



## POLICY ROUNDTABLES

# Competition, Concentration and Stability in the Banking Sector 2010

### Introduction

The OECD Competition Committee held a roundtable discussion on Competition, Concentration and Stability in the Banking Sector in February 2010. This document includes an executive summary and the documents from the meeting: an analytical note by Elena Carletti for the OECD, written submissions from Australia, Bulgaria, Chile, Egypt, the European Commission, Finland, Germany, Greece, Hungary, Ireland, Italy, Japan, Korea, the Netherlands, the Russian Federation, South Africa, Switzerland, Chinese Taipei, Turkey, the United Kingdom, the United States and BIAC, as well as an aide-memoire.

### Overview

A controversial question has arisen in the context of the ongoing global financial crisis: Is financial stability enhanced or weakened by competition? The Committee first addressed the link between concentration and competition in the financial sector and found it to be generally unreliable. Furthermore, a clear causal link between either competition or concentration and stability in the financial sector can be found neither in theory nor in the data. However, measures taken to remedy the crisis may have an effect on competition and stability, and in any event sound financial regulation is crucial. Guest speakers included Hans-Helmut Kotz, Chair of the OECD Committee on Financial Markets, Prof. Thorsten Beck of Tilburg University, Prof. Elena Carletti of the European University Institute, Mr Ross Jones, Deputy Chairman of the Australian Prudential Regulation Authority, Prof. Xavier Vives of the University of Navarra, and Prof. Lawrence White of New York University.

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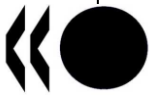
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**DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS  
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## **FOREWORD**

This document comprises proceedings in the original languages of a Roundtable on Competition, Concentration and Stability in the Banking Sector held by the Competition Committee in February 2010.

It is published under the responsibility of the Secretary General of the OECD to bring information on this topic to the attention of a wider audience.

This compilation is one of a series of publications entitled "Competition Policy Roundtables".

## **PRÉFACE**

Ce document rassemble la documentation dans la langue d'origine dans laquelle elle a été soumise, relative à une table ronde sur la concurrence, la concentration et la stabilité dans le secteur bancaire qui s'est tenue en février 2010 dans le cadre du Comité de la concurrence.

Il est publié sous la responsabilité du Secrétaire général de l'OCDE, afin de porter à la connaissance d'un large public les éléments d'information qui ont été réunis à cette occasion.

Cette compilation fait partie de la série intitulée "Les tables rondes sur la politique de la concurrence".

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## EXECUTIVE SUMMARY

*By the Secretariat*

- (1) *Measuring competition in financial markets is complex due to their peculiar features, such as switching costs. Concentration, among other structural indicators, is not a good proxy for competition.*

Although antitrust authorities use measures of market concentration, such as market shares and HHI, to make an initial assessment of competition, these structural measures are only a first step in analyzing whether concentration will create or enhance the exercise of market power. Market contestability, for example, is also important for evaluating competition in financial markets. The existence of entry barriers, as well as activity restrictions and other rigidities, must be taken into account in evaluating financial firms' behaviour, both in a static and in a dynamic sense. Furthermore, factors such as switching costs, geographic constraints on customers or supplies, competition from nonfinancial firms, and the size of competitors and customers need to be considered.

- (2) *It is not clear whether excessive competition contributed to the recent financial crisis. Both the country experiences and the academic debate suggest that concentration and competition have ambiguous effects on financial stability.*

The resiliency of Canada and Australia to the recent financial crisis seems to suggest that more concentrated financial systems are more resilient to financial distress. However, the big impact that the crisis has had on other countries, such as Switzerland and the Netherlands, with very concentrated financial systems shows that the opposite is also possible.

The relationship between competition and stability is also ambiguous in the academic literature. Two opposing views can be distinguished in the theoretical work. The first one, called the "charter value" view, points to a negative relationship between competition and stability. The second, more recent one, points instead to a positive influence of competition on stability. The theoretical literature makes no distinction between competition and concentration, though. The empirical evidence provides a series of ambiguous and contrasting results, depending on the sample and period analyzed, and the proxies used for competition and financial stability.

In any case, academics and practitioners agree that factors other than competition and concentration contributed to the recent crisis. Macroeconomic factors like loose monetary policy and global imbalances led to a bubble both in asset and real estate markets. Microeconomic factors such as poor regulatory and institutional frameworks and banks' funding structure also played a crucial role.

- (3) *Regulatory and institutional frameworks play a very important role for financial stability.*

As shown in the recent financial turmoil, regulation affects the resilience of financial institutions to a crisis. Countries with strong regulatory and institutional frameworks have been less prone to financial distress. A well-designed regulatory framework can also help reduce the potential detrimental effects of competition on financial stability, in particular by improving banks' risk taking incentives. In other words, regulation can make banks less inclined to take on excessive risk.

Regulatory failures rather than excessive competition led to the crisis. Better prudential regulation and supervision can improve stability going forward. Restrictions to competition would not contribute to a greater resilience of financial institutions to financial distress. Instead, they would just have a negative effect on efficiency. Competition authorities should engage in a dialogue with supervisory and regulatory authorities in order to help frame regulation and to ensure that it is consistent with a robust competition policy.

(4) *Banks' funding structures affected banks' resilience during the crisis.*

The recent financial crisis has shown that banks' funding structure is important to their resilience. Banks can finance themselves with both depository funding and wholesale funding (i.e. funding from other banks, money market funds, corporate treasuries and other non-bank investors). Banks relying mostly on wholesale funding have been severely affected by the crisis. Banks in Australia and Canada, for example, have been very resilient to the crisis because they have relied mostly on depository funding, much of which came from retail sources such as households. On the contrary, banks in countries such as the UK that have increasingly relied on wholesale funding from financial markets, have been very much affected by the recent financial turmoil.

(5) *Financial innovation introduced important changes in banks' activities and made regulatory restrictions less effective.*

Various financial innovations were conceived in the early 2000s as ways to improve risk sharing and risk management. However, they led to increased leverage and risk taking. Banks introduced a wide range of new instruments to transfer credit risk (i.e. CDS contracts). Initially, these instruments allowed banks to gain very large spreads. Then, they substantially decreased due to fierce global competition involving not only banks but also other financial institutions. Financial regulation should have changed in response to financial innovation. However, that did not happen and regulatory effectiveness decreased dramatically as banks were able to use derivatives to get around regulatory requirements such as capital rules and ratings.

(6) *The emergency measures adopted to remedy the crisis have the potential to harm competition in the financial sector.*

What happened during the recent financial crisis requires a deep rethinking of the interaction between competition and financial stability authorities. The emergency measures taken to remedy the crisis have the potential to harm competition. Although the authorities' main concern during the crisis was to restore financial stability, it is now important to fix the potential negative competitive effects of state aid, acquisitions, capital injections and bailouts.

## SYNTHÈSE

*par le Secrétariat*

- (1) *Mesurer la concurrence sur les marchés financiers est une tâche difficile du fait de leurs spécificités, par exemple les coûts de transfert. La concentration, entre autres indicateurs structurels, n'est pas une bonne mesure indirecte de la concurrence.*

Quoique, les autorités antitrust se servent comme mesure de concentration du marché des parts de marché et de l'IHH pour procéder à une première évaluation de la concurrence, ces mesures structurelles représentent seulement une première étape pour analyser si la concentration créera ou renforcera l'exercice d'une puissance sur le marché. La contestabilité des marchés par exemple, est également importante pour évaluer la concurrence sur les marchés financiers. Il faut tenir compte de l'existence d'obstacles à l'entrée, ainsi que de restrictions pesant sur les activités et d'autres facteurs de rigidité, afin d'évaluer le comportement des sociétés financières, que l'analyse soit statique ou dynamique. En outre, des facteurs tels que les coûts de transfert, les contraintes géographiques concernant les consommateurs ou les fournisseurs, la concurrence d'entreprises non financières, et la taille des concurrents doivent être considérés.

- (2) *Il n'est pas certain que l'excès de concurrence ait contribué à la récente crise financière. Les données nationales comme les débats universitaires laissent à penser que la concentration et la concurrence exercent des effets ambigus sur la stabilité financière.*

La résistance du Canada et de l'Australie à la récente crise financière semble indiquer que la concentration permet aux systèmes financiers de mieux résister aux difficultés financières. Toutefois, l'ampleur des effets de la crise sur d'autres pays, par exemple la Suisse et les Pays-Bas, où le système financiers est très concentré, montre que l'inverse est possible.

La relation entre concurrence et stabilité est ambiguë dans les publications universitaires aussi. Deux thèses s'opposent dans les travaux théoriques. La première, celle de la « valeur de l'agrément bancaire », indique une relation négative entre la concurrence et la stabilité. La seconde, plus récente, indique au contraire une influence positive de la concurrence sur la stabilité. Toutefois, les travaux théoriques ne distinguent pas la concurrence et la concentration. Les données empiriques produisent une série de résultats ambigus et contradictoires, en fonction de l'échantillon et de la période analysés, ainsi que des variables représentatives de la concurrence et de la stabilité financière.

Quoi qu'il en soit, universitaires et praticiens s'accordent à reconnaître que d'autres facteurs que la concurrence et la concentration ont contribué à la récente crise. Des facteurs macroéconomiques, par exemple une politique monétaire peu contraignante et les déséquilibres mondiaux, ont entraîné une bulle, tant sur les marchés des actifs financiers que sur ceux de l'immobilier. Des facteurs microéconomiques, par exemple les carences de la réglementation et des institutions, ainsi que la structure de financement des banques, ont eux aussi joué un rôle capital.

- (3) *La réglementation et les institutions contribuent grandement à la stabilité financière.*

Comme l'ont montré les récentes turbulences financières, la réglementation influe sur la résistance des établissements financiers à une crise. Les pays dotés d'une réglementation et d'institutions solides ont été moins exposés aux difficultés financières. Un cadre réglementaire bien conçu permet aussi de réduire les effets néfastes que la concurrence peut exercer sur la stabilité financière, notamment en modérant les facteurs qui incitent les banques à prendre des risques. En d'autres termes, la réglementation permet de réduire la propension des banques à prendre des risques excessifs.

Plus que l'excès de concurrence, ce sont les carences de la réglementation qui ont entraîné la crise. Un effort de réglementation et de contrôle prudentiels permettront de renforcer la stabilité. Restreindre la concurrence ne favoriserait pas la résistance des établissements financiers aux difficultés financières. Au contraire, l'efficacité s'en trouverait diminuée. Les autorités chargées de la concurrence doivent engager un dialogue avec les autorités réglementaire et de contrôle afin de contribuer à l'élaboration de la réglementation et de veiller à ce qu'elle soit compatible avec une politique énergique de la concurrence.

(4) *Les structures de financement des banques ont influé sur leur résistance durant la crise.*

La récente crise financière a montré que la structure de financement des banques est pour beaucoup dans leur résistance. Les banques peuvent se financer à la fois par les dépôts et par le marché (c'est-à-dire par d'autres banques, des fonds placés sur le marché monétaire, la trésorerie des entreprises et d'autres investisseurs non bancaires). Les banques tributaires du financement de marché ont été durement touchées par la crise. Ainsi, les banques d'Australie et du Canada, par exemple, ont très bien résisté à la crise parce qu'elles ont surtout eu recours au financement par les dépôts provenant en grande partie des opérations avec la petite clientèle et notamment les ménages. En revanche, les banques d'autres pays, le Royaume-Uni par exemple, qui de plus en plus ont fait appel aux marchés financiers pour se financer, ont été très affectées par les récentes turbulences financières.

(5) *L'innovation financière a profondément modifié les activités bancaires et les restrictions réglementaires y ont perdu en efficacité.*

Diverses innovations financières ont été conçues au début des années 2000 pour rationaliser le partage et la gestion des risques. Toutefois, elles ont entraîné une augmentation de l'effet de levier et de la prise de risque. Les banques ont mis en œuvre un large éventail de nouveaux instruments pour transférer le risque de crédit (par exemple les contrats d'échange sur le risque de défaillance). Au début, ces instruments ont permis aux banques de bénéficier de très forts écarts de taux. Ensuite, ces derniers ont beaucoup diminué du fait de l'intensité de la concurrence mondiale qui s'exerce non seulement entre les banques, mais aussi entre d'autres établissements financiers.

La réglementation financière aurait dû évoluer en réponse à l'innovation financière. Or, il n'en a rien été et l'efficacité de la réglementation a considérablement diminué, car les banques ont pu se servir de produits dérivés pour contourner les obligations réglementaires, par exemple les règles visant les capitaux et la notation.

(6) *Les mesures d'urgence adoptées pour remédier à la crise peuvent nuire à la concurrence dans le secteur financier.*

Ce qui s'est passé lors de la récente crise financière appelle un réexamen approfondi des liens qui unissent les autorités chargées de la concurrence et celles qui doivent veiller à la stabilité financière. Les mesures d'urgence prises pour remédier à la crise peuvent nuire à la concurrence. Les autorités avaient lors de la crise pour préoccupation principale de restaurer la stabilité financière, mais il importe maintenant de pallier le risque d'atteinte à la concurrence que comportent les aides publiques, les acquisitions, les injections de capitaux et les opérations de renflouement.

## BACKGROUND NOTE

*by the Secretariat*

### 1. Introduction

The financial sector crisis that broke out in the summer of 2007 disrupted the structure and functioning of the industry around the world. In order to preserve investors' confidence and restore viability, public policy responded to the crisis with liquidity and capital injections, implicit and explicit guarantee schemes as well as direct rescues and asset purchases. Public support backed major mergers aimed at rescuing distressed institutions. While many small banks, especially in the United States, are going into liquidation, some middle and large-sized financial institutions have not been allowed to fail. The scope and cost of these crisis management measures are unprecedented.

To avoid similar systematic crises and rescue costs in the future, it is important to understand how and to what extent the elements of the structure and functioning of the financial system and its regulation led to the crisis. On the macroeconomic side, factors included prolonged low interest rates in the United States and global imbalances following the Asian crisis, which contributed to the emergence of bubbles in stock markets and in real estate markets. On the microeconomic side, high leverage, executive compensation and financial innovation could have led financial institutions to exploit the bubble and take excessive risk (Allen and Carletti, 2009).

Competition could also be a factor both in the causes and in the cures. Did competition contribute to the crisis? In particular, does "excessive" competition in the financial sector explain excessive risk taking by managers of financial institutions since the beginning of the 2000s? Looking to the future, what effects will crisis responses such as mergers and public support have on competition in the financial sector and on financial system stability?

This paper focuses on whether more vigorous competition contributed to the crisis. Important changes in the structure and the functioning of the financial system in the past two decades included domestic consolidation and regulatory reforms, as many restrictions on entry and operation were lifted. These changes affected industry concentration and the intensity of competition. At first glance it appears that some countries with more concentrated banking sectors, such as Australia and Canada, did not suffer serious effects from the crisis and have not made use of public money to bail out financial institutions. Similarly, France, where the banking sector is relatively concentrated, appears to be in a stronger position than Germany, where banks' market shares are more scattered.<sup>1</sup> But the paper will show that differences in structure do not explain all of the differences in how the crisis affected different countries. Other factors, such as the banks' funding structures and the regulatory environments, have been at least as important. The paper will also discuss briefly the likely effects of the crisis management measures on competition and stability in the financial industry, taking particular account of the so-called "too big to fail" problem.

Theoretical analysis of competition and financial sector stability finds their relationship to be ambiguous. Competition has long been thought to reduce stability by exacerbating risk and reducing banks' incentives to behave prudently. That view has recently been countered by the argument that competition in the loan market may reduce the risk of banks' portfolios. Competition could also increase the probability of runs on individual banks and the risk of contagion stemming from the failure of individual financial institutions; however, those predictions of negative effects of competition on systemic risk may not be robust.

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<sup>1</sup> See the discussion on this point made by Adrian Blundell-Wignall at the October 2009 OECD Competition Committee session—DAF/COMP/M(2009)3/ANN3.

Empirical studies of the relationship must deal first with the difficulty of measuring competition in the financial industry. Characteristics such as information asymmetries in corporate borrowing, switching costs in retail banking and network externalities in payment systems take the financial industry outside the traditional structure-conduct-performance paradigm. Measures of structure and concentration do not measure competition among financial institutions accurately. Other variables, linked more directly to price levels and changes, must be used. Yet by either type of measure, the results of the empirical studies are also ambiguous. Structural and non-structural measures of competition are found to be both positively and negatively associated with financial stability, depending on the country and the sample analyzed and the measure of financial stability used.

The relationship between concentration, competition and stability thus remains unclear. More research is needed before conclusions can be drawn about the effects of competition on the current crisis. The relationship between competition and financial regulation also deserves more attention. Some theoretical studies show that, if competition had detrimental effects on financial stability, appropriate regulatory measures could correct or prevent those effects. The experience of some countries, such as Japan, where financial liberalisation without adequate changes in the regulatory and supervisory frameworks was followed by a banking crisis, supports this point. Thus, rather than restrict competition or encourage concentration in the financial sector, a better solution would be to design and apply better regulation.

The paper proceeds as follows. Section 2 explains the specialness of the financial sector and its vulnerability to instability. In doing this, it focuses on the channels of instability that have been analyzed in the literature on the relationship between competition and stability. It also discusses other sources of instability such as financial innovation that have played an important role in the current crisis. Section 3 reviews the theoretical literature on the potential trade-offs between competition and stability. After this, the paper moves on to the empirical debate. Section 4 describes the various measures of competition in the financial industry, distinguishing between structural and non-structural variables. Section 5 reviews empirical studies of the relationship between competition, concentration and stability. Section 6 considers how regulation could affect the link between competition and stability. Section 7 discusses the effects that crisis response measures may have on the future of competition in the financial industry. Section 8 concludes by tentatively assessing what can be said about the role of competition in the crisis and the implications of the massive crisis response measures for the degree of competition in the financial industry and for its future stability.

## **2. The specialness of the financial sector: sources of instability and the need for regulation**

Traditionally, banks have acted as intermediaries between investors and firms. They collect a large amount of wealth from individual investors in the form of debt and redistribute it to the productive sector through loans or other forms of financing.

### **2.1 *Bank runs, excessive risk taking and contagion***

The maturity transformation between liabilities and assets is the core of the fragility problem.<sup>2</sup> Deposits are usually demandable, while loans are long term investments. When there is a run, and a large number of depositors wish to withdraw their funds prematurely, the bank must find liquidity, either by borrowing in the interbank market or by selling assets. Both solutions to the liquidity problem on the deposit side are problematic. The interbank market may not be available if, as in the 2007 crisis, financial markets stop working properly. Selling assets to meet short-term liquidity demands risks getting prices well below the assets' intrinsic quality.

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<sup>2</sup> See more extended reviews in Carletti (2008, 2009), Carletti and Vives (2009).

Instability problems also arise on the banks' asset side. Their great reliance on debt and the private information that banks possess on their borrowers may induce them to take excessive risks in their investments or in granting loans. This type of risk is much more pronounced in the financial sector than in others, both because banks' assets are more leveraged and more opaque and because banks' liabilities are insensitive to asset risk, due to deposit insurance or implicit state guarantees.

Financial institutions are more closely interlinked than firms in other sectors. The failure of an individual bank may lead to the failure of other financial institutions. This risk of contagion, one of the most distinctive features of the financial sector, is at the core of public interventions and the need to regulate the system. Contagion could result from banks' direct linkages, in the interbank markets or payment systems, or indirectly from the interdependency of their portfolios.<sup>3</sup>

The severity of the risk of contagion depends on the size of the failing bank and the shape of networks among banks, among other things. When a financial institution is in distress, its contribution to the risk of the system as a whole increases in the leverage, the size and the maturity mismatch of the bank in distress.<sup>4</sup> Its contribution depends also on how widespread the interconnections among banks are, as this affects the correlation of banks' portfolio returns. Banks in clustered networks hold very similar and thus highly correlated portfolios. Each bank faces a low probability of distress; but, once a distress has occurred, the risk that this propagates in the system is greater.<sup>5</sup>

## **2.2 *Additional sources of instability in modern financial systems: short term debt, market freezes and financial innovation***

The current crisis has highlighted the importance of the funding structure of financial institutions. Traditionally, banks raised funds through retail deposits. Now, banks have started raising large fractions of their funds in the form of wholesale short run debt from mutual funds, particularly in the United Kingdom and the United States. Unlike deposits, this short term debt must be rolled over frequently and is not insured. Recent experience has shown that this liability structure may become very problematic in times of crisis. The academic literature has started analyzing the so-called rollover risk as an additional source of banks' instability.<sup>6</sup>

Adequate liquidity and smooth functioning of the interbank market are essential to preserve the soundness of financial institutions. After the recent turbulence in the interbank market, academic research has also started analyzing market freezes and the link between asset prices and financial stability. Several scenarios can lead to a market freeze. Banks may start hoarding liquidity and stop trading on the interbank market when there is great uncertainty about aggregate liquidity demand.<sup>7</sup> They may hold assets that are illiquid in order to avoid fire sales induced by the limited market liquidity.<sup>8</sup> They may also stop lending in the interbank market when the asymmetry of the information about the quality of the borrowing banks is too great.<sup>9</sup>

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<sup>3</sup> See Allen, Babus and Carletti (2009a) for a review.

<sup>4</sup> See Adrian and Brunnermeier (2009).

<sup>5</sup> See Allen, Babus and Carletti (2009b).

<sup>6</sup> See for example, He and Xiong (2009) and Acharya, Gale and Yorulmazer (2009).

<sup>7</sup> See Allen, Carletti and Gale (2009).

<sup>8</sup> See Diamond and Rajan (2009).

<sup>9</sup> See Heider, Hoerova and Holthausen (2009).



Financial innovation has also turned out to be an important source of financial instability. Instruments like loan sales or credit default swaps originated as a way to improve risk sharing and risk management. However, more recently they have been associated with greater risk in the banking system. Transferring credit risk may induce banks to retain only the most illiquid toxic assets in their portfolios or lower banks' incentives to screen and monitor borrowers appropriately.<sup>10</sup> This makes it more difficult for banks to sell assets in their portfolios in case of need, and it worsens the quality of lending standards. Moreover, by transferring risk on to other financial institutions, banks are allowed to reduce their capital holdings and increase leverage. This contributes to reduce lending standards and worsen the fragility of the financial sector further.<sup>11</sup> And transfer of credit risk may also be a source of contagion between financial institutions, because it makes their balance sheets more similar and thus sensitive to the same shocks as those, for example, stemming from changes in asset prices.<sup>12</sup>

### 2.3 *Safety net arrangements*

Reducing systemic risk and preserving a stable financial system are principal motivations for regulation and safety net arrangements, in the form of deposit insurance and lender of last resort. Deposit insurance, if complete, prevents bank runs as investors are certain to be repaid. In a strict sense, the lender of last resort relates to the provision of liquidity by the central bank to individual banks in distress. Although there is a long-standing debate in the academic literature as well as in policy making about the optimal form and the precise role of the lender of last resort, there seems to be a general consensus that, at least in normal market conditions, this instrument should not be used to deal with individual bank insolvencies. In other words, the central bank should provide liquidity to illiquid but solvent banks.<sup>13</sup> This should prevent a widespread use of public money and thus limit the moral hazard problem implicit in any insurance or guarantee scheme.

But distinguishing illiquidity from insolvency is difficult, even for central banks. In theory, as long as markets are sufficient to deal with systemic liquidity crises, there should be no need for central bank loans to individual banks. However, the interbank market may stop working properly, as the recent crisis has shown, and then even illiquid, but solvent, banks are unable to obtain the necessary liquidity.<sup>14</sup> In such circumstances, the lender of last resort, and more generally some form of public intervention, may be necessary to avoid the propagation of an individual bank distress to the entire system.

Whenever the social cost of a bank failure is larger than its private cost, it becomes necessary to offer public support to individual institutions. However, this should not imply a systematic and indiscriminate rescue of all banks. As it reduces the private cost of risk taking, the lender of last resort or any public support, as any insurance scheme, induces banks to take greater risk.<sup>15</sup> Thus, only the banks having a systemic impact should receive public support. These are more likely to be large-size banks and banks occupying key positions in the payment system or in the interbank market.

Even when appropriately designed, bailouts and public intervention have some important drawbacks. They generate disparities between small and large banks with negative competitive consequences for the

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<sup>10</sup> See, for example, Duffie (2007).

<sup>11</sup> See Shin (2009).

<sup>12</sup> See Allen and Carletti (2006).

<sup>13</sup> This is the idea underlying Bagehot's principle that central banks should lend freely only to illiquid banks at a penalty rate and against good collateral. See Bagehot (1873).

<sup>14</sup> See, for example, Allen and Carletti (2008c).

<sup>15</sup> See for example Goodhart (1987).

former. They keep inefficient institutions alive. They create the expectation of future support, thus worsening the excessive risk taking problem, which is a particular concern for banks that are systemically important.<sup>16</sup> This so-called “too big to fail” problem has become particularly worrying after the massive public interventions in recent years and the large size many banks reached in the last decade. To the extent that this worry is warranted – and the paper will discuss later the evidence on bank size and risk taking – it is necessary to design appropriate measures to limit the potential risk of excessive risk taking by large financial institutions. The current discussions in the policy arena about imposing limits to the size of banks or imposing stricter capital requirements for large institutions are steps in the direction of imposing more discipline on financial institutions.

### **3. Competition and stability in the financial sector: a theoretically ambiguous nexus**

This section describes competition in the financial sector and explains the reasons and the channels through which greater competition could lead to greater instability. Competition in banking should produce the same effects as competition in other sectors, to improve efficiency and foster innovation, thus leading to a greater variety of products, lower prices, wider access to finance and better service. Several features of the financial sector depart from the textbook competition model. These include endogenous barriers to entry, asymmetric information in corporate relationships, switching costs, network effects and elements of non-price competition that can be used as strategic variables and sources of rents.<sup>17</sup> Of course, many other sectors of the economy share these features to a greater or lesser extent.

#### **3.1 Competition and risk taking from the asset side**

In the theoretical academic literature, the link between competition and stability remains an unresolved issue.<sup>18</sup> Until the 1980's, the view was that competition worsens stability. Intense competition was seen as favouring excessive risk taking on the asset side and thus leading to a higher likelihood of individual bank failure. Recent studies, on the other hand, have shown that competition may be beneficial for banks' portfolio risk.

The idea behind the so-called “charter value” hypothesis is that higher profits induce banks to limit their risk exposure in order to avoid failure and enjoy high returns. As competition puts pressure on margins and reduces a bank's charter value, banks have an incentive to take more risk.<sup>19</sup> Furthermore, competition can affect the channel through which financial innovation contributes to financial stability. If on the one hand, credit derivatives improve stability because they improve risk sharing, on the other hand they also make it more attractive for a bank to acquire more risk. This latter effect dominates when credit markets are competitive, thus contributing to the destabilising effect on lending incentives.<sup>20</sup>

Recent work shows how greater bank competition could instead improve stability. The underlying intuition is that the borrowers' conduct also affects the risks of the banks' investment projects, and that effects of competition on incentives of the entrepreneurs that are using the money are different from effects on the banks that are lending it. Greater competition in the loan market would lead to lower interest rates on loans, and lower margins on their loans would increase risks for the banks. But on the other side of the transactions, those lower interest rates would increase the return on investment for entrepreneurs who are

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<sup>16</sup> Demirguc-Kunt and Detragiache, 1999

<sup>17</sup> See Carletti (2009) and Degryse and Ongena for a more extensive discussion of competition in banking.

<sup>18</sup> See Carletti (2008) for a more extensive and technical review of the literature.

<sup>19</sup> See, for example, the influential work by Keely (1990), Hellmann, Murdock and Stiglitz (2000); Matutes and Vives (2000), and Allen and Gale (2004).

<sup>20</sup> See Insteffjord (2009).

borrowing the money. The prospect of higher return would encourage entrepreneurs to expend more effort to succeed, thus reducing the risk to the bank of default. Depending on which of the two effects dominates, competition leading to lower lending interest rates could make bank portfolios safer.<sup>21</sup> These effects are complex, but they do imply that theoretical predictions of a negative relationship between competition and risk taking need not be robust.

### **3.2 *Competition and fragility from the liability side***

On the liability side, the relationship between competition and financial fragility also looks ambiguous. Runs and systemic crises could occur either as a consequence of a co-ordination failure among depositors or as rational responses by depositors to a bank's impending insolvency. Most studies of these sources of financial fragility assume a banking system that is perfectly competitive, ignoring the effects of different market structures and strategic interaction between banks.

A few studies have looked at the interaction between fragility and market structure. One conclusion is that panic runs could occur in all competitive conditions. Panic runs result from co-ordination problems among depositors and network externalities, and these features need not depend on the degree of competition for deposits.<sup>22</sup> On the other hand, there might be a relationship, too. More competition may worsen bank fragility: by raising interest rates on deposits, more competition may exacerbate the co-ordination problem among depositors, leading to a panic run<sup>23</sup>, and also increase the probability of fundamental runs.<sup>24</sup>

Competition also affects the functioning of the interbank market. Banks with surplus liquidity and market power in the interbank market might face choices, with opposite effects. They might deny funds to deficit banks, forcing inefficient asset liquidation and increasing the probability of bank failures.<sup>25</sup> Or they might help troubled banks in need of liquidity in order to prevent contagion. This occurs only when competition is imperfect, as otherwise banks are price takers on the interbank market and cannot influence the price level with their action.<sup>26</sup> Thus, again, the relationship between competition and stability of the interbank market remains ambiguous.

### **3.3 *Competition and risk taking: restrict competition, or improve regulation?***

If competition worsens stability by encouraging too much risky behaviour, then one way to correct that effect would be to restrict competition, by measures such as ceilings on interest rates or limits on entry. But another way to address the problem would be regulation to discourage and discipline risky actions. Risk-adjusted deposit insurance or appropriate capital requirements would help control risk taking, even in the presence of intense competition.<sup>27</sup> Policies about mergers and entry could also dampen the incentive for risky conduct. If a solvent bank could gain market share by acquiring a failing institution, that

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<sup>21</sup> See Boyd and De Nicoló (2005) and also Caminal and Matutes (2002).

<sup>22</sup> See Matutes and Vives (1996).

<sup>23</sup> See Matutes and Vives (1996).

<sup>24</sup> See Goldstein and Pauzner (2005) and also Rochet and Vives (2004).

<sup>25</sup> See Acharya, Gromb and Yorulmazer (2009).

<sup>26</sup> See Allen and Gale (2004).

<sup>27</sup> See, for example, Hellmann, Murdock and Stiglitz (2000), Matutes and Vives (2000) and Repullo (2004).

would create an *ex ante* incentive for a bank to remain solvent. Furthermore, allowing new entry could limit the market power that the survivor might gain from the rescue acquisition and restore competition.<sup>28</sup>

The interrelation between regulation and competition is complex. On the one hand, regulation can help mitigate the potential negative effects of competition on banks' risk taking. On the other hand, however, badly designed regulation can distort banks' incentives even further. Theory predicts that higher charter values and thus less competition would give banks more incentive to contain risk. However, if higher charter values are a result of an inefficient regulatory policy such as the bailout of inefficient institutions, then banks would still have incentives to take risk.<sup>29</sup> This suggests again that the design of financial regulation matters at least as much as the market structure for the stability of the banking sector.

### **3.4 Competition and stability: an overall assessment**

A plausible prediction from theory would be that, once a certain threshold is reached, an increase in the level of competition would tend to increase risk-taking incentives and the probability of bank failure.<sup>30</sup> This tendency could be contained by reputational concerns, by the presence of private costs of failure for managers or by properly designed regulation.

Regulation and safety net arrangements play an important role in the relationship between competition and stability. A properly designed regulation can help mitigate the problem of too much risky behaviour that can potentially derive from competition. However, a badly designed regulation as well as the anticipation of widespread public support can themselves contribute to worsen banks' incentives to take risk. Thus, it is not only the market structure that matters for the stability of the banking sector. An appropriate regulatory and supervisory framework seems at least equally important. As in any other industry, effective market discipline, the internalisation of future losses and a correct mechanism for pricing risk are crucial elements for encouraging healthy and prudent behaviour by agents operating in the financial sector.

## **4. Measuring competition in the banking sector**

Three approaches have been used to measure competition in the banking sector, which are analyzed in turn below.<sup>31</sup>

### **4.1 Structural measures of competition**

Familiar measures of market structure, such as concentration ratios, the number of banks and the Herfindahl-Hirschman index (HHI), are still widely used in empirical work. These measures originated in the structure-conduct-performance (SCP) paradigm linking the structure of a market to influences on firm behaviour and thus sector performance. One prediction of the SCP approach is that higher concentration would encourage collusion and reduce efficiency.

The SCP paradigm has well-known weaknesses. Structure may not be exogenous, but instead it might be the result of firms' behaviour. A more concentrated market structure could be the result of better, more efficient performance, contrary to the predictions of the SCP paradigm.<sup>32</sup> There is no consensus on the best

<sup>28</sup> See Perotti and Suarez (2002).

<sup>29</sup> See, for example, Nagarajan and Sealey (1995).

<sup>30</sup> See Carletti and Vives (2008).

<sup>31</sup> See also Bikker and Spierdijk (2009) and Claessens (2009).

<sup>32</sup> See Berger et al. (2004) for a discussion of the so-called efficient structure hypothesis.

variable for measuring market structure in banking, while performance is typically measured with variables, such as net interest margins or profitability, which can be influenced by factors other than the degree of competition, such as a country's macroeconomic situation or the level of taxation.

#### **4.2 *Measures of market contestability***

The second approach assesses competitive conditions in terms of contestability. Variables like regulatory indicators of entry requirements, the presence of foreign ownership, formal and informal entry barriers and activity restrictions measure the threat of entry in the sector and thus its contestability through the degree of entry and exit.

#### **4.3 *Direct measures of competition: the H-statistic***

The third approach measures the intensity of competition directly, in the way prices or outputs respond to costs. Many recent studies of banking use the so-called H-statistic, based on the Panzar and Rosse methodology, which proxies the reaction of output to input prices. The H-statistic is calculated by summing the estimated elasticities of revenue to factor prices; a value of one indicates perfect competition, a value of zero (or less) indicates monopoly and intermediate values indicate the degree of monopolistic competition. Other studies use the Lerner index, which expresses market power as the difference between the market price and the marginal cost divided by the output price. The index ranges from a high of 1 to a low of 0, with higher numbers implying greater market power.

The theoretical foundation for direct measures is stronger than for structural measures, but direct measures have drawbacks too. For example, the H-statistic imposes restrictive assumptions on banks' cost functions. Its conclusion that increases in input prices make total revenue and marginal costs not to move together in imperfectly competitive markets is only valid if the industry is in equilibrium, which in practice is very rarely the case. Its single measure neglects differences among banks like size, product or geographic differentiation. Still, this approach is increasingly used in empirical research because it measures banks' behaviour and thus competition directly. The Lerner index is a better way to distinguish among the different products, but it has the problem that it requires information on prices and marginal costs, which is very difficult to gather.

#### **Box 1. Measuring competition: academic literature and competition policy**

There is a substantial difference between the academic studies and the implementation of competition policy in the way competition is measured. Academic studies tend to treat banking as though banks produced a single product. They measure competition and margins without regard to distinctions between different product lines, such as deposit and lending products. This is clearly an important shortcoming. Banks, in particular universal banks, have a wide range of activities and products, which are likely to have different geographical markets and different margins.<sup>33</sup> When examining the financial industry, competition authorities will apply a finer screen in order to identify and define particular product and geographic markets.

The same holds for the structure measures. Most academic studies measure domestic concentration as the share of assets of the three largest banks in total banking system assets in a country at the national level (e.g., Beck et al., 2006, Schaeck et al., 2006). By contrast, competition authorities concentrate their attention on the markets for deposits and for loans to small and medium enterprises, with a geographical dimension of either the province or the region (A notable exception is the UK, where both the deposit and the loan markets are considered to be national). An important implication of this is that the word concentration can have a very different meaning in the academic

<sup>33</sup>

See OECD (2006, 2007).

literature and in the competition policy world.

Moreover, common structural measures of competition, which are derived from the industrial organisation literature, neglect important features of the financial sector such as asymmetric information and networks that may affect competition significantly. If they are not corrected to account for those features, these traditional measures will be misleading.

#### **4.4 Factors driving competition in the banking sector**

Evidence measuring the level of competition in banking systems is scarce. Most studies of competition and the factors driving it have been conducted at the country level, because bank-level data sets comparable across countries were not available until recently. The meagre evidence available shows that competition varies greatly across countries, but the extent of the variation depends on the data sets used and the period analyzed.<sup>34</sup>

One conclusion emerges clearly from the studies: countries with fewer entry and activity restrictions tend to have stronger competition.<sup>35</sup> By contrast, structural variables do not have a significant impact on competition, as measured by the H-statistic. Contestability appears to be more important than market structure in explaining the strength of competition in banking.

Another study, however, finds that bank size matters for market power, and in the way predicted by the SCP paradigm.<sup>36</sup> Competition is found to decrease significantly with bank size. This may be because large banks are in a better position to collude with other banks, or because large banks are more likely to operate in product or geographical markets where there are few competitors.

### **5. The nexus competition-stability in the empirical evidence**

Evidence measuring the relationship between competition and stability is also scarce.<sup>37</sup> Like the theoretical predictions, the empirical results are ambiguous. Studies based on bank-level data in individual countries reach contrasting results depending on the sample and period analyzed.

Cross-country studies find a positive relationship between competition and stability in the banking sector. These same cross-country studies also find a positive correlation between concentration and stability. These correlations imply that higher concentration may not promote stability by dampening competition; rather, that effect might instead be produced through channels such as gains from diversification. The findings underscore once again that basic measures of concentration, such as concentration ratios or the number of banks, are not good proxies for the degree of competition. At a

<sup>34</sup> See Claessens and Laeven (2004) and Bikker and Spierdijk (2007).

<sup>35</sup> This is in line with the findings that financial deregulation abolishing previous restrictions led to more competition and better economic performance. See Strahan (2003) for a review of this literature.

<sup>36</sup> See Bikker, Spierdijk and Finnie (2006).

<sup>37</sup> See also Carletti and Hartmann (2002), Carletti, Hartmann and Spagnolo (2002) and Beck (2009) for reviews.

minimum, they must be complemented with measures of features such as size distribution, reflecting the skewness of the banking market and thus the heterogeneity of banks and markets.<sup>38</sup>

In line with the theoretical findings, cross-country evidence finds also that an appropriate regulatory framework can help mitigate the potential negative effects on stability of the greater competition following a process of deregulation. Financial liberalisation is found to be beneficial where the institutional and regulatory frameworks are developed and well-designed.

Before reviewing the empirical literature, it is worth emphasising an important distinction between the way the nexus between competition and stability is analyzed in the theoretical literature and in the empirical literature. Theoretical literature tends not to distinguish between competition, concentration, and size, making the implicit assumption that concentration and size are suitable inverse measures of competition. In contrast, in the empirical literature the distinction between concentration, size and competition is of particular relevance.

**Box 2. The nexus between competition, concentration, size and stability: Main empirical predictions**

To the extent that concentration and bank size are good proxies for competition, the following predictions hold. In line with the view that competition hurts stability, it is predicted that (see also the discussion by Adrian Blundell-Wignall at the October 2009 OECD Competition Committee session—DAF/COMP/M(2009)3/ANN3):

- Large banks or banks operating in less competitive/more concentrated sectors are theoretically more profit worthy. Higher charter values act as buffer and limit banks' incentives to take risk (the charter value hypothesis);
- Large banks in a stable oligopoly are more likely to make profits on traditional bank activities. Therefore, they do not feel the need to fight for market shares in the new 'equity culture' product areas, involving derivatives, structured products and similar;
- A few large banks in a stable oligopoly/more concentrated sector are easier for regulators to monitor and regulate;
- Large banks tend to be more diversified, in terms of both geography and products, and are therefore better positioned against geographic and product risk.
- Large banks can adopt more sophisticated risk management systems than smaller banks;

By contrast, the view that competition benefits stability predicts that:

- Market power leads to riskier banks' portfolio because higher loan rates reduce entrepreneurial efforts;
- Greater diversification make large banks readjust their portfolios towards greater risk;
- The implicit guarantee of survival that banks of systemic importance – which are more likely to exist in concentrated markets – enjoy because they are treated as too big to fail worsens their moral hazard problem and induces them to take excessive risk;
- Large banks are more opaque and thus more difficult to monitor for regulators, and have less effective internal control systems.

<sup>38</sup> See Bikker and Spierdijk (2009).

### 5.1 *The measures of competition and stability in the various studies*

Studies differ in the sample and period analyzed and in the methods used to measure competition and stability. Earlier studies tend to measure competition with structural variables such as concentration ratios or number of banks, while more recent studies use the Lerner index or the H-statistics.

Stability is measured with variables capturing individual bank distress or systemic distress. Individual bank distress, that is, proximity to bankruptcy, can be measured by the “z-score” (the sum of capital-asset ratio and return on assets weighted by the standard deviation of return on assets) or by the non-performing loan ratio (the ratio of non-performing loans to total loans). Systemic distress can mean either systemic risk, which is typically measured by the correlation of banks’ stock returns, or actual systemic crises when banks are unable to fulfil their intermediation function.<sup>39</sup>

### 5.2 *Bank-level studies on individual countries*

Most studies of individual countries test the relationship between competition and risk taking. Earlier studies on the United States banking system support the charter-value theory. A study looking at 85 large United States bank holding companies between 1971 and 1986 finds that reduced market power, as measured by market-to-book asset ratio, induces banks to reduce their capital cushions and increase the interest rates on large certificates of deposits.<sup>40</sup> These results indicate that the erosion of charter values caused by various deregulation measures contributed to the greater bank fragility in the United States during the 1980s as they led to lower capital cushions and higher risk premiums reflected in the spreads of large certificate of deposits. Several later studies of the United States confirm a negative relationship between market power and banks’ risk.<sup>41</sup>

Bank-level studies of other countries support, at least partly, the charter value theory. A study analyzing the Spanish banking sector in the year 1988-2003 find strong evidence that competition, as measured by the Lerner index for various commercial loan products, is negatively correlated with bank risk as measured by the proportion of a bank’s commercial non-performing loans.<sup>42</sup> Similar results, although less strong, hold for the Lerner index calculated for the deposit market. Notably, in this study the standard measures of market concentration (C5, Herfindahl-Hirschmann index and number of banks operating in each market) are not found to affect the ratio of non-performing commercial loans. Similar results of a negative relationship between competition and stability are obtained in a study of Russia for the period 2001-2007, where stability refers to the occurrence of actually bank failures rather than to risk taking measures.<sup>43</sup>

#### 5.2.1 *Descriptive studies*

A few, mostly descriptive, historical studies examine the efficiency and stability properties of banking systems in different countries. Competitive conditions are often considered as one factor in efficiency. Some results point to a negative link between competition and stability. For example, a study of the Canadian and United States banking systems between 1920 and 1980 shows that Canadian banks had lower failure rates than United States banks. The study relates this difference to the oligopolistic market structure of the Canadian banking system, but it does not find evidence of monopoly rents in the deposit

<sup>39</sup> See Demirgüç-Kunt and Detragiache (1998 and 2002) for a precise definition of systemic banking crisis.

<sup>40</sup> See the influential work by Keely (1990).

<sup>41</sup> See for example, the survey of the empirical evidence in Jeménez, Lopez and Saurina (2007).

<sup>42</sup> See Jeménez, Lopez and Saurina (2007).

<sup>43</sup> See Fungacova and Weill (2009).



and loan rate levels.<sup>44</sup> Comparison of balance sheets shows that Canadian banks were more profitable than United States banks. The findings suggest that Canadian banks were both more stable and more efficient – but not less competitive – than their US counterparts. A study of Spain and Greece in the last decade finds stronger evidence that the banking system in Spain was both more competitive and more stable than the banking system in Greece.<sup>45</sup>

By contrast, an analysis of the United Kingdom and the German banking systems during the last decades finds evidence that banks' profits were consistently higher in the United Kingdom than in Germany, but those profits were also more variable and thus more unstable.<sup>46</sup> The higher profits were due to higher non-interest income and lower staff costs. The lower volatility in Germany was related to lower inflation and less competition, in particular from foreign banks. The banking system in the United Kingdom thus appears to have been both more competitive and less stable than in Germany, consistent with the possibility that there is a trade-off between competition and stability in banking.

### 5.3 *Cross-country evidence*

Cross-country studies of the relationship between competition and stability are still scarce due to the lack of available and comparable data until recently. In general, these studies can be divided into two groups. The first group focuses on the relationship between competition, concentration and risk taking by individual banks. Results vary depending on the sample considered and the measures of competition and stability employed. The second group focuses instead on the impact of competition and concentration on the systemic stability of the banking sector. Results in these studies suggest that both competition and concentration have a positive impact on financial stability.

#### 5.3.1 *Competition, concentration and individual bank stability*

A study using both a cross-country data set on 134 countries for the period 1993-2004 and a cross-sectional sample on the US in the year 2003 provides evidence of a positive relationship between competition and stability.<sup>47</sup> The study measures competition with the Herfindahl-Hirschmann index and stability with various measures of the probability of individual bank failure such as the z-score and the ratio of equity to total assets. The study finds that banks in markets with a higher HHI are more likely to fail.

But when stability is measured as the overall bank risk, the relationship between competition and stability is less clear. A study using data for 8,235 banks in 23 developed countries found that market power, as measured by the Herfindahl index and the Lerner index, increases loan portfolio risk but decreases overall risk exposure.<sup>48</sup> The reason for these apparently contrasting results is that banks tend to offset the higher loan risk by holding more equity capital, and this reduces in turn the overall risk.

#### 5.3.2 *Competition, concentration and systemic stability*

Existing cross-country studies focusing on systemic stability find a positive effect of both competition and concentration on stability. An influential study examines how the likelihood of a financial crisis

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<sup>44</sup> See Bordo, Redish and Rockoff (1996).

<sup>45</sup> See Staikouras and Wood (2000).

<sup>46</sup> See Hoggarth, Milne and Wood (1998).

<sup>47</sup> See Boyd, De Nicolò and Jalal (2009).

<sup>48</sup> Berger, Klapper and Turk-Ariss (2009) find these results in a sample of 9000 banks from 89 developing and developed countries.

depends on various banking system, regulatory and country characteristics in a sample of 69 countries over the period 1980-1997.<sup>49</sup> The main findings are:

- Bank concentration, as measured by the share of assets of the three largest banks in total banking assets, is (robustly) negatively correlated with financial crises. That is, more concentrated banking systems are less likely to suffer systemic banking crises.
- The likelihood of a financial crisis is lower in countries where regulation allows more entry, foreign ownership and a wider range of activities, and where the institutional conditions stimulate competition. To this extent that this kind of regulation increases the contestability and the competitiveness of the banking sector, this result suggests that more competition is associated with more stability.

As the study suggests, the positive effect of concentration on stability is likely to depend on better possibilities for larger banks to diversify risk. There is no evidence that that the positive effect of concentration on stability depends on the market power that banks enjoy in more concentrated systems.

These results are confirmed in another cross-country study, where competition is measured directly with the H-statistics.<sup>50</sup> In a sample of 45 countries over the period 1980-2005, the study finds that more competitive and more concentrated banking systems have a lower probability of a systemic crisis.

The results of cross-country studies highlight that competition and concentration have independent effects on bank stability. One possible reason for this relates to a measurement issue. At least for some products, competition has a local dimension which cannot be captured through national and consolidated measures of concentration. Another possible reason is that concentration has an independent effect on stability through channels other than competition that relate to risk diversification and size.

#### **5.4 Bank mergers and risk diversification**

The analysis of the channels through which concentration might affect stability is the subject of studies of bank mergers and market power. The focus is on whether mergers and thus concentration lead to better risk diversification. The results depend crucially on whether the analysis allows for portfolio adjustments.

Mergers among banks are typically found to reduce the risk of the merging parties, but only if portfolio adjustments are not considered. For example, a study comparing the pre- and post-merger characteristics of 256 acquisitions by United States bank holding companies between 1984 and 1993 finds lower post-merger risk, as measured either by the standard deviations of the returns on equity and on assets or by the z-score measure of default risk.<sup>51</sup> Similarly, another study that simulates different consolidation strategies among bank holding companies with data from 1994 finds that interstate expansion should lead to lower insolvency risk.<sup>52</sup> The results suggest that mergers reduce banks' risk because they allow banks to achieve greater diversification benefits.

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<sup>49</sup> Beck, Demirgüç-Kunt and Levine (2006).

<sup>50</sup> See Schaeck, Cihak and Wolfe (2009).

<sup>51</sup> See Craig and Santos (1997) and Carletti and Hartmann (2002) for a review of earlier studies finding similar results.

<sup>52</sup> See Hughes et al. (1999).

But greater diversification does not necessarily reduce banks' risk overall, because it may induce banks to readjust their portfolios towards riskier ones. Studies of United States bank mergers indeed find that greater diversification lowers average and marginal costs of risk management and induces banks to take on more risk.<sup>53</sup>

### **Box 3. Concentration and stability: the cases of Australia, Canada and the UK**

In line with the results of the cross-country studies on the relationship between concentration and stability, casual empiricism suggests that countries with highly concentrated banking sectors have been more resilient to the crisis that started in 2007 than countries with more competitive banking sectors. Outstanding examples of the apparent nexus between concentration and stability are Australia and Canada. The banking sectors in the two countries present a very similar structure: four major banks dominate the sector in Australia, where also a few small domestic and foreign banks are present; six banks dominate the whole system in Canada.

But casual empiricism also suggests that other countries with similarly highly concentrated banking sectors have instead been very much affected by the crisis. A striking example is the United Kingdom where, as in Australia, the banking sector is dominated in the lending and deposits of households and companies by four large banks and a handful number of small and foreign institutions.

This suggests that, even accepting the positive contribution of concentration to stability, other factors are also important in explaining the occurrence of a banking crisis as well as the resiliency of a country against it. Two of these factors are:

- Funding structure of financial institutions;
- Institutional and regulatory environment prevailing in a country.

*Funding structure.* Australian and Canadian banks have relied mostly on depository funding, much of which came from retail sources such as households. This seems to have been a key determinant of the resilience of these countries during the crisis. By contrast, British banks have increasingly relied on wholesale funding from financial markets (other banks, money market funds, corporate treasuries and other non-bank investors). The “customer funding gap” of UK-owned banks, which indicates net dependence on wholesale funding, rose from zero in 2001 to GBP 738 billion in 2008 (around 50% of GDP), of which GBP 333 billion was accounted for by the net interbank deposits from abroad (Davis, 2009). Based on a sample of all large commercial banks in OECD countries, a study using multivariate regression analysis finds that funding structure was the most robust predictor of bank performance during the crisis (Ratnovski and Huang, 2009).

*Institutional and regulatory environment.* Australia and Canada also have much stricter regulatory environments than the United Kingdom. In Australia and Canada, banks' exposure to structural finance products and wholesale activities has been very limited. Besides from the reasons linked to the market structure of these countries as discussed above, this lower exposure results from more severe and stringent regulatory factors that have reduced the banks' incentives to take risk. Some of the regulatory measures in place in Canada involved:

- Stringent capital regulation with higher-than-Basel minimal requirements;
- Limits on banks' involvement in foreign and wholesale activities;
- Conservative mortgage product market with less than 3% of mortgages being subprime and less than 30% being securitised.

A similar conservative environment was present in Australia, where (Reserve Bank of Australia, 2009):

- The legal framework places a strong obligation on lenders to make responsible lending decisions in the mortgage market;
- Mortgages are “full recourse”;
- A severe and proactive domestic regulatory framework, in which several stress tests of deposit-taking institutions housing loan portfolios were performed and capital requirements for higher-risk housing loans were imposed.

<sup>53</sup>

See Chong (1991) and Hughes and Mester (1998).

By contrast, the institutional and regulatory framework in the UK was characterised by a weakening of the standard regulatory tools. Concerning capital regulation, for example, the effectiveness of the imposed capital ratios was weakened by the off balance sheet vehicles that banks used to hold securitised assets. This type of activities contributed also to reduce the transparency of a bank's financial position and made it difficult for regulators to discern the true risk of the overall market SIVs.<sup>54</sup>

## 6. Financial regulation, competition and stability

The link between financial regulation, competition and stability has many facets. As shown in the cross-country studies, regulatory measures promoting competition, such as lower barriers to entry and fewer restrictions on bank activities, improve systemic stability.<sup>55</sup>

Competition may affect also the effectiveness of regulation in promoting stability. A study including 421 commercial banks from 61 countries finds that capital regulation is effective in reducing risk-taking, as measured by the ratio of non-performing loans, in countries where the banking system is more competitive, as measured by a lower level of concentration. It does not need to be effective in countries with highly concentrated banking systems.<sup>56</sup>

### 6.1 Financial liberalisation, regulation and stability

Moreover, as predicted by theory, an appropriate regulatory framework may mitigate the potential negative effects of competition on stability. Some studies provide evidence of this by testing how the effect of financial liberalisation, used as a proxy for greater competition, on banking stability depends on the regulatory framework.

The wave of financial deregulation and liberalisation in the financial sector started in the 1970s. Many regulations, such as the rules limiting interstate banking, were relaxed or repealed and financial institutions became much freer to choose their activities and prices, to develop new products and expand into new areas or countries. As competition intensified in many segments, a major process of consolidation started in the late 1990s.<sup>57</sup>

The era was also marked by a number of financial crises, after a long period of stability. In addition to the current one, crises broke out in the United States, Scandinavia, Japan and Asian countries, among others. These events suggest that liberalisation and competition contribute to financial crises, but closer examination reveals that the relationship between competition and stability depends on the regulatory framework.

Studies of the crises in Scandinavia and Japan show that financial liberalisation can trigger a crisis if it is not carried out properly. Liberalisation that is not accompanied by a careful revision and adjustment of the regulatory framework may become destabilising.<sup>58</sup> Some cross-country studies confirm this link between crisis and the quality of regulation.<sup>59</sup> The association between financial liberalisation and the

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<sup>54</sup> See P. Davis (2009).

<sup>55</sup> See Beck, Demirgüç-Kunt and Levine (2006).

<sup>56</sup> See Behr, Schmidt and Xie (2009).

<sup>57</sup> See for example Group of Ten (2001).

<sup>58</sup> See for example Kanaya and Woo (2000) for Japan; and Drees and Pazarbasioglu (1998) and Honkapohja and Koskela (1999) for the Nordic countries.

<sup>59</sup> See for example Demirguc-Kunt and Detragiache (1999).

probability of banking crises is found to be positive, but the size of the impact depends on the quality of the institutions and of the regulatory framework. The negative effect is mitigated in countries with a strong institutional environment, a low level of corruption, a good respect of the rule of law and good contract enforcement. More importantly, financial liberalisation is found to be beneficial where the institutional and regulatory frameworks are developed and well-designed. A good institutional and regulatory framework can check and prevent behaviour that undermines the stability of the system. To the extent that liberalisation leads to more competition, this evidence suggests that greater competition need not undermine financial sector stability, if accompanied by a proper regulatory framework.

#### **Box 4. Liberalisation, deregulation and banking crises in 1990s: the case of Japan**

Japan experienced a dramatic acceleration in the process of financial liberalisation and deregulation in the second half of the 1980s. The financial liberalisation consisted mostly in:

- Increased access of households to the system;
- Reduction in market segmentation;
- Liberalisation of short-term euro-yen loans to residents;
- Relaxation of interest rate control;
- Creation of a domestic commercial paper market;
- Gradual removal of the restrictions on access to the corporate bond market.

Accelerated liberalisation was thought to have contributed to destabilise the banking system, by intensifying competition and reinforcing risk-taking incentives that weakened the banks.

But several observers have recognised that the liberalisation process contributed to the Japanese banking crisis in the 1990s only because it was conducted without adequate changes in the regulatory and supervisory framework. (Cargil, 1999; Hoshi and Kashap, 1999). Elements of the old regime that survived after liberalisation included lack of transparency, close relationships among financial institutions, businesses and regulatory authorities, and inefficiency in the delivery of financial services. According to this view, the increased risk opportunities that banks enjoyed after the liberalisation process would not have been a problem if the effectiveness of prudential regulation and supervision at controlling bank behaviour and realigned incentives had been also strengthened.

In sum, most of the observers agree that poor design of liberalisation, rather than the liberalisation itself, contributed to the distress of the financial system in Japan.

## **7. Crisis management measures, bank size and the “too big to fail” doctrine**

The current crisis has witnessed the use of massive public intervention in the form of liquidity and capital injections, government guarantee schemes and orchestrated mergers. Sharp reductions in interest rates, an instrument that is typically used for monetary policy, have also been used to facilitate liquidity and the functioning of the banking system.

The main rationale behind the bailouts has been the fear of contagion, that is, the risk that the failure of one institution would propagate through the system. This fear has led public authorities all over the world to intervene and rescue even middle-sized financial institutions occupying crucial positions in the interbank markets or in particular market segments.<sup>60</sup> Large institutions have been encouraged and allowed

<sup>60</sup> See Allen and Carletti (2008).

to merge with or acquire others – e.g., JP Morgan/Bear Stearns and Bank of America/Merrill Lynch in the United States and Lloyds/HBOS in the United Kingdom. Many retail banks have gone into liquidation.<sup>61</sup>

The measures adopted have been successful, in avoiding a systemic breakdown of the financial system and restoring investors' confidence. They have also shown, however, the difficulties of dealing with the insolvency of financial institutions, in particular in times of systemic crises. This raises important questions:

- What are the consequences of being “too big to fail” on banks' incentives to compete and take risk?
- What will be the impact of the mergers and the bailouts that were prompted by the crisis on the structure of the banking industry and on banks' incentives to compete?

### **7.1 Bank size and risk taking**

Positions in the academic literature about the relationship between bank size and risk are based largely on arguments that have been discussed above in terms of stability generally.

Evidence provides more support to the argument that large banks are riskier. Most studies focus on the impact of diversification. The results depend crucially on whether banks compensate the benefits of greater diversification by taking additional risk.

A study examining 122 United States bank holding companies finds that large banks have a lower volatility of stock returns, suggesting a benefit from diversification. But that did not translate into a lower probability of failure for these banks, as measured by lower z-scores.<sup>62</sup> Large banks in the United States failed more often than small banks in the period 1970-1986, but less often in the period 1987-1994.<sup>63</sup> A recent study using a broader data set finds that the probability of failure, as measured by the z-score, increases with bank size, not only for the United States but also for European and Japanese banks in the period 1988-1998.<sup>64</sup> This study also finds that state ownership has a positive impact on banks' risk of failure. These results imply that larger banks do not use diversification to reduce the risk of failure.

Some studies analyze the effects of greater diversification on the risk of individual banks' portfolios. A study of a sample of United States bank holding companies (BHCs) finds that larger BHCs have lower stock return volatility, confirming a positive effect of size on BHC diversification. However, this does not translate into reductions in overall risk. The risk reducing potential of diversification at large BHCs is offset by their lower capital ratios, larger C&I loan portfolios, and greater use of derivatives. This study is empirical support for the theoretical argument that size-related diversification must not reduce bank insolvency risk.<sup>65</sup>

Similar results are obtained for the impact of bank size on systemic stability. Large and complex banking organisations in the United States are found to have increased both their market shares and their stock return correlations during the 1990s. This suggests an inverse relationship between bank size and

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<sup>61</sup> In the United States, the number of large investment banks halved, and over 100 retail banks are going into liquidation.

<sup>62</sup> See Boyd and Runkle (1993).

<sup>63</sup> See Boyd and Graham (1991 and 1996).

<sup>64</sup> See De Nicoló (2000).

<sup>65</sup> See Hellwig (1998) for a formal theoretical analysis of this argument.

systemic risk. Moreover, to the extent that increased market shares imply also higher profits, this result supports also an inverse relationship between competition and stability.<sup>66</sup>

Large banks also have a greater tendency to leverage, potentially as a consequence of implicit too-big-to-fail protection. The effect of size on leverage is shown explicitly in a study of the United States banking system in the 1980s, where large banks are found to have taken greater risk through larger leverage. Faced with enhanced competition, large banks exploited the implicit guarantee of the “too-big-to-fail” doctrine to take greater risk.<sup>67</sup> The source of greater risk was an inadequate regulatory policy that encouraged excessive risk taking and not the degree of competition in the banking system.

## 7.2 *The future structure of the financial industry*

The measures adopted during the recent crisis are likely to have an important impact on the future structure of the financial industry and thus on competitive conditions in the industry.

The numerous mergers occurred during the crisis have led to a significant increase of the concentration levels of the banking industry in several countries. Between 2005, before the crisis broke out, and 2009, the market share in deposits of the top five domestic institutions has increased from 29.3% to 37.3% in the United States and from 58.3% to 61.3% in France. Similar patterns can be seen in the loan markets.

The consequences of this increased concentration on competition in the banking industry will very much depend on the exit strategies that will be adopted and the measures that will eventually be imposed on the banks that have received public support. In Europe, for example, several of the banks that have been bailed out or have been involved in orchestrated mergers have been subject to severe measures in terms of size reduction and limits on activities.<sup>68</sup> Banks in the United States may also be subject to restrictions on the scope of activities and limits on concentration, under the plan announced in January 2010.<sup>69</sup> An important role will also be played by the new regulatory framework that many countries are likely to implement in the future in an attempt to improve the stability of the financial system and in particular of systemically important financial institutions.

Although concentration and competition are distinct concepts, and a concentrated banking sector can still be competitive, nonetheless the extensive academic literature shows that consolidation is likely to reduce competition in the financial sector, in particular in retail banking.<sup>70</sup> Moreover, the increase in bank size and the massive public interventions during the crisis will worsen the too-big-to-fail problem, encouraging excessive risk taking and distorting the competitive playing field. Systemically important institutions that are perceived to receive implicit public guarantees may benefit from unfair funding advantages relative to smaller institutions.

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<sup>66</sup> De Nicoló and Kwast (2001).

<sup>67</sup> See Boyd and Gertler (1993).

<sup>68</sup> For example, Commerzbank, Hypo Real Estate, Landesbank Baden Württemberg, Northern Rock have been required by the European Competition, among others, to cut their balance sheet by half. Similarly, ING, RBS, Lloyds have been imposed measures ranging from the separation of the insurance and banking businesses to restrictions on aggressive behaviors and on potential acquires of the activities or branches to be dismissed.

<sup>69</sup> [http://www.economist.com/opinion/displayStory.cfm?story\\_id=15374543&source=features\\_box\\_main](http://www.economist.com/opinion/displayStory.cfm?story_id=15374543&source=features_box_main).

<sup>70</sup> See Carletti, Hartmann and Spagnolo (2002) for a survey of the literature analyzing the effect of bank mergers for the loan and the deposit markets.

## 8. Conclusions

The academic literature, both theoretical and empirical, is not conclusive about whether competition reduces stability or increases it. The once-dominant view was that greater competition would increase bank risk taking through a reduction of charter value, but recent work challenges that theory. Analysis of the relationship between competition and fragility stemming from the liability side predicts that it can go either way.

The empirical evidence is just as ambiguous. Depending on the sample and the period of analysis, and on the choice among the different ways to measure competition and stability, studies find that greater competition can lead to more stability or to less. Cross country studies find that both concentration and competition have a positive effect on systemic banking stability. This suggests that concentration is not a good proxy for competition, and that the positive effect of concentration on stability is more likely to occur because of better risk diversification opportunities rather than because of increased market power in concentrated banking systems.

Nonetheless, some conclusions can be drawn:

- If appropriate regulation and supervision are in place, competition need not reduce stability. Theory shows how regulation could correct or mitigate negative effects of competition on stability. Empirical studies show that pro-competitive regulatory changes that reduce restrictions on entry and activity can improve stability, measured either as individual bank distress or systemic risk. On the other hand, failures of supervision and regulation are factors that reduce stability. Waves of financial deregulation and increased competition are found to be detrimental for stability if not accompanied by appropriate financial regulation. Regulation must take account of market conditions, of course; for example, the effectiveness of standard regulatory tools, such as capital requirements, on bank risk may be affected by market structure.
- The available research does not establish that competition caused the crisis that started in 2007. Certainly, competition can reduce margins. Competition could increase risk taking, in particular if the risk taking was not controlled by appropriate regulation. But the results of both the theoretical and the empirical literature are too ambiguous to draw clear conclusions. With a few exceptions, most studies focus on individual bank stability, which is very different from the systemic crisis that we observed since August 2007.
- The effects of size and structure on stability may be separate from their effects on competition. Permitting larger financial institutions might not necessarily lead to a lower degree of competition, but larger institutions do seem to take more risk on their portfolios. Whatever the reason for the increased risk, whether it is compensation for their improved diversification or exploitation of being “too big to fail”, more attention should be devoted to the issue of an optimal size for financial institutions. The casual observation that the larger banks were also the ones kicking off and experiencing most troubles during the recent crisis seem to support this conclusion. If the principal objective of public policy is to avoid another systemic crisis, that goal would counsel against increasing bank concentration and creating larger banks that are clearly too big to fail, because those steps may reduce stability.
- Most studies look at risk or instability in traditional loan portfolios and ignore important new sources such as derivatives and other financial innovations. Market microstructure and information flows play a crucial role in modern financial systems. For large financial institutions, active participation in financial markets has overshadowed traditional activities based on pricing loans and deposits. Academic research needs to adjust to the developments in the financial



markets and financial institutions. How the new financial industry landscape will affect the stability and the level of competition of the financial system worldwide is still to be assessed. The potential consequences of the crisis management measures and of the regulatory reforms on competition among financial institutions should not be underestimated.

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## NOTE DE RÉFÉRENCE

*par le Secrétariat*

### 1. Introduction

La crise qui a éclaté dans le secteur financier pendant l'été 2007 en a ébranlé la structure et le fonctionnement dans le monde entier. Pour maintenir la confiance des investisseurs et restaurer la viabilité, les pouvoirs publics ont réagi à la crise non seulement en injectant des liquidités et des capitaux et en introduisant des dispositifs de garantie implicite et explicite, mais aussi en procédant directement à des opérations de sauvetage et à des achats d'actifs. Ils ont soutenu les grandes fusions destinées à sauver des institutions en sérieuse difficulté. Alors que nombre de petits établissements bancaires sont mis en liquidation, surtout aux États-Unis, il n'a pas été permis à certaines grandes et moyennes institutions financières de faire faillite. L'ampleur et le coût de ces mesures prises pour gérer la crise sont sans précédent.

Pour éviter la répétition d'une telle crise systémique et des coûts qu'elle a entraînés pour y faire face, il est important de comprendre comment et dans quelle mesure les éléments de la structure et le fonctionnement du système financier et sa réglementation ont conduit à la crise. Au niveau macroéconomique, des facteurs comme la faiblesse prolongée des taux d'intérêt aux États-Unis et les déséquilibres mondiaux qui ont fait suite à la crise asiatique ont contribué à la formation de bulles sur les marchés boursiers et immobiliers. Au niveau microéconomique, l'importance de l'endettement, le système de rémunération des cadres et l'innovation financière ont pu conduire les institutions financières à exploiter les bulles et à prendre des risques excessifs (Allen et Carletti, 2009).

La concurrence peut aussi avoir joué un rôle à la fois comme facteur causal et comme remède. A-t-elle contribué à la crise? En particulier, un « excès » de concurrence dans le secteur financier explique-t-il les risques excessifs pris par les dirigeants des institutions financières depuis le début des années 2000? S'agissant de l'avenir, quels effets les mesures prises pour remédier à la crise, comme les fusions favorisées et l'aide publique apportée, auront-elles sur la concurrence dans le secteur financier et la stabilité du système financier?

La présente note cherche principalement à déterminer si l'intensification de la concurrence a contribué à la crise. La structure et le fonctionnement du système financier ont été profondément modifiés au cours des vingt dernières années notamment par des fusions au niveau national et des réformes réglementaires, de nombreuses restrictions à l'entrée et aux activités exercées ayant été levées. Ces changements ont influé sur la concentration du secteur et l'intensité de la concurrence. À première vue, des pays dotés de secteurs bancaires plus concentrés, comme l'Australie et le Canada, n'ont pas été gravement touchés par la crise et n'ont pas utilisé l'argent public pour renflouer des institutions financières. De même, la France, dont le secteur bancaire est relativement concentré, semble être en meilleure posture que l'Allemagne, dont le secteur est plus éclaté.<sup>1</sup> Nous verrons, toutefois, que les différences de structure n'expliquent pas entièrement les différences observées dans les effets de la crise sur les pays. D'autres facteurs, comme les structures de financement des banques et les cadres réglementaires ont joué un rôle au moins aussi important. Nous considérerons, en outre, rapidement les effets probables sur la concurrence dans le secteur

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<sup>1</sup> Voir l'examen de ce point par Adrian Blundell-Wignall à la réunion d'octobre du Comité de la concurrence de l'OCDE— document DAF/COMP/M(2009)3/ANN3.



financier et la stabilité de celui-ci des mesures prises pour gérer la crise en tenant particulièrement compte du problème des établissements trop grands pour qu'on puisse les laisser faire faillite.

Il ressort de l'analyse théorique de la concurrence et de la stabilité du secteur financier que les relations entre elles sont ambivalentes. La concurrence passe depuis longtemps pour avoir un effet négatif sur la stabilité en exacerbant les risques et en incitant moins les banques à la prudence. Cette façon de voir a été récemment remise en cause par l'idée que la concurrence sur le marché du crédit peut réduire le risque de portefeuille des banques. Elle pourrait aussi augmenter la probabilité de retraits massifs de fonds de certaines banques et le risque de contagion après la faillite d'institutions financières; ces prédictions d'effets négatifs de la concurrence sur le risque systémique peuvent toutefois, peut-être, s'avérer mal fondées.

Les études empiriques des relations entre la concurrence et la stabilité doivent tout d'abord surmonter la difficulté de l'évaluation de la concurrence dans le secteur financier. Celui-ci s'écarte du paradigme structure-comportement-performance du fait d'un certain nombre de particularités comme l'asymétrie de l'information relative aux emprunts des sociétés, les coûts de sortie dans le cadre de la banque de détail et les externalités de réseau liées aux systèmes de règlement. Les indicateurs des structures et de la concentration ne mesurent pas avec précision la concurrence entre les institutions financières. Il faut utiliser d'autres variables, liées plus directement aux niveaux et aux variations des prix. Quel que soit, cependant, le type de mesure employé, les résultats des études empiriques sont également ambigus. Les mesures structurelles et non structurelles de la concurrence se révèlent corrélées positivement et négativement à la stabilité financière selon le pays et l'échantillon analysés et l'indicateur de la stabilité financière utilisé.

Les relations entre la concentration, la concurrence et la stabilité restent donc mal définies. De nouveaux travaux seront nécessaires avant que l'on puisse tirer des conclusions sur les effets de la concurrence sur la crise actuelle. Les relations entre la concurrence et la réglementation financière méritent aussi de retenir davantage l'attention. Des études théoriques montrent que des mesures réglementaires appropriées pourraient corriger ou empêcher les effets préjudiciables éventuels de la concurrence sur la stabilité financière. L'expérience de certains pays, comme le Japon, où une crise bancaire a suivi la libéralisation financière effectuée sans que les cadres de la réglementation et de la surveillance soient modifiés en conséquence, corrobore cette observation. Il serait donc préférable de concevoir et de mettre en œuvre une meilleure réglementation plutôt que de limiter la concurrence ou d'encourager la concentration dans le secteur financier.

La note s'articule comme suit. La section 2 explique la spécificité du secteur financier et sa vulnérabilité à l'instabilité. Pour cela, elle s'intéresse plus particulièrement aux vecteurs d'instabilité qui ont été analysés dans les études consacrées aux relations entre la concurrence et la stabilité. Elle examine aussi d'autres sources d'instabilité, comme l'innovation financière, qui ont joué un rôle important dans la crise actuelle. La section 3 fait le point des études théoriques consacrées aux arbitrages éventuels entre concurrence et stabilité. Après cela, l'attention se porte sur les questions empiriques. La section 4 décrit les divers indicateurs de la concurrence dans le secteur financier en faisant une distinction entre les variables structurelles et non structurelles. La section 5 commente les études empiriques portant sur les relations entre la concurrence, la concentration et la stabilité. La section 6 analyse comment la réglementation pourrait influencer sur le lien entre la concurrence et la stabilité. La section 7 examine les effets que les mesures prises pour faire face à la crise risquent d'avoir à l'avenir sur la concurrence dans le secteur financier. Enfin, la section 8 conclut en faisant le point de ce que l'on peut dire actuellement du rôle joué par la concurrence dans la crise et des implications des mesures massives qui ont été prises pour y faire face pour le degré de concurrence dans le secteur financier et la stabilité de celui-ci à l'avenir.

## 2. La spécificité du secteur financier: les sources d'instabilité et le besoin de réglementation

De tout temps, les banques ont joué le rôle d'intermédiaire entre les investisseurs et les entreprises. Elles recueillent auprès d'investisseurs une quantité importante de richesse sous la forme de dette qu'elles redistribuent au secteur productif par le biais de prêts ou d'autres formes de financement.

### 2.1 *Retraits bancaires massifs, prise de risques excessifs et contagion*

La transformation des échéances des passifs et des actifs est au cœur du problème de la fragilité.<sup>2</sup> Les dépôts sont généralement exigibles à tout moment alors que les prêts sont des investissements à long terme. Lorsqu'une banque est soumise à une demande de retraits massifs, c'est-à-dire lorsqu'un grand nombre de déposants souhaitent en retirer prématurément leurs fonds, elle doit trouver des liquidités soit en empruntant sur le marché interbancaire, soit en vendant des actifs. Ces deux solutions au problème de liquidité qui se pose du côté des dépôts sont hasardeuses. Le marché interbancaire peut ne pas être accessible si, comme pendant la crise de 2007, les marchés financiers cessent de fonctionner correctement. Lorsque les actifs sont vendus pour répondre à des besoins de liquidité à court terme, ils risquent de l'être à des prix bien inférieurs à leur valeur intrinsèque.

Des problèmes d'instabilité se posent aussi du côté des actifs des banques. Celles-ci étant très dépendantes de la dette et détenant des informations privées sur leurs emprunteurs, elles peuvent être incitées à prendre des risques excessifs dans leurs investissements ou les prêts qu'elles accordent. Ce type de risques est beaucoup plus prononcé dans le secteur financier que dans d'autres du fait, à la fois, que l'actif des banques se caractérise par un plus fort degré d'endettement et une plus grande opacité et que leur passif est insensible aux risques de l'actif en raison de l'assurance des dépôts ou des garanties implicites des États.

Les institutions financières sont plus étroitement liées entre elles que les entreprises d'autres secteurs. La faillite d'une banque peut entraîner celle d'autres institutions financières. Ce risque de contagion, qui est l'une des principales caractéristiques du secteur financier, est la raison fondamentale de l'intervention des pouvoirs publics et de la nécessité de réguler le système. La contagion pourrait résulter directement des liens existant entre les banques sur les marchés interbancaires ou dans les systèmes de règlement, ou indirectement de l'interdépendance de leurs portefeuilles.<sup>3</sup>

La gravité du risque de contagion dépend, entre autres, de la taille de la banque défaillante et de la configuration des réseaux existant entre les banques. Quand une institution financière est en difficulté, sa contribution au risque pour l'ensemble du système augmente en fonction de son endettement, de sa taille et de l'asymétrie des échéances.<sup>4</sup> Elle dépend aussi de l'étendue des interconnexions entre les banques qui affecte la corrélation entre les rendements des portefeuilles bancaires. Les banques appartenant à des réseaux étroits détiennent des portefeuilles très similaires et donc très corrélés. La probabilité qu'elles se trouvent en difficulté est faible, mais une fois qu'elles s'y trouvent, le risque de propagation à l'ensemble du système est plus élevé.<sup>5</sup>

<sup>2</sup> Voir Carletti (2008, 2009) et Carletti et Vives (2009) pour des analyses plus poussées.

<sup>3</sup> Voir Allen, Babus et Carletti (2009a) pour un examen de cette question.

<sup>4</sup> Voir Adrian et Brunnermeier (2009).

<sup>5</sup> Voir Allen, Babus et Carletti (2009b).

## 2.2 *Les autres sources d'instabilité dans les systèmes financiers modernes: dette à court terme, gels de marchés et innovation financière*

La crise actuelle a mis en évidence l'importance de la structure de financement des institutions financières. Traditionnellement, les banques réunissaient des fonds par l'intermédiaire des dépôts des particuliers. Elles se sont mises, plus récemment, à lever une grande partie de leurs fonds sous la forme de dettes à court terme de fonds communs de placement surtout au Royaume-Uni et aux États-Unis. À la différence des dépôts, ces dettes à court terme doivent être reconduites fréquemment et ne sont pas assurées. L'expérience récente a montré que cette structure d'endettement peut devenir très problématique en temps de crise. Des travaux de recherche ont commencé à analyser le risque dit de « reconduction » en tant que nouvelle source d'instabilité pour les banques.<sup>6</sup>

Un niveau de liquidité suffisant et un fonctionnement harmonieux du marché interbancaire sont indispensables pour préserver la viabilité des institutions financières. Après les turbulences observées récemment sur le marché interbancaire, des travaux de recherche ont aussi commencé à analyser les gels de marchés et le lien entre les prix des actifs et la stabilité financière. Plusieurs scénarios peuvent conduire au gel d'un marché. Les banques peuvent se mettre à stocker des liquidités et s'arrêter d'effectuer des transactions sur le marché interbancaire en cas de grande incertitude à propos de la demande globale de liquidités.<sup>7</sup> Elles peuvent conserver des actifs illiquides pour éviter de les brader du fait du manque de liquidité du marché.<sup>8</sup> Elles peuvent aussi cesser de prêter sur le marché interbancaire quand l'asymétrie de l'information sur la qualité des banques emprunteuses est trop grande.<sup>9</sup>

L'innovation financière s'est également révélée être une source importante d'instabilité. Des instruments comme les cessions de créances ou les échanges sur le risque de défaillance ont été créés, au départ, pour mieux partager et gérer les risques. Or, ils ont été associés plus récemment à l'accroissement des risques dans le système bancaire. Le transfert de risques de crédit peut encourager les banques à ne garder en portefeuille que les actifs toxiques les plus illiquides ou moins les inciter à sélectionner et à surveiller les emprunteurs convenablement.<sup>10</sup> Cela leur rend plus difficile de vendre des actifs qu'elles ont en portefeuille en cas de besoin et abaisse le niveau des normes de prêt. En outre, en transférant les risques à d'autres institutions financières, les banques sont autorisées à réduire leurs avoirs en capital et à accroître leur endettement. Cela contribue à abaisser les normes de prêt et augmente encore la fragilité du secteur financier.<sup>11</sup> Enfin, le transfert des risques de crédit peut aussi être une source de contagion entre les institutions financières parce qu'il uniformise davantage leurs bilans et les rend ainsi sensibles aux mêmes chocs que ceux résultant, par exemple, de variations des prix des actifs.<sup>12</sup>

## 2.3 *Dispositifs de sécurité*

C'est principalement pour réduire le risque systémique et préserver la stabilité du système financier qu'ont été adoptés les dispositifs réglementaires et de sécurité revêtant la forme de la garantie des dépôts et de la fonction de prêteur en dernier ressort. Si elle est totale, la garantie des dépôts bancaires empêche leurs retraits massifs, les investisseurs étant certains d'être remboursés. *Stricto sensu*, la notion de prêteur en

<sup>6</sup> Voir, par exemple, He et Xiong (2009), et Acharya, Gale et Yorulmazer (2009).

<sup>7</sup> Voir Allen, Carletti et Gale (2009).

<sup>8</sup> Voir Diamond et Rajan (2009).

<sup>9</sup> Voir Heider, Hoerova et Holthausen (2009).

<sup>10</sup> Voir, par exemple, Duffie (2007).

<sup>11</sup> Voir Shin (2009).

<sup>12</sup> Voir Allen et Carletti (2006).

dernier ressort fait référence à l'apport de liquidités par la banque centrale à des banques en difficulté. Bien qu'il existe un débat de longue date dans les travaux de recherche ainsi qu'au niveau de l'élaboration des politiques sur la forme optimale et le rôle précis du prêteur en dernier ressort, il semble généralement admis qu'au moins dans des conditions de marché normales, cet instrument ne doit pas être utilisé pour résoudre le problème de l'insolvabilité de certaines banques. Autrement dit, la banque centrale devrait fournir des liquidités aux banques qui en manquent totalement, mais sont solvables.<sup>13</sup> Cela devrait éviter un recours généralisé à l'argent public et donc limiter le problème d'aléa moral implicite dans tout dispositif d'assurance ou de garantie.

Il est toutefois difficile, même pour les banques centrales, de faire la distinction entre un manque total de liquidités et une insolvabilité. Théoriquement, tant que les marchés peuvent faire face par eux-mêmes aux crises de liquidité systémiques, il ne devrait pas être nécessaire que la banque centrale prête à des banques. Cependant, le marché interbancaire peut cesser de fonctionner correctement, comme on l'a vu pendant la crise récente, et dans ce cas, des banques manquant de liquidités, mais solvables, ne peuvent obtenir les liquidités dont elles ont besoin.<sup>14</sup> Dans ce type de circonstances, il peut s'avérer nécessaire que le prêteur en dernier ressort, et plus généralement les pouvoirs publics, interviennent d'une façon ou d'une autre pour éviter que les difficultés rencontrées par une banque ne se propagent dans l'ensemble du système.

Chaque fois que le coût social de la faillite d'une banque est plus élevé que son coût privé, il devient nécessaire d'apporter un soutien public à l'institution en question. Cela ne veut toutefois pas dire qu'il faut voler systématiquement et inconsidérément au secours de toutes les banques. Dans la mesure où il réduit le coût privé de la prise de risques, le prêteur en dernier ressort ou tout soutien public incite, comme n'importe quel dispositif d'assurance, les banques à prendre de plus gros risques.<sup>15</sup> Par conséquent, seules les banques dont la faillite aurait un effet systémique devraient bénéficier d'un soutien public. Il s'agira très probablement de grandes banques et d'établissements occupant des positions clés dans le système de règlement ou sur le marché interbancaire.

Même lorsqu'ils sont conçus comme il convient, les renflouements et les interventions publiques présentent d'importants inconvénients. Ils génèrent des disparités entre les petites et les grandes banques avec des conséquences négatives en termes de concurrence pour les premières. Ils maintiennent en activité des établissements non performants. En laissant espérer un soutien, ils aggravent le problème de la prise de risques excessifs, qui est particulièrement préoccupant dans le cas des banques d'importance systémique.<sup>16</sup> Ce problème des établissements « trop importants pour qu'on les laisse faire faillite » est devenu particulièrement préoccupant après les interventions publiques massives des dernières années et la taille que de nombreuses banques ont atteinte au cours de la décennie écoulée. Dans la mesure où cette inquiétude est justifiée – et nous examinerons plus loin les constatations faites en ce qui concerne la taille et la prise de risques des banques – il convient de mettre au point des mesures appropriées pour limiter le risque potentiel de la prise de risques excessifs par les grandes institutions financières. Les discussions en cours sur les mesures qui peuvent être prises pour limiter la taille des banques ou imposer des ratios de fonds propres plus stricts aux grands établissements vont dans le sens de l'imposition de règles plus contraignantes aux institutions financières.

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<sup>13</sup> C'est l'idée sur laquelle repose le principe de Bagehot selon lequel les banques centrales devraient prêter librement, mais uniquement, aux banques manquant de liquidités à un taux de pénalité et contre des garanties de bonne qualité. Voir Bagehot (1873).

<sup>14</sup> Voir, par exemple, Allen et Carletti (2008c).

<sup>15</sup> Voir, par exemple, Goodhart (1987).

<sup>16</sup> Demirguc-Kunt et Detragiache, 1999.

### 3. Concurrence et stabilité dans le secteur financier: des liens théoriquement ambigus

Cette section décrit la concurrence dans le secteur financier et explique les raisons pour lesquelles et les biais par lesquels une intensification de la concurrence pourrait conduire à une plus grande instabilité. La concurrence devrait produire dans le secteur bancaire les mêmes effets que dans d'autres secteurs, c'est-à-dire améliorer l'efficacité et favoriser l'innovation et donc se traduire par une plus grande variété de produits, des prix plus bas, un plus large accès aux moyens de financement et de meilleurs services. Le secteur financier s'écarte du modèle théorique de la concurrence par plusieurs aspects. Ceux-ci incluent les obstacles endogènes à l'entrée, l'asymétrie de l'information dans le cadre des relations avec les entreprises, les coûts de transfert d'un établissement à un autre, les effets de réseau et les éléments de la concurrence hors prix qui peuvent être utilisés comme des variables stratégiques et des sources de rentes.<sup>17</sup> De nombreux autres secteurs économiques présentent aussi, bien sûr, ces particularités à un degré plus ou moins élevé.

#### 3.1 Concurrence et prise de risques du côté de l'actif

Le lien entre la concurrence et la stabilité reste une question non résolue dans les études théoriques.<sup>18</sup> Jusqu'aux années 80, la concurrence passait pour avoir un effet négatif sur la stabilité. Il était considéré qu'une concurrence intense favorisait une prise de risques excessifs du côté de l'actif et augmentait ainsi la probabilité de faillite de certaines banques. Des études récentes ont en revanche montré que la concurrence peut être bénéfique pour le risque de portefeuille des banques.

L'idée qui sous-tend ce que l'on appelle l'hypothèse de la « valeur de l'agrément bancaire » (*charter value*) est que la réalisation de plus gros profits incite les banques à limiter les risques qu'elles encourent pour éviter la défaillance et bénéficier de bons rendements. La concurrence exerçant des pressions sur les marges et réduisant la valeur de l'agrément bancaire, les banques sont incitées à prendre davantage de risques.<sup>19</sup> La concurrence peut, en outre, avoir un effet sur le biais par lequel l'innovation contribue à la stabilité financière. Si, d'un côté, les dérivés de crédit améliorent la stabilité en favorisant un meilleur partage des risques, de l'autre, ils rendent aussi plus tentant pour les banques de prendre davantage de risques. Ce dernier effet dominant quand les marchés du crédit sont concurrentiels, il contribue à déstabiliser les incitations à prêter.<sup>20</sup>

Des travaux récents montrent comment une intensification de la concurrence dans le secteur bancaire pourrait plutôt avoir pour effet d'améliorer la stabilité. L'intuition sous-jacente est que le comportement des emprunteurs influe aussi sur les risques des projets d'investissement des banques et que les effets de la concurrence sur les incitations des chefs d'entreprise qui utilisent l'argent sont différents des effets observés sur les banques qui le prêtent. Une plus grande concurrence sur le marché du crédit entraînerait une baisse des taux de prêt et une réduction de leurs marges sur les prêts augmenterait, pour les banques, les risques encourus. Mais de l'autre côté des transactions, ces plus faibles taux d'intérêt augmenteraient la rentabilité des investissements pour les entrepreneurs qui empruntent l'argent. De meilleures perspectives de rendement encourageraient les entrepreneurs à s'efforcer davantage de réussir, ce qui réduirait le risque de leur défaillance pour les banques. Selon que l'un ou l'autre effet domine, la concurrence se traduisant

<sup>17</sup> Voir Carletti (2009) et Degryse et Ongena pour une analyse plus approfondie de la concurrence dans le secteur bancaire.

<sup>18</sup> Voir Carletti (2008) pour une analyse plus approfondie et plus technique des travaux publiés.

<sup>19</sup> Voir, par exemple, les travaux influents de Keely (1990), Hellmann, Murdock et Stiglitz (2000); Matutes et Vives (2000), et Allen et Gale (2004).

<sup>20</sup> Voir Instefjord (2009).

par une baisse des taux prêteurs pourrait rendre les portefeuilles des banques plus sûrs.<sup>21</sup> Ces effets sont complexes, mais ils impliquent que les prédictions théoriques d'une relation négative entre la concurrence et la prise de risques ne sont pas nécessairement bien fondées.

### **3.2 Concurrence et fragilité du côté du passif**

Du côté du passif, les relations entre la concurrence et la fragilité financière semblent aussi ambiguës. Les retraits bancaires massifs et les crises systémiques pourraient être la conséquence soit d'une coordination défailante entre les déposants, soit d'une réaction rationnelle de ceux-ci à l'insolvabilité imminente d'une banque. La plupart des études de ces sources de fragilité financière supposent l'existence d'un système bancaire parfaitement concurrentiel, en ignorant les effets de différentes structures de marché et les interactions stratégiques entre les banques.

Quelques études se sont intéressées aux interactions entre fragilité et structure de marché. L'une de leurs conclusions est que les retraits de panique pourraient se produire quelles que soient les conditions de concurrence. Ils résultent de problèmes de coordination entre les déposants et d'externalités de réseau qui, ni les uns ni les autres, ne sont nécessairement influencés par le degré de concurrence s'exerçant pour les dépôts.<sup>22</sup> Des liens pourraient toutefois exister entre concurrence et fragilité. Un renforcement de la concurrence peut en effet augmenter la fragilité des banques: en entraînant une hausse des taux d'intérêt sur les dépôts, il peut exacerber le problème de coordination entre les déposants, provoquant ainsi des retraits de panique,<sup>23</sup> et augmenter également le risque de retraits structurels.<sup>24</sup>

La concurrence affecte aussi le fonctionnement du marché interbancaire. Des banques disposant d'un excès de liquidité et d'un pouvoir de marché sur le marché interbancaire pourraient être confrontées à des choix aux effets opposés. Elles pourraient refuser de fournir des fonds à des banques déficitaires ce qui forcerait celles-ci à procéder à des liquidations d'actifs inopérantes et augmenterait leurs risques de défaillance.<sup>25</sup> Ou bien, elles pourraient décider de venir en aide aux banques manquant de liquidités pour éviter un phénomène de contagion. Cela ne se produit que lorsque la concurrence est imparfaite puisque, autrement, les banques sont « preneuses de prix » sur le marché interbancaire et ne peuvent influencer sur le niveau des prix par leur action.<sup>26</sup> Là encore, donc, les relations entre la concurrence et la stabilité du marché interbancaire sont ambiguës.

### **3.3 Concurrence et prise de risques: limiter la concurrence ou améliorer la réglementation?**

Si la concurrence a un effet négatif sur la stabilité en favorisant trop la prise de risques, une façon de corriger cet effet serait de limiter la concurrence par des mesures telles qu'un plafonnement des taux d'intérêt ou une limitation des entrées. Une autre façon de résoudre le problème serait d'introduire une réglementation visant à décourager et sanctionner les actions risquées. Une assurance des dépôts ajustée en fonction du risque ou des ratios de fonds propres appropriés permettraient de contrôler la prise de risques même en présence d'une intense concurrence.<sup>27</sup> Des mesures portant sur les fusions et l'entrée pourraient aussi réduire les incitations à la prise de risques. Si une banque solvable pouvait augmenter sa part de

<sup>21</sup> Voir Boyd et De Nicoló (2005) ainsi que Caminal et Matutes (2002).

<sup>22</sup> Voir Matutes et Vives (1996).

<sup>23</sup> Voir Matutes et Vives (1996).

<sup>24</sup> Voir Goldstein et Pauzner (2005) ainsi que Rochet et Vives (2004).

<sup>25</sup> Voir Acharya, Gromb et Yorulmazer (2009).

<sup>26</sup> Voir Allen et Gale (2004).

<sup>27</sup> Voir, par exemple, Hellmann, Murdock et Stiglitz (2000), Matutes et Vives (2000) et Repullo (2004).

marché en acquérant une institution défaillante, cela créerait une incitation préalable pour les banques à rester solvables. En outre, en permettant de nouvelles entrées, on limiterait le pouvoir de marché que l'établissement survivant pourrait obtenir suite à son opération de sauvetage et on rétablirait la concurrence.<sup>28</sup>

Les interrelations entre la réglementation et la concurrence sont complexes. D'un côté, la réglementation peut contribuer à atténuer les effets négatifs potentiels de la concurrence sur la prise de risques des banques. De l'autre, toutefois, une réglementation mal conçue peut aggraver encore les distorsions des incitations bancaires. La théorie prédit qu'une augmentation de la valeur des agréments bancaires et donc une diminution de la concurrence inciteraient davantage les banques à limiter le risque. Cependant, si cette augmentation de la valeur des agréments bancaires résultait d'un manque d'efficacité de la politique réglementaire comme le renflouement de banques peu performantes, les banques continueraient d'être incitées à prendre des risques.<sup>29</sup> Cela suggère à nouveau que la conception de la réglementation financière importe au moins autant que la structure du marché pour la stabilité du secteur bancaire.

### **3.4 Concurrence et stabilité: évaluation globale**

Une prédiction théorique plausible serait qu'une fois atteint un certain seuil, une intensification de la concurrence tendrait à accroître les incitations à la prise de risques et la probabilité de défaillance bancaire.<sup>30</sup> Cette tendance pourrait être freinée par des considérations relatives à la réputation, l'existence de coûts privés de la défaillance pour les dirigeants des établissements ou une réglementation bien conçue.

La réglementation et les dispositifs de sécurité peuvent jouer un rôle important dans les relations entre la concurrence et la stabilité. Une réglementation bien conçue peut permettre d'atténuer le problème de la prise de risques excessifs qui peut résulter de la concurrence. En revanche, une réglementation mal conçue et l'anticipation d'un large soutien public peuvent elles-mêmes contribuer à inciter davantage les banques à prendre des risques. Ce n'est donc pas uniquement la structure du marché qui importe pour la stabilité du secteur bancaire. L'existence d'un cadre de régulation et de surveillance approprié paraît au moins tout aussi importante. Comme dans n'importe quel autre secteur d'activité, une discipline de marché effective, l'internalisation des pertes futures et un mécanisme approprié de tarification du risque sont des éléments très importants pour encourager un comportement sain et prudent de la part des agents intervenant dans le secteur financier.

## **4. Mesurer la concurrence dans le secteur bancaire**

Trois approches, analysées tour à tour ci-dessous, ont été suivies pour mesurer la concurrence dans le secteur bancaire.<sup>31</sup>

### **4.1 Mesures structurelles de la concurrence**

Des indicateurs bien connus de la structure des marchés, comme les ratios de concentration, le nombre de banques et l'indice de Herfindahl-Hirschman (IHH), sont encore largement utilisés dans les travaux empiriques. Ils trouvent leur origine dans le paradigme structure-comportement-performance (SCP) qui lie la structure d'un marché à des influences sur le comportement des entreprises et, donc, la performance

<sup>28</sup> Voir Perotti et Suarez (2002).

<sup>29</sup> Voir, par exemple, Nagarajan et Sealey (1995).

<sup>30</sup> Voir Carletti et Vives (2008).

<sup>31</sup> Voir aussi Bikker et Spierdijk (2009) ainsi que Claessens (2009).

d'un secteur. Une prédiction de l'approche SCP est qu'un plus haut degré de concentration encouragera la collusion et réduira l'efficacité.

Le paradigme SCP présente des insuffisances bien connues. La structure peut ne pas être exogène, mais résulter du comportement des entreprises. Une structure de marché plus concentrée pourrait résulter d'une meilleure performance, plus efficace, contrairement à ce que prédit le paradigme SCP.<sup>32</sup> Les points de vue divergent sur la meilleure variable à utiliser pour mesurer la structure des marchés bancaires alors que la performance est généralement mesurée à l'aide de variables, comme les marges nettes d'intérêt ou la rentabilité, qui peuvent être influencées par des facteurs autres que le degré de concurrence, tels que la situation macroéconomique ou le niveau d'imposition d'un pays.

#### **4.2 Mesures de la « contestabilité » des marchés**

La deuxième approche consiste à évaluer les conditions de la concurrence en termes de « contestabilité » d'un marché. Des variables comme les indicateurs réglementaires des conditions d'entrée, la présence d'intérêts étrangers, les obstacles formels et informels à l'entrée et les restrictions à l'activité mesurent la menace d'entrée dans le secteur et, donc, la « contestabilité » de celui-ci à l'aide du niveau d'entrée et de sortie.

#### **4.3 Mesures directes de la concurrence: la statistique H**

La troisième approche permet de mesurer directement l'intensité de la concurrence suivant la façon dont les prix ou les résultats réagissent aux coûts. De nombreuses études récentes du secteur bancaire utilisent ce que l'on appelle la statistique H, reposant sur la méthode de Panzar et Rosse qui représente la réaction du résultat aux prix des intrants. La statistique H est la somme des élasticités estimées des recettes par rapport aux prix des facteurs; si elle est égale à l'unité, la concurrence est parfaite, si elle est égale (ou inférieure) à zéro, il y a monopole, et si elle atteint des valeurs intermédiaires, celles-ci reflètent le degré de concurrence monopolistique existant. D'autres études utilisent l'indice de Lerner, qui exprime le pouvoir de marché sous la forme de la différence entre le prix du marché et le coût marginal divisé par le prix à la production. Il se situe entre 0 et 1 et le pouvoir de marché est d'autant plus important que sa valeur est élevée.

Le fondement théorique des mesures directes est plus solide que celui des mesures structurelles, mais les mesures directes présentent aussi des inconvénients. Par exemple, la statistique H impose des hypothèses restrictives aux fonctions de coût des banques. Sa conclusion selon laquelle les hausses de prix des intrants empêchent les recettes totales et les coûts marginaux d'évoluer conjointement sur des marchés imparfaitement concurrentiels n'est valable que si le secteur est en situation d'équilibre, ce qui n'est en pratique que très rarement le cas. Son instrument de mesure unique néglige des différences entre les banques comme leurs différences de taille, de produit ou de situation géographique. Cette méthode est pourtant de plus en plus utilisée dans les travaux de recherche empirique parce qu'elle mesure directement le comportement des banques et par là même la concurrence. L'indice de Lerner permet mieux de faire une distinction entre les différents produits, mais il nécessite des informations sur les prix et les coûts marginaux qui sont très difficiles à réunir.

#### **Box 5. Encadré 1. Mesure de la concurrence: travaux de recherche et politique de la concurrence**

La concurrence est mesurée très différemment dans le cadre des travaux de recherche et dans celui de la politique de la concurrence. Les travaux de recherche ont tendance à traiter le secteur bancaire comme si toutes les banques ne produisaient qu'un seul produit. Ils mesurent la concurrence et les marges sans faire de distinction entre les lignes de produits comme celles concernant les dépôts et les prêts. C'est, à l'évidence, une déficience importante.

<sup>32</sup>

Voir Berger et autres (2004) pour une analyse de ce que l'on appelle l'hypothèse de la structure efficace.



Les banques, en particulier celles qui sont polyvalentes, ont des activités et des produits très variés qui ont des chances d'avoir des marchés géographiques et des marges différents.<sup>33</sup> Quand elles examinent le secteur financier, les autorités de la concurrence procèdent à une analyse plus fine pour distinguer et définir des marchés de produits et des marchés géographiques particuliers.

Il en va de même pour la mesure des structures. La plupart des travaux de recherche mesurent la concentration d'un marché à l'aide de la part des actifs des trois plus grandes banques du pays dans le total des actifs de son système bancaire au niveau national (par exemple, Beck et autres, 2006, Schaeck et autres, 2006). Les autorités de la concurrence concentrent, en revanche, leur attention sur les marchés des dépôts et des prêts aux petites et moyennes entreprises au niveau des provinces ou des régions. (Le Royaume-Uni constitue une exception notable à cet égard puisqu'il considère les marchés des dépôts et des prêts comme nationaux). Une implication importante de cela est que le terme « concentration » peut avoir une signification très différente dans les travaux universitaires et dans le monde de la politique de la concurrence.

De plus, les mesures structurelles communes de la concurrence qui sont tirées des études sur l'organisation industrielle négligent des particularités importantes du secteur financier comme l'asymétrie de l'information et les réseaux qui peuvent avoir une incidence notable sur la concurrence. Si elles ne sont pas corrigées pour tenir compte de ces particularités, ces mesures traditionnelles sont trompeuses.

#### **4.4 Facteurs favorisant la concurrence dans le secteur bancaire**

Les éléments d'information permettant de mesurer le niveau de la concurrence dans les systèmes bancaires sont peu nombreux. La plupart des études de la concurrence et des facteurs qui la favorisent ont été réalisées au niveau des pays parce que l'on ne disposait pas, jusqu'à une date récente, de séries de données sur les banques se prêtant à des comparaisons internationales. Il ressort des maigres informations disponibles que la concurrence varie considérablement entre les pays, mais l'ampleur de cette variation dépend des séries de données utilisées et de la période considérée.<sup>34</sup>

Une conclusion ressort nettement des études: la concurrence a tendance à être plus forte dans les pays qui restreignent moins l'entrée et l'activité.<sup>35</sup> Par contre, les variables structurelles n'ont pas une incidence notable sur la concurrence, mesurée par la statistique H. La contestabilité semble jouer un rôle plus important que la structure du marché dans la vigueur de la concurrence dans le secteur bancaire.

Une autre étude conclut, toutefois, que la taille des banques importe pour le pouvoir de marché et ce, de la façon prédite par le paradigme SCP.<sup>36</sup> Elle constate que le niveau de concurrence diminue sensiblement avec la taille des banques. Cela peut tenir au fait que les grandes banques sont en meilleure position pour s'entendre avec d'autres banques ou qu'elles ont plus de chances d'intervenir sur des marchés de produits ou des marchés géographiques où elles ont peu de concurrents.

### **5. Le couple concurrence-stabilité dans les observations empiriques**

Les éléments d'information permettant d'évaluer les relations entre la concurrence et la stabilité sont également limités.<sup>37</sup> Les résultats empiriques sont aussi ambigus que les prédictions théoriques. Les études

<sup>33</sup> Voir OCDE (2006, 2007).

<sup>34</sup> Voir Claessens et Laeven (2004) ainsi que Bikker et Spierdijk (2007).

<sup>35</sup> Cela concorde avec les observations selon lesquelles la déréglementation financière qui a supprimé les restrictions existantes s'est traduite par une intensification de la concurrence et de meilleures performances économiques. Voir Strahan (2003) pour un examen de ces travaux.

<sup>36</sup> Voir Bikker, Spierdijk et Finnie (2006).

<sup>37</sup> Voir aussi Carletti et Hartmann (2002), Carletti, Hartmann et Spagnolo (2002) et Beck (2009) pour des analyses.

reposant sur les données au niveau des banques de divers pays aboutissent à des résultats différents selon l'échantillon et la période analysés.

Des études transnationales constatent une relation positive entre la concurrence et la stabilité dans le secteur bancaire. Elles concluent aussi à l'existence d'une corrélation positive entre la concentration et la stabilité. Ces corrélations impliquent qu'un degré plus élevé de concentration ne favorise peut-être pas la stabilité en diminuant la concurrence; cet effet pourrait peut-être plutôt être obtenu par d'autres voies telles que les retombées positives de la diversification. Les conclusions tirées soulignent une fois de plus que les indicateurs de base de la concentration, comme les ratios de concentration ou le nombre de banques, ne sont pas de bonnes mesures indirectes du degré de concurrence. Ils doivent au moins être complétés par les indicateurs d'aspects tels que la distribution par taille, reflétant l'asymétrie du marché bancaire et donc l'hétérogénéité des banques et des marchés.<sup>38</sup>

Comme les observations théoriques, les données transnationales font apparaître qu'un cadre réglementaire approprié peut permettre d'atténuer les effets négatifs potentiels sur la stabilité de l'intensification de la concurrence qui résulte d'un processus de déréglementation. La libéralisation financière apparaît bénéfique là où des cadres institutionnels et réglementaires bien conçus sont élaborés.

Avant d'examiner les travaux empiriques, il convient de souligner que le lien entre la concurrence et la stabilité n'est pas analysé de la même façon dans les études théoriques et dans les études empiriques. Il n'est en général pas fait de distinction entre la concurrence, la concentration et la taille dans les études théoriques qui supposent implicitement que la concentration et la taille sont des indicateurs inverses appropriés de la concurrence alors que la distinction entre ces trois concepts revêt une importance particulière dans les études empiriques.

**Box 6. Encadré 2: Le lien entre la concurrence, la concentration, la taille et la stabilité: les principales prédictions empiriques**

Les prédictions suivantes sont valables pour autant que la concentration et la taille des banques constituent de bonnes mesures indirectes de la concurrence. Dans la ligne de l'idée que la concurrence nuit à la stabilité, il est prédit que (voir aussi l'intervention d'Adrian Blundell-Wignall à la réunion d'octobre 2009 du Comité de la concurrence de l'OCDE—DAF/COMP/M(2009)3/ANN3):

- les grandes banques ou les banques qui exercent leurs activités dans des secteurs moins concurrentiels/plus concentrés sont théoriquement plus rentables. Lorsqu'elle est élevée la valeur de l'agrément bancaire (« charter value ») a un effet régulateur dans la mesure où elle limite, pour une banque, les incitations à prendre des risques (hypothèse de la valeur de l'agrément bancaire);
- les grandes banques d'un oligopole stable ont plus de chances de tirer leurs profits des activités bancaires traditionnelles. Elles n'éprouvent donc pas le besoin de lutter pour obtenir des parts de marché dans les domaines des produits de la nouvelle « culture boursière » incluant les produits dérivés, les produits structurés et autres produits similaires;
- il est plus facile aux autorités de régulation de surveiller les quelques grandes banques d'un oligopole stable/secteur plus concentré et de définir leurs règles d'action;
- les grandes banques sont en général plus diversifiées sur le plan géographique et des produits qu'elles gèrent et elles sont, de ce fait, moins exposées au risque géographique et aux risques des produits, et
- les grandes banques peuvent adopter des systèmes de gestion plus élaborés que les établissements de plus petite taille.

L'idée que la concurrence est bénéfique pour la stabilité conduit, au contraire, à prédire que:

- le pouvoir de marché se traduit par des portefeuilles plus risqués pour les banques du fait que des taux de

<sup>38</sup>

Voir Bikker et Spierdijk (2009).

prêt plus élevés ont un effet négatif sur l'effort entrepreneurial;

- une plus grande diversification incite les grandes banques à réajuster leurs portefeuilles vers une plus grande prise de risques;
- la garantie implicite de survie dont les banques d'importance systémique (que l'on a plus de chances de trouver sur des marchés concentrés) bénéficient parce qu'on considère qu'elles sont trop importantes pour qu'on puisse les laisser faire faillite, aggrave leur problème d'aléa moral et les encourage à prendre des risques excessifs, et
- les grandes banques sont plus opaques et donc plus difficiles à surveiller pour les autorités de régulation, et leurs systèmes de contrôle interne sont moins efficaces.

### 5.1 *Les mesures de la concurrence et de la stabilité dans les diverses études*

Les études diffèrent par les échantillons et les périodes considérés et par les méthodes utilisées pour mesurer la concurrence et la stabilité. Les plus anciennes mesurent en général la concurrence à l'aide de variables structurelles comme les ratios de concentration ou le nombre de banques alors que les études plus récentes utilisent l'indice de Lerner ou la statistique H.

La stabilité est mesurée à l'aide de variables reflétant les difficultés financières de certaines banques ou les difficultés systémiques. Le fait que des banques se trouvent en difficulté, c'est-à-dire qu'elles sont proches de la faillite, peut être mesuré par le « score Z » (somme du ratio capital/actif et du rendement de l'actif pondérée par l'écart-type du rendement de l'actif) ou par le ratio des prêts non performants (ratio prêts non performants/ensemble des prêts). Les difficultés systémiques peuvent signifier soit un risque systémique, généralement mesuré par la corrélation des rendements des actions des banques, soit une réelle crise systémique quand les banques ne sont plus en mesure de remplir leur fonction d'intermédiation.<sup>39</sup>

### 5.2 *Études au niveau des banques de différents pays*

La plupart des études de pays cherchent à déterminer la nature des relations entre la concurrence et la prise de risques. Des études plus anciennes sur le système bancaire des États-Unis confirment la théorie de la valeur de l'agrément bancaire. Une étude s'intéressant à 85 grandes sociétés américaines de holding bancaire entre 1971 et 1986 conclut qu'un moindre pouvoir de marché, mesuré par le ratio cours/valeur comptable des actifs, incite les banques à réduire leur coussin de capital et à relever les taux d'intérêt sur les gros certificats de dépôt.<sup>40</sup> Ces conclusions indiquent que l'érosion des valeurs des agréments bancaires provoquée par diverses mesures de déréglementation a contribué à fragiliser davantage les banques aux États-Unis pendant les années 80 en conduisant à une diminution de leurs coussins de capital et à une augmentation des primes de risque dont témoignent les écarts de taux des gros certificats de dépôt. Plusieurs études ultérieures des États-Unis confirment l'existence d'une relation négative entre le pouvoir de marché et les risques des banques.<sup>41</sup>

Des études des banques d'autres pays corroborent, au moins partiellement, la théorie de la valeur de l'agrément bancaire. Une étude analysant le secteur bancaire espagnol entre 1988 et 2003 conclut que tout porte à croire qu'il existe une corrélation négative entre la concurrence, mesurée par l'indice de Lerner calculé pour divers types de prêt aux entreprises, et le risque bancaire, mesuré par le pourcentage des prêts consentis aux entreprises par une banque qui ne sont pas performants.<sup>42</sup> L'indice de Lerner calculé pour le

<sup>39</sup> Voir Demirgüç-Kunt et Detragiache (1998 et 2002) pour une définition précise d'une crise bancaire systémique.

<sup>40</sup> Voir les travaux influents de Keely (1990).

<sup>41</sup> Voir par exemple, l'étude des données empiriques dans Jeménez, Lopez et Saurina (2007).

<sup>42</sup> Voir Jeménez, Lopez et Saurina (2007).

marché des dépôts donne des résultats du même ordre, bien que moins nets. Cette étude, conclut notamment à l'absence de lien entre les indicateurs courants de la concentration du marché (indice C5, indice Herfindahl-Hirschmann et nombre de banques intervenant sur chaque marché) et le ratio des prêts aux entreprises non performants. Une relation négative entre la concurrence et la stabilité est également constatée dans une étude de la Russie sur la période 2001-2007, où la stabilité est mesurée à l'aide du nombre des faillites bancaires plutôt que d'indicateurs de la prise de risques.<sup>43</sup>

### 5.2.1 *Études descriptives*

Quelques études rétrospectives, surtout de nature descriptive, examinent les caractéristiques du système bancaire de divers pays en termes d'efficacité et de stabilité. Les conditions concurrentielles sont souvent considérées comme un facteur de l'efficacité. Certains résultats donnent à penser qu'il existe un lien négatif entre la concurrence et la stabilité. Par exemple, une étude des systèmes bancaires du Canada et des États-Unis entre 1920 et 1980 indique un plus faible taux de faillite pour les banques canadiennes que pour les banques américaines. Elle lie cette différence à la structure de marché oligopolistique du système bancaire canadien, mais ne trouve pas la preuve de l'existence de rentes de monopole dans les niveaux des dépôts et des taux de prêt.<sup>44</sup> La comparaison des bilans fait apparaître que les banques canadiennes étaient plus rentables que les banques américaines. Ces observations donnent à penser que les premières étaient à la fois plus stables et plus efficaces, mais non moins compétitives, que les secondes. Une étude de l'Espagne et de la Grèce au cours de la dernière décennie observe des preuves plus convaincantes du fait que le système bancaire espagnol était à la fois plus concurrentiel et plus stable que le système bancaire grec.<sup>45</sup>

Une analyse des systèmes bancaires britannique et allemand au cours des dernières décennies constate, en revanche, que les profits bancaires étaient régulièrement plus élevés au Royaume-Uni qu'en Allemagne, mais qu'ils y étaient aussi plus variables et donc plus instables.<sup>46</sup> Si les profits étaient plus importants au Royaume-Uni, c'est parce que les revenus autres que ceux provenant d'intérêts y étaient plus élevés et que les frais de personnel y étaient plus bas. La moindre instabilité observée en Allemagne était liée à une plus faible inflation et à une concurrence moins vive de la part notamment des banques étrangères. Le système bancaire britannique semble donc avoir été à la fois plus concurrentiel et moins stable que le système allemand, ce qui concorde avec l'existence possible d'une relation inverse entre la concurrence et la stabilité dans le secteur bancaire.

### 5.3 *Observations transnationales*

Les études transnationales des relations entre la concurrence et la stabilité sont encore peu nombreuses du fait que l'on manquait de données comparables jusqu'à il y a peu. Ces études peuvent, en général, être divisées en deux groupes. Celles du premier groupe sont axées sur les relations entre la concurrence, la concentration et la prise de risques par les banques. Leurs conclusions varient suivant l'échantillon considéré et les indicateurs de la concurrence et de la stabilité utilisés. Celles du second groupe s'intéressent plutôt à l'effet de la concurrence et de la concentration sur la stabilité systémique du secteur bancaire. Leurs conclusions donnent à penser que tant la concurrence que la concentration a un effet positif sur la stabilité financière.

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<sup>43</sup> Voir Fungacova et Weill (2009).

<sup>44</sup> Voir Bordo, Redish et Rockoff (1996).

<sup>45</sup> Voir Staikouras et Wood (2000).

<sup>46</sup> Voir Hoggarth, Milne et Wood (1998).

### 5.3.1 *Concurrence, concentration et stabilité des banques*

Une étude utilisant à la fois une série de données transnationales couvrant 134 pays sur la période 1993-2004 et un échantillon transversal portant sur les États-Unis en 2003 apporte la preuve de l'existence d'une relation positive entre la concurrence et la stabilité.<sup>47</sup> Elle mesure la concurrence à l'aide de l'indice de Herfindahl-Hirschmann et la stabilité à l'aide de divers indicateurs de la probabilité de défaillance de certaines banques tels que le score Z et le ratio des fonds propres au total des actifs. Elle conclut que les banques qui se trouvent sur des marchés présentant un indice de Herfindahl-Hirschmann plus élevé risquent davantage de défaillir.

Mais quand la stabilité est mesurée par le risque bancaire global, les relations entre la concurrence et la stabilité sont moins nettes. Une étude utilisant des données sur 8 235 banques de 23 pays développés a conclu que le pouvoir de marché, mesuré par l'indice de Herfindahl et l'indice de Lerner, augmente le risque des portefeuilles de prêts, mais diminue l'exposition au risque global.<sup>48</sup> Ces résultats apparemment contradictoires s'expliquent par le fait que les banques ont tendance à compenser le risque plus élevé des prêts en augmentant leurs capitaux propres, ce qui réduit à son tour le risque global.

### 5.3.2 *Concurrence, concentration et stabilité systémique*

Les études transnationales existantes qui s'intéressent à la stabilité systémique constatent que la concurrence et la concentration ont un effet positif sur la stabilité. Une étude influente examine comment la probabilité d'une crise financière est fonction de diverses caractéristiques des systèmes bancaires, des réglementations et des pays dans un échantillon de 69 pays pendant la période 1980-1997.<sup>49</sup> Ses principales conclusions sont les suivantes:

- La concentration bancaire, mesurée par la part des actifs des trois plus grandes banques dans le total des actifs bancaires, est (nettement) corrélée négativement avec les crises financières. En d'autres termes, les systèmes bancaires plus concentrés, risquent moins de subir une crise systémique.
- La probabilité d'une crise financière est moindre dans les pays où la réglementation permet davantage d'entrées, les participations étrangères et un plus large éventail d'activités et où les conditions institutionnelles stimulent la concurrence. Dans la mesure où ce type de réglementation augmente la contestabilité des marchés et la compétitivité du secteur bancaire, cette conclusion donne à penser qu'une concurrence plus intense va de pair avec une plus grande stabilité.

Comme cette étude le suggère, l'effet positif de la concentration sur la stabilité est probablement tributaire du fait que les grandes banques sont mieux à même de diversifier le risque. Rien ne permet d'affirmer que cet effet dépend du pouvoir de marché dont jouissent les banques dans des systèmes plus concentrés.

Ces conclusions sont confirmées par une autre étude transnationale dans laquelle la concurrence est mesurée directement à l'aide de la statistique H.<sup>50</sup> Cette étude conclut, sur la base d'un échantillon de 45 pays

<sup>47</sup> Voir Boyd, De Nicolò et Jalal (2009).

<sup>48</sup> Berger, Klapper et Turk-Ariss (2009) obtiennent ces résultats d'un échantillon de 9 000 banques établies dans 89 pays développés et en développement.

<sup>49</sup> Beck, Demirgüç-Kunt et Levine (2006).

<sup>50</sup> Voir Schaeck, Cihak et Wolfe (2009).

couvrant la période 1980-2005, que les systèmes bancaires plus concurrentiels et plus concentrés sont moins exposés au risque de crise systémique.

Les résultats des études transnationales font apparaître que la concurrence et la concentration ont des effets indépendants sur la stabilité bancaire. Cela tient peut-être à une question de mesure. Pour certains produits au moins, la concurrence présente une dimension locale que les mesures nationales et consolidées de la concentration ne permettent pas de saisir. Une autre raison possible est que la concentration influe indépendamment sur la stabilité par des voies autres que la concurrence qui sont liées à la diversification des risques et à la taille.

#### **5.4 Fusions bancaires et diversification des risques**

Les voies par lesquelles la concentration pourrait influencer sur la stabilité sont analysées dans les études portant sur les fusions et le pouvoir de marché des banques. Celles-ci se concentrent sur la question de savoir si les fusions, et donc la concentration, se traduisent par une meilleure diversification des risques. Les conclusions varient essentiellement suivant que l'analyse tient compte ou non des ajustements de portefeuille.

Il est constaté, dans l'ensemble, que les fusions entre les banques réduisent le risque pour les parties à ces fusions, mais seulement si les ajustements de portefeuille ne sont pas pris en compte. Par exemple, une étude comparant les caractéristiques avant et après leur réalisation de 256 acquisitions par des sociétés de holding bancaire aux États-Unis entre 1984 et 1993 conclut que les risques sont moindres après, qu'ils soient mesurés par les écarts-types des rendements des capitaux propres et de l'actif ou par le score Z du risque d'insolvabilité.<sup>51</sup> Une autre étude qui simule différentes stratégies de regroupement entre sociétés américaines de holding bancaire sur la base de données de 1994 conclut, de même, qu'une expansion inter-états devrait se traduire par une diminution du risque d'insolvabilité.<sup>52</sup> Ces conclusions suggèrent que les fusions réduisent le risque pour les banques en leur permettant de bénéficier des avantages d'une plus grande diversification.

Mais une plus grande diversification ne réduit pas nécessairement le risque global des banques parce qu'elle peut inciter celles-ci à réajuster leurs portefeuilles dans le sens d'une plus grande prise de risques. Des études de fusions bancaires aux États-Unis ont effectivement constaté qu'une plus grande diversification réduit les coûts moyens et marginaux de la gestion des risques et encourage les banques à prendre davantage de risques.<sup>53</sup>

#### **Box 7. Encadré 3. Concentration et stabilité: le cas de l'Australie, du Canada et du Royaume-Uni**

Dans la ligne des conclusions des études transnationales sur les relations entre la concentration et la stabilité, quelques données empiriques donnent à penser que les pays ayant des secteurs bancaires très concentrés ont mieux résisté à la crise qui a commencé en 2007 que les pays ayant des secteurs bancaires plus concurrentiels. L'Australie

<sup>51</sup> Voir Craig et Santos (1997) et Carletti et Hartmann (2002) pour une analyse d'études antérieures aboutissant à des conclusions du même ordre.

<sup>52</sup> Voir Hughes et autres (1999).

<sup>53</sup> Voir Chong (1991) et Hughes et Mester (1998).

et le Canada illustrent de façon remarquable le lien qui semble exister entre la concentration et la stabilité. Les secteurs bancaires de ces deux pays présentent une structure très ressemblante: quatre grandes banques dominent le secteur en Australie, où seuls quelques petits établissements nationaux et étrangers sont présents, et six banques dominent l'ensemble du système au Canada.

Mais des données empiriques suggèrent aussi, à première vue, que d'autres pays dotés de secteurs bancaires également très concentrés ont, par contre, été très touchés par la crise. Un exemple frappant est le Royaume-Uni où, comme en Australie, le secteur bancaire est dominé pour les opérations de prêt et les dépôts des ménages et des sociétés par quatre grandes banques et quelques petits établissements et banques étrangères.

Cela permet de penser que, même si l'on accepte l'effet positif de la concentration sur la stabilité, d'autres facteurs jouent aussi un rôle important dans la survenue d'une crise bancaire ainsi que dans la façon dont un pays résiste à celle-ci. Deux de ces facteurs sont:

- la structure de financement des institutions financières, et
- le cadre institutionnel et réglementaire existant dans un pays.

*Structure de financement.* Les banques australiennes et canadiennes ont surtout eu recours au financement par les dépôts provenant en grande partie des opérations avec la petite clientèle et notamment les ménages. Cela semble avoir été un facteur déterminant de la façon dont ces pays ont résisté à la crise. Les banques britanniques, par contre, ont de plus en plus fait appel pour leur financement aux marchés financiers (autres banques, fonds communs de placement monétaire, trésoreries des entreprises et autres investisseurs non bancaires). L'écart entre les prêts aux ménages et les dépôts des ménages, qui est révélateur d'une nette dépendance à l'égard des marchés financiers, est passé, dans le cas des banques sous contrôle britannique de zéro en 2001 à 738 milliards de GBP en 2008 (environ 50% du PIB) dont 333 milliards de GBP correspondaient aux dépôts interbancaires nets en provenance de l'étranger (Davis, 2009). Sur la base d'un échantillon incluant toutes les grandes banques commerciales des pays de l'OCDE, une étude procédant à une analyse de régression multivariée conclut que la structure de financement était la variable explicative la plus solide des performances des banques pendant la crise (Ratnovski et Huang, 2009).

*Cadre institutionnel et réglementaire.* L'Australie et le Canada ont aussi un cadre réglementaire beaucoup plus strict que le Royaume-Uni. L'exposition des banques australiennes et canadiennes aux produits financiers structurés et aux activités avec la grosse clientèle a été très limitée. En dehors des raisons liées à la structure du marché de ces pays considérée plus haut, cette plus faible exposition s'explique par des dispositions réglementaires plus rigoureuses qui ont eu pour effet de moins inciter les banques à prendre des risques. Certaines des mesures réglementaires en place au Canada se traduisaient par:

- des normes de fonds propres plus rigoureuses que les normes minimales de Bâle;
- une limitation des activités des banques à l'étranger et avec la clientèle institutionnelle, et
- un marché des produits hypothécaires prudent sur lequel les prêts à risque représentaient moins de 3% des hypothèques et la titrisation concernait moins de 30% des créances hypothécaires.

On observait un environnement tout autant marqué par la prudence en Australie, où (d'après la Banque de réserve, 2009):

- le cadre juridique oblige fortement les prêteurs à prendre des décisions responsables en matière de prêt sur le marché hypothécaire;
- les hypothèques sont « totalement garanties », et
- dans le cadre d'une réglementation nationale stricte et préventive, les portefeuilles de prêts immobiliers des établissements recevant des dépôts ont été soumis à plusieurs tests de résistance et des exigences en matière de fonds propres ont été imposées pour les prêts immobiliers à haut risque.

Le cadre institutionnel et réglementaire britannique s'est, au contraire, caractérisé par un affaiblissement des outils réglementaires courants. Dans le cas de la réglementation relative aux fonds propres, par exemple, l'efficacité des ratios de fonds propres imposée a été affaiblie par les véhicules hors bilan auxquels les banques ont eu recours pour la titrisation des actifs. Ce type d'activités a également contribué à réduire la transparence de la situation financière des banques et rendu difficile aux autorités de régulation de discerner le risque réel présenté par les instruments d'investissement structurés (SIV) du marché global.<sup>54</sup>

<sup>54</sup>

Voir P. Davis (2009).

## 6. Réglementation financière, concurrence et stabilité

Le lien entre réglementation financière, concurrence et stabilité présente de nombreuses facettes. Comme le montrent les études transnationales, les mesures réglementaires qui favorisent la concurrence, telles que celles qui réduisent les obstacles à l'entrée et les restrictions aux activités bancaires, améliorent la stabilité systémique.<sup>55</sup>

La concurrence peut aussi influencer sur l'efficacité de la réglementation en favorisant la stabilité. Une étude couvrant 421 banques commerciales de 61 pays constate que la réglementation relative aux fonds propres réduit efficacement la prise de risque mesurée par le pourcentage de prêts non performants dans les pays où le système bancaire est considéré comme plus concurrentiel parce que présentant un plus faible niveau de concentration. Il n'a pas besoin d'être efficace dans les pays où son niveau de concentration est très élevé.<sup>56</sup>

### 6.1 Libéralisation financière, réglementation et stabilité

En outre, comme la théorie le prédit, un cadre réglementaire approprié peut atténuer les effets négatifs potentiels de la concurrence sur la stabilité. Des études en apportent la preuve en déterminant comment l'effet sur la stabilité du système bancaire de la libéralisation financière, utilisée comme indicateur d'une plus grande concurrence, est tributaire du cadre réglementaire.

La vague de déréglementation et de libéralisation financière dans le secteur financier a commencé dans les années 70. De nombreuses dispositions réglementaires, comme celles limitant les activités bancaires inter-états aux États-Unis, ont été assouplies ou abrogées et les institutions financières ont pu beaucoup plus librement choisir leurs activités, fixer leurs tarifs, créer des produits et se développer dans de nouvelles régions ou pays. La concurrence s'intensifiant dans de nombreux segments, un processus de concentration de grande ampleur s'est amorcé à la fin des années 90.<sup>57</sup>

L'époque a aussi été marquée par plusieurs crises financières après une longue période de stabilité. En dehors de celle qui sévit actuellement, des crises ont éclaté aux États-Unis, en Scandinavie, au Japon et dans les pays d'Asie notamment. Ces événements semblent indiquer que la libéralisation et la concurrence contribuent aux crises financières, mais un examen plus approfondi fait apparaître que les relations entre la concurrence et la stabilité dépendent du cadre réglementaire.

Les études des crises scandinave et japonaise montrent que la libéralisation financière peut déclencher une crise si elle n'est pas effectuée comme il faut. Une libéralisation qui ne s'accompagne pas d'une révision et d'un ajustement rigoureux du cadre réglementaire peut avoir un effet déstabilisateur.<sup>58</sup> Des études transnationales confirment ce lien entre crise et qualité de la réglementation.<sup>59</sup> L'association entre libéralisation financière et probabilité de crises bancaires apparaît positive, mais l'ampleur de l'effet varie suivant la qualité des institutions et du cadre réglementaire. L'effet négatif est atténué dans les pays où le cadre institutionnel est solide, la corruption faible, l'État de droit bien respecté et les contrats bien mis en œuvre. Surtout, il apparaît que la libéralisation financière est bénéfique là où les cadres institutionnel et réglementaire sont élaborés et bien conçus. Ils peuvent dans ce cas réfréner et empêcher les comportements

<sup>55</sup> Voir Beck, Demirgüç-Kunt et Levine (2006).

<sup>56</sup> Voir Behr, Schmidt et Xie (2009).

<sup>57</sup> Voir, par exemple « Group of Ten » (2001).

<sup>58</sup> Voir, par exemple, Kanaya et Woo (2000) pour le Japon ainsi que Drees et Pazarbasioglu (1998) et Honkapohja et Koskela (1999) pour les pays nordiques.

<sup>59</sup> Voir, par exemple, Demirgüç-Kunt et Detragiache (1999).



qui compromettent la stabilité du système. Dans la mesure où la libéralisation conduit à une intensification de la concurrence, cette observation suggère qu'une plus grande concurrence n'ébranle pas nécessairement la stabilité du secteur financier si elle a lieu dans un cadre réglementaire approprié.

**Box 8. Encadré 4. Libéralisation, déréglementation et crises bancaires dans les années 90: le cas du Japon**

Le processus de libéralisation et de déréglementation financière a connu une accélération spectaculaire au Japon pendant la deuxième moitié des années 80. La libéralisation financière s'est surtout traduite par:

- un plus large accès des ménages au système;
- un marché moins segmenté;
- la libéralisation des prêts à court terme en euro-yens accordés aux résidents;
- l'assouplissement du contrôle des taux d'intérêt;
- la création d'un marché national des billets de trésorerie, et
- la levée progressive des restrictions à l'accès au marché des obligations de société.

Il a été estimé que la libéralisation accélérée a contribué à déstabiliser le système bancaire en intensifiant la concurrence et en renforçant les incitations à la prise de risques qui a affaibli les banques.

Plusieurs observateurs ont toutefois reconnu que le processus de libéralisation a contribué à la crise bancaire japonaise des années 90 du fait uniquement qu'il a été mené sans que les modifications nécessaires aient été apportées au cadre de réglementation et de surveillance (Cargil, 1999; Hoshi et Kashap, 1999). Certains aspects de l'ancien dispositif ont survécu à la libéralisation tels que le manque de transparence, d'étroites relations entre les institutions financières, les entreprises et les autorités de régulation, et un manque d'efficacité dans la fourniture des services financiers. Pour ces observateurs, les plus grandes possibilités de prise de risques dont ont joui les banques après le processus de libéralisation n'auraient pas posé de problème si l'efficacité de la réglementation prudentielle et de la surveillance du comportement des banques et des nouvelles incitations avait aussi été renforcée.

En résumé, la plupart des observateurs s'accordent à penser que ce n'est pas tant la libéralisation elle-même que le fait qu'elle a été mal conçue qui a contribué aux difficultés du système financier au Japon.

**7. Les mesures de gestion de la crise, la taille des banques et la doctrine selon laquelle on ne peut laisser tomber en faillite les établissements de grande taille**

La crise actuelle a été marquée par une intervention massive des pouvoirs publics sous la forme d'injections de liquidités et de capitaux, de dispositifs de garantie et de l'organisation de fusions. Il a aussi été procédé à de fortes baisses des taux d'intérêt, mesure généralement utilisée pour la politique monétaire, en vue de favoriser la liquidité du système bancaire et de faciliter son fonctionnement.

Les renflouements ont principalement été motivés par la peur de la contagion c'est-à-dire le risque que la défaillance d'un établissement se propage dans l'ensemble du système. Cette crainte a conduit, dans le monde entier, les pouvoirs publics à intervenir et à voler au secours d'institutions financières même de taille moyenne, occupant des positions clés sur les marchés interbancaires ou sur des segments particuliers des marchés.<sup>60</sup> De grands établissements ont été incités et autorisés à fusionner avec d'autres ou à prendre le contrôle d'autres: par exemple, JP Morgan/Bear Stearns et Bank of America/Merrill Lynch aux États-

<sup>60</sup> Voir Allen et Carletti (2008).

Unis et Lloyds/HBOS au Royaume-Uni. Beaucoup de banques de dépôt sont, en outre, entrées en liquidation.<sup>61</sup>

Les mesures prises ont réussi à éviter un effondrement systémique du système financier et à restaurer la confiance des investisseurs. Elles ont toutefois aussi montré qu'il est difficile de faire face à l'insolvabilité des institutions financières, surtout en période de crise systémique. Cela soulève d'importantes questions:

- Quelles sont les conséquences de la doctrine selon laquelle on ne peut laisser tomber en faillite les établissements de grande taille pour les incitations des banques à se faire concurrence et à prendre des risques?
- Quel sera l'effet des fusions et des renflouements qui ont été provoqués par la crise sur la structure du secteur bancaire et sur les incitations des banques à se faire concurrence?

### **7.1 Taille des banques et prise de risques**

Les positions des auteurs d'études sur les relations entre la taille des banques et le risque reposent en grande partie sur les arguments qui ont été examinés plus haut en ce qui concerne la stabilité en général.

Les données disponibles corroborent davantage l'argument selon lequel les grandes banques sont plus exposées aux risques. La plupart des études se focalisent sur l'effet de la diversification. Leurs conclusions varient fondamentalement selon que les banques contrebalancent ou non les effets positifs d'une plus grande diversification par une plus grande prise de risques.

Une étude examinant 122 sociétés de holding bancaire aux États-Unis constate que les rendements boursiers des grandes banques sont moins instables, ce qui suggère que la diversification a un effet positif. Cela ne s'est toutefois pas traduit, pour ces banques, par une plus faible probabilité de défaillance, mesurée par de plus faibles scores Z.<sup>62</sup> Aux États-Unis, les grandes banques ont défailli plus souvent que les petits établissements bancaires pendant la période 1970-1986, mais moins souvent pendant la période 1987-1994.<sup>63</sup> Une étude récente reposant sur un plus large ensemble de données conclut que la probabilité de défaillance, mesurée par le score Z, augmentait avec la taille des banques non seulement aux États-Unis, mais aussi en Europe et au Japon pendant la période 1988-1998.<sup>64</sup> Cette étude constate également l'existence d'un effet positif de la nationalisation des banques sur leur risque de défaillance. Ces résultats impliquent que les grandes banques n'utilisent pas la diversification pour réduire leur risque de défaillance.

Certaines études analysent les effets d'une plus grande diversification sur le risque de portefeuille des différentes banques. Une étude portant sur un échantillon de sociétés de holding bancaire (BHC) aux États-Unis constate que les établissements plus grands ont des rendements boursiers moins instables, ce qui confirme l'existence d'un effet positif de la taille sur la diversification des BHC. Cela ne se traduit toutefois pas par des réductions du risque global. L'effet possible de la diversification sur la réduction du risque dans les grandes BHC est contrebalancé par leurs plus faibles ratios de fonds propres, leurs plus importants portefeuilles de prêt aux entreprises et une plus large utilisation des produits dérivés. Cette

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<sup>61</sup> Aux États-Unis, le nombre des grandes banques d'investissement a diminué de moitié et plus d'une centaine de banques de dépôt sont entrées en liquidation.

<sup>62</sup> Voir Boyd et Runkle (1993).

<sup>63</sup> Voir Boyd et Graham (1991 et 1996).

<sup>64</sup> Voir De Nicoló (2000).

étude apporte un soutien empirique à l'argument théorique selon lequel la diversification liée à la taille ne doit pas réduire le risque d'insolvabilité des banques.<sup>65</sup>

On obtient des résultats du même ordre pour l'effet de la taille des banques sur la stabilité systémique. On constate, en effet, que les grandes organisations bancaires complexes aux États-Unis ont vu à la fois leurs parts de marché et les corrélations entre leurs rendements boursiers augmenter pendant les années 90. Cela suggère l'existence d'une relation inverse entre la taille des banques et le risque systémique. En outre, dans la mesure où un accroissement des parts de marché implique aussi de plus gros profits, ce résultat confirme également l'existence d'une relation inverse entre la concurrence et la stabilité.<sup>66</sup>

Les grandes banques ont également davantage tendance à s'endetter du fait peut-être de la protection implicite dont elles jouissent parce qu'elles sont trop importantes pour qu'on puisse les laisser faire faillite. L'effet de la taille sur l'endettement est explicitement montré dans une étude du système bancaire des États-Unis pendant les années 80 dont il ressort que les grandes banques ont pris davantage de risques en s'endettant davantage. Confrontées à une intensification de la concurrence, elles ont exploité la garantie implicite de la doctrine selon laquelle on ne les laisserait pas tomber en faillite du fait de leur taille pour prendre de plus gros risques.<sup>67</sup> La raison de leur plus grande prise de risques se trouvait dans une mesure réglementaire inadéquate qui encourageait un tel comportement et non dans l'intensité de la concurrence s'exerçant dans le système bancaire.

## 7.2 *La structure du secteur financier à l'avenir*

Les mesures prises pendant la crise récente auront probablement d'importantes répercussions sur la structure du secteur financier à l'avenir et donc sur les conditions concurrentielles de ce secteur.

Les nombreuses fusions effectuées pendant la crise se sont traduites par un accroissement notable du niveau de concentration du secteur bancaire dans plusieurs pays. Entre 2005, c'est-à-dire avant l'éclatement de la crise, et 2009, la part de marché pour les dépôts des cinq premiers établissements nationaux est passée de 29,3% à 37,3% aux États-Unis et de 58,3% à 61,3% en France. Des tendances similaires sont observables sur les marchés des prêts.

Les conséquences de cette plus grande concentration sur la concurrence dans le secteur bancaire dépendront dans une large mesure des stratégies de sortie de crise qui seront adoptées et des mesures qui seront finalement imposées aux banques qui ont bénéficié d'une aide publique. En Europe, par exemple, plusieurs des banques qui ont été renflouées ou ont été parties à des fusions organisées ont été soumises à des mesures contraignantes limitant leur taille et leurs activités.<sup>68</sup> Aux États-Unis, des restrictions seront peut-être aussi imposées à l'étendue des activités des banques et au degré de concentration du secteur dans le cadre du plan annoncé en janvier 2010.<sup>69</sup> Un rôle important sera aussi joué par le nouveau cadre

<sup>65</sup> Voir Hellwig (1998) pour une analyse théorique en bonne et due forme de cet argument.

<sup>66</sup> De Nicoló et Kwast (2001).

<sup>67</sup> Voir Boyd et Gertler (1993).

<sup>68</sup> Par exemple, Commerzbank, Hypo Real Estate, Landesbank Baden Württemberg et Northern Rock ont été invités par la Direction générale de la concurrence de la Commission européenne, entre autres, à réduire de moitié la taille de leur bilan. Des mesures ont, de même, été imposées à ING, RBS et Lloyds qui allaient de la séparation des activités d'assurance et des activités bancaires à des restrictions visant à limiter les comportements agressifs et les acquisitions potentielles d'activités ou de succursales devant être abandonnées.

<sup>69</sup> [http://www.economist.com/opinion/displayStory.cfm?story\\_id=15374543&source=features\\_box\\_main](http://www.economist.com/opinion/displayStory.cfm?story_id=15374543&source=features_box_main).

réglementaire que de nombreux pays mettront sans doute en œuvre à l'avenir pour essayer d'améliorer la stabilité du système financier et, en particulier, des institutions financières d'importance systémique.

Bien que la concentration et la concurrence soient deux concepts distincts et qu'un secteur bancaire concentré puisse rester concurrentiel, de très nombreux travaux de recherche montrent que la concentration risque de réduire la concurrence dans le secteur financier, notamment sur le marché bancaire des particuliers.<sup>70</sup> En outre, l'augmentation de la taille des banques et les interventions massives des pouvoirs publics pendant la crise vont aggraver le problème que posent les banques trop importantes pour qu'on les laisse faire faillite en encourageant une prise de risques excessifs et en faussant les conditions de concurrence. Les institutions d'importance systémique qui semblent bénéficier de garanties publiques implicites peuvent être injustement avantagées sur le plan financier par rapport aux établissements de plus petite taille.

## 8. Conclusions

Les travaux de recherche théorique et empirique ne sont pas concluants sur la question de savoir si la concurrence a un effet positif ou négatif sur la stabilité. L'idée qui prédominait à un moment était qu'une intensification de la concurrence entraînerait une augmentation de la prise de risques de la part des banques en réduisant la valeur des agréments bancaires, mais des travaux récents remettent cette théorie en question. L'analyse des relations entre la concurrence et la fragilité se faisant sentir du côté du passif conclut que celles-ci peuvent jouer dans les deux sens.

Les données empiriques sont tout aussi ambiguës. Les études concluent qu'une intensification de la concurrence peut augmenter ou réduire la stabilité selon l'échantillon et la période analysés ainsi que les méthodes choisies pour mesurer la concurrence et la stabilité. Des études transnationales constatent que la concentration comme la concurrence ont un effet positif sur la stabilité du système bancaire. Cela conduit à penser que la concentration n'est pas un bon indicateur supplétif de la concurrence et que l'effet positif de la concentration sur la stabilité a plus de chances de tenir à une amélioration des possibilités de diversification des risques qu'à l'accroissement du pouvoir de marché des systèmes bancaires concentrés.

On peut néanmoins tirer un certain nombre de conclusions:

- Si une réglementation et une surveillance appropriées sont en place, la concurrence ne réduit pas nécessairement la stabilité. La théorie indique comment la réglementation pourrait corriger ou atténuer les effets négatifs de la concurrence sur la stabilité. Les études empiriques montrent que des réformes réglementaires favorables à la concurrence qui réduisent les restrictions à l'entrée et aux activités peuvent améliorer la stabilité, mesurée par les difficultés rencontrées par certaines banques ou par le risque systémique. Une surveillance et une réglementation défaillantes sont, par contre, des facteurs qui réduisent la stabilité. Les vagues de dérégulation financière et d'intensification de la concurrence s'avèrent préjudiciables à la stabilité si elles ne vont pas de pair avec l'adoption d'une réglementation financière appropriée. Celle-ci doit, bien sûr, tenir compte des conditions du marché; par exemple, l'efficacité des instruments réglementaires types, tels que les ratios de fonds propres, pour le risque bancaire peut être affectée par la structure du marché.
- Les travaux de recherche disponibles n'établissent pas que la concurrence a été à l'origine de la crise qui a éclaté en 2007. La concurrence peut certainement réduire les marges. Elle pourrait accroître la prise de risques surtout si celle-ci n'est pas limitée par une réglementation appropriée.

<sup>70</sup> Voir Carletti, Hartmann et Spagnolo (2002) pour une synthèse des travaux analysant l'effet des fusions bancaires sur les marchés du crédit et des dépôts.

Les résultats des travaux aussi bien théoriques qu'empiriques sont trop ambigus pour qu'on en tire de nettes conclusions. À quelques exceptions près, la plupart des études sont axées sur la stabilité de certaines banques, ce qui est très différent de la crise systémique que nous observons depuis août 2007.

- Les effets de la taille et de la structure sur la stabilité peuvent être distincts de leurs effets sur la concurrence. Autoriser l'existence de grandes institutions financières pourrait ne pas se traduire nécessairement par un moindre degré de concurrence, mais les grandes institutions semblent vraiment prendre davantage de risques sur leurs portefeuilles. Quelle que soit la raison pour laquelle elles le font (contrepartie de leur plus grande diversification ou exploitation du fait qu'elles sont trop importantes pour qu'on les laisse tomber en faillite), la question de la taille optimale des institutions financières devrait davantage retenir l'attention. Le fait qu'à première vue ce sont de grandes banques qui ont été les premières et les plus touchées par la crise récente semble renforcer cette conclusion. Si le principal objectif de la politique des pouvoirs publics est d'éviter une autre crise systémique, il serait préférable de ne pas accentuer la concentration des banques pour donner naissance à des établissements qui sont nettement trop grands pour qu'on puisse les laisser faire faillite parce que cela risque de compromettre la stabilité.
- La plupart des études examinent le risque ou l'instabilité dans le cadre des portefeuilles de prêt traditionnels et en ignorent les nouvelles sources que sont les produits dérivés et autres innovations financières. La microstructure des marchés et les flux d'information jouent un rôle déterminant dans les systèmes financiers modernes. Pour les grandes institutions financières, la participation active aux marchés financiers a éclipsé les activités traditionnelles reposant sur les conditions de prix appliquées aux prêts et aux dépôts. Les travaux de recherche doivent s'adapter à l'évolution des marchés de capitaux et des institutions financières. Il reste à déterminer comment le nouveau paysage du secteur financier affectera la stabilité et le niveau de concurrence du système financier au niveau mondial. Il ne faut pas sous-estimer les conséquences possibles des mesures de gestion de la crise et des réformes de la réglementation pour la concurrence entre les institutions financières.

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## AUSTRALIA

### 1. Executive summary

Australia's financial system regulation regime is designed to balance the goals of stability, competition, efficiency, market integrity and consumer protection, and be consistent with international best practice. Reflecting these goals, successive Australian Governments have pursued reforms to enhance competitive pressures in the banking industry while maintaining sound regulatory frameworks. In addition, all regulators of the financial sector have a role to play in supporting competition in the banking sector.

Partly reflecting pro-competitive reforms in the 1980s and 1990s, Australians have access to a wide range of providers of banking services and certain barriers to entry have fallen over time. Reflecting increasing competitive pressures, net interest margins narrowed prior to the global financial crisis, and fees and charges fell relative to lending volumes. While the banks have remained profitable, this has not been in excess of other Australian companies, and has in part reflected increasing profits from their non-bank activities, such as wealth management.

However, as in many other jurisdictions, there have been a number of key banking sector mergers in Australia over the past decade, causing the number of banking sector participants to fall over that time. Australia's four major banks account for a majority of the market share for many popular banking products.

Australia's banking system has been resilient in the face of the global financial crisis, as a result of a diversity of factors. These include timely Government stimulus to support the Australian economy, as well as Government guarantees of banks' deposits and wholesale funding. Other factors include strong prudential regulation; sound lending practices of Australian ADIs; and low impairment rates supported by a buoyant housing market. This resilience reflects *neither* a lack of competition in the Australian banking sector, *nor* any preference for stability over competition in the prioritisation of Government and regulatory objectives.

However, the banking system has not been immune from the effects of the global financial crisis. Competition has generally fallen due to the withdrawal or weakening of a number of mid-tier and smaller competitors and foreign banks, and the major banks have been able to recover some of the reduction in market share and interest margins experienced prior to the crisis. A particular concern is the exit and slower growth of smaller lenders that traditionally relied on securitisation markets for funding, as these institutions played an important role in driving competition in lending and reductions in interest margins over the past two decades.

Two significant banking mergers took place over the past two years, each involving a major bank and a significant mid-tier institution. These mergers were subject to the usual regulatory approval processes applicable to any bank merger. Both mergers were approved on the basis that they were not likely to result in a substantial lessening of competition.

It is not anticipated that competition levels will rebound to their previous highs in the short-to-medium term, as some of the increase in competition in the lead-up to the crisis was based on unsustainably low pricing of capital and risk. However, it is anticipated that competitive pressures will increase as funding markets such as securitisation recover. In addition, recent developments indicate that competition exists between the remaining participants, including between the four major banks.

The Australian Government is undertaking a number of initiatives to promote healthy competition in the banking sector. These include: supporting smaller institutions' fundraising activities; assisting customers to switch banks; to reduce barriers to entry; and addressing unfair exit fees and other contract terms. The Australian Government remains committed to improving competition in the banking system.

## 2. Introduction

The banking sector is one of the largest sectors in the finance and insurance industry, which is the third-largest industry in Australia and accounts for almost 10 per cent of GDP (almost double its relative contribution three decades ago).<sup>1</sup> In addition to contributing directly to Australia's GDP, the banking sector performs a number of functions that underpin economic activity in the broader economy, such as financing investment and facilitating payments. It also provides consumption- and investment-related services to virtually all households in Australia.

Australia's banking sector currently consists of two key groups: authorised deposit-taking institutions (ADIs) and non-ADIs. Only ADIs are permitted to accept deposits, and as a consequence of this function, they are subject to prudential regulation. ADIs (excluding subsidiaries) include 4 major banks; 7 second-tier domestic banks; 11 building societies and 112 credit unions. Further, 9 foreign banks operate in the Australian market through locally incorporated subsidiaries, and 34 foreign banks have branches in Australia. Non-ADI lenders include finance companies, money-market corporations and securitisers. More detail on the major participants in the Australian banking sector can be found at Appendix 1.

Australia's banking system is relatively concentrated. The four major banks – Commonwealth Bank of Australia (CBA), Westpac Banking Corporation (Westpac), National Australia Bank (NAB) and Australia and New Zealand Banking Corporation (ANZ) – are large relative to their competitors, and make up a substantial proportion of the market in business and household lending and deposit-taking. They also facilitate financial markets by performing functions, such as securities underwriting, alongside global investment banks. In addition to banking activities, each of the major banks provides a range of other financial services such as insurance and wealth management.

The Australian banking sector has undergone significant changes over the past three decades. This partly reflects the deregulation of the sector in the 1980s, which removed a range of restrictions on participation in the sector and the nature of products and services that could be provided. It also reflects the rapid changes in banking technology (such as the move to electronic banking) and the evolution of financial markets.

The reforms to the banking sector over the past three decades have been aimed at boosting competition and efficiency. In particular, deregulation in the 1980s opened the Australian market to foreign competitors. Later reforms, stemming from the 1997 Financial System Inquiry (the Wallis inquiry), restructured the financial system's regulatory framework. The Wallis inquiry noted that, in extracting efficiency gains from the financial system, it was necessary that the system be both competitive and well regulated:

*There are very large efficiency gains and cost savings which could be released from the existing system...Markets can only deliver these outcomes where competition is allowed to thrive and where consumers have confidence in the integrity and safety of the system.*<sup>2</sup>

<sup>1</sup> ABS Cat. No. 5206.0. Measured as the finance and insurance sector's share of gross value added, Sep qtr 2009.

<sup>2</sup> Wallis, Beerworth, Carmichael, Harper and Nicholls, 1997, *Financial System Inquiry Report*, p.2.

Consequently, the inquiry sought to create ‘an appropriate balance between achieving competitive outcomes and ensuring financial safety and market integrity’<sup>3</sup> in its recommendations.

Since the inquiry, Australia has pursued a more competitive banking sector, for example by improving competitive neutrality through ensuring consistent regulation of all deposit-taking institutions and all credit providers, regardless of size or institutional structures. However, Australia has also maintained a stability focus through improved prudential regulation. These outcomes resulted from restructuring the regulation of the financial system such that each regulator was responsible for a clearly separate function, as per the Wallis inquiry’s recommendations. This restructure has effectively supported both competition and stability goals simultaneously.

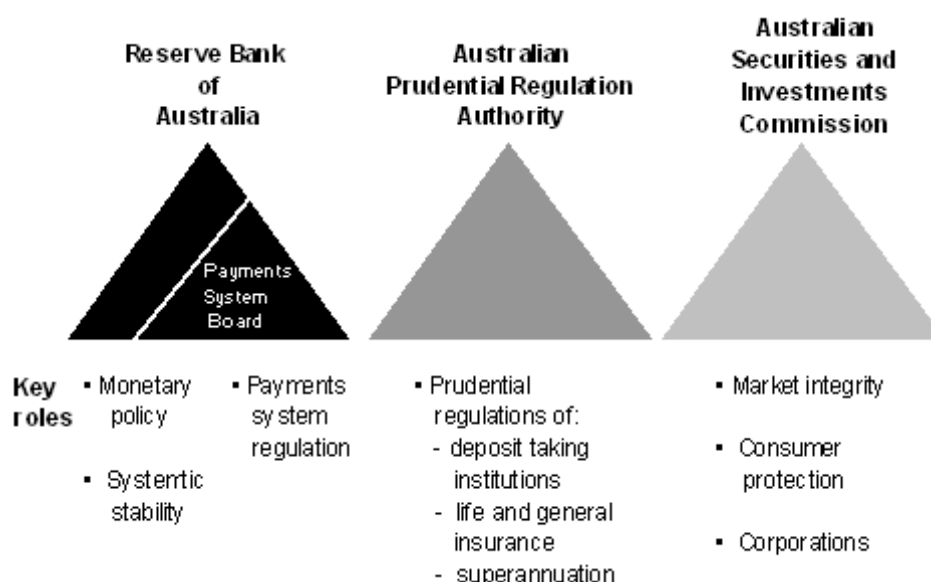
### 3. Regulation of the financial sector in Australia

Australia’s financial system regulation regime is designed to balance the goals of safety, competition, efficiency, market integrity and consumer protection, and be consistent with international best practice. Regulatory functions are split between specific financial system regulators and economy-wide regulators. All elements of the regulation regime play a role in the mergers framework, and in supporting competition in the banking system more generally.

#### 3.1 Financial system regulation regime

Australia’s financial regulation framework is based on three separate agencies operating on functional lines (figure 3.1). These institutions have prime responsibility for maintaining the safety and soundness of financial institutions, protecting consumers and promoting systemic stability through implementing and administering the regulatory regimes that apply to the financial sector.

Figure 3.1 Key financial sector regulatory agencies in Australia



<sup>3</sup> Wallis et al., 1997, *Financial System Inquiry Report*, p.2.

- The Reserve Bank of Australia (RBA) has responsibility for monetary policy, overseeing financial system stability and oversight of the payments system.
  - The RBA assesses the impact of financial system developments, including competitive dynamics, on financial system stability. It publishes its analysis in its biannual financial stability review.
- The Australian Prudential Regulation Authority (APRA) is responsible for prudential regulation and supervision of ADIs, general and life insurance companies and superannuation funds.
  - The Government expects APRA to administer a principles-based regulatory framework in an efficient and effective manner, and that balances the objectives of financial safety and efficiency, competition, contestability and competitive neutrality.<sup>4</sup>
- The Australian Securities and Investments Commission (ASIC) is responsible for market conduct and investor protection, including licensing of financial services providers.
  - The Government expects ASIC to administer a regulatory framework that does ‘not unduly constrain market participants from pursuing opportunities for competition and innovative development’.<sup>5</sup>

These agencies, along with the Australian Treasury, also form the Council of Financial Regulators. The Council’s role is to contribute to the efficiency and effectiveness of financial regulation by providing a high-level forum for co-operation and collaboration among its members. It operates as an informal body in which members are able to share information and views, discuss regulatory reforms or issues where responsibilities overlap and, if the need arises, co-ordinate responses to potential threats to financial stability. The Council also has a role in advising the Government on the adequacy of Australia’s financial system architecture in light of ongoing developments.

Responsibility for the operational or day-to-day supervision of financial institutions and markets lies with these individual regulators, while accountability for the broad framework for the regulation of the financial sector rests with the Australian Government, aided by the Council of Financial Regulators.

### **3.2 Competition regulation regime**

The primary tool for promoting and maintaining competition across all industries, including the banking sector, is the *Trade Practices Act 1974* (TPA). The object of the TPA is to enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection. The Australian Competition and Consumer Commission (ACCC) is Australia’s competition regulator, and as such is the Government agency charged with enforcing prohibitions on specified forms of anti-competitive conduct contained in the TPA.

The competition provisions contained in Part IV of the TPA prohibit various trade practices that are likely to prevent or lessen competition in Australian markets for goods and services. These include

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<sup>4</sup> The Government’s Statement of Expectations for APRA, issued by the Government in 2007. Available at: <http://www.apra.gov.au/AboutAPRA/upload/Statement-of-Expectations-from-Treasurer-20-Feb-07.pdf>.

<sup>5</sup> The Government’s Statement of Expectations for ASIC, issued by the Government in 2007. Available at: <http://www.asic.gov.au/asic/asic.nsf/byheadline/Statement+of+expectations+and+statement+of+intent?openDocument>.

provisions relating to collusive agreements, abuse of market power, anti-competitive mergers and acquisitions and exclusive dealing arrangements.

During the 1990s Australia embarked on an ambitious micro-economic reform programme. In 1995, Australia's National Competition Policy reform package was established by three Federal and State/Territory intergovernmental agreements, including the *Competition Principles Agreement*. The implementation of the National Competition Policy extended the principles of competition law to all the States and Territories. The focus was on an economy-wide application of law addressing anti-competitive conduct, and the removal of structural and legislative impediments so as to facilitate greater competition in the non-traded good sector.

### 3.3 *The mergers framework*

Under Australian law, merger or acquisition proposals involving banks operating in Australia are subject to two approval processes or 'tests':

- A **competition test**, which is administered by the ACCC under section 50 of the TPA and is applicable to mergers and acquisitions in all industries;<sup>6</sup> and
- The **national interest** test, which is administered by the Treasurer under section 63 of the *Banking Act 1959* (Banking Act) and section 14 of the *Financial Sector (Shareholdings) Act 1998*, and is applicable only to mergers and acquisitions involving financial institutions.<sup>7</sup>

#### 3.3.1 *Competition test*

Section 50 of the TPA prohibits acquisitions of shares or assets that would have the effect, or be likely to have the effect, of substantially lessening competition in a market. Section 50 applies to acquisitions in all Australian industries, including the banking sector.

The ACCC examines proposed acquisitions<sup>8</sup> to determine whether, in its view, the transaction will breach section 50 of the TPA.

The analytical framework used by the ACCC to assess whether an acquisition is likely to substantially lessen competition in a market is set out in the ACCC's *Merger Guidelines*.<sup>9</sup>

Generally, the ACCC takes the view that a lessening of competition is substantial if it creates or confers on the merged firm, and/or other firms in the relevant market, an increase in market power that is

<sup>6</sup> It should be noted that a person may apply to the Australian Competition Tribunal (ACT) for authorisation of an acquisition pursuant to section 95AT of the TPA. If the ACT grants authorisation, section 50 of the TPA does not prevent the person from making the acquisition. The ACT will not grant authorisation unless it is satisfied that the acquisition is likely to result in such a benefit to the public that it should be allowed. Sections 50A and 88(9) of the TPA govern certain acquisitions occurring outside of Australia. As no matters in the banking sector have been considered under these provisions, this paper will not consider these provisions further.

<sup>7</sup> Where an acquisition involves a foreign acquisition, it may also be assessed under a national interest test under the *Foreign Acquisitions and Takeovers Act 1975*. National interest is not defined under any of these Acts.

<sup>8</sup> The ACCC can also examine acquisitions that have already occurred except where clearance is sought under section 95AC(1).

<sup>9</sup> Available at: <http://www.accc.gov.au/mergerguidelines>.



significant and sustainable. For example, a merger will substantially lessen competition if it results in the merged firm being able to significantly and sustainably increase prices or provide a reduced service offering. The ACCC will also consider the extent to which a proposed merger may result in market conditions that facilitate co-ordinated conduct between firms.

The ACCC's approach in assessing a merger is to compare the likely state of competition in the future with the merger (the factual) and the likely state of competition if the merger does not take place (the counterfactual). This comparison isolates the impact of the merger on competition from other factors. For example, a relevant consideration might be whether the target firm is on the verge of entering the relevant market or if it may already operate in the relevant market but will be likely within the next one to two years to benefit from new technology or intellectual property that will enhance its competitiveness with the acquiring firm.

Notably, the ACCC's consideration of transactions does not rely solely on standard structural measures of competition such as market share figures. Consistent with standard international practice, the ACCC's analytical approach takes into account a wide range of other factors in assessing the competitive implications of a merger, as provided for under subsection 50(3) of the TPA. These include, but are not limited to:

- The actual and potential level of import competition in the market;
- The height of barriers to entry to the market;
- The level of concentration in the market;
- The degree of countervailing power in the market;
- The likelihood that the acquisition would result in the acquirer being able to significantly and sustainably increase prices or profit margins;
- The extent to which substitutes are available in the market, or are likely to be available in the market;
- The dynamic characteristics of the market, including growth, innovation and product differentiation;
- The likelihood that the acquisition would result in the removal from the market of a vigorous and effective competitor; and
- The nature and extent of vertical integration in the market.

In assessing the competitive impact of acquisitions pursuant to section 50 of the TPA, the ACCC takes a purposive approach to market definition, meaning that markets may be defined differently in terms of products, customer and geographic scope depending on the transaction being considered. The definition of the relevant markets will depend on the particular merger under consideration. A summary of the markets in which recent mergers have been assessed is at Appendix 2.

As one of the most significant banking sector mergers in recent times, the St George and Westpac merger assessment of 2008 provides an example of the ACCC's considerations for a specific merger (see Appendix 3). The ACCC found that the acquisition would not result in a substantial lessening of competition in any of the relevant markets due to sufficient competition from remaining participants.

Merger parties are not legally required to notify the ACCC of a merger. However, under the voluntary notification system, merger parties are encouraged to approach the ACCC when a merger passes the notification threshold set out in the Merger Guidelines. There are two avenues available to have a merger considered and assessed by the ACCC:

- Parties can seek the ACCC's view on whether a merger proposal is likely to breach section 50 under the ACCC merger review process (parties can do this on a public basis or on a confidential basis where the proposal is confidential), or
- Parties can apply to the ACCC for formal clearance, pursuant to section 95AC(1) of the TPA. Formal clearance, if granted, will provide merger parties with legal protection from court action under section 50. The ACCC has not received any applications for formal clearance since the clearance regime was introduced in January 2007.

Where the ACCC forms the view that a proposed transaction would result in, or would be likely to result in, a substantial lessening of competition in a market, and the parties seek to pursue the transaction, the ACCC may apply to the Federal Court of Australia for orders to prevent the transaction proceeding. In cases where a merger has already been consummated, the ACCC may apply for orders for divestiture. In some matters, parties may offer court enforceable undertakings to the ACCC to address competition concerns identified. This may involve the divestiture of certain assets or businesses, but still allows the transaction to proceed.

The process applied by the ACCC to merger assessments is set out in detail in the *Merger Review Process Guidelines*<sup>10</sup>. In assessing non-confidential mergers, the ACCC consults widely with interested parties, including other government departments and authorities.

There are very specific circumstances where bank or insurance acquisitions may be exempted from the competition provisions of the TPA.<sup>11</sup> These exemptions ensure that APRA or an appointed manager can quickly and effectively respond to distress in the financial sector by, for example, recapitalising a distressed institution or transferring its business or assets. They also ensure the effective operation of the Financial Claims Scheme, which, as it relates to the banking sector, plays a similar role to a deposit insurance scheme. In particular, they exempt certain actions undertaken for the purposes of the Scheme from the competition provisions of the TPA, such as APRA establishing bank accounts on behalf of protected depositors at healthy institutions to facilitate the timely payment of entitlements. To date, no such exemptions have been implemented.

### 3.3.2 *The national interest test and the four pillars policy*

Under the *Financial Sector (Shareholdings) Act 1998*, the Treasurer's approval is necessary for a person to hold a stake of more than 15 per cent in a financial sector company. This approval can only be granted if the applicant satisfies the Treasurer that the application is in the national interest.

Similarly, under subsection 63(1) of the Banking Act, an ADI such as a bank, must seek the Treasurer's consent before entering into an arrangement or agreement for any sale or disposal of its business by amalgamation or otherwise, or wishes to effect a reconstruction of the ADI. In making a

<sup>10</sup> Available at: <http://www.accc.gov.au/processguidelines>.

<sup>11</sup> The relevant exemptions are contained in: sections 16AA and 16AU of the Banking Act, sections 62ZN and 62ZZV of the Insurance Act 1973 and 179A of the Life Insurance Act 1995; and Section 43 of the Financial Sector (Business Transfer and Group Restructure Act) 1999.

decision whether to consent to an arrangement, agreement or reconstruction, the Treasurer must also take the national interest into account.

As with other companies, foreign investment in a bank may also be subject to the *Foreign Acquisitions and Takeovers Act 1975*.

Approval under any of the three Acts can be made subject to any conditions that the Treasurer considers appropriate. In particular, conditions may be imposed to ameliorate national interest concerns the Treasurer has with a proposal. For example, in the past, conditions have been imposed under *Foreign Acquisitions and Takeovers Act 1975* that related to governance arrangements and structures, although conditions have not been directed at the day-to-day operational activities of companies.

As there is no statutory definition of what is in the 'national interest', the Treasurer has scope within existing policy to decide what is and is not in the national interest. The following is a list of factors which have typically been taken into account in determining whether a proposed acquisition is in the national interest:

- Whether the proposed acquisition or activity is likely to adversely affect the prudent conduct of the affairs of the company.
- Whether the proposed acquisition or activity is likely to result in an unsuitable person being in a position of influence over the company.
- Whether the proposed acquisition or activity is likely to substantially lessen competition or result in an undue concentration of power in the Australian financial system.
- Whether the proposed acquisition or activity is expected to create a more efficient and effective corporate structure which will benefit shareholders as well as customers.

In forming a view on these issues, the Treasurer will be informed by: advice from the Treasury; advice from APRA and the RBA on the extent of any prudential or financial system stability considerations; and the ACCC's decision under the TPA.

Since 1997, successive Australian Governments have maintained the position that any merger between the largest four banks in Australia would be considered contrary to the national interest, and hence would not be approved under the national interest test. This is called the 'four pillars policy'. While its initial purpose was to promote competition, this policy also supports stability through preventing increased concentration of risks, reducing the costs of managing a large bank failure, and maintaining the financial system infrastructure, which is relied on by many smaller institutions.

The four pillars policy was originally announced in response to the Wallis inquiry, and replaced the pre-existing six pillars policy that incorporated two life insurance companies. The current Government confirmed this policy on 2 June 2008.

The Wallis inquiry also concluded that 'apart from foreign ownership and competition concerns, only prudential considerations have sufficient substance to justify intervention in commercial choices about the amalgamation of banks'.<sup>12</sup>

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<sup>12</sup> Wallis et al., 1997, *Financial System Inquiry Report*, p.422.

Consistent with these findings, it is not generally Australia's policy to stand in the way of mergers in the financial system, unless it is shown that there is a reason to do so. While the four pillars policy effectively prevents applications for mergers between the four major banks from being put forward, no Treasurer has opposed any financial sector merger in the last 15 years. Further, provisions in the Banking Act require that the Treasurer's consent not be unreasonably withheld.

### 3.3.3 *Divestiture*

Where an acquisition is assessed, after the transaction has occurred, as substantially lessening competition (in breach of section 50), a divestiture order can be sought by the ACCC from the Federal Court under section 81 of the TPA within three years of the acquisition taking place. In practice, the ACCC is only likely to seek such orders in one of two circumstances. The first is where the acquisition is completed before the ACCC undertakes and completes a merger review (for example, the ACCC is not notified of the acquisition). Secondly, the ACCC may seek a divestiture order where it becomes aware that information on which it made an earlier decision to approve an acquisition is subsequently found to be misleading or incomplete, to an extent that would have altered the previous decision. There have been no such enforced divestitures sought by the ACCC involving acquisitions in the financial sector.

While no divestitures have been sought under the TPA in the banking sector to date, the existence of such powers does have a significant impact on the sector. In particular, the ability of the ACCC to obtain effective remedies in relation to an acquisition that would substantially lessen competition is likely to have ensured that a number of proposed mergers that are likely to raise issues with the ACCC have not advanced beyond initial stages.

Should an acquisition be subject to the national interest test in the Banking Act, and proceed without approval from the government, it can later be declared void if it is later found to breach that test. However, as merger parties have traditionally sought the Treasurer's approval before the transaction takes place, the circumstances that might give rise to such enforced divestiture have not previously arisen.

There are a range of divergent views held in the community on the costs and benefits of the TPA's divestiture power, and its scope. The 1993 Report on the Implementation of a National Competition Policy (the Hilmer Review) recommended against extending the application of the divestiture power beyond the prohibition on mergers that substantially lessen competition. The 2003 Review of the Competition Provisions of the Trade Practices Act (the Dawson Review) took a similar view, holding that exercise of such a power could be arbitrary and require courts to engage in politically-sensitive decisions.

Generally, enforced divestiture is not supported for reasons of improving stability. A policy that enabled authorities to break-up banks for stability purposes would create additional uncertainty for investors and potentially reduce the efficiency of the banking sector by preventing banks from accessing economies of scale. Instead, Governments have consistently relied on Australia's strong prudential regulation as the primary tool for supporting financial system stability, rather than more intrusive and unpredictable regulatory options such as the use of a general divestiture power.

## **4. Measuring competition in Australia's banking sector**

Measures of competition in the banking sector are largely similar to those used in other industries. In particular, as the starting point of a more comprehensive analysis, measures such as market share are used to establish a view on relative concentration. However, these measures alone are not adequate to fully assess the level of competition, as market shares are not determinative of market power. It is also necessary to examine contestability of markets. Additionally, it is possible to look to measures such as pricing and innovation to inform views on the overall level of competitive pressure.

However, it should be noted that quantitative measures are difficult to obtain for some of these areas of analysis. In particular, assessment of contestability including barriers to entry, the existence of potential entrants, and the competitive capacity of smaller players, are necessarily difficult to quantify. Further, any efforts to do so must take into account variances over time and between countries (for the purposes of international comparisons) in the structure and regulation of the market and the types of products demanded by consumers.

In the Australian market, the majority of competition indicators suggest that over the past 10-15 years, in general, the banking sector has been subject to increasing competitive pressures. Nevertheless, promoting competition remains an ongoing policy concern.

#### **4.1 Market concentration**

Consistent with the approach taken toward other industries, market shares represent the most commonly used measure of concentration in the banking industry. Key advantages of the market share measure include relative ease of calculation, partly due to the availability of the necessary data. It also allows comparisons of particular customer sectors, products and subsectors of providers.

As in other countries, market share in Australia's banking sector is relatively concentrated, compared with some other industries. In particular, Australia's four largest banks have historically accounted for the majority of market share for many popular banking products, such as deposits, credit cards, personal lending and mortgages (table 4.1).<sup>13</sup>

The increase in concentration in the banking sector outlined in table 4.1 partly reflects consolidation over time, as well as the more recent effects of the global financial crisis. Despite the new entries that have occurred (particularly from non-ADI mortgage providers and foreign banks), the total number of participants in the market has fallen since the late 1990s, with mergers and acquisitions among existing ADIs outweighing the number of new entrants. Key acquisitions considered by the ACCC over the past decade include Westpac's acquisition of Bank of Melbourne in 1997, the CBA's acquisition of Colonial in 2000, Westpac's acquisition of St George in 2008 and CBA's acquisition of BankWest in 2008. In addition, there was significant merger activity among smaller institutions, as illustrated by the decline in the number of credit unions from 213 in 2001 to 143 in 2008.<sup>14</sup>

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<sup>13</sup> As noted in section 3.3.1 and Appendix 2, in assessing the competitive impact of acquisitions pursuant to section 50 of the TPA, the ACCC takes a purposive approach to market definition. Therefore, in addition to looking at market shares across the entire banking sector, the ACCC will examine market shares across a variety of product, customer and geographic markets, depending on the relevant markets to the transaction being considered.

<sup>14</sup> APRA *Insight*, Issue 1 2001 and Issue 1 2008.

**Table 4.1 Concentration in Australia's Banking Sector – 1890 – 2009<sup>(a)</sup>**

	Assets		Deposits		Home Loans	
	Share of 4 largest banks	HH index <sup>(b)</sup>	Share of 4 largest banks	HH index <sup>(b)</sup>	Share of 4 largest banks	HH index <sup>(b)</sup>
<b>1890</b>	0.34	0.06				
<b>1913</b>	0.38	0.10				
<b>1950</b>	0.63	0.14	0.64	0.15		
<b>1970</b>	0.68	0.16	0.68	0.16	0.77 <sup>(c)</sup>	0.21 <sup>(c)</sup>
<b>1990</b>	0.66	0.12	0.65	0.12	0.65	0.13
<b>Oct 2008</b>	0.65	0.11	0.65	0.12	0.74	0.15
<b>July 2009</b>	0.74	0.15	0.78	0.16	0.90	0.27

- (a) Data refers only to activities of banks (a subset of ADIs). Data excludes all activities of credit unions, building societies, and non-ADI lenders. Consequently, the actual concentration and HH index values are lower than stated.
- (b) The Herfindahl-Hirschman concentration index (which can vary from 0 representing perfect competition to 1 representing monopoly; a market with X equally-sized competitors will have an index of 1/X).
- (c) Assuming all owner-occupier housing loans were made by savings banks and accounted for all their loans.

Source: Report on Bank Mergers, Australian Senate Economics Committee, September 2009

Despite this increase in concentration, the Herfindahl-Hirschman index (HHI), calculated only for banks (a subset of ADIs<sup>15</sup>) suggests that with respect to both assets and deposits, the Australian market remains relatively competitive (table 4.1). For example, the HHI is below the USA's threshold of 0.18 for considering an industry to have high concentration.<sup>16</sup> Further, the index provides the same values in these areas as it would for a market with between six and seven equally sized firms. Nevertheless, the recent increases in concentration, particularly for mortgages, remains and ongoing policy concern for the Australian Government.

The recent consolidation partly reflects firms' desire to take advantage of economies of scale in distribution networks, staff training, computer systems, advertising and so forth. For similar reasons, economies of scope have also driven consolidation of banks with other financial services businesses, such as insurance companies. Increased scale is also important for the larger banks, in order to enable them to provide the larger loans required by larger businesses, and to compete internationally.

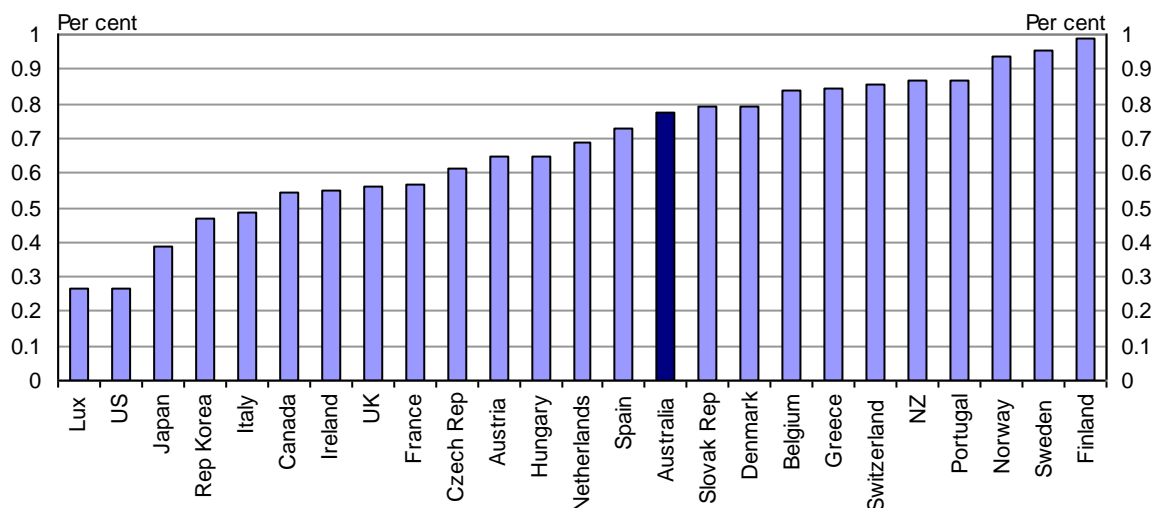
In addition to merger activity, the increased concentration of market shares also reflects the individual competitive strategies of different participants. Whereas some banks have actively sought to increase market share and become major players across the full spectrum of banking markets, others have prioritised margins over market share, or have chosen to focus on specific products, customers and/or geographic markets. For example, many credit unions and building societies were established to service employees in particular industries or particular geographic regions, and have not sought to expand significantly beyond their traditional customer bases. More recently, there have been prominent differences between the strategies of the four major banks following the onset of the global financial crisis, with two out of the four aggressively pursuing growth in mortgage lending, while the others have pursued growth in other areas.

<sup>15</sup> Data excludes all activities of credit unions, building societies, and non-ADI lenders. Consequently, the actual concentration and HH index values are lower than stated.

<sup>16</sup> United States Department of Justice, Horizontal Merger Guidelines, subsection 1.51.

Australia's experiences with consolidation in the banking industry and concentration of market share appear to be similar to those experienced by a number of other OECD nations. Prior to the global financial crisis, the level of concentration in Australia's banking sector (measured using the market share of the four largest banks) was broadly consistent with the OECD average (chart 4.1).

**Chart 4.1: International Comparisons of Concentration – Average 2000-2007<sup>(a)</sup>**



(a) Market share of the four largest' banks (1=100 per cent).

Source: OECD, from World Bank, Financial Structure Dataset.

In addition to merger activity in the banking sector, a key adjustment to the Australian financial system in the past decade has been concentration in the wealth management sector. This sector includes both bank and non-bank providers. As Australia has a compulsory superannuation system, a substantial quantity of funds is invested through the wealth management industry. The four major banks have actively pursued strong market shares in these markets through acquisitions and organic growth.

## 4.2 Market contestability

One limitation of concentration measures, such as market share, is that these incorporate only the shares of banks already in the market. It is well recognised that competition can exist in markets with a small number of major suppliers, particularly where there is competition from smaller players or where barriers to entry and exit are sufficiently low for there to be a credible threat of competition from new entrants. Such a market is said to be 'contestable'.

Given the difficulties in obtaining comparable quantitative data on contestability, more qualitative measures are necessary in order to establish the level of competition within the financial system. These include a wider view of alternative sources of finance, including the potential for smaller players to take on larger market share should the larger players cease to price competitively. Further, analysis of the contestability of markets through barriers to entry and exit are important in establishing the level of competitiveness in the marketplace.

Notwithstanding the large size of Australia's four major banks, Australians continue to be served by a wide range of financial service providers. The Australian banking market currently includes around 110 providers of over 2070 mortgage products, 70 providers of over 330 credit card products and around

30 providers of 340 business term loans, 70 business overdraft loans and around 40 small business commercial loans<sup>17</sup>.

There have been a number of new entrants to the Australian banking industry since the late 1990s, including: domestically owned banks; foreign bank subsidiaries; foreign bank branches; and non-ADI providers. Many of these institutions experienced growing market shares prior to the global financial crisis.

#### 4.2.1 *Regulatory barriers to entry*

Entry into the Australian banking sector is open to any institution (Australian or foreign), provided that it meets the relevant regulatory requirements. For example, the provision of financial products is subject to the financial services licensing regime of ASIC. In addition, financial institutions that raise funding through deposit-taking activities are subject to prudential regulation by APRA, which is designed to promote the safety of deposits and protect the stability of the financial system. Other regulatory requirements specific to the banking sector include payments system regulation and anti-money laundering and counter-terrorism financing requirements.

Australia's licensing requirements are sufficient to ensure safety of the core banking system, and limit the opportunities for inappropriate business models to become established. Overall, Australia's regulatory barriers do not appear to exceed the requirements from a stability perspective.

Perhaps the largest regulatory barrier to entry is with respect to capital requirements. Given the large quantity of capital required to establish an ADI, it can be relatively difficult for new players to enter the Australian market. However, these barriers should be relatively insignificant for a large international player, looking to establish themselves in a new market. Moreover, authorisation as an ADI is not required to supply non-deposit products such as provision of credit.

#### 4.2.2 *Non-regulatory barriers to entry*

Non-regulatory barriers to a financial institution looking to enter a new economy can include: the need for distribution channels (such as branch networks), switching costs, and the importance of economies of scale in diversifying risk and raising funds at competitive rates.

However, while it is important to assess non-regulatory barriers, it is difficult to determine relevant benchmarks. Further, structural and regulatory differences can make these barriers difficult to compare over time.

Non-regulatory barriers to entry into the Australian market have decreased over time, encouraging a number of new entrants. In particular, the widespread adoption of electronic banking and alternative distribution schemes, such as brokers and agency banking relationships, have reduced the importance of branch networks. For example, ING Direct has developed a banking business that operates almost entirely online.

These developments have dramatically improved the ability of new entrants and smaller existing players to compete more effectively with the larger banks with established branch networks. Further, they have increased the opportunities for one or more of these foreign banks already catering to selected markets in Australia to potentially adjust their product mix in response to any new opportunities that arise.

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<sup>17</sup> CANNEX *Home Loan Star Ratings*, Report No. 24, October 2009; *Credit Card Star Ratings*, Report No. 18, November 2009; *Deposit Account Star Ratings*, Report No. 10, September 2009; and data provided to Treasury by CANNEX.



### 4.2.3 *Competitiveness of smaller players*

While market share in the banking sector is relatively concentrated, a number of recent developments in the banking industry suggest that the level of concentration is not necessarily a significant impediment to competition, although the ability of smaller financial players to compete varies between different banking product markets.

Experience since the 1990s suggests that smaller players can successfully compete with the major banks should opportunities arise for them to raise funds at competitive prices and provide more innovative products and services than those already provided by the major banks. For example, prior to the global financial crisis, securitisation enabled smaller institutions (including non-ADI lenders) to gain market share and put downward pressure on interest rates in the mortgage lending. While the major banks retained a dominant (but declining) share over this period, the ability of smaller institutions to increase their loan portfolios at a lower funding cost created a strong competitive dynamic.

Similarly, foreign banks have had a growing presence in many key banking markets since first entering the Australian banking system in the late 1980s and early 1990s. Prior to the global financial crisis, foreign banks accounted for: 9 per cent of mortgage lending; 13 per cent of credit card lending; 20 per cent of business lending (predominantly to large businesses) and 18 per cent of deposits.<sup>18</sup> Foreign banks also pioneered a number of innovative banking products in the 1990s, such as high interest online savings accounts and credit card rewards packages, forcing major banks to improve their product offerings in order to defend their market shares.

Further, some of Australia's smaller institutions are significant players within their own region, or within particular product segments. For example, many of Australia's credit unions, building societies and smaller banks were established to service particular regions or employees (e.g. teachers or defence employees) from particular industries and maintain a strong competitive presence in these communities. Similarly, some smaller financial institutions are significant competitors in a narrow range of banking products, such as rural lending, credit cards, or automobile loans. This suggests the level of competition from smaller institutions may be stronger than the aggregate concentration figures indicate.

Finally, in some cases, substitutes are increasingly available from outside the banking system. For example, larger non-financial corporates have access to non-intermediated debt and equity markets as alternative sources of funding to bank loans. Since the onset of the global financial crisis, these markets have become increasingly important as the pricing and conditions of intermediated debt have tightened. For example, while Australian companies (excluding ADIs and Government corporations) issued virtually no corporate bonds in 2006, they issued a record \$29.2 billion in corporate bonds over 2009. They also issued a record \$98.7 billion of additional (secondary) equity over that period.

### 4.3 *Profitability and pricing*

Given that measures of concentration are not sufficient in order to establish the level of competitiveness within a banking system, it is necessary to consider other measures of competition. Pricing of lending products, particularly through examination of net interest margins and fees, can give a good indication of relative levels of competitiveness over time and across jurisdictions.

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<sup>18</sup> RBA, 2007, financial stability review. Available at: <http://www.rba.gov.au/publications/fsr/2007/mar/html/box-c.html>. Also, RBA, 2008, Submission to the inquiry on competition in the banking and non-banking sectors. Available at: <http://www.rba.gov.au/publications/submissions/inquiry-comp-bank-sect.pdf>.

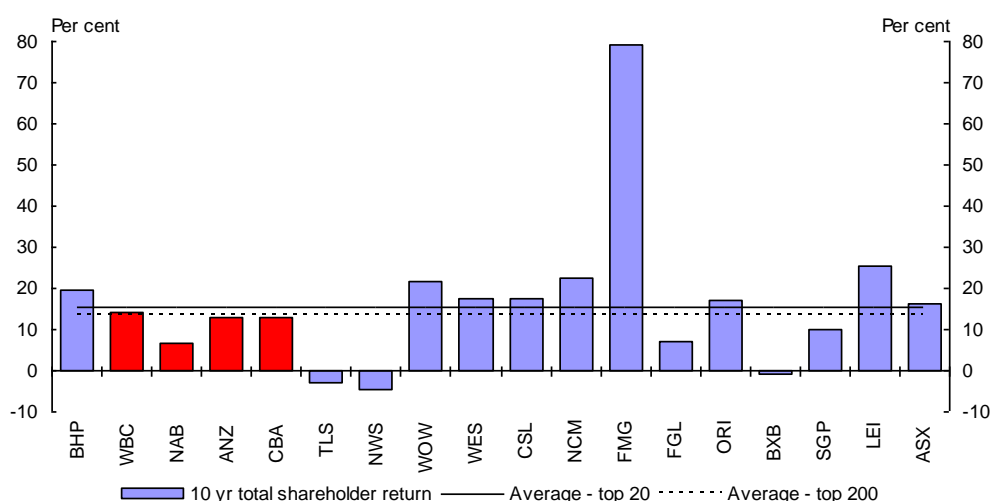
While quantitative measures of profitability are more comparable across countries and through time than the qualitative analysis of market contestability, it should be recognised that some institutions engage in a variety of activities that are not related directly to banking. For example, many of Australia's banks (including the four majors) engage in wealth management activities, which have a substantial impact on their profit results. Consequently, profitability measures (which are generally calculated on an institutional basis) are not necessarily fully reflective of competition in the banking sector.

Subject to this qualification, pricing and profitability measures support the conclusion that Australia's banking sector is competitive, and that competitive pressures have increased in recent years.

#### 4.3.1 Profitability

Australia's major banks have reported significant profits over the past decade or so. However, various measures of profitability suggest that the major banks' profits are in line with other large Australian companies. For example, the 10 year total shareholder returns of the four major banks are broadly in line with the average of Australia's largest 200 companies (chart 4.2).

**Chart 4.2 Total Shareholder Returns<sup>(a)</sup>**



(a) Total shareholder returns measures the total return to an investor, including capital gain and dividends. The top 20 data refers to the largest 20 companies that are both listed and have a 10 year return available. The top 200 data refers to the largest 200 companies for which the data is available; some companies may be delisted.

Source: Morningstar FinAnalysis database.

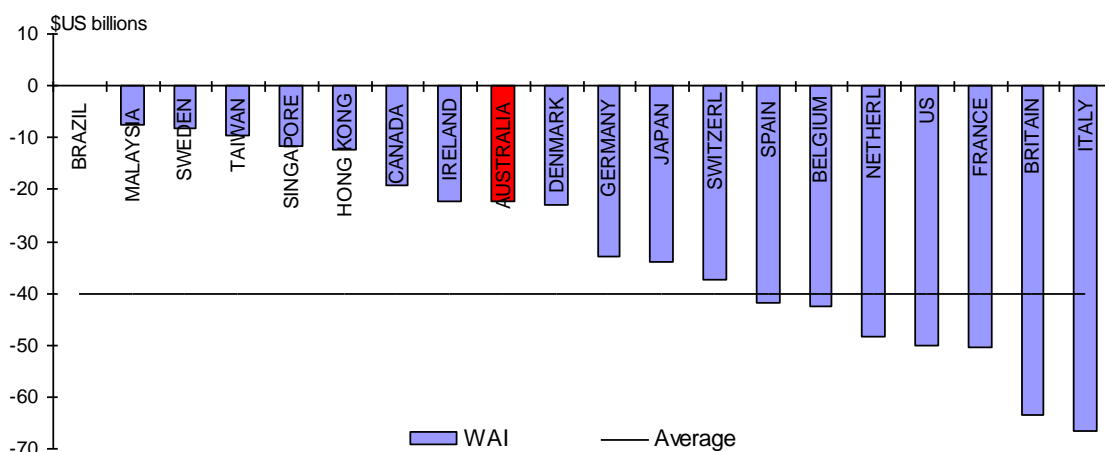
It should be noted that a substantial proportion of the profitability of many banks, including the four major banks, is associated with their wealth management, rather than banking activities. Profit after tax from wealth management activities increased from around \$1.3 billion in 2005 to around \$1.9 billion in 2007.<sup>19</sup>

<sup>19</sup> Treasury estimates, based on KPMG 2006, 2007, 2008 and 2009, 'Major Banks Survey' *Financial Institutions Performance Survey*. Available at <http://www.kpmg.com/AU/en/IssuesAndInsights/ArticlesPublications/Financial-Institutions-Performance-Survey/Major-Banks/Pages/Default.aspx>.

An alternative measure, designed to improve on total shareholder return, is the Wealth Added Index (WAI).<sup>20</sup> This index measures the value of the ‘excess return’ to shareholders over the cost of equity over a period and is comparable across industries and across countries. It is based on adjusted movements in share price.

Internationally, only a single financial institution (in Brazil) of the 100 surveyed by Stern Stewart & Co reported a positive WAI across the most recent business cycle. However, Australian banks reported a smaller average negative WAI than many of the jurisdictions covered. Further, all four major Australian banks reported a WAI better than the average for the 100 institutions examined (chart 4.3).

**Chart 4.3 WAI of International Finance Companies (Including Banks)<sup>(a)(b)</sup>**



(a) The analysis covers the most recent business cycle, defined as the period from 10 September 2002 to 9 March 2009 (note that this was based on the highs and lows of the S&P 500). The analysis covered the largest 100 companies globally in each of ten categories, including financial institutions.

(b) As selection for the index requires a market capitalisation in the top 100 financial institutions globally, some jurisdictions have more firms than others. In particular, the values for Brazil, Malaysia, Taiwan and Denmark are based on a single institution’s performance.

Source: S Stern Stewart & Co., Stern Stewart Global 1000, August 2009.

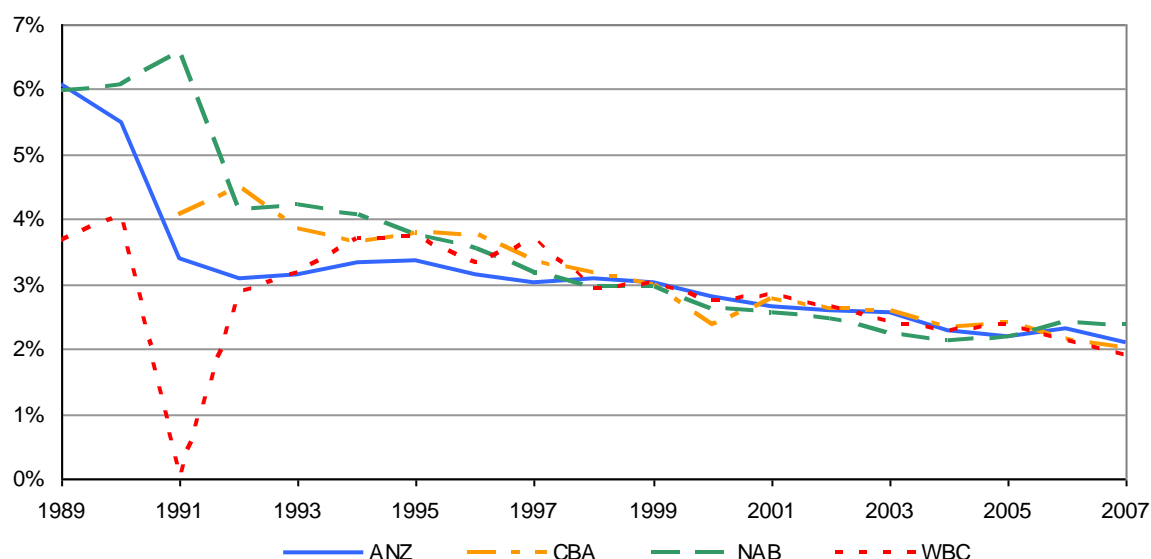
#### 4.3.2 Interest margins

Net interest margins provide another method of tracking competitive dynamics. Where competition is increasing, it can be expected that net interest margins will fall.

In Australia one of the clearest long-term benefits of deregulation of the financial system has been sustained downward pressure on prices for financial products. Net interest margins for Australian licensed banks have more than halved since 1995, partly reflecting competition from non-ADI lenders and new bank entrants and were at historic lows prior to the onset of the global financial crisis (chart 4.4).

<sup>20</sup> WAI is a trademark of Stern Stewart & Co.

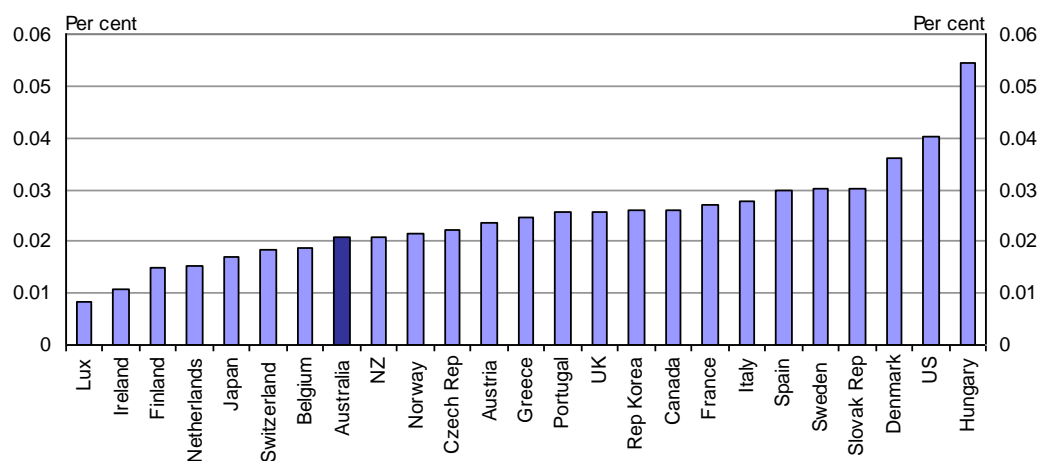
**Chart 4.4 Affects of Competition and Deregulation on Net Interest Margins Prior to the Global Financial Crisis**



Source: Finanalysis database.

According to the OECD, over the pre-crisis period 2000-2007, the major Australian banks’ net interest margins were below the levels reported by the UK, USA, Japan and Canada, and below the average across all OECD countries (chart 4.5).

**Chart 4.5 International Comparisons of Net Interest Margins – Average over the Eight Years Leading up to the Global Financial Crisis**



Source: OECD, from World Bank, Financial Structure Dataset.

Some of the early decrease in net interest margins may have resulted from banks transitioning to a ‘user pays’ system, which resulted in higher fees. However, overall the decrease appears to have more than offset any increase in bank fees and charges.

### 4.3.3 Fees and charges

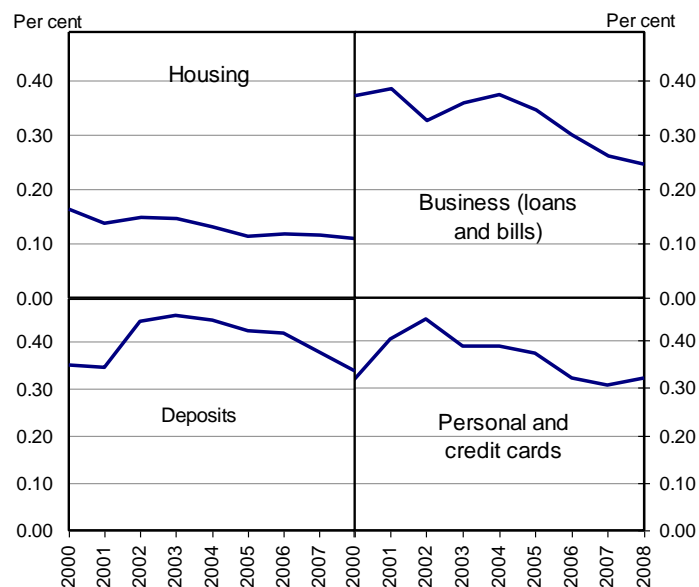
Fees and charges also adjust in response to competitive pressures, and may therefore provide an indication of the competitive environment. While fees are not always as easy for customers to compare as interest charges (or payments for depositors), a competitive environment is likely to encourage some banks to position themselves as ‘low fee’ or ‘no fee’ players. Similarly, fees such as upfront mortgage fees are more likely to be waived when customers have easy access to other providers.

Fees and charges on banking products increased significantly over the late 1990s, as the banking sector transitioned away from traditional pricing structures – in which the cost of operating transaction accounts was cross-subsidised by the interest earned on lending – towards a ‘user pays’ pricing system.

However, over the past few years many fees have levelled off or fallen, reflecting renewed competition in fees and charges. The continued growth in aggregate fee revenue over this period has generally been driven by increased levels of banking activity, such as a higher number of transactions, rather than an increase in individual charges. As a result, aggregate fee revenue has grown at a slower pace than banks’ total assets, revenue and transaction volumes over the past few years (chart 4.6).

Some of the relative reduction in fee revenue reflects the development of banking products that potentially reduce the number and size of fees incurred, including: ‘fee free’ transaction accounts; ‘all-you-can-eat’ transaction accounts; ‘no-frills’ products including some credit cards; and fee discounts offered as part of product bundles. Many of these were pioneered by smaller players and new entrants, such as foreign banks. In some cases the major banks responded by matching these product features in order to defend their market shares.

**Chart 4.6 Annual Fee Revenue as a Percentage of Total Loans or Deposits Outstanding**



Source: RBA, Reserve Bank Bulletin ‘Bank Fees in Australia’, issues 2001 – 2009; RBA, Financial Aggregates.

One of the fastest-growing categories of fee revenue in recent years is ‘penalty’ or ‘exception’ fees, which are incurred, for example, when a customer becomes overdrawn on a deposit account or fails to make the requisite credit card repayment. These fees rose to a total of \$11.6 billion in 2008, ranging from

\$20 to \$45 per incident.<sup>21</sup> However, in 2009 all four major banks announced that they would either significantly reduce or abolish exceptions fees on many account types. This is expected to reduce aggregate fees going forward.

#### **4.4 *Product innovation***

The level of innovation within a banking system provides a further indication of competitive pressures, albeit a qualitative one. As banks attempt to attract brand recognition and market share, this encourages them to create unique financial products. This stimulates innovation, and provides consumers with the opportunity to obtain financing products that more closely match their needs.

The Australian financial services market generally has experienced considerable innovation in recent decades. The range of products available today is significantly different from those available a decade ago. In many cases the new products reflect innovations by new entrants keen to attract market share, thereby effectively forcing the incumbent bank and non-ADI providers to match the improved pricing or product features in order to defend their market shares.

### **5. *Impact of the global financial crisis on competition and concentration***

#### **5.1 *Ongoing stability of the Australian financial system***

Australia's banking system has been resilient in the face of the global financial crisis, as the result of a number of structural, regulatory and policy factors.

Reflecting sound lending and risk-management practices, Australian banks generally had stronger balance sheets than their international counterparts going into the crisis. As a result, although impairment rates increased through the crisis, they remained low compared with banks internationally. By avoiding the substantial losses associated with high impairment rates, Australian banks were able to remain well-capitalised. Similarly, Australian banks did not substantially engage in investment in high-risk assets, such as collateralised debt obligations and non-conforming asset-backed securities, unlike many of their overseas counterparts.

The sound lending practices of Australian banks are backed by effective regulation. In addition to strong prudential regulation, Australian banks must comply with the Uniform Consumer Credit Code, which puts responsibility on the lender to ensure that borrowers can afford to service their loans.

Low impairment rates were also supported by a buoyant housing market. The Australian housing market had its previous boom in 2002-2003, which levelled without notably impacting on financial system stability, in part reflecting a timely response from financial system regulators. Consequently, Australia was not suffering to the same extent as other countries from over-priced housing and overbuilding when the financial crisis occurred. Given that housing forms around 60 per cent of Australian banks' on-balance-sheet loans, the relative strength of this market supported ongoing bank profitability.

The strength and stability of the financial system was also supported by timely action by the Australian Government in response to the global financial crisis. The Australian Government provided timely fiscal stimulus measures, including the \$42 billion Nation Building and Jobs Plan, which played a

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<sup>21</sup> Australian Bankers' Association Fact Sheet, 'Exception Fees November 2007' in Senate Standing Committee on Economics, 'Australian Securities and Investments Commission (Fair Bank and Credit Card Fees) Amendment Bill 2008', September 2008.

key role in supporting the Australian economy. Treasury estimates that, in the absence of fiscal stimulus, growth would have contracted approximately 2.0 per cent through the year to September 2009.

The Australian Government also introduced guarantee schemes to support banks' access to funds throughout the financial crisis. In October 2008, the Government announced a commitment to guarantee all retail deposits up to \$1 million under the newly created Financial Claims Scheme. In addition, the Government introduced a temporary, fee-based Large Deposits and Wholesale Funding Guarantee. This allowed ADIs to raise wholesale funding that was guaranteed by the Australian Government for up to a 5 year maturity, at a price that varied from 70 basis points for AA- (and above) rated ADIs to 150 basis points for BBB+ (and below) rated ADIs. The guarantees supported confidence in the deposit system, and also allowed ADIs to continue to raise funds in wholesale markets, both onshore and offshore, despite global financial market instability. The guarantees are available to all ADIs, and cover both deposits, which are smaller ADIs' primary funding source, as well as wholesale funding, which is issued predominantly by larger ADIs.

In addition, the Government provided support for the residential mortgage-backed securities markets. This support provided assistance to smaller lenders in raising funds during a period of dislocation in asset-backed securities markets, which were an important source of funding for those lenders. This initiative was announced prior to announcement of the guarantees, but was expanded when the guarantees were introduced, as a complementary measure to support competition from smaller players. Further information can be found at section 6.1.

## **5.2 Consolidation activity during the crisis**

The banking sector became more concentrated during the global financial crisis, partly reflecting consolidation amongst providers of banking services via mergers. However, a particularly significant driver of consolidation has been the exit or scaling back of operations of firms from the market. Key exits and mergers include:

- The exit or significant scaling back of non-bank lenders due to the closure of securitisation markets, which constituted the primary source of funding for many of these entities – these competitors were particularly important in driving competition in home loan lending. Examples include FirstMac, RESIMAC, Challenger, Liberty and Bluestone;
- The exit or significant scaling back of other non-bank lenders due to constraints in other funding markets, either in Australia (for example in commercial paper markets) or in the jurisdiction of their parent companies overseas, restricting their parents' ability to provide capital injections to their Australian subsidiaries. Examples include GE, Virgin Money, GMAC-RFC and Seiza Capital;
- The exit or significant scaling back of foreign banks from Australia due to funding constraints – these competitors were particularly significant in providing corporate business banking services. Examples of institutions that have exited or significantly scaled back operations include Royal Bank of Scotland and Société Générale;
- The scaling back of operations of smaller Australian banks including Bank of Queensland, Macquarie Bank, Suncorp, Bendigo and Adelaide Bank and ME Bank, particularly due to increased cost of funding, particularly in wholesale funding markets. This impact was mitigated by the Government's Large Deposit and Wholesale Funding Guarantee Scheme and the Financial Claims Scheme, which enabled smaller institutions to raise deposits and wholesale funding using

a Government guarantee. The home lending portfolios of these banks were further affected by closure of securitisation markets; however the Government's \$16 billion investment in RMBS helped to offset this impact. Their business lending portfolios were also affected by increased impairment rates;

- The acquisition of BankWest (Australia's sixth largest bank) by CBA in 2008, as a result of the decision by BankWest's former parent, HBOS, to withdraw from its Australian operations; and
- The acquisition of RAMS by Westpac in 2007 and Challenger by NAB in 2009, and the acquisition of 33 per cent of Aussie Home Loans by CBA in 2008 — these entities were previously significant non-ADI lenders, albeit with individually very small market shares.

All mergers and acquisitions of shares or assets involving the banking sector which could raise competition issues were carefully assessed by the independent ACCC pursuant to section 50 of the TPA. While market conditions have changed as a result of the crisis, the underlying analytical framework of the ACCC has been applied in a consistent manner, and has proved to be robust in assessing the competitive implications of acquisitions in this sector during this period of economic change.

Box 5.1 (below) outlines the ACCC's analysis of the CBA-BankWest merger proposal.

### **5.3 *The impact of the global financial crisis on competition measures***

A number of significant developments have collectively altered the competitive dynamics in the banking services sector since the onset of the global financial crisis. These include:

- The decline of non-ADI lenders as substantial players in mortgage lending markets, following the closure of international securitisation markets;
- The withdrawal and slower growth of foreign banks' operations in Australia, reflecting their reduced capacity to raise funds and to divert scarce capital away from their home operations;
- Strong growth in deposits, reflecting an increase in risk aversion and supported by the Government's deposit guarantee;
- Increased use by the major banks of long-term wholesale debt and a corresponding reduction in exposure to short-term debt (although short-term debt exposure still remains high by international standards); and
- Increased demand by the ADI sector for deposits in place of short-term and long-term wholesale funding, due to changes in shareholder expectations.

A particular concern following the onset of the global financial crisis is the exit and slower growth of non-ADI lenders and, to a lesser extent, regional banks. These institutions played an important role in driving competition in lending and reductions in interest margins over the past two decades.



### **Box 5.1 Merger of CBA and BankWest**

In October 2008, Commonwealth Bank of Australia (CBA) announced its proposal to acquire BankWest and St Andrews from HBOS. At the time of the announcement, HBOS was experiencing considerable funding pressures, despite its announced sale to Lloyds TSB Group plc.

Following comprehensive inquiries and analysis of the proposed merger, the ACCC took the view that the acquisition was not likely to result in a substantial lessening of competition in any of the relevant markets. A key factor in the ACCC's analysis was the ACCC's assessment of the 'counterfactual' or likely future state of competition without the merger. Although BankWest had been considered a vigorous competitor in the past, the ACCC found compelling evidence that in the absence of the merger with CBA, it would not have been in a position to continue to compete aggressively in the future. Leading up to the GFC, BankWest was found to be a vigorous competitor in Western Australia and was expanding aggressively into the eastern states. However, its competitive strength was reliant on funding from its UK parent company HBOS, which was in substantial financial difficulty.

On this basis, in national markets for deposit/term products, home loans, personal loans and credit cards, the ACCC found that the acquisition would only result in a small degree of aggregation, with a number of other significant competitors remaining. In relation to local transaction account markets, it was found that within Western Australia, where BankWest had a more significant presence, particularly in terms of branches and ATMs, three significant competitors would remain with similar sized branch networks. On a local level, it was found that in almost all local areas, consumers would continue to have a choice of several providers post-acquisition.

The ACCC's decision not to oppose the merger was made on competition grounds and not on the basis of financial stability considerations. Accordingly, while global financial instability was part of the factual background relevant to competition issues, the ACCC did not take into account broader systemic or public benefit issues in reaching its decision.

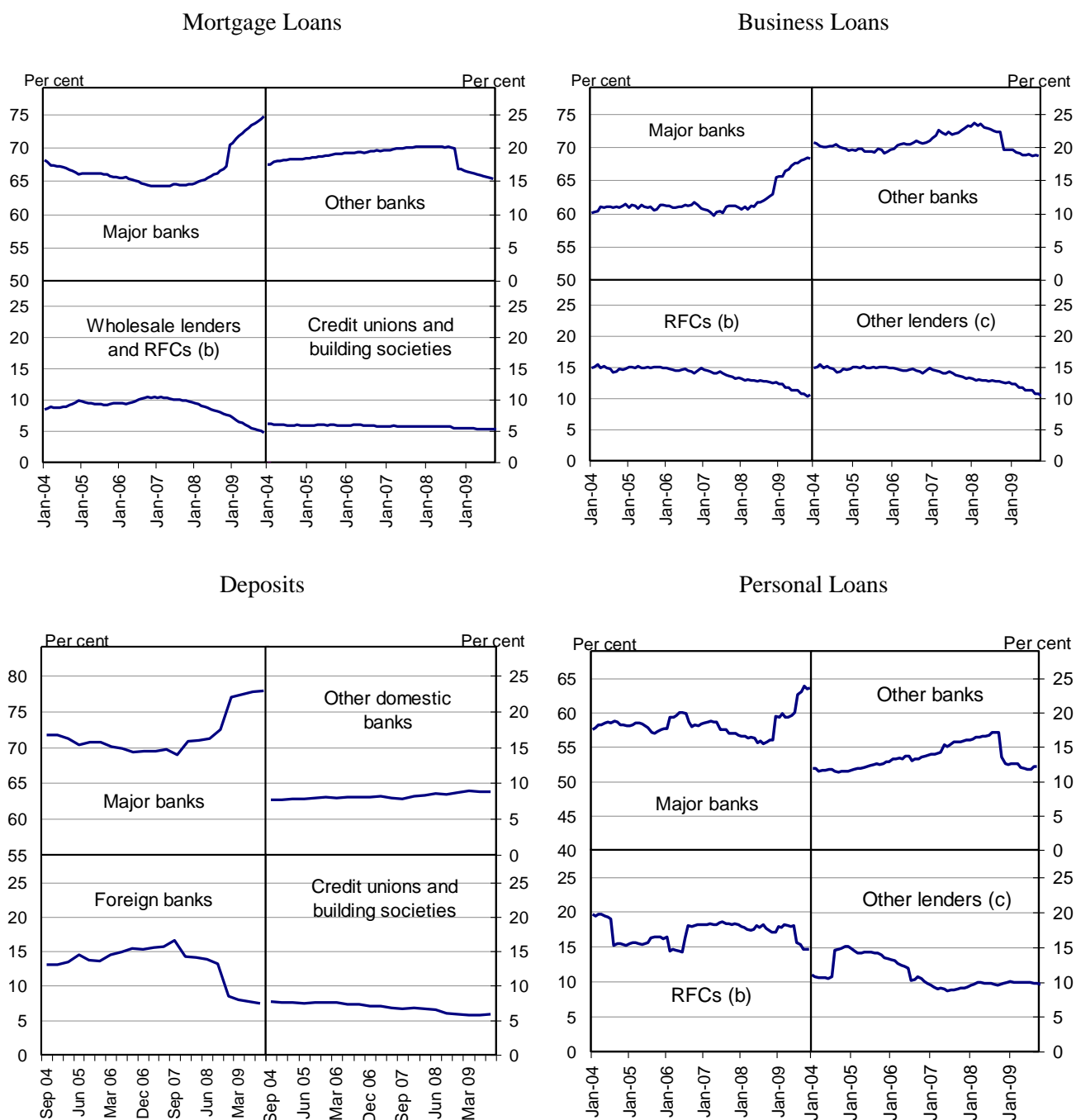
#### *5.3.1 Market shares*

The major banks, with their very large deposit bases, high credit ratings and comparatively low reliance on securitisation markets, have been strongly positioned to compete for market share throughout the global financial crisis. Some foreign subsidiaries that compete in niche markets, backed by large and secure foreign banks, have also been well positioned in this regard.

Smaller ADIs have benefited from increased deposit flows, particularly since the introduction of the Government's deposit guarantee, which has underpinned their lending. However, as lower rated institutions, they have been less able than the major banks to obtain cost effective funding from other sources without Government support, which has limited their capacity to expand their market share. Similarly, a number of foreign banks faced difficulty accessing scarce capital from their parents, reflecting the financial difficulties being faced by their parent companies and the higher priority placed on financing activities in the companies' home jurisdiction relative to their Australian operations.

Reflecting a combination of these factors, the major banks' market share of most banking products increased over the course of the crisis (chart 5.1). However, some smaller ADIs have also maintained or increased their market share over this period.

Chart 5.1: Market Shares of Outstanding Loans and Deposits<sup>(a)</sup>



(a) All major bank charts include BankWest from December 2008; and ANZ, CBA, NAB, St George and Westpac for the entire sample.

(b) RFCs stands for ‘registered financial corporations’. The term covers all non-ADI financial corporations with assets over \$5 million whose principal business in Australia is the borrowing of money and provision of finance.

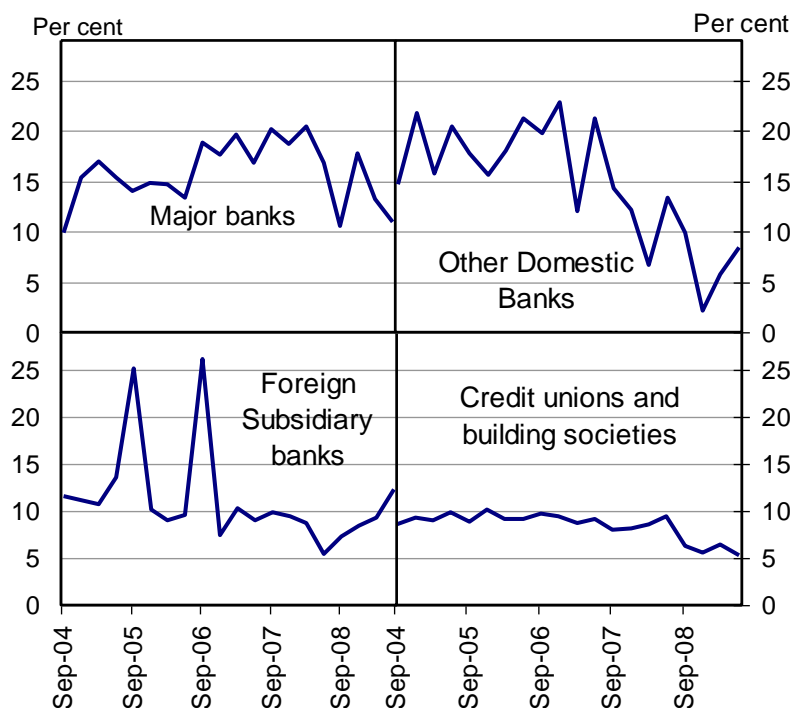
(c) Includes lending by credit unions, building societies, cash management trusts, specialist credit card institutions and some additional securitisation data. Credit unions and building societies make up approximately 0.4 per cent out of a total of between 2.4 per cent and 4.9 per cent.

Source: Treasury estimates using APRA’s Quarterly Bank Performance Statistics and Quarterly Credit Union and Building Society Performance Statistics and data provided by the RBA.

### 5.3.2 Profitability

Relative to the experience in other jurisdictions, all categories of ADIs have returned solid profits throughout the crisis, emphasising the underlying strength of Australia's banking system. Nonetheless, Australia's banking institutions have experienced a reduction in profitability stemming from the crisis, with return on equity ratios falling across most categories (chart 5.2). The fall in return on equity was partly the result of a decline of around \$600 million in profit after tax from wealth management activities.<sup>22</sup>

**Chart 5.2: Return on Equity of Australian Financial Institutions – 2004-2009**



Source: APRA, Quarterly Bank Performance Statistics and Quarterly Credit Union and Building Society Performance Statistics.

The fall in profits has generally been more pronounced for smaller institutions than for the major banks. For example, some smaller banks have experienced proportionally larger impairment expenses than the major banks, partly reflecting the size of their business activities relative to their balance sheets, and partly reflecting their more aggressive lending patterns in the period leading up to the crisis.

Despite the fall in profits, the average of the major banks' net interest margins increased from 2.06 per cent in the 2007-08 financial year to 2.22 per cent over the 2008-09 financial year, largely reflecting wider margins on business loans. While there are signs that they have begun to stabilise, there remains significant Government and community concern surrounding the recent trends in increasing net interest margins.

The gap between the banks' profits and their net interest margins has partly reflected a significant increase in impairment expenses, particularly on business loans. However, as the economic downturn has

<sup>22</sup> Treasury estimates, based on KPMG 2008 and 2009, 'Major Banks Survey' *Financial Institutions Performance Survey*. Available at <http://www.kpmg.com/AU/en/IssuesAndInsights/ArticlesPublications/Financial-Institutions-Performance-Survey/Major-Banks/Pages/Default.aspx>.

been less pronounced than previously feared, it is anticipated that some of these expenses will be unwound as the economy recovers.

#### **5.4 *The post-crisis competitive environment***

Rapid growth in global credit prior to the financial crisis led to spreads on a number of financial products narrowing to unusually low levels that did not adequately reflect inherent credit risks. With the permanent repricing of risk, these highly favourable conditions are unlikely to return. Consequently, lenders that established business models with the expectation that the low cost of credit would continue are likely to experience significant ongoing pressures on their competitive positions.

However, competition levels in the banking sector in Australia are expected to rise as the financial system recovers from the global financial crisis. In particular, competition from non-ADI participants and smaller ADIs can be expected to be enhanced as securitisation markets recover. Further, some smaller domestic ADIs that have been forced to scale back lending can be expected to become a stronger competitive force as their balance sheets recover. Foreign banks will also be well placed to re-establish their presence in Australia as conditions in their home markets stabilise.

Moreover, despite the financial market turmoil, Australian banking customers continue to have access to a significant number of providers and there is continued evidence of competitive pressures on interest rates, especially for mortgages. For example, a significant number of smaller lenders are offering mortgages at rates of up to 1 per cent lower than the four major banks. In addition, when the RBA increased the cash rate in early December, the four major banks responded very differently. While Westpac increased variable mortgage rates by 20 basis points in excess of the RBA cash rate increase, NAB (who initially had lower mortgage rates than Westpac) increased rates by the cash rate only, and issued a press release encouraging Westpac customers to switch to NAB. This suggests that competitive forces remain in lending markets, even between the four major banks.

Competition for deposits is also more intense than before the crisis, supported by the market's increased focus on liquidity. The focus on liquidity has prompted the banks with more wholesale funding to further increase their deposit base.

While there has been considerable press speculation regarding possible further mergers between the major banks and regional banks, to date, no significant proposal has been announced. The ACCC has made clear that it would assess the competitive effects of any such proposals very carefully, particularly given the global financial crisis and the impact this has had on funding, and accordingly the ability of smaller competitors to compete aggressively. Industry is aware of the ACCC's views on the competitiveness of the financial services sector. Some proposed mergers have not advanced beyond initial stages as a direct result of these views being aired in the public arena.

The ACCC is currently examining the proposed acquisition of AXA Asia Pacific Holdings (AXA) by AMP, and an alternative bid from National Australia Bank. AXA is a wealth management company providing superannuation, insurance, finance planning and investment products and services, but does not have a strong presence in banking services.

## **6. Recent Government initiatives to improve competition**

The Australian Government is of the view that strong competition in the financial services sector is critical to ensuring consumers get the services they want at the lowest possible prices. As the Treasurer stated in a press release on 11 October 2009, "the Government is committed to ensuring Australia has a competitive and healthy banking system, which gives consumers a wide range of financial products at competitive prices." As the economy recovers from the global financial crisis, the Government continues

to promote measures to enhance competition in the banking sector to ensure an efficient and innovative financial system.

A number of initiatives that have previously been implemented or are currently underway can be expected to support competition in the banking sector. The Government is also continuing to monitor competitive dynamics in the wake of the crisis.

### **6.1 *Support for securitisation markets***

Securitisation has historically been an important driver of competition in Australia's mortgage market, providing smaller lenders with a large and inexpensive source of funding to compete strongly on price with the established major banks. Over the course of the global financial crisis, the marked deterioration in global securitisation markets flowed through to the Australian residential mortgage-backed securities (RMBS) market, which meant smaller lenders were unable to access funding from this source to compete effectively with larger lenders. In response, in September and October 2008, the Australian Government announced that it would invest up to \$8 billion in RMBS to support competition from a diverse range of lenders throughout the global financial crisis.

By investing almost all of this \$8 billion over the period between November 2008 and November 2009, the initiative has enabled 13 smaller mortgage lenders to raise almost \$11.4 billion in funding. Lenders assisted through this initiative comprise five non-major Australian banks, four building societies and credit unions, and four non-ADI lenders. It has allowed these smaller lenders to maintain a higher level of lending and market share than would otherwise have been possible.

Conditions in the Australian RMBS market have improved since the height of the global financial crisis. There has been approximately \$5.3 billion in non-Government supported RMBS issuances and increased private investor participation in Government supported issuances. However, pricing and volumes have not yet improved enough to support affordable new issuance from a variety of smaller lenders. As such, on 11 October 2009, the Government announced it would invest up to an additional \$8 billion in Australian RMBS, to support competition as the RMBS market continues to recover from the impacts of the global financial crisis.

### **6.2 *Account switching package***

Impediments to customers' ability to switch banks, due to administrative and other obstacles that may confront them if they wanted to do so, inhibits choice and competition in the financial services sector.

Reflecting these considerations, the Government developed its Account Switching Package to make it easier for customers to switch banks if they are not satisfied with their current provider. The package includes a listing and switching service that requires banks to provide their customers with accurate information on all direct debits and credits to take to a new bank for easier transferral. It also includes a consumer complaints hotline, consumer education resources and an ASIC-led review of mortgage exit fees. This package, which came into effect on 1 November 2008, seeks to support competition in the financial services sector by reducing unnecessary barriers to customers wanting to change providers and increasing consumer awareness of financial service products and their associated costs.

Australia's account switching services are structurally different from those in place overseas. This reflects differences in the way Australia's payments system has evolved over time. For instance, in the UK, the clearing and settlement of direct credit and debit transactions has evolved to become more centralised. This facilitates the smoother diversion of these transactions from one bank to another, compared to what is in currently in place for Australia.

### **6.3 *Prohibition of unfair contract terms***

In June 2009, the Government introduced the Trade Practices Amendment (Australian Consumer Law) Bill 2009 into Parliament, which includes a new national unfair contract terms law. The legislation will prohibit the use of unfair terms in standard-form consumer contracts and will allow a court to render any unfair terms void. A term in a consumer contract term will be unfair if: it would cause a significant imbalance in the parties' rights and obligations arising under the contract; it is not reasonably necessary to protect the legitimate interests of the supplier; and it would cause detriment to a party. Subject to passage by the Senate early in 2010, the unfair contract terms provisions are expected to come into effect on 1 July 2010.

### **6.4 *National consumer credit protection reform***

The Australian Government has committed to nationalising and modernising Australia's consumer credit laws. Consequently, on 23 November 2009 the Australian Government passed legislation to implement the first Phase of the National Consumer Credit Protection Reform Package (the Credit Reform Package). The Credit Reform Package will, for the first time in Australia, provide for one single, standard, national regime for the regulation of consumer credit, and is expected to commence operation from 1 April 2010.

Key features of the reforms include:

- A comprehensive national licensing regime for all providers of consumer credit and credit services, enforced by ASIC, with enhanced enforcement powers in an improved sanctions regime.
- New industry-wide responsible lending conduct obligations which will protect consumers by requiring all lenders to lend responsibly by ensuring that the credit they provide is not unsuitable to the consumer and the consumer has the capacity to repay. Brokers will also have to comply with similar responsible lending conduct obligations. Consumers will be able to seek redress for any loss or damage due to licensee misconduct, or if responsible lending obligations were not met.
- Expanded consumer protection offered through special court arrangements, and the requirement for a licensee to be member of an external dispute resolution scheme approved by ASIC to provide consumers access to a low-cost forum to resolve disputes outside the court system.

The Government intends to build on these reforms to enhance the regulatory framework established by this package. Work on the second phase will include the consideration of credit card limit extensions, fringe lending issues and reverse mortgages as well as extending the regulation of credit to include small business and other investment loans.

These reforms are not aimed at promoting competition in particular. However, by increasing the requirements for lenders to consider the ability of their customers to repay their loans before allowing them to take on debt, the Credit Reform Package ensures that competition in the banking sector remains healthy, and is not to the detriment of consumers. The package also promotes competitive neutrality between providers of different types of credit and extended responsible lending requirements to brokers and advisers.

## 7. Conclusion

### 7.1 *Competition and stability*

The resilience of Australia's banking sector reflects *neither* a lack of competition in the Australian banking sector, *nor* any preference for stability over competition in the prioritisation of Government and regulatory objectives. Both Australia's regulatory framework and Government policy are designed to support competition and stability simultaneously.

As discussed in section 4, competition increased in the Australian market over the two decades in the lead-up to the global financial crisis, and was comparable with competition levels in the financial systems of other advanced economies. This enhanced competition resulted in many benefits for banking customers, including: lower interest margins and fees; product innovation; improved access to making services; and greater choices of providers. It also resulted in lenders offering 'low-doc' loans and loans with higher loan-to-valuation ratios, and other changes to lending standards similar to those experienced in other countries.

This increase in banking competition, combined with the Australian financial system's relative resilience in response to the global financial crisis (see section 5), indicates that it is possible to design regulatory systems and Government policy that simultaneously support competition and stability objectives. This view is supported by recent OECD research, which finds that effective financial system regulation is positively correlated with both stability and competition.<sup>23</sup>

Australia's regulatory system, as discussed in section 3, divides responsibility for competition and stability regulation between separate entities. This division prevents short-term concerns related to *either* competition or stability (particularly during periods of financial market dislocation) from outweighing longer-term considerations in the other arena. However, Australia's regulatory system also encourages the stability regulators (the RBA and APRA) to take into account competition objectives where necessary, thereby reducing conflict between regulators. In this way, the quality of Australia's regulatory system helped to keep in check any inappropriate lending practices that may otherwise have developed over the favourable conditions prior to the global financial crisis, without stifling healthy long-term competition.

This simultaneous focus on both competition and stability objectives also contributed to the Australian Government's effective policy response to the global financial crisis (as discussed in section 5 and section 6). The mergers that took place during the financial crisis were subject to the usual competition test and approved on the basis that they were not likely to substantially lessen competition. Similarly, the Government's response to the global financial crisis took account of competition concerns in designing its stabilising initiatives.

Overall, in the Australian context, competition and stability are considered to be complementary, rather than contradictory, goals that together promote a well-functioning financial market. Australia's experience through the global financial crisis demonstrates that healthy banking sector competition can occur without resulting in financial system instability.

### 7.2 *Competition in Australia's banking sector*

Australia's banking system has been resilient in the face of the global financial crisis, as a result of a diversity of structural, regulatory and policy factors. In particular, the Australian Government's fiscal stimulus packages supported growth in the Australian economy, and the guarantees of wholesale funding

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<sup>23</sup> Ahrend, Arnold and Murtin 2009, *Prudential Regulation and Competition in Financial Markets*, Economics Department Working Paper No. 735, OECD.

and deposits allowed the banks to remain well-capitalised. In addition, sound lending and investment practices by the banks, supported by effective regulation, reduced impairment expenses and allowed the banks to remain well-capitalised.

Prior to the financial crisis, Australia's banking sector was subject to increasing competition. Despite consolidation over the past decade, net interest margins narrowed prior to the global financial crisis, and fees and charges fell relative to lending volumes, reflecting increasing competitive pressures.

However, the banking system has not been immune from the effects of the global financial crisis. Competition has generally fallen due to the withdrawal or weakening of a number of mid-tier and smaller competitors, among other things. Further, the major banks have been able to recover some of the reduction in market share and interest margins experienced prior to the crisis.

There have been two major merger transactions occurring over the past two years, Westpac/St George (which occurred prior to the height of the global financial crisis), and CBA/BankWest. Neither transaction was found to substantially lessen competition. In particular, in the case of the CBA/BankWest merger, it was found that BankWest's competitive model was not sustainable and it would have ceased to have been a competitive force in any event.

It is not anticipated that competition will rebound to its previous level in the short-to-medium term, as some of the increase in competition in the lead-up to the crisis was based on unsustainably low pricing of capital and risk. However, it is anticipated that competitive pressures will increase as funding markets such as securitisation recover. In addition, recent developments indicate that competition exists between the remaining participants, including between the four major banks.

Although the Australian banking system has demonstrated both resilience and workable competition, the Australian Government is committed to improving banking sector competition going forward. The Government is actively pursuing and promoting a number of initiatives in this regard, including support for securitisation markets, an account switching package, prohibition of unfair contract terms, and national consumer credit protection reform.





## APPENDIX 1: PARTICIPANTS IN THE AUSTRALIAN BANKING SECTOR

### **Authorised deposit-taking institutions (ADIs)**

Authorised deposit-taking institutions are the only institutions permitted to accept deposits, and as a consequence of this function, they are subject to prudential regulation. ADIs include all banks, building societies and credit unions.

### ***Major Banks***

Banks provide a wide range of financial services to all sectors of the economy, including (through subsidiaries) funds management and insurance services. There are four major banks in the Australian market:

- Australia and New Zealand Banking Corporation (ANZ);
- Commonwealth Bank of Australia (CBA);
- National Australia Bank (NAB); and
- Westpac Banking Corporation (Westpac).

### ***Other domestic banks***

There are six other domestic banks in Australia at the present time (not including subsidiaries of the major banks). These are smaller than the major banks, and have generally grown from banks based in particular regions. The seven banks are as follows:

- AMP Bank Limited;
- Bank of Queensland (BOQ);
- Bendigo-Adelaide bank;
- Macquarie Bank;
- ME bank;
- Rural Bank; and
- Suncorp-Metway (Suncorp).

### ***Foreign bank branches***

Foreign banks authorised to operate as branches in Australia are required to confine their deposit-taking activities to wholesale markets. There are currently 34 foreign bank branches operating in Australia, with the largest being:

- BNP Paribas;
- The Bank of Tokyo-Mitsubishi UFJ, Ltd; and
- The Royal Bank of Scotland PLC.

### ***Foreign subsidiaries***

Foreign subsidiaries have international banks as parent companies. There are currently nine foreign subsidiary banks operating in Australia, with the largest being:

- Citigroup Pty Limited;
- ING Bank (Australia) Limited (ING Direct); and
- Rabobank Australia Limited.

### ***Building societies***

Building societies raise funds primarily by accepting deposits from households, provide loans (mainly mortgage finance for owner-occupied housing) and payment services. Traditionally mutually owned institutions, building societies increasingly are issuing share capital. There are 11 building societies in Australia at the present time, with the largest being:

- Heritage Building Society;
- IMB Ltd; and
- Newcastle permanent building society.

### ***Credit unions***

Credit unions are mutually owned institutions that provide deposit, personal/housing loan and payment services to members. There are currently 112 credit unions in Australia, although this number has fallen over time due to a gradual process of aggregation. While most credit unions are very small, a few of the larger ones include:

- Credit Union Australia;
- Savings and Loans Credit Union (SA); and
- NSW Teachers' Credit Union.

**Non-ADI lenders**

Non-ADI lenders include money market corporations (merchant banks), finance companies and securitisers.

Money market corporations operate primarily in wholesale markets, borrowing from and lending to large corporations and government agencies. Other services, including advisory, relate to corporate finance, capital markets, foreign exchange and investment management.

Finance companies (including general financiers and pastoral finance companies) provide loans to households and small- to medium-sized businesses. Finance companies raise funds from wholesale markets and, using debentures and unsecured notes, from retail investors. A number of finance companies were established by manufacturing firms to support the purchase of their products and services, such as for motor vehicles and specialised equipment.

Securitisers are special-purpose vehicles that issue securities backed by pools of assets (e.g. mortgage based housing loans). The securities are usually credit enhanced (e.g. through the use of guarantees from third parties). Securitisers are often created and used by ADIs.



## APPENDIX 2: MARKET DEFINITION IN RECENT MERGER ASSESSMENTS

As discussed in section 3.3.1, in assessing the competitive impact of acquisitions pursuant to section 50 of the TPA, the ACCC takes a purposive approach to market definition, meaning that markets may be defined differently in terms of products, customer and geographic scope depending on the transaction being considered. The following table reflects a number of markets in which recent mergers have been assessed.

<b>Product dimension</b>	<b>Geographic dimension</b>	<b>Functional characteristics</b>
<i>Personal banking markets</i>		
Transaction accounts	Local but price and service competition is predominantly national	Provide day-to-day deposit and payment functionality in the form of cheque books, debit cards, BPay, internet and phone banking.
Deposit/term products	National	Traditional savings instrument with a focus on growth in the capital value of the deposited funds.
Credit cards	National	Short-term unsecured lending product for individual consumers.
Home loans	National	Mortgage lending to individuals for the purpose of acquiring residential property.
Personal loans	National	Lending to individuals for the purposes of purchasing large personal consumption items.
Hybrid personal loans (margin loans)	National	Flexible lending provided to individuals for the purpose of acquiring shares or investing in funds or for drawing on the equity in assets.
<i>Business banking markets</i>		
SME banking	Local but price and service competition is national	A 'cluster' of banking products encompassing credit products, transaction/cash facilities, merchant acquiring services and banking advice.
Equipment finance	National	Includes lease finance products and hire-purchase products. The lease provider purchases capital equipment and leases it to the business for an agreed term, commonly two to five years.
Agribusiness banking	Local but price and service competition is national	A 'cluster' of banking products for agricultural businesses with a central element being specialised lending products including very long-term credit instruments.



### APPENDIX 3: MERGER ANALYSIS – ST GEORGE AND WESTPAC

The ACCC's assessment of the acquisition of St George Bank by Westpac in August 2008 provides a demonstration of the analysis involved in determining the possibility of a substantial lessening of competition.

Westpac was at that time the third largest retail bank in Australia, its principle businesses including personal and business banking, corporate and institutional banking and wealth management and insurance. Its operations include a comprehensive branch and ATM network across Australia. St George was Australia's fifth largest retail bank at the time of the merger. Its activities were in similar areas to Westpac, and it had a particularly strong presence in several State regions.

The ACCC's analysis showed that in the areas of overlap between St George's and Westpac's operations, there would be sufficient alternative competitive options remaining to ensure that the acquisition would not result in a substantial lessening of competition in any identified market.

In assessing the acquisition the ACCC considered the potential competitive impact of the transaction over a range of retail banking activities, including;

- Transactional accounts;
- Deposit/term products;
- Credit cards;
- Home loans;
- Personal loans;
- Hybrid personal loans (margin loans);
- Small to Medium Enterprise (SME) banking;
- Equipment finance; and
- Agribusiness.

The ACCC identified each of these product areas as separate markets. In most areas, the ACCC found that competitive rivalry occurred on a national basis, and accordingly adopted a national market approach in analysing the competitive implications of the acquisition. In relation to transaction accounts, SME banking and agribusiness banking, it was found that competition also occurred on a local level. Accordingly, the ACCC also assessed the competitive implications of the transaction in relation to local areas in relation to these product categories.



The ACCC found that in the national retail markets examined, St George had a relatively small share in each of the retail product areas, ranging from about 4% for credit cards to 9% for margin lending and SME banking. It found that post-acquisition, the merged entity's national share would range between 15% and 25% across these markets.

The ACCC also considered carefully the nature of St George's presence in the relevant markets – not just in terms of market share figures, but in terms of whether it provided vigorous and effective competition in terms of price leadership or other aspects of competition such as customer service that would be lost post merger.

The ACCC found that barriers to entry in these markets appeared to be high, with almost all new entry in recent years coming from large international financial institutions. This was found to be due to a range of factors including regulatory requirements, significant capital costs associated with establishing a branch network for products where a physical presence was important, and a high degree of customer 'stickiness' for many retail banking products.

Nevertheless, the level of aggregation arising from this transaction was limited and there were a number of other significant competitors in each area. Significantly, although St George was considered to be competitive in terms of price and customer service, it was not considered to be a key driver of competition in terms of pricing, product development or innovation. Accordingly, the ACCC found that the acquisition would not be likely to substantially lessen competition in these areas.

The table below shows indicative national market shares of financial institutions based on the number of branches operated by financial institutions in Australia as at 30 June 2007.

**Financial institutions branches in Australia 30 June 2007**

<b>Financial Institution</b>	<b>Number of branches</b>	<b>Per cent of branches</b>
Bank of Western Australia Ltd	104	1.6%
Suncorp Metway Ltd	212	3.2%
Bank of Queensland	222	3.4%
St George Bank	364	5.6%
Elders Rural Bank Ltd	384	5.9%
Bendigo Bank	447	6.8%
ANZ	788	12.1%
National Australia Bank	790	12.1%
Westpac Banking Corporation	821	12.6%
Commonwealth Bank	1010	15.5%
Other banks <100 branches	122	1.9%
Building societies	367	5.6%
Credit Unions	896	13.7%
<b>TOTAL</b>	<b>6527</b>	<b>100.0%</b>
<b>Merged Entity</b>	<b>1185</b>	<b>18.2%</b>

Data source: APRA Statistics ADI Points of Presence June 2007 (issued November 2007)

At the local level, the ACCC found that in geographic regions where St George had a strong presence, a number of significant local competitors would remain in those areas post-acquisition. The ACCC also noted that in such areas credit unions and building societies which were considered to be strong competitors on customer service represented a significant share of transaction accounts.

The ACCC also assessed the acquisition in relation to corporate and institutional banking. It was found that these areas of activity were highly competitive, and contested by all national banks as well as large merchant banks and international securities houses. St George was found to have a minimal presence in these markets.

The ACCC also assessed whether the combination of Westpac and St George's wealth management operations, particularly in relation to the supply of retail platforms, and insurance would be likely to substantially lessen competition in a market. The ACCC found that in relation to retail platforms, there would remain a number of strong competitors, and the highly dynamic and technology driven nature of the market was such that new competitive threats were likely to emerge. In relation to insurance products, both Westpac and St George were found to have a limited presence, and a number of strong competitors would remain in that sector. This analysis indicated that although there had been some degree of consolidation in the Australian banking industry, competition was occurring across a number of markets that would not be significantly reduced as a result of the acquisition.



## CHILE

### 1. Measurement of Competition in the Financial Sector

The usual measures of concentration (market share, the Herfindahl-Hirshman index, others) are not particularly suitable to assess competition in the banking sector, partly because this one is a complex multiproduct industry dealing with a number of relevant markets, businesses and customers in different geographical settings. This alone lessens the meaning, or even precludes the application of a single figure or measure to the system as a whole.

That is why, when analysing the banking sector, the Chilean competition authorities have often employed the standard measures of concentration, only applying them separately to every core business within a bank - mortgage loans and other retail banking, corporate borrowing, securities and information intermediation, and so forth. The concentration figure for the whole banking sector in a given moment, then, will vary according to which business is under scrutiny. That notwithstanding, interest rates and commissions charged, that is, prices in this sector, have also been used by our agency to appraise the competitiveness and/or dominant position of a bank.

Furthermore, the Chilean competition agency, FNE, has released guidelines to analyse and evaluate economic concentration in our midst, but before going into that, a brief explanation is in order. The Chilean jurisdiction has neither mandatory premerger notification for mergers and acquisitions (M&A), nor specific rules for their review, but provides for just a voluntary application or opinion sought instead. Following the 2004 amendments to the Competition Act, M&A may be examined by the Competition Tribunal if, according to an interested party such merger may prevent, restrain or obstruct free competition as established in article 3 of the Act. In other words, while M&A are not *per se* open to objection, the Competition Act considers ways in which the Competition Tribunal may deter or condition harmful M&A.

In May 2006 the Chilean Competition Agency, FNE, uploaded a first draft of an Internal Guidelines for the Assessment of Horizontal Mergers on its Website, in order to collect comments from law firms, media, academics and other interested parties. Four months later the FNE released the final version of the Guidelines, whose general standards have been followed by the FNE in concentration investigations ever since. A Spanish version of the text is available at [http://www.fne.cl/?content=guia\\_concentracion](http://www.fne.cl/?content=guia_concentracion).

The Guidelines are an internal working tool providing useful information and orientation for firms and interested parties on the main aspects, procedures and methodology applied by the FNE to the inspection of a horizontal merger. It reflects the FNE's understanding that that task aims at weighing up the risks of the consolidated firm carrying out anticompetitive conducts due to the higher market concentration, *vis-à-vis* the M&A's efficiency improvements. The Guidelines focuses on relevant market definition, concentration degree, entrance conditions, risks from the M&A and the expected efficiencies involved therein. The Guidelines are not binding for the TDLC. The FNE is currently reconsidering its text to include recent experiences in its application, changes in the legal framework and new procedural regulations issued by the TDLC.

### 2. Competition, Concentration and Crisis

Back in the early 1980 the Chilean economy went through a very serious financial crisis, as a result of which the Central Bank acted as a lender of last resort for a number of major banks, with the ensuing

economic costs. One of the outcomes of the process was the thorough amendment to the General Banking Law and regulations to include stern provisions for the safeguard of the stability and solvency of the Chilean banking sector. These provisions, coupled with a highly specialised supervision, have been enforced throughout the nearly three decades elapsed since.

This being so, the recent systemic crisis of 2008 brought about no significant consequences on the Chilean banking industry. Indeed, the crisis came to be quite surmountable on the economy as a whole, cushioned as it was by a fiscal structural rule, a sound monetary policy and a favourable and sustained international price of copper - the country's chief tradable good.

### 3. Consolidation in the Chilean Banking System

The Chilean banking sector is, and has been for a while, a quite concentrated one, where two large banks of all 25 incumbent ones hold an indisputable dominant position, encompassing nearly 45% of the system's loans. In the last decade before the crisis our banking sector has increased its consolidation or concentration process, as can be seen in the following table.

**Table 1. Chile 1990-2009:  
Number of Banks, Yearly Movements and Loan Market Concentration**

Years	# of entries, exits and M&A			# of banks (as of December)	Concentration in loans	
	Exits	Entries	M&A		HHI	CR4 (%)
1990	1	2	0	36	861	49,29
1991	2	1	0	35	824	46,60
1992	0	2	0	37	822	44,86
1993	3	0	1	34	819	44,91
1994	0	0	0	34	802	44,70
1995	1	0	0	33	772	43,26
1996	1	1	1	33	826	47,75
1997	1	0	1	32	844	54,01
1998	1	2	1	33	848	53,93
1999	3	1	2	31	902	53,14
2000	1	1	0	31	923	51,68
2001	2	0	0	29	943	52,22
2002	4	3	2	28	1.356	66,45
2003	1	1	1	28	1.284	65,04
2004	1	3	1	30	1.294	65,31
2005	1	0	1	29	1.319	66,33
2006	0	0	0	29	1.305	65,95
2007	2	2	0	29	1.292	64,75
2008	2	1	1	28	1.328	66,58
2009	0	0	1	25	1.341	67,64 *

Source: FNE's Research Division, upon Banking Superintendence's data.  
(\*). As of October 2009.

As shown in the table, there have been a number of M&A in the Chilean banking system both before and throughout the 2008 systemic crisis. Neither of the two latest M&A is to be, nevertheless, mainly linked or ascribed to it.

It is frequently said that consolidation in the Chilean banking sector has taken place roughly for the same reasons M&A happen in many comparable markets and which can be summarised as follows:

- To reach economies of scale and of scope. It is well known that some costs decrease notoriously when the volume of operations doubles, while the back-office efficiencies achieved also allow substantial cost savings. As to the economies of scale, operational costs recede when the number, variety and quality of products per customer are improved. As a result, a big bank's profitability largely exceeds that of a small bank.
- To attain an optimum operational scale. The banking business requires an optimal level of investment in technology and a critical mass of customers, below which some projects cannot be carried forward. The investment level has a perverse side as well, in the sense that banking firms with excess capacity have a tendency to merge, so to avoid, among other reasons, pressures on their margins. Both aspects of the operational scale encourage M&A in the Chilean banking sector.
- To secure a larger market share for the resulting firm.

Additionally, M&A in the Chilean banking industry often take on traits or reasons peculiar to the country. Chile has a sound, profitable, well-regulated financial market, which entices overseas investment groups to come in for joint ventures and/or to make use of our market as a springboard to enter the remaining South American region. Conversely, local holdings use to look for foreign partners to bring in fresh equity at a lower capital cost, which in turn makes growth easier by means of a lesser lending rate. That increase in our banks' capital also allows them to cope with the Basle and other regulatory requirements, and particularly to come along with the Chilean corporations investing and dealing abroad.

Now, because of the small relative size of the Chilean banking sector and the high economic and technical standards demanded to banks by their regulator, it is faster and easier for locals and foreigners alike to purchase market participation rather than reach it through sheer commercial growth. So did, for instance, Scotiabank and Rabobank. Foreign banks (the HSBC, for instance) have been known to stand by for as long as necessary for the opportunity to purchase an incumbent firm in the industry. As it happens, there are large, precise monetary figures ascribed to every basis point of market share in our financial market.

#### **4. Some Banking Cases Reviewed by Competition Authorities**

##### **4.1 Case 1: Merger of Banco Santiago and Banco Santander, CR Ruling N° 639, 2002**

*Key facts:* In 1999 a merger of two banks - Santander and Central Hispano - into the Banco Santander Central Hispano (BSCH) was announced in Spain. Now each merging party had a stake in a bank operating in Chile, namely, Santander-Chile and Santiago, the common control of which would command a 30% market share in Chile. In April 2000 the Competition Agency requested the Resolutive Commission<sup>1</sup> the issuance of regulations aiming at precluding anticompetitive effects of that control, and eventual merging.

*Trial outcome:* In January 2002 the Resolutive Commission ruled the allegations out, sustaining that the BSCH's control over Santiago and Santander-Chile entailed no competition risks for the industry. The key element of the decision was that no evidence was gathered that the operation of two banks under a common control result in anticompetitive conducts. Concerns emerged about possible abuses upon small and medium size firms and individual customers; they were deemed, though, not crucial enough as to justify objecting the concentration, but only to advise the banking regulator to oversee those banks'

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<sup>1</sup> A quasi-judicial body with adjudicative powers that preceded the current Competition Tribunal.

behaviour towards these customers. At the same time, the Banking Superintendence stated the prerequisites it would demand to authorize future M&A in the sector.

#### **4.2 Case 2: Competition Court's Decision N° 15 / 2005**

*Key facts:* The Consumers and Customers' National Association presented charges against the Banking Association, contending that banks did not pass lower interest on to borrowers; and that the information provided was too scant and misleading for borrowers to be certain of the loan rate effectively charged.

*Trial outcome:* Allegations were overruled by the Court on the grounds that the evidence put forward was insufficient, and that the case had financial risk and monetary policy lags to be taken into account. Shortly after the filing of the charges (2002), the Banking Superintendence regulated the conditions and figures that banks were to disclose from then on to borrowers.

#### **4.3 Case 3: Agency's Investigation on Banco de Chile / Citybank Association (2007)**

*Key facts:* In September 2007 the Chilean conglomerate Quiñenco agreed with Citibank Inc. the joint control of the former's holding LQFI, which in turn controlled the Banco de Chile. The Competition Agency initiated an investigation to evaluate the risk that the strategic association might entail, and concluded that it gave no good reason for filing a complaint before the Competition Court.

*Key elements of the decision:* Following its Internal Guidelines of Investigative Proceedings, the FNE analysed every item included there: definition of relevant markets (different products, geographic) and of entry conditions to each of them; concentration and thresholds, types of entry barriers, sunk costs, opportunity and sufficiency of entry, and strategic behaviour. None of them involved a real threat to competition in this case, hence the investigation was filed

### **5. Issues in Banking from a Competition Point of View**

From a competition perspective, there are specific issues to be addressed in the Chilean retail banking industry, such as:

- Information asymmetries, mainly regarding consumption and mortgage loans and operations and products for the Small and Medium Size Enterprises (SMEs);
- High switching costs and guarantees for the average customer, including SMEs;
- The definition of relevant markets, which amounts to determine the substitution degree among different banking products, schemes, operations;
- The design of industry-specific concentration measures. Interest rates and commissions charged appear to be fit in this regard;
- Network externalities (e-banking, on-line cashiers, databases, among other) and the sluggishness at passing them on to the average customer;
- Unilateral modifications of contractual terms;
- Tying and bundling of different product and services.

## FINLAND

### 1. Concentration and Bank Competition - Measurement and Inference

During the last two decades, the Finnish banking sector has been fundamentally reshaped. The present structures can be traced back to the depression in the early 1990s and the decisions made during the recovery from the Nordic banking crisis.<sup>1</sup> In the aftermath of the crisis, the banking sector was granted a number of exemptions that shaped some of the still existing structures.<sup>2</sup> The crisis was followed by a period of consolidation, and the banking sector proved to develop into an efficient service industry, although characterised by oligopolistic structures typical of other industries in small markets like that of Finland. The FCA has devoted much attention to these highly concentrated banking markets, although interventions in the development of concentrations are rare, as is a thorough independent assessment of competition in the banking markets. This stems from the fact that the merger cases have not raised doubts of being in conflict with the competition laws in effect at each time. However, heavily concentrated oligopolistic structures require that the authorities keep up with the developments in the assessment and measurement of competition, as the probability of facing competition concerns is increasing with the concentration.

#### *1.1 Measuring Competition in the Banking Sector*

The standard measures help us to assess the possibilities of firms to restrict competition in a given market. Factors facilitating tacit collusion and making collusion easier to sustain are to such an extent connected with the traditional concentration measures that they serve as proper indicators for markets where functioning competition may be at risk. However, the measures of these characteristics do not necessarily correlate with the intensity of competition, which depends on the behaviour of the firms. Accurate measures of the intensity of competition have to reflect this behaviour, not the environment in which the firms act.

In empirical work, a number of approaches have been used to evaluate the state of competition in the Finnish banking markets. The Panzar-Rosse H statistic has been estimated by Vesala (1995). Using data for years 1985-1992, he found that the market was characterised by monopolistic competition, with the exception of two years ( i.e. 1989-1990) which indicated a monopoly (or collusive) market outcome.<sup>3</sup> Subsequent attempts to estimate the Panzar-Rosse H-statistic has yielded mixed results for Finland. Where Casu & Girardone (2005) claim that the Finnish banking market is characterised by nearly perfect competition, Bikker et al. (2006) control for a misspecification in the model and find for years 1988-2004 that the hypothesis of collusion cannot be rejected . Bikker et al. (2006) challenge the outcome of the earlier studies (to quote, p. 19):

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<sup>1</sup> A detailed presentation of the Nordic banking crisis can be found in the report jointly prepared by the Nordic Competition Authorities in 2009: Competition Policy and Financial Crises - lessons learned and the way forward.

<sup>2</sup> These exemptions include e.g. the co-operation in the pricing of the Savings banks association (908/67/2001), and that of local co-operative banks (225/67/2003), both valid until 2012.

<sup>3</sup> Vesala, J. 1995. "Testing for Competition in Banking: Behavioral Evidence from Finland." Bank of Finland Studies, Working Paper No. E:1.



*"Monopoly or perfect cartel cannot be rejected in 28 of the countries analysed (against 0% in the miss-pecified model) and perfect competition cannot be rejected in 38% (against 20-30% with misspecification). [...] Our overview of the extensive literature on the P-R model reveals that all 28 studies considered suffer from the type of misspecification we address. That means that the literature systematically overestimates the degree of competition in the banking industry."*

The specific nature of the banking markets has made it possible to measure competition in a slightly different manner than has been done for other industries. In a recent empirical study concerning years 2003-2009, the degree of competition between banks has been measured with the elasticity with which overnight deposit rates react to changes in market rates.<sup>4</sup> The rigidity of deposit rates with respect to changes in market rates reflects a low intensity of competition.

In Finland, this elasticity is relatively high (15 basis points), while it was roughly 20 and 25 basis points in Luxembourg and Ireland, and less than 5 basis points in Spain. However, the elasticity need not be symmetric for rising and falling market rates. Different elasticities for increasing and falling market rates may reveal the presence of market power. Indeed, results show that in Finland deposit rates react quite sluggishly to rising market interest rates, while the elasticity with respect to falling market interest rates was relatively high. This is to say that Finnish banks, in contrast to banks in Luxembourg, Italy and Ireland for example, pass rising market interest rates only to a very limited extent into overnight deposit rates. One interpretation of this is that deposit interest rates, a central variable determining a choice of a bank, are not a central variable in competition between Finnish banks.<sup>5</sup> Another explanation may rest on the rational non-cooperative behaviour behind this "rocket and feathers" phenomenon as described by Tappata (2009).<sup>6</sup> Moreover, Vajanne concludes that several factors, such as switching costs may explain some of the differences between countries. Large switching costs enable a bank to use its market power.

In their report "Competition in Nordic Retail Banking" published in 2006, the Nordic competition authorities assessed the existing barriers to customer mobility, and identified a number of important switching costs. These were caused by search costs and bundling, and a concrete example was provided by the notary public fee, when transferring a mortgage to another lender. However, in Finland this fee was revoked in 1998, partly due to the initiative of the FCA in 1996. The effects were deemed as positive for both competition between and competitiveness of Finnish banks.

Among the few studies of switching costs, Shy (2002) estimated depositor switching costs for four banks in Finland in 1997. He found that costs were approximately 0, 10, and 11 percent of the value of deposits for the smallest to largest commercial bank and up to 20 percent for a large Finnish bank providing many government services.<sup>7</sup> Although we cannot state anything definite about the present switching costs, the self regulation developed by the European Banking Industry Committee (EBIC) on domestic personal current account switching has potential to lower consumer switching costs and hence to intensify competition between banks.

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<sup>4</sup> Vajanne, L. (2009) Inferring market power from retail deposit interest rates in the euro area. *Bank of Finland Research Discussion Papers 27/2009*. A summary of the research is found in *Bank of Finland Bulletin 2/2009*, pp. 30-36.

<sup>5</sup> An international comparison builds on assumptions that overnight deposits in each country contain a similar bundle of services.

<sup>6</sup> Tappata, M. (2009) Rockets and feathers: Understanding asymmetric pricing. *RAND Journal of Economics* 40(4), 673-687.

<sup>7</sup> Shy, O. (2002) A Quick-and-Easy Method for Estimating Switching Costs," *International Journal of Industrial Organization* 20, 71-87.

## 2. Consolidation in the Banking Sector

### 2.1 *From Crisis Mergers to Consolidation Mergers*

The depression in 1990s had fundamental consequences for the future structure of the Finnish banking sector. Between 1990 and 1995, the Finnish banking sector was shrinking, making losses of 39.5 billion Markkas, which amounted to 6 per cent of the banks' total assets. These years also constituted the phase of the so-called "crisis mergers" in the banking industry, which was followed by a period of "consolidation mergers" during the years 1996 to 2000. A figure that describes the extent of bank mergers is that in 1990 there were 502 banks, in contrast to 344 in 1999.<sup>8</sup> By the end of 1995 with the merger of Kansallis Osaakepankki and Union Bank of Finland, which both had been making negative results during the four preceding years, the phase of "crisis mergers" had already shaped the banking market in a fundamental way: less than a fourth of the savings banks survived the crisis.<sup>9</sup>

The banking sector was further reshaped during the phase of consolidation mergers (1996-2004). The number of bank mergers was reduced, but these mergers now involved larger entities, including cases where the Finnish influence ended up being relatively diluted. In 1997 the Finnish Merita Bank merged with the Swedish Nordbanken. In 2000 the new MeritaNordbanken acquired the Norwegian bank Kreditkassen and decided to merge with the Danish Unidanmark, thus creating Nordea. In 2001, a merger between state-owned Leonia (which was created 1998 by a merger between Postipankki Plc and Finnish Export Credit Plc) and the insurance company Sampo led to the establishment of Sampo Bank. In short, the above mentioned mergers and the increased co-operation inside the OKO bank Group<sup>10</sup> have shaped much of the prevailing concentrated structure in the Finnish banking market. The more recent changes are some significant mergers between insurance companies and banks together with the entry of both domestic and foreign banks.<sup>11</sup>

In 2003, the FCA approved (case 766/81/2002 decided on 19.3. 2003) the establishment of a Savings Banks limited company, owned by 33 local savings banks (25 per cent), Pohjola Insurance Corporation (70 per cent) and Mutual Life Insurance Company Suomi (5 per cent). This action did not raise any competition concerns and did not require a detailed assessment.

### 2.2 *Year 2005 and Beyond - Structures Reshaped as Banks Acquire Insurance Companies*

In 2005, the Finnish OKO Bank plc acquired control in the Pohjola Group plc. In its opinion submitted to the Insurance Supervisory Authority in October 2005, the FCA saw no impediment to the

<sup>8</sup> During the phase of the "crisis mergers", the merger activity was mainly focused around savings banks, of which the largest ones were subject to severe distress in 1991. Skopbank, which acted as a central bank to its owners, the savings banks, also faced difficulties in 1991. In September 1991, the Bank of Finland decided to take control over Skopbank due to the evident risk of its failure.

<sup>9</sup> C.f. Kjellman, A. (1997) *Essays on performance and financing decisions during the 1990s recession in Finland*. Doctoral thesis, Åbo Akademi University. A detailed presentation of the banking crisis is also found in Honkapohja, S. (2009) "The Financial Crises of the 1990s in Finland and other Nordic Countries". *Bank of Finland Bulletin* 1/2009, 49-64.

<sup>10</sup> 252 co-operative banks decided to consolidate their balances within the OP Bank Group. OP Bank Group Central Co-operative was established in 1997. 42 banks chose to join and form the Local Co-operative Bank. (see Kjellman & Sillanpää (2002) *Konsolideringen inom Andelsbanksgruppen*. *Aronia Business Papers* 2 (5).

<sup>11</sup> The Icelandic Kaupthing bank entered the Finnish market in 2001. In 2007, Danish Danske Bank acquired Sampo Bank Plc from Sampo Plc and in this same year the Icelandic bank Glitnir entered the Finnish market by acquiring FIM, a provider of investment services.

deal, whereby there was no need to notify it to the FCA. The parties to the deal had overlapping business activities e.g. in the life insurance and mutual funds sector, but the acquisition did not lead to a creation or strengthening of a dominant position in any sub segments of the life insurance or in mutual funds which would significantly impede competition in the Finnish market. Following this acquisition, Pohjola became a subsidiary to the OKO Bank.

In 2005, OKO Bank sold the Bank's retail banking operations to *OP Bank Group Central Co-operative*. In 2006, Pohjola Group plc was delisted from the Helsinki Stock Exchange and subsequently Pohjola Group Ltd merged with its parent, OKO Bank plc. In 2007, the OKO Bank plc changed its name to Pohjola Bank plc, effective on 1 March 2008. The banking and investment operations and non-life insurance operations were run under a single brand. In 2007, *OP Bank Group* changed its name to *OP-Pohjola Group*.

### 2.3 *Effects on Concentration*

A more recent event to shape the banking markets was the approval of the acquisition of the Veritas Mutual Insurance company by Aktia Savings Bank (Case 550/81/2008) in July 2008. Again, there were no significant overlapping activities between the parties and the acquisition did not raise any competition concerns at the FCA or among other market participants.

Although the years preceding the financial crisis were characterised by substantial reorganisations of the financial sector, these have not directly resulted in any dramatic changes in bank concentration.

In the end of 2008, there were 336 banks in Finland, where 322 were of domestic origin and 227 were members of the OP-Pohjola Group. Between year 1997 and the end of 2008, the market shows an increasing concentration when measured by HHI and CR<sub>3</sub> calculated from total assets. Entry and growth of smaller operators have, however, slightly decreased the CR<sub>5</sub>.

**Table 2. Structural Indicators of Finnish Banking Market Based on Total Assets**

	<i>HHI</i>	<i>CR<sub>3</sub></i>	<i>CR<sub>5</sub></i>
1997	3565	88,92	98,3
2003	4073	86,92	98,55
2008	4403	91,91	96,5

*Source: Casu et al. (2005, p.20) and Federation of Finnish Financial Services (2009, p.4)*

The figures are more moderate when we evaluate market concentration in different services. The market can still be characterised as concentrated, as in 2008 the three largest banking groups held a market share of roughly 77 per cent (HHI > 2200) of loans to and 79 per cent (HHI > 2400) of deposits of the public. For loans this is somewhat less than in 2001 when CR<sub>3</sub> for both loans and deposits was roughly 85 percent. In 2001, the HHI for loans was roughly 2700 and slightly higher in deposits. These figures do not allow us to infer that the concentration in the provision of banking services has substantially increased.

Although the consolidation process in itself has not revealed any competition concerns, the concentrated structure has raised some concerns regarding signalling of future intents and potential collusion. It is, however, difficult to distinguish analytical statements concerning lending margins, for example from signalling of future intentions.

### 3. Bank Concentration and Competition in the Financial Crisis

The Finnish banking market is heavily concentrated and the banks have not faced serious difficulties. This is not to say that the high concentration is a cause of this stability. There are a number of alternative explanations for the banks' relatively good performance during the crisis.<sup>12</sup> First, the crisis in early 1990s with large scale bank failures provided a lesson that may still have affected the propensity to be excessively exposed to risks. Secondly, although Finnish banks expected that lending will decrease in 2009, this decrease has to be viewed against the fact that from the outbreak of the global financial crisis, Finnish banks acted increasingly as substitutes to drained foreign lending channels, thus increasing their lending. Thirdly, it is possible that the financial crisis has not yet had its full effect and that the effect for Finland is lagging. However, the surveys of the Confederation of Finnish Industry (CFI) in early 2009 indicated that access to credit has not constituted bottlenecks in production.

As the FCA has not in the advent of the financial crisis neither been faced with cases nor taken decisions which would have required a thorough evaluation of the competition in the banking markets, one may argue that the degree of competition has remained by and large unchanged. The above mentioned acquisitions of insurance companies by banks can be interpreted so as that the industry is increasingly resorting to economies of scope. Whether increasing multimarket contact will give rise to competition concerns remains to be seen.

In the eve of the outbreak of the global financial crisis, the Finnish banking market has witnessed entry as the largest grocery retailer group (S-Group) established its own bank in. The establishment of the bank was a continuum to the foregoing savings association of the co-operative. The retailer-bank concept may be of importance for competition in banking, as its 1500 "service points" constitute about 50 per cent of the around 3000 bank offices in Finland.

The concentration of the Finnish banking markets was affected by the exit of two Icelandic banks in 2008. These banks grew quite swiftly, partly due to fierce competition in deposit interest rates. Lack of investor confidence and liquidity problems contributed to their exit.<sup>13</sup>

Available empirical studies of bank competition were used in the case "Automatia" (case 964/61/2007) resulting in the first commitment decision by the FCA concerning collective dominance. The three largest banks were claimed to abuse their collective dominant position as joint owners of Automatia, which operates the dominant ATM network. The banks applied a discriminatory pricing scheme for withdrawals from competing ATMs that effectively excluded the competitor(s) from the market. The three owner banks committed to change their pricing according to a cost based non-discriminatory scheme. The entry and growth of new ATM operators is assumed to have some spill over effects to bank and retail competition, for example.

Consequently, the FCA cannot establish that the degree of competition or of concentration would have contributed to exacerbate the harshness of the crisis.

#### 3.1 *Banks and the Crisis-measures in Place at Limiting the Potential Negative Effects of Competition*

Measures to stabilise the financial markets did not stem from problems caused by increasing market concentration, but rather from a willingness to secure the smooth operations of the quite stable banking

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<sup>12</sup> The results for individual banks in 2008 showed, however, large variation, including large declines in annual operating profits.

<sup>13</sup> See footnote 11.

markets. The measures related more to competition between markets than between banks in Finland. The Cabinet Committee on Economic Policy decided in October 2008 on an increase of the coverage of deposit guarantee from EUR 25,000 to EUR 50,000. The decision, effective immediately, was a part of co-ordinated EU efforts to stabilise the financial markets and was agreed on at the ECOFIN Council on 7 October 2008. The co-ordinated decision was thought to level out the interbank distortion of competition that has emerged after an increase of the level of deposit guarantee in certain countries.<sup>14</sup> The most important measures to stabilise the financial markets and to boost the recovery of the commercial paper market include the following measures:

- On 12<sup>th</sup> December 2008, the Parliament authorised the Government to grant state guarantees for the refunding of Finnish banks to a maximum value of EUR 50 billion. In February 2009, the State Council decided on the conditions of these guarantees;
- The Ministry of Finance decided to grant the State Pension Fund the right to a limited use of the assets in its possession to acquire commercial papers of significant and financially solid Finnish companies.

In February 2009, a legislative proposal was made which aimed at guaranteeing the stability of the financial market. According to this proposal, a deposit bank could be put under an obligation to apply for assistance from the State Guarantee Fund when the solidity of the bank is threatened. A denial to apply for assistance in due time could result in that the State could redeem a bank's shares or business activity. The proposal is at present being handled by the legislative Committees of the Parliament. (Government proposal to the Parliament (HE 5/2009) on February 20<sup>th</sup>, 2009).

#### **4. Summary**

In Finland, the competition policy has not constituted any pronounced obstacles to consolidation in the banking markets, although the behaviour and structures in this market have been under constant scrutiny. The crisis in the 1990s and the actual legislation have determined much of those structures we face today. In the future however, the assessment of the effect of mergers on competition will be more versatile. A new competition law has been under preparation and is expected to be adopted in 2010. The new law is expected to update the merger regulation as it contains a merger test more similar to that of the EU competition law.

It has been argued that competition policy has an active role to play in banking. Current market structure emphasises the importance to closely monitor the market. New developments in the analytical field as in the legislative work further motivate a more multifaceted analysis of competition than a simple reliance on traditional concentration measures. Once the current economic standpoint will be normalised, followed by increasing market interest rates, one variable of interest could be the elasticity with which these higher interest rates are passed into deposit interest rates. Moreover, recent issues regarding two-sided markets and the pricing therein further strengthens the view that traditional measures may serve only as rough gauges of competition.

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<sup>14</sup> Press release 303/2008 Government Communications Unit October 8<sup>th</sup> 2008.

## GERMANY

### 1. Introduction

At its February 2009 meeting, the Competition Committee held a roundtable discussion on the topic of Competition and Financial Markets.<sup>15</sup> Further continuing and deepening this discussion, the Committee will at the February 2010 meeting deal with the relationship between competition, concentration and stability in the banking sector. It will also discuss the question whether “excessive competition” in the banking sector has contributed to the recent financial crisis.<sup>16</sup> The following submission seeks – from a German perspective – to clarify the relationship between competition, concentration and stability in the banking sector. It builds on the contribution by the Federal Republic of Germany (*Bundeskartellamt*) to the February 2009 roundtable.<sup>17</sup>

Any discussion on the relationship between competition, concentration and stability in the German banking sector must at the outset recognise one salient principle: namely, that the *Bundeskartellamt* is an authority charged with protecting competition, and not with performing other regulatory functions. Other institutions – such as the Federal Financial Supervisory Authority (*BaFin*) and the German Central Bank (*Deutsche Bundesbank*) – oversee and regulate banks and other financial institutions in a broader sense, focusing on such issues as capital and liquidity requirements, and internal risk management.

With this central principle in mind, this contribution begins with an overview of the structure of the German banking industry, noting in particular its deconcentrated and competitive nature (subsequently 2.). It then proceeds to highlight some of the consequences caused by the financial crisis, including a brief discussion of the emergency measures that the German government implemented to mitigate any damage the financial crisis might have on the financial system and the broader economy (3.). It concludes by describing and commenting on how the *Bundeskartellamt* has reacted to these developments in its recent enforcement practice (4.).

### 2. The Structure of the Banking Sector in Germany

The German banking sector is shaped by a large variety of financial institutes. Important criteria for differentiation are the legal structure, ownership (public or private), corporate objective, balance sheet total and number of employees of the institutes. Depending on their legal structure, financial institutes are traditionally separated into three groups. This separation results in the so-called “three column structure” (*Drei-Säulen-Struktur*), in which private banks (*Geschäftsbanken*) account for the first, public banks (*öffentlich-rechtliche Banken*) for the second and co-operative banks (*Genossenschaftsbanken*) for the third column.

Private banks generally operate as universal banks and are typically organised as stock companies. Currently, there are four large private banks in Germany: Deutsche Bank AG, Commerzbank AG (post-merger with Dresdner Bank AG), Postbank AG (will soon fall under the control of Deutsche Bank AG) and Hypo Vereinsbank AG (affiliate of the Unicredit S.p.A.). Roughly 160 smaller banks (often private

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<sup>15</sup> See *Competition and Financial Markets - Background Note by the Directorate*, OECD Doc. DAF/COMP(2009)2.

<sup>16</sup> OECD Doc. COMP/2009.114, dated 02 December 2009.

<sup>17</sup> *Competition and Financial Markets – Roundtable 4 (Going Forward: The Adaption of Competition Rules, Processes and Institutions to Current Financial Sector Issues) – Note by Germany*, OECD Doc. DAF/COMP/WD(2009)18/ADD1.

partnerships with a regional focus), more than 100 affiliates of foreign banks and several specialised banks (e.g. mortgage banks) also belong to this group.

Public banks include the banks operated by most federal states (hereinafter: “*Landesbanken*”), public saving banks (*Sparkassen*) and federal banks with special tasks (like the KfW Bankengruppe). Public banks are generally owned by the respective entities at federal, state or local level and are usually dedicated to serving the public interest. Currently, there are roughly 400 – mainly independent – public saving banks in Germany, all of which are organised on a regional basis and closely linked to the respective local entities which control them. The eleven *Landesbanken* (four of which are, in turn, controlled by other *Landesbanken*) also serve as central banks for the (private and public) banks in their respective territories.

Co-operative banks are banks that are owned by their members, who are at the same time the owners and customers of their bank. In terms of their business policies and the customers they serve, co-operative banks generally have a predominantly local or regional focus. Like public savings banks, each co-operative bank typically acts independently, but there are also two larger central institutes (DZ Bank AG and WGZ Bank AG) that serve as a form of “central bank”.<sup>18</sup> Currently, there are roughly 1,200 co-operative banks operating in Germany (number including co-operative building societies (*genossenschaftliche Bausparkassen*)).

While still largely deconcentrated, the German banking sector has undergone a continuous process of consolidation in the last twenty years, whereby the total number of roughly 4,500 banking institutions in late 1990 had fallen to around 2,000 by 2008.<sup>19</sup> This process could be observed particularly in the co-operative banks segment, where the total number of banks fell from roughly 3,400 institutes in late 1990 to slightly more than 1,200 institutes in 2007.

Whilst the consolidation process is ongoing, the Bundeskartellamt has in various recent proceedings found that the German banking sector is characterised by “intensive competition”.<sup>20</sup> In this context, it has also pointed out that barriers to entry are in many segments relatively low as foreign banks are increasingly entering the market. Moreover, the supply-side substitutability is apparently high because there are no major technical barriers to product changes. Further, marketing – in particular via internet – allows competitors to react quickly.

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<sup>18</sup> In December 2008, these two banks notified the Bundeskartellamt of their intention to merge. WGZ Bank was to transfer all its assets to DZ Bank with effect from 1 January 2009. The Bundeskartellamt cleared the merger in the First Phase after establishing that it would not create or strengthen a dominant position. In April 2009, however, both parties announced that the merger had been placed on hold indefinitely as a result of valuation disagreements during negotiations.

<sup>19</sup> Regarding this process see, e.g., the German Council of Economic Experts (*Sachverständigenrat*) – Das deutsche Finanzsystem: Effizienz steigern – Stabilität erhöhen, June 2008, paras. 152ff. (available in German only at <http://www.sachverstaendigenrat-wirtschaft.de/en/publikat/expertise.php>) and Heitzer, Banken zwischen Fusionen und staatlicher Rettung – Auswirkungen auf den Wettbewerb, in: Orientierungen zur Wirtschafts- und Gesellschaftspolitik 120, pages 34ff. (2/2009; available in German only at [http://www.bundeskartellamt.de/wDeutsch/download/pdf/Stellungnahmen/090626\\_Orientierungen\\_Finanzmarkt.pdf](http://www.bundeskartellamt.de/wDeutsch/download/pdf/Stellungnahmen/090626_Orientierungen_Finanzmarkt.pdf)).

<sup>20</sup> See in particular the case summaries on *Major Mergers in the Banking Sector* (Deutsche Bank AG / Deutsche Postbank AG; Commerzbank AG / Dresdner Bank AG and DZ Bank AG / WGZ Bank AG), page 6 (case summary available in English at <http://www.bundeskartellamt.de/wEnglisch/download/pdf/Fallberichte/B4-133-08-E.pdf?navid=35>); regarding the degree of competition in the German banking sector see also Heitzer (article cited footnote 5), page 34 and the German Council of Economic Experts (*Sachverständigenrat*) (report cited footnote 5), paras. 164ff.

### 3. Impact of the Financial Crisis on the German Banking Sector

The world-wide financial crisis has wrought considerable havoc in Germany.<sup>21</sup> Particularly banks that held large positions in international real estate financial products – mainly derivative securities whose value was based on subprime mortgage loans emanating largely from the United States – have suffered considerably. A number of Landesbanken, for instance, took advantage of the availability of cheap credit before the crisis, and heavily reinvested the money in such derivative securities.<sup>22</sup> With the collapse of the US-American housing market, the value of these securities plunged, leaving these banks dangerously exposed. However, a considerable portion of the banking sector in Germany has, at least so far, coped comparatively well. This may well be because of the relatively strong regional focus in the business of the vast majority of financial entities – in particular as far as the business of public saving banks and cooperative banks is concerned. Whether the relative stability of the less internationalised segments of the financial sector will endure, is, however, still not yet fully clear.<sup>23</sup>

In response to the crisis the German legislature passed the “Finanzmarktstabilisierungsgesetz” (FMStG – Act on the Stabilisation of the Financial Markets) in October 2008 to prevent any more devastating impact on the financial sector and the broader economy.<sup>24</sup> This law has ramifications for merger control. Specifically, it provided for the creation of a state fund allowing the German federal government to acquire stakes in financial institutions that are in distress. To facilitate the speed and efficacy of such rescue operations, the FMStG stated that the relevant provisions of the German Act against Restraints of Competition (*Gesetz gegen Wettbewerbsbeschränkungen*, ARC) would not apply to the newly created fund.<sup>25</sup>

This means that the acquisition by the state fund of a stake in a bank or other financial institution would not be subject to merger control by the Bundeskartellamt. The legislature has, in effect, accepted that a dominant position in the sector could emerge for a limited period. Once any state-owned undertakings are sold back into the private market, however, the ARC will once again apply. So far, the FMStG has in only one case prevented the application of German merger control (acquisition of a 25 % stake plus one share by the state fund in Commerzbank AG).<sup>26</sup>

<sup>21</sup> The German Council of Economic Experts (*Sachverständigenrat*) notes that, as far as the total amount of adjustments (*Wertberichtigungen*) is concerned, Germany is – along with the United Kingdom and Switzerland – one of three European countries that has suffered most from the financial crisis (see the report cited in footnote 5, para 199).

<sup>22</sup> Regarding the performance of the Landesbanken during the financial crisis see, e.g., the German Council of Economic Experts (*Sachverständigenrat*) (report cited footnote 5), paras. 207ff.

<sup>23</sup> See *Deutsche Bundesbank*, Finanzmarktstabilisierungsbericht 2009, page 9f. (available in German at <http://www.bundesbank.de/download/volkswirtschaft/finanzstabilitaetsberichte/finanzstabilitaetsbericht2009.pdf>).

<sup>24</sup> BGBl. 2008 I, page 1982.

<sup>25</sup> FMStG Art. 2, Section 17, “Die Vorschriften des Ersten bis Dritten Teils des Gesetzes gegen Wettbewerbsbeschränkungen finden keine Anwendung auf den Fonds.” (The provisions from the first to the third parts of the Act Against Restraints of Competition do not apply to the fund).

<sup>26</sup> The acquisition by the state fund of the Hypo Real Estate AG by way of public bid was notified to the European Commission.



#### 4. Recent Enforcement Practice

The financial crisis has led to a series of mergers in the banking industry.<sup>27</sup> As a result of heavy losses in subprime-mortgage backed derivative securities, the Sächsische Landesbank, IKB Industriekreditbank AG and Düsseldorfer Hypothekenbank AG were all rescued from insolvency through mergers or by selling a majority stake to other entities.<sup>28</sup> The Bundeskartellamt acted swiftly to approve these transactions, both because they posed no serious threat to competition, and because excessive delay might have caused the banks to collapse.

While not a direct consequence of the financial crisis, two recent large mergers have significantly changed the private banking landscape in Germany.<sup>29</sup> First, Commerzbank AG effectively acquired control over Dresdner Bank AG at the end of 2008. Specifically, Commerzbank AG acquired all the shares held by Allianz SE in Dresdner Bank AG. As part of its compensation, Allianz attained 18.45% of the voting rights in Commerzbank, as well as control over former Commerzbank subsidiary Cominvest. The transaction, in short, resulted in one of Germany's major private banks exiting the field, and a larger Commerzbank in which Allianz possesses a significant minority stake.

Another significant merger was announced in early 2009, when Deutsche Bank AG notified the Bundeskartellamt that it intended to acquire a controlling position in Deutsche Postbank AG. The transaction anticipated that Deutsche Bank AG would acquire a 22.9% stake of Postbank AG in 2009, as well as a convertible bond from Postbank AG that would automatically convert to a 27.4% stake in 2012. The initial 8% stake in Deutsche Bank AG received by Deutsche Post AG as part of the purchase price has in the meantime been divested. The end result is that Deutsche Bank AG will acquire a controlling interest in Postbank AG as of 2012, while Postbank AG will retain a minority interest in Deutsche Bank AG.

The Bundeskartellamt cleared both mergers in the so-called "first phase" of its examination (one month time limit and no formal decision), because despite the fact that there was some overlap in the business activities of the relevant parties, analysis demonstrated that neither merger would create or strengthen a dominant position in any of the relevant markets. More specifically, the combined market shares of the new entities in the areas of private customer business (including such segments as deposits and loans, issuance of credit cards and asset management) and corporate banking (including such segments as deposits, loans, financing, asset management and investment banking) would each be less than 15%. Slightly higher market shares in areas such as mortgage bond trading and foreign trade financing did not give rise to any serious competition concerns either. Thus while these mergers represent significant developments in the private German banking market – two of five major players having departed the field – no substantial competitive problems were foreseen because the German banking industry as a whole would remain deconcentrated and competitive.

As demonstrated, the Bundeskartellamt considered the standard structural measures of competition (e.g., market shares, market entry barriers) applied to any other sector to be equally suitable to assess the degree of competition in the financial sector. This coherence in substantive analysis may also serve to emphasise the Bundeskartellamt's view that the financial crisis was not caused by "too much" or "excessive" competition. Rather, the Bundeskartellamt is convinced that the crisis and its adverse effects, at least in Germany, were caused by an insufficient regulation of the financial markets and that it can only

<sup>27</sup> See *Heitzer* (article cited footnote 5), page 36.

<sup>28</sup> The Sächsische Landesbank survived only by being taken over by the Landesbank Baden-Württemberg. IKB Industriebank was saved by selling a majority stake to the investor Lone Star Funds, while the Bundesbank Deutscher Banken took over the Düsseldorfer Hypothekenbank.

<sup>29</sup> Regarding these mergers, see the case summaries cited in footnote 6.

be effectively overcome by adhering to the principles of free and competitive markets within a framework of sound regulation.<sup>30</sup>

## 5. Conclusion

As noted at the outset, the Bundeskartellamt is a competition authority and not a general regulatory body with competence for the banking industry. In this capacity, it has recently reviewed a series of mergers in the banking industry and has quickly declined to intervene in any of them. While the outbreak of the financial crisis has led in some cases to a sense of urgency with respect to bank mergers – and has contributed to the Bundeskartellamt reviewing them very swiftly – it has not fundamentally altered the analysis that the Bundeskartellamt has undertaken. The German banking industry remains deconcentrated and competitive, meaning that the mergers under review did not give rise to any substantial competitive concerns.

The German federal government's reaction to the financial crisis, meanwhile, demonstrates that the German system is nimble enough to react to extreme challenges. The government recognised the inherent dangers to the financial system, and implemented a law that temporarily created a special regime for dealing with acquisitions by the state of stakes in financial institutions. While such a law was generally justified given the then prevailing circumstances, the Bundeskartellamt remains fundamentally of the view that the financial crisis did not result from too much competition in the banking sector, but rather from insufficient regulation of the financial markets. The financial markets do not need less competition, but rather effective regulation, particularly of systemically important financial institutions, hedge funds and rating agencies. The value of a competitive market economy should not be lost amid all of the emergency measures undertaken to stabilise the financial system.

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<sup>30</sup> See, e.g., *Heitzer*, “Die Wettbewerbsaufsicht durch das Bundeskartellamt – Ordnungspolitischer Schatten der unsichtbaren Hand“, (Competition Policy of the Bundeskartellamt), speech delivered at the Zentrum für Europäische Wirtschaftsforschung, Mannheim, 02.04.2009 (in German available at [www.bundeskartellamt.de/wDeutsch/download/pdf/Diskussionsbeitraege/090402\\_Mannheim\\_ZEW.pdf](http://www.bundeskartellamt.de/wDeutsch/download/pdf/Diskussionsbeitraege/090402_Mannheim_ZEW.pdf)); see also Heitzer (article cited in footnote 5), page 38.



## GREECE

### 1. Introduction

This paper attempts, on the one hand, to cast light on the main effects of the global financial crisis to the Greek banking sector and on the other hand to analyse the competitive structure of it. For this purpose we mainly analyse published financial data concerning the banking sector in Greece during the period 2007 – 2008.<sup>1</sup>

The global economic developments during the period 2007 - 2008 “have negatively affected the Greek economy, although less strongly than most European countries, given its lower degree of openness.”<sup>2</sup>

The main principles of this negative affection of the Greek economy are listed below:

- Fall of the demand and GDP growth rate;
- Restriction of the supply of loans to firms and households;
- Decrease of credit demand;
- Deterioration of macroeconomic imbalances;
- Reduction of Greek exports of goods and services.

### 2. The stability of the Greek banking sector

The stability of the Greek banking system plays a crucial role in the sustainability and the effectiveness of the financial sector. According to Demirguc-Kunt and Detragiache (1998, 2002) and Beck (2008), “*Systemic banking distress can be broadly defined as periods where the banking system is not capable of fulfilling its intermediation function (deposit taking, lending, payment services) for the economy anymore.*” Systematic banking distress is a situation where “(i) *non-performing assets reached at least 10 percent of total assets at the peak of the crisis, (ii) the fiscal cost of the rescue operations was at least 2 percent of GDP, (iii) emergency measures, such as bank holidays, deposit freezes, blanket guarantees to depositors or other bank creditors, were taken to assist the banking system, or (iv) if large-scale bank nationalisations took place.*”<sup>3</sup>

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<sup>1</sup> To the best of our knowledge, the last available published data.

<sup>2</sup> According to the Hellenic Bank Association (thereafter HBA) - financial stability report, June 2009 (see also [http://www.hba.gr/English/Index\\_en.asp](http://www.hba.gr/English/Index_en.asp)).

<sup>3</sup> See Beck (2008), pp 4.

The main figures of the Greek banking sector during the period 2007 - 2008 are given in the following table:

**Table 1: Main Figures of the Greek Banking Sector: 2007 - 2008**

	2008	2007
NPL ratio*	5%	4.5%
Coverage ratio**	48.9%	53.4%
Pre-tax profits***	978 (3.377)****	1686(4.694)****
<i>Profitability measures</i>		
Net interest rate margin	2.2% (2.9%)^^^	2.5% (3%)^^^
RoA (after tax)^	0.2% (10.7%)^^^	1% (1.4%)^^^
RoE (after tax)^^	3% (0.1%)^^^	14.7% (17.9%)^^^
<i>Capital adequacy measures</i>		
Capital adequacy ratio	10.7% (9.4%)^^^	12.7% (11.2%)^^^
Tier I ratio	8.7% (7.9%)^^^	9.3% (9.2%)^^^

Source: HBA, financial stability report, 2009

\*The ratio of non-performing loans to total loans

\*\*The ratio of accumulated provision for credit risk to non-performing loans

\*\*\*in million euro

\*\*\*\*The number in parenthesis are pre-tax profits of Greek banking groups

^Return on Assets ratio

^^Return on Equity ratio

^^^ The number in parenthesis is the corresponding margin of Greek banking groups

^^^ The number in parenthesis are the corresponding ratios of Greek banking groups

More specifically, the NPL ratio showed a small increase during the last two years reaching the level of 5% in 2008 mainly because of an increase in non-performing housing and consumer loans. This means that non-performing loans represent a small fraction of the total loans of the banks revealing a significant level of financial stability in the banks' leverage. The small increase in the NPL ratio is responsible for the decline in the coverage ratio representing the percentage of accumulated provisions for credit risk to non-performing loans which reached 48.9% in 2008. However, the exposure to individual borrowers and the concentration of loans to particular sectors of activity remained low, while banks have substantially increased, in absolute terms, their contingency provisions for any losses from their lending portfolios both in Greece and in South-eastern European countries. The tensions in money markets also increased the liquidity risk. The increase in the risk exposure of Greek banks is partly attributable to their activity in foreign markets, most notably in countries of Emerging Europe, which were more strongly affected —compared with the Greek economy —by the global financial and economic crisis<sup>4</sup>. By contrast, a decline was observed in market risk and operational risk, which constitute only a small part of total risk.

Pre-tax profits of Greek banks and banking groups fell sharply reaching the level of 978 million and 3.377 million euro respectively. The comparatively better performance of banking groups largely stemmed

<sup>4</sup> According to HBA, domestic banks' activity in these countries corresponds to one fifth of Greek GDP.

from their foreign activities. It is worth mentioning that the share of foreign activities in banks' profits increased to about one third at the end of 2008, from about one fifth at the end of 2007.

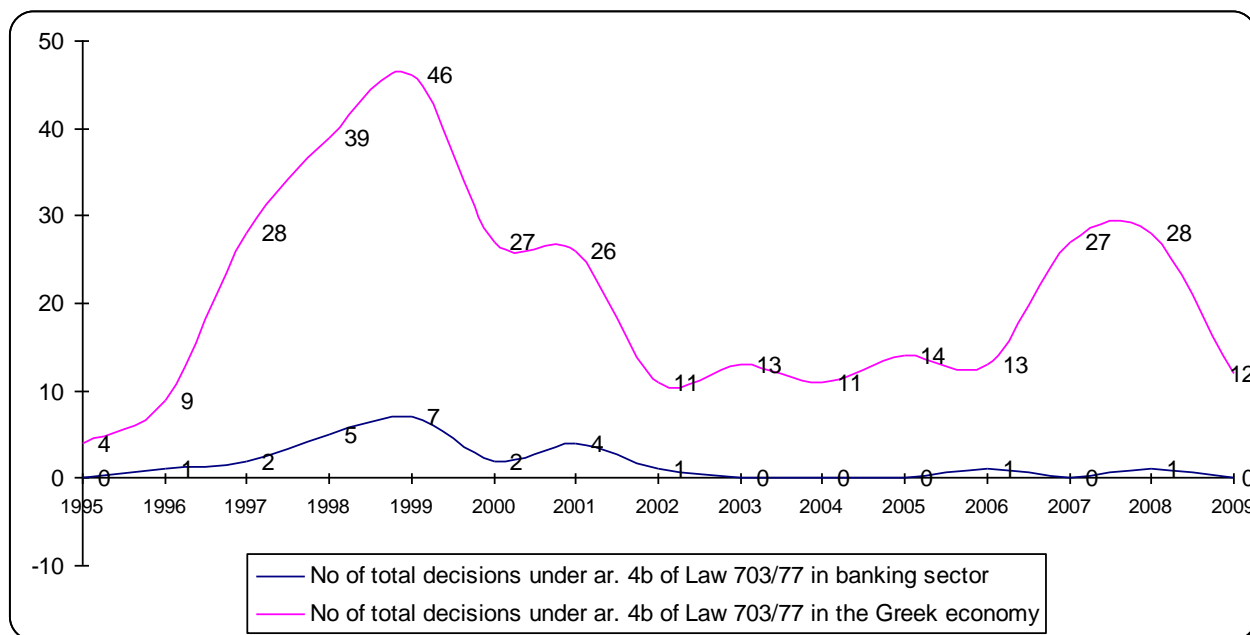
At the same time, the profitability and capital adequacy indicators of banks and banking groups performed a significant decline. Regarding profitability at bank level, the net interest rate margin and (after tax) return on assets (RoA) and equity (RoE) stood at 2.2%, 0.2% and 3%, respectively (2007: 2.5%, 1% and 14.7%); at banking group level, these ratios dropped to 2.9%, 0.7% and 10.1% (2007: 3%, 1.4% and 17.9%). Regarding capital adequacy, a decrease in regulatory own funds and an increase in risk-weighted assets resulted in lower capital adequacy ratios. At bank level, the capital adequacy and the Tier I ratios stood at 10.7% and 8.7% at the end of 2008 (2007: 12.7% and 9.3%) and, at group level, at 9.4% and 7.9% (2007: 11.2% and 9.2%).

Despite these declines, the aforementioned measures continued to provide a satisfactory safety margin for addressing risks and ensuring financial stability during the period 2007 - 2008.

### 3. The evolution of concentrations in the banking sector

Figure 1 below illustrates the total number of decisions by Hellenic Competition Commission (thereafter HCC) concerning notified concentrations under article 4b of Greek Competition Act (Law 703/77 and its amendments) in the banking sector and in the Greek economy as a whole. During the period from 1995 to 2009 the HCC has cleared 24 concentrations under article 4b of Greek Competition Act in the banking sector out of 308 notified concentrations concerning the Greek economy.

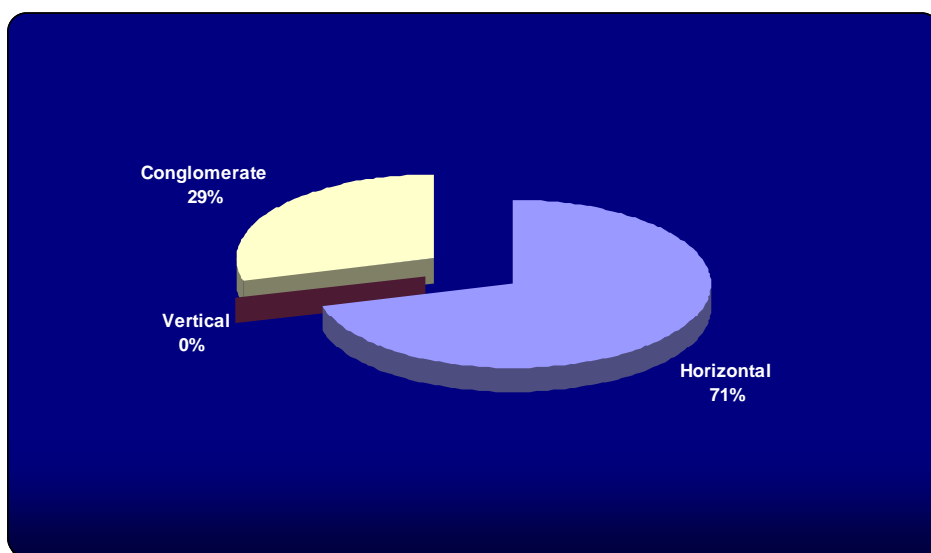
**Figure 1: Decisions of HCC concerning Notified Concentrations under Article 4b of Greek Competition Act During the Period 1995 – 2009**



Source: [http://www.epant.gr/apofaseis\\_ctg.php?Lang=gr&id=28](http://www.epant.gr/apofaseis_ctg.php?Lang=gr&id=28) .

Figure 2 below depicts that the majority of the concentrations in the banking sector are horizontal.

**Figure 2: Type of Concentrations in Banking Sector During the Period 1995 - 2009**



Source: Elaborated data from Figure 1.

The basic characteristic of notified concentrations in the banking sector is that there are no transactions among the five largest commercial banks in Greece in terms of total assets. In the banking sector always “*the big fish eats the small fish*”<sup>5</sup> so as the big fish to be bigger and the small fish to disappear from the market. This strategy by the commercial banks in Greece leads to an increase of the degree of concentration in the banking sector until 2001, but since then the concentration rate remains stable. Table 3 below verifies that the concentration rate remains stable during the period 2001 – 2008 and diagram 1 reveals that the stable rate comes from the fact that only 3 concentrations among credit institutions were notified to the HCC during the period 2002 – 2009<sup>6</sup>.

#### 4. The structure of the Greek banking sector

The banking sector in Greece, except for the foreign credit institutions, consists of 16 commercial banks, 16 co – operative banks and 1 remaining credit institution<sup>7</sup>. The market share of commercial banks in Greece in terms of total assets amounts to 80% - 90% while the five largest banks<sup>8</sup> hold a market share<sup>9</sup> of 70% (see Table 3 - 2008).

<sup>5</sup> See Huck S., et al. (2001), ‘Big fish eat small fish: on mergers in Stackelberg markets’, Economics Letters, 73, pp. 213-217.

<sup>6</sup> The President of Alpha Bank Mr. J. Kostopoulos believes (see <http://www.greekmoney.gr/index.php/permalink-/18909.html> - in Greek) that, on the one hand, only 2.5 credit institutions must participate in the Greek banking sector so as the latter to behave competitively, but on the other hand he states that in nowadays, concentrations among the large ‘*players*’ in the Greek banking sector are quite difficult to be completed.

<sup>7</sup> See <http://www.hba.gr/Index.asp?Menu=4>.

<sup>8</sup> National bank of Greece, EFG Eurobank Bank, Pireaus Bank, Alpha Bank and Commercial bank of Greece.

<sup>9</sup> In terms of total assets.

Table 4 below shows the number of banks and personnel during the period from 2002 to 2008:

**Table 2: Number of banks and personnel in the Greek territory during the period 2002 - 2008**

	<b>Banks*</b>	<b>Personnel</b>
<b>2002</b>	62	63.407
<b>2003</b>	59	63.611
<b>2004</b>	62	62.611
<b>2005</b>	61	63.040
<b>2006</b>	62	64.541
<b>2007</b>	65	67.483
<b>2008</b>	66	68.659

Source: HBA, <http://www.hba.gr/Index.asp?Menu=4> (in Greek)

\*Both Greek & foreign banks (commercial, co-operative and other credit institutions)

From table 4 we can see that the number of banks during the period 2002-2008 remained stable.

**Table 3: Total assets, HI and CR5 for Greek banking sector from 2001 to 2008**

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>
<b>Total</b>	202,736	201,608	213,171	230,454	281,066	315,081	383,293	461,982
<b>assets*</b>								
<b>HI**</b>	1,113	1,164	1,130	1,070	1,096	1,101	1,096	1,172
<b>CR5***</b>	67%	67,04%	66,9%	65%	65,6%	66,3%	67,7%	69,5%

Source: ECB, Structural indicators for the EU banking sector, January 2010 – EU banking sector, October 2006

\*in millions euro

\*\*Herfindahl index (ranges from 0 to 10000)

\*\*\*Share of the five largest credit institutions in total assets

Table 3 reveals that the Greek banking sector is characterised by a low degree of concentration according to the relevant indicators (HI and CR5). More specifically, the CR5 is below 75% and the HI is almost 1000 points indicating, *ceteris paribus*, the competitive structure of Greek banking sector.

But may we state that the banking sector behaves competitively in terms only of market structure measures? The answer is no. Even though the concentration ratios reveal a competitive structure, the Greek banking sector behaves in a oligopolistic wave and its structure is determined by the behaviour of individual banks which are different among them and may not be captured by the calculation of market structure measures (for example, risk, which characterises the banking sector, cannot be measured by them).

Entry barriers to new entrants, *ceteris paribus*, may eliminate the number of efficient new banks in the sector and decrease the possibility of new potential entrants in the future. The characteristics of entry conditions in Greek banking sector indicate that entrance may be easy but not efficient. That is, the new entrants are not capable to play a crucial role in the near future since, as we show above, only 5 commercial banks possess the market in terms of total assets and the remaining banks, as well as the new entrants play the role of followers.



## 5. Final remarks and future policy

The Greek banking sector constitutes an oligopolistic market with few large players as a consequence of the mergers and acquisitions that took place during the period 1996 - 2001. The HCC continues to monitor the market by using concentration indices (HI and CR5), in collaboration with other measures, so as to indicate the structure of the banking sector<sup>10</sup>.

During the period 2007 – 2008, the Greek banking system remained fundamentally sound. Even though the financial crisis negatively affected the Greek economy, that effect was at that time still less strong than in most European countries, given its lower degree of openness. Nevertheless, in nowadays, the banking system in Greece is faced with the major challenge of dealing with the depression of the economic activity, as an outcome of the global financial crisis. In order to effectively tackle the latter, constant vigilance is of the utmost importance in this respect.

Constant vigilance and supervision is needed in order to safeguard and minimise the consequences of the financial crisis especially in light of the continued downward trend of these ratios in the first quarter of 2009. More specifically, between the first quarter of 2009 and the first quarter of 2008, at the bank level, the NPL ratio rose to 6%, the coverage ratio dropped to 43,7% and the pre-tax profits also dropped to 107 million euro, mainly due to the increase of credit risk<sup>11</sup> and the decrease of net interest<sup>12</sup> and fee<sup>13</sup> income.

“The above developments inevitably affected the key profitability indicators. The net interest rate margin narrowed by about 50 basis points (mainly because of the increased cost of funding, especially from the early fourth quarter 2008 onwards, as well as because of weaker credit expansion) and return on equity fell by about 10 percentage points year-on-year. Declines, of about 40 and 20 basis points respectively, were recorded in the Capital Adequacy and Tier I ratios. These outcomes stemmed exclusively from a drop in regulatory capital, as the risk weighted assets remained broadly unchanged.”<sup>14</sup>

The Bank of Greece has conducted three econometric studies in order to examine the effect of exogenous shocks on banking system stability (in terms of NPL ratio).

The first econometric study explores the effect of the deterioration of crucial macroeconomic indicators (the first exogenous scenario assumes that in a two year period, 2009-2010, “*GDP would decline by a cumulative 3%, the unemployment rate would rise by 4 percentage points and bank lending rates would increase by 400 basis points*”) on NPL ratio. The results show that the NPL ratio would increase to 12,7% at the end of 2010 from 5% at the end of 2008 (see table 1 above).

The second econometric study examines, “relative to the actual figures of 31 December 2008”, the effect of “a parallel upward shift in the yield curve by 300 basis-points, a 30% depreciation of the euro vis-à-vis the other major currencies, a 40% drop in the Athens Exchange composite index of stock prices and an increase of 450 basis points in the spread of the ten-year Greek government bond over the corresponding German bond” on the ability of the banking sector to withstand such shocks. Also, it is assumed “that profits before taxes and provisions would fall by 15% in 2009 in comparison with 2008,

<sup>10</sup> In its decision about the acquisition of 31,3147% of equity capital of Proton bank by Piraeus bank, HCC states that under examination of HI and especially its change ( $\Delta$ ), the notified acquisition will not affect the degree of competition in the relevant product markets which are affected by the concentration.

<sup>11</sup> 118,4 at bank level and 133,4 at banking group level.

<sup>12</sup> -10,4% at bank level and -2,7% at banking group level.

<sup>13</sup> -7,6% at bank level and -21,5% at banking group level.

<sup>14</sup> See HBA financial stability report, June, pp. 4.

before rising by 10% in 2010.” The results<sup>15</sup> reveal that the Greek banking sector, “as a whole, would be able to withstand such strong shocks as those envisaged in the scenarios.”

Lastly, the third econometric study “*assesses individual banks’ ability to meet their financial obligations that mature over a horizon of one month.*” The results indicate that the 80% of the banking sector in terms of assets would not face liquidated problems.

Whether the aforementioned studies characterise the financial environment in Greece is a subject of further research.

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<sup>15</sup> The sample consists of nine banks with a market share of more than 80% in terms of assets.



## HUNGARY

This contribution discusses the experience in relation to the current financial crisis and the issues of competition, concentration and stability in Hungary. It does not follow the structure of the questionnaire to the roundtable, and addresses only the issues where the Hungarian Competition Authority (GVH) has relevant experience.

The Hungarian experience may be regarded as somewhat special. Neither the real estate bubble of the US and certain European countries nor the hidden toxic assets did affect directly the banking system of Hungary. The primary reason for that was the Hungarian banks staying away in the first place from investing into the kinds of financial products which later turned out to be (potentially) toxic. Nevertheless, the Hungarian banking system was indirectly hit hard by one of the major consequences of the credit crunch: the drying up of liquidity. Financing their retail lending activity – a significant part of it in foreign currency – became increasingly expensive. This highlighted the underlying vulnerability and hidden risks of the lending practices of the previous several years, as well as the prudential and consumer protection regulations of the same time period. This contribution therefore focuses on the factors and developments leading to those vulnerability and risks, which are the specific features of the Hungarian crisis, most of them are related to foreign currency lending. An overview of limited experiences related to concentration and stability in Hungary is provided at the end.

### 1. Developments in the Hungarian credit markets

Hungary experienced a very high growth rate for credit markets in retail banking in the early 2000s. Growing consumer demand was further fuelled by a government subsidy programme for mortgages, making these products very lucrative to consumers. After a restriction in government subsidies, foreign currency loans became a popular alternative for mortgages denominated in the domestic currency (HUF, forint). Considerable interest rate differences resulted in lower monthly instalments, thereby attracting a lot of consumers to these riskier products. The supply of these products was further increased by cheap, short-term funds that were readily available on the market. The access to these funds was further simplified by structural links between the Hungarian banks and their foreign parent companies; the abundance of the short-term financing is partially attributed to the availability of cheap funds on these markets.

Some authors<sup>1</sup> argue that a monetary policy focusing almost exclusively on price stability could contribute to liquidity difficulties. High domestic interest rates raised the demand for the domestic currency, which resulted in a relatively stable exchange rate against major currencies as the Euro and Swiss Franc (CHF). Together with the high interest rate differences, these relatively stable exchange rates made investing in Forint, or borrowing in foreign currency a favourable speculation.

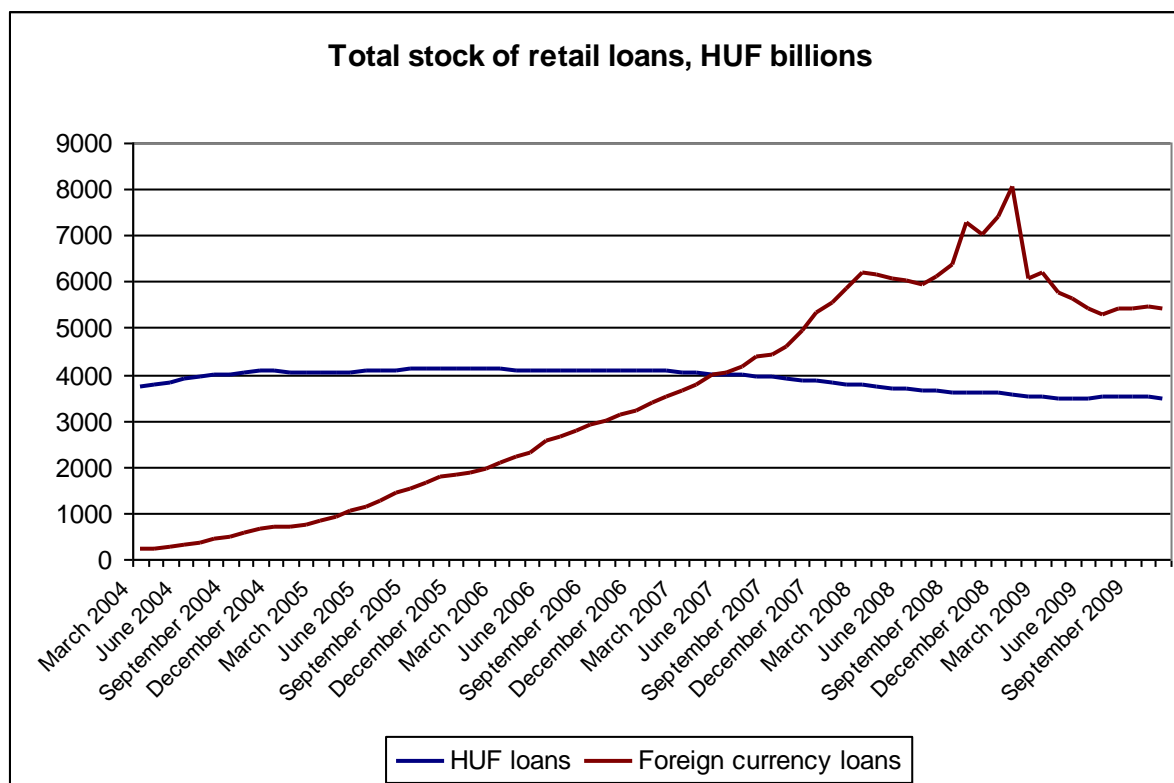
These circumstances resulted in a situation where foreign exchange assets accounted for a large share in the portfolio of the Hungarian credit institutions. As total retail loans rose from a very low level to approximately 40% of the national GDP by the end of 2008 (*Neményi, 2009*), the majority of these contracts are denominated in foreign currencies.<sup>2</sup>

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<sup>1</sup> E.g. *Neményi [2009]*.

<sup>2</sup> Before November 2008, around 85% of new loans were denominated in CHF (Swiss Franc), while new loans in domestic currency held a rate of only around 10-15% (*Sebők, 2009*).

Chart 1: Stock of Retail Loans in Hungary



The above mentioned situation made the Hungarian markets very much exposed to **foreign currency risk**. A depreciation of the domestic currency, as it was witnessed during the crisis, dramatically altered the conditions of the contract (monthly instalments, value of collaterals), which indicated a significantly higher default rate.

In addition to foreign exchange problems, an additional risk factor arose in the form of a significant **maturity mismatch** in the Hungarian credit market. Since mortgages accounted for a significant portion of retail credit demands, the duration of this portfolio was necessarily quite high, while long-term funds had limited availability.

The situation described here inherently contained in itself the possibility that, should liquidity problems or huge interest rate shifts arise, the risks above mentioned would painfully materialise. Prudential regulation in Hungary had limitations to the issue. Although the Hungarian National Bank had been addressing the importance of foreign currency risk in its stability reports from the early 2000s, these observations have not been translated into an effective regulatory framework. (Neményi, 2009)

The September 2008 crisis was obviously a tremendous shock to the financial markets, however, there had been earlier signs that highlighted the underlying vulnerability of the Hungarian system. To correct for previous mistakes, some banks began to **unilaterally change some contractual terms**. As a prominent example of this, they changed early repayment charges to prevent consumers to switch away from products that they considered less favourable.

These highly questionable practices meant a straightforward consumer protection problem, which also had much broader financial stability implications in the light of the already described prudential deficiencies. Due to the detrimental effects also to competition, the GVH has initiated several actions,

among them a sector inquiry into switching between various retail products, including personal loans and mortgages.

The *switching sector inquiry* found a significant asymmetry in the long-term loan contracts, favouring the service providers. The general practice of unilateral modifications was exacerbated by high explicit switching costs in Hungary, and an econometric analysis found that they were able to hinder effective competition on the market. Lack of transparency and other regulatory deficiencies were also identified as possible problems to switching. (GVH, 2009)

Several studies showed that the situation was further aggravated by the very limited financial literacy of the Hungarian population. As an example, the number of retail banking transactions per capita are around the half of EU average, and according to a 2006 study commissioned by the GVH, more than 70% of the population has never initiated credit transfers or direct debits, nor have they used internet banking.<sup>3</sup>

The financial crisis escalated the problems mentioned above, and put them into a different perspective. Not only the risks of isolated business decisions made by some banks were passed through to consumers, but also the entire interest rate and foreign exchange risk materialised. Consumers experienced sharp increases in their monthly instalments and a financial shock potentially harmful to the stability of the whole banking sector materialised (creating or rather uncovering a kind of “Hungarian subprime” problem). Effective consumer reactions to these developments were however, largely restricted by business practices that were not prevented by regulation.

## **2. Regulatory steps and consequences**

Insufficient prudential regulation has generally been considered (as a contributor) to contribute to the harmful effects of the financial crisis in Hungary. As a result of this, the powers of the Financial Supervisory Authority have been strengthened, and new regulations have been adopted concerning foreign currency operations and unilateral contract modifications.

### **2.1 Regulation regarding foreign currency operations**

The liquidity crisis and the increase in cost of funds had a very considerable effect on the Hungarian loan markets. These factors made Hungarian banks face enormous challenges in securing financing for their lending activity. The massively increased price of funds was passed through to the borrowers of foreign currency loans, whose monthly instalments additionally grew also due to a sharp devaluation of the domestic currency. The financial shock witnessed by the borrowers had a negative impact on sector stability as well with a potentially high rate of non-performing loans posing a significant threat to banks.

Realising the risks arising from foreign currency lending, credit institutions with the help of the National Bank of Hungary, tried to elaborate a self-regulation limiting these activities. This proposal included strict LTV (loan to value) and PTI (payment to income) ratios and the limitation of the duration for car loans. The self-regulatory initiative failed to materialise however, since credit institutions were unwilling to commit themselves to the very strict proposals.

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<sup>3</sup> ECB statistics from the Statistical Data Warehouse, and GVH study for the sector inquiry.

However, a *legislative action* was taken at the end of 2009 *to limit foreign currency operations*. Although the regulation included stricter LTV limits for foreign currency loans, it was nevertheless based on the previous self-regulatory initiative to a significant extent.<sup>4</sup>

## 2.2 *Regulations regarding unilateral modifications*

Various documents and conferences pointing out difficulties in switching made the Hungarian Bankers Association prepare self-regulations. The Association proposed two documents in 2008, a code of conduct for loan switching (refinancing) and another code of conduct for current account switching.

The government however was not entirely satisfied with the proposed self-regulation, and decided to implement changes itself. To *limit unilateral contract modifications*, an amendment to these rules was enacted in March 2009. Major elements of the regulation provide free exit from the contract if fixed-rate contracts are unilaterally modified, and allow consumers 60 days to consider their actions after a personal notification. A further modification to address questions raised by the new regulation was approved by the Parliament at the end of 2009.

Since there had been some contradicting interpretations on the new rules, in order to establish more clarity and to improve confidence in the banking sector, credit institutions elaborated a more extensive *Code of Conduct*, discussing various topics, among them unilateral modifications. These rules are monitored by the Financial Supervisory Authority (PSZÁF), which can impose significant fines in case of non-compliance.

## 3. **Concentration and crisis – the Hungarian experience**

In an international comparison the overall concentration of the Hungarian banking industry can be considered as *moderate*. After the establishment of the two-tier banking system in 1987, the sector underwent liberalisation. A former state-owned monopoly in the retail sector witnessed gradual erosion of its position in numerous segments, while remaining the major player in the market until nowadays.

A successful reorganisation programme in the 1990s was followed by a rapid influx of foreign capital, which resulted in decreasing concentration. As the new entrants principally targeted larger corporate clients, wholesale banking experienced a lot fiercer competition from the middle of the '90s, while competition in retail banking – more so in the case of individuals and less for SMEs - started to catch up only in the next decade. The end of the 1990s was then also marked by several acquisitions and mergers resulting in some concentration increase. (*Vígh-Miklé, 2002*)

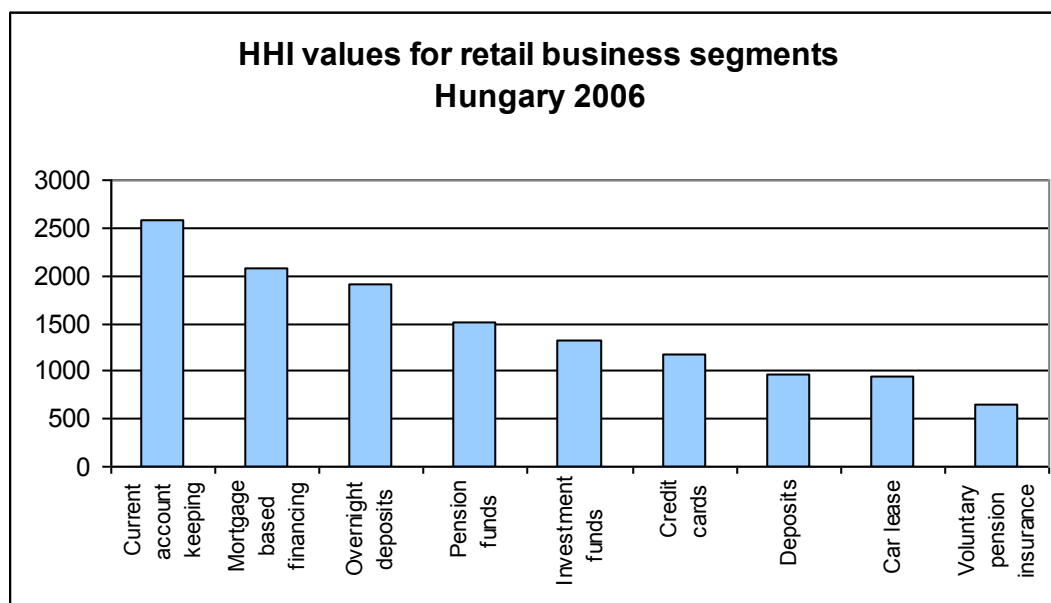
The EU integration process further contributed to the decrease of concentration in the banking market. The number of foreign branches increased, while opening branch offices became a general trend as more and more credit institutions expanded vastly into retail banking. While the decreasing trend for concentration in the banking concentration continued, there were countervailing effects for credit institutions in general as several saving co-operatives ceased their operation, merged, or transformed into banks. (*PSZÁF, 2009*)

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<sup>4</sup> The banks have to assess the borrowers prior to lending and they have to calculate a limit of lending for every borrower based on their income. The monthly instalment cannot surpass this limit, in case of EUR loans 80% of the limit, while in case of other foreign currency loans 60% of it. The LTV's for housing mortgage loans are 75% for HUF loans, 60% for EUR loans and 45% for other currency loans respectively. In case of financial lease, the respective numbers are as follows: 80%, 65% and 50%. For car loans the maximum duration has been limited to 7 years, while the LTV is 75%, 60% and 45% respectively.

*Concentration varies* greatly not only between the wholesale and retail segments, but also according to the activity in question. The decreasing trend in concentration is much more evident for the wholesale business, while retail concentration in the banking sector seems to remain rather stable over time. The concentration of the wholesale sector is in general much lower compared to the retail business; in 2002, the HHI value for the whole industry was around 1000, with 800-900 for the wholesale, and 2000 for the retail sector. (Vigh-Mikle, 2002) Based on a study by McKinsey&Company, the Hungarian retail market has the following concentration numbers according to the activity in question:

Chart 2: HHI indices for retail submarkets in Hungary (2006)



The same study found that in 2005 the market share of the three biggest banks was 43.8% in Hungary, while the HHI for the whole sector was 1007. According to these figures Hungary ranks among the moderately concentrated markets.<sup>5</sup>

The relation between the level of concentration in the banking sector and its vulnerability in case of shocks and crises has not been adequately assessed in Hungary so far. There are empirical evidences neither of the “concentration-stability” nor of the “concentration-fragility” view.<sup>6</sup>

There are only a few studies of *limited scope* that consider the relationship between competition, concentration and stability; they were however all prepared before the crisis. Várhegyi [2002] argues for example, that although the increased stability of the financial sector in the early 2000s went together with a decreased concentration, the high concentration in the retail sector left considerable room to extract even monopoly rents. The author draws the conclusion that it might also have had a positive impact on stability. An empirical study commissioned by Moré-Nagy [2004] confirms the relatively high concentration indices

<sup>5</sup> HHI values in the study range between 266 (Italy) and 2421 (Belgium).

<sup>6</sup> The terms “concentration-stability” and “concentration-fragility” are taken from Beck, Kunt and Levine [2005]. The former relates to the view by which higher concentration of the sector renders it more resistant to crises, while the latter represents the view according to which higher concentration is associated with higher vulnerability in case of crises.



in the retail sector, finding HHI values of 3400 for mortgages and 2900 for personal loans respectively.<sup>7</sup> The authors indicate that the higher concentration values are transformed into higher profit margins.

There are only *speculative conclusions* to be drawn concerning concentration and stability in the Hungarian banking sector. In the transformation period, the decrease in concentration seemed to contribute to increased stability; a causal relationship is not obvious, however.

Currently, the relatively low concentration is accompanied by a *diversified ownership structure* in Hungary – as noted above; the majority of the Hungarian banks are parts of international banking groups, with parent companies based in various countries. It can be argued that this renders the industry less prone to systemic risk. In case of a bank failure, for example, diversity of ownership and extended number of banks on the market could make the failure of the whole sector less likely. Even a global crisis is likely to affect different countries – and so different parents of the Hungarian banks – differently. Therefore, it is less probable that all of the banks share the same “story of failure”, including the lack of “help” from their own groups. In addition, variety in foreign ownership may translate into variety of traditions, corporate culture and business strategies – more diverse than otherwise. This also helps mitigating risks that could arise from failed investments.

These thoughts are all however, only based on conventional wisdom, as direct evidence is not available for Hungary. It cannot be excluded either that the above detailed potential benefits of diversity are only true for a limited set of countries with specific characteristics.

This crisis has had special features and a specific course in Hungary, as described in previous sections. There were no failing banks, and there was no need for bailouts, increase of concentration or nationalisation. Several reasons can be brought up in this matter, some of them have already been mentioned above, but it might also be considered that the Hungarian banking industry’s diversified ownership structure and relatively low concentration had also a role. These conclusions however, need to be supported and confirmed by empirical evidence as well.

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<sup>7</sup> The difference between the market shares of the first and second players also show significant difference: in the retail sector it ranges from 15-48 percentage points for the various products, while the same difference for the wholesale sector is only 1-1.5%.

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## IRELAND

### 1. Introduction

This submission from the Irish Competition Authority (“the Authority”) to the February 2010 OECD Competition Committee Roundtable on Competition, Concentration and Stability in the Banking Sector considers (i) the degree of competition and concentration in the banking sector pre-crisis; (ii) the impact of the crisis and the measures adopted to ensure the stability in the banking sector in Ireland; and, (iii) the present situation of the Irish banking sector.

### 2. Background

Within Ireland there are five domestically owned financial institutions with retail operations: Allied Irish Banks, Bank of Ireland, Irish Life & Permanent (trading as Permanent TSB), Irish Nationwide Building Society and EBS Building Society. Foreign banks with a retail presence are Ulster Bank (Royal Bank of Scotland), Halifax (Lloyds Banking Group), KBC Bank Ireland, National Irish Bank (Danske Bank), and ACC Bank (Rabobank). In addition, Anglo Irish Bank is another domestic bank but it does not offer banking services to retail customers nor does it operate a branch network.

In addition, the International Financial Services Centre (IFSC) houses various operations of many foreign institutions. The IFSC was set up by the Irish Government with EU approval in 1987 as a location with special corporation tax status of 10% for firms offering internationally traded financial services. This 10% corporation tax rate expired in 2002 and since then all firms pay corporation tax at the standard 12.5% applied in Ireland. Activities conducted in the IFSC include banking, asset financing, fund management, corporate treasury management, investment management, custody and administration and specialised insurance operations. More than 430 international institutions are approved to trade in the IFSC.

### 3. Degree of competition and/or concentration in the Irish Banking Sector pre-crisis

#### 3.1 Competition

In September 2005, the Authority published a report entitled “Competition in the (non-investment) banking sector in Ireland,” (the “2005 Report”).<sup>1</sup> The 2005 Report studied three specific areas: personal current accounts, lending to small and medium enterprises and access to payment clearing systems.

The 2005 Report identified competition concerns and made 25 recommendations which are addressed to the Government, the financial regulator, the clearing companies and the banks. In the area of personal current accounts, the recommendations focus on making it easier for consumers to move their bank accounts and equipping consumers with full account histories and with the information to make informed decisions about their current account providers.

In the area of lending to small and medium enterprises, the recommendations focus on making it easier to move loans and current accounts to another bank, giving businesses access to accurate, reliable

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<sup>1</sup> An electronic copy of the 2005 Report may be downloaded at <http://www.tca.ie/EN/Promoting-Competition/Market-Studies/Banking.aspx>. The appendices of the 2005 Report include a commissioned report by LECG Consultants entitled “Study of Competition in the Provision of Non-investment Banking Services in Ireland: Report and Recommendations.”

and understandable information about alternative banking products and facilitating the transfer of security to another bank to facilitate switching loans.

With respect to the clearing system, the key recommendations relate to facilitating new members joining the payment clearing system, improving corporate governance structure of the payment system, increasing the transparency of the payment system and promoting a more efficient system.

The 2005 Report was not a comprehensive study of the entire Irish banking sector given its limited scope to three areas of activity: personal current accounts, lending to small and medium enterprises and access to the payment clearing system. Despite the competition concerns identified by the report, there was some degree of competition in the banking sector in Ireland pre-crisis and the banks were profitable.

As of January 2010, most of the 25 recommendations have been substantially implemented or addressed through legislation. It must be stressed, however, that the implementation of the recommendations does not imply that there are no remaining competition concerns.

### **3.2 Concentration**

According to the 2005 Report, the retail banking sector in Ireland is concentrated, particularly in the personal current accounts market with two banks, Bank of Ireland and Allied Irish Banks with a combined market share of at least 65% (as of 2003) with the next largest bank, Permanent TSB with between 5% to 20%. This is an indicator of the high level of concentration before the crisis in area of personal current accounts in the Irish banking sector.

Before the crisis, the Irish banking sector did not experience any significant consolidation. Government policy was largely neutral, i.e. there has been no implementation of policies to facilitate or hinder the consolidation process.

In the last decade there were three noteworthy events involving the acquisition of three Irish banks by foreign banks. In March 2000, Ulster Bank was acquired by the Royal Bank of Scotland (United Kingdom) as part of the acquisition of the National Westminster Bank Group, the owner of Ulster Bank. In 2003 Ulster Bank acquired First Active. In March 2005, National Irish Bank was acquired by Danske Bank (Denmark). Neither of these acquisitions was notified to the Authority.

The Authority does not have a measure for concentration in the banking sector that is different from that used for other sectors. The Authority's Notice in respect of Guidelines for Merger Analysis (N/02/004) relies on market shares and the Herfindahl index to determine the level of concentration and the change in market concentration resulting from the merger.

## **4. Impact of the crisis and measures adopted to ensure stability in the Irish Banking Sector**

All financial institutions with a retail presence within Ireland have been significantly impacted by the financial crisis. The banking crisis has been severe, particularly for Irish institutions which have been confronted by the credit crunch.<sup>2</sup> The crisis has resulted in a reduction in the quality of property related assets and consequently weakened balance sheets, restricted access to wholesale funding, and severely reduced share values. Shares in AIB which reached a record high of €21.17 in January 2007 currently trade at €1.48 while Bank of Ireland shares having reached an all-time high of €18.65 in November 2006 are now trading at €1.53 on the Irish Stock Exchange.

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<sup>2</sup> The IFSC operations are separate from domestic banking activities and, therefore, the banking crisis in Ireland has not directly affected the operations at the IFSC.

The crisis has also impacted on foreign banks in Ireland. Whereas the preceding five to ten years saw an increased presence of foreign banks, foreign banks would appear to be reducing their exposure to the Irish market at present. Halifax (Bank of Scotland Ireland), National Irish Bank (Danske Bank) and Ulster Bank have in recent months indicated a reduction in either branch presence or staffing. For example, Royal Bank of Scotland closed its First Active mortgage lending franchise with the loss of 750 jobs and has recently announced 250 redundancies in its core Ulster Bank franchise. The National Irish Bank (which is owned by Danske Bank) has also recently announced the closure of 25 branches through Ireland.

Various significant public policy responses have been implemented over the last two years to maintain the viability of Irish institutions and the stability of the financial system. The key measures adopted by the Government are the following:

- The enactment of the *Credit Institutions (Financial Support) Act 2008* (“The CIFS Act”) in October 2008. The CIFS Act enables the Minister of Finance (the “Minister”) to review certain mergers and acquisitions in the banking sector.
- The adoption of a guarantee scheme to safeguard all deposits and liabilities in the banks covered by the scheme.<sup>3</sup> The guarantee scheme was envisaged in the CIFS Act and enacted by separate legislation, the *Credit Institutions (Financial Support) Scheme 2008*. The guarantee scheme was approved by the Commission under state aid rules on 13 October 2008.
- The nationalisation of Anglo Irish Bank, the third major Irish bank, in January 2009. The *Anglo Irish Bank Corporation Act 2009* is the emergency legislation that gave effect to the nationalisation of Anglo.
- The recapitalisation of the three major Irish banks: Bank of Ireland and Allied Irish Banks (with €3.5 billion each) and Anglo Irish Bank (with €4 billion). The recapitalisation of Bank of Ireland, Allied Irish Banks and Anglo Irish Bank was approved by the Commission under state aid rules in March, May and June 2009, respectively.
- The establishment of the National Asset Management Agency (“NAMA”) in November 2009. NAMA is a Government entity established to acquire troubled assets (mainly land and development loans) from Irish banks. The transfer of the largest loans to NAMA should commence in March 2010. Initial Government estimates indicated that NAMA would pay €54 billion for the property loans which have a book value of €77 billion, representing a discount of 30%.<sup>4</sup>

Following the Commission’s approval of the recapitalisation of Bank of Ireland, Allied Irish Banks and Anglo Irish Bank, restructuring plans were submitted by each of these three banks. At the time of writing this submission, the restructuring plans are being reviewed by the Commission but no final decision has yet been made.

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<sup>3</sup> They are: Allied Irish Banks, Bank of Ireland, Anglo Irish Bank, Irish Life and Permanent, Irish Nationwide Building Society and the Educational Building Society. Postbank Ireland Limited was subsequently added to the list of the institutions covered by the guarantee scheme.

<sup>4</sup> It should be noted that the discounts are only indicative figures based on estimates of the total value of the lending carried out by all the Irish banks covered by the scheme. The discounts which will be applied to the individual loans may vary considerably from this aggregate figure depending on the quality of the underlying assets.

It is probably too early to provide a full assessment of the causes of the instability in the Irish banking sector in part because of the restructuring that is underway in connection with the Commission's review of the state aids granted to Irish banks and the impact of NAMA. There is little doubt, however, that much of the problems in the Irish banking sector can be attributed to a large extent to widespread, questionable lending practices by banks especially in dealing with property developers coupled with the lack of sufficient regulatory oversight. It is doubtful that excessive concentration and/or competition, in and of themselves, can be said to be causes of the instability. This is not to say that recovery in the banking sector would not be hindered in those areas where there was excessive concentration or competition concerns pre-crisis.

In respect of the pre-crisis situation of financial regulation in Ireland, Mr. Patrick Honohan, Governor of the Central Bank & Financial Services Authority of Ireland, stated during his speech at the Financial Services Ireland Annual Dinner on 1 December 2009 that:

*“As far as the past is concerned, it is conventional to assume that, in the recent words of Judge Richard Posner, applied to the US regulatory agencies in the run-up to their own crisis, “ignorance and inattention” were at the heart of regulatory failure. Whatever else about that assessment, it hardly represents an explanation. Nor is it credible that a few simple rules like “no 100% mortgages” would have prevented the disaster that has occurred”.*<sup>5</sup>

The regulatory failure could have been linked to the banks' own directors and management. According to Mr. Honohan, “There do appear to have been fairly basic violations of good governance practices (to say the least) in some institutions”.

The Government is currently proposing to establish a commission of inquiry to examine the causes of the banking crisis in Ireland.

## **5. Present situation of the Irish banking sector**

The weakness exhibited by smaller banks including the retrenchment by foreign banks may have increased concentration in some banking areas and created a negative effect on competition. Given the fact that most banks, Irish and foreign, in Ireland are experiencing difficulties, increased competition in the banking sector is unlikely to come about except through new entry into the sector. Thus, changes to lower the barriers to entry such as facilitating Internet banking especially by foreign banks would be welcomed from a competition perspective.

There has been much public speculation about potential mergers in the Irish bank sector, in particular, to create a so-called ‘third force’ to compete against the two dominant banks in Ireland: Bank of Ireland and Allied Irish Banks. Recently, two Irish building societies, EBS and Irish Nationwide Building Society have publicly acknowledged that they are in merger talks.

As noted above, in October 2008 the Irish Government enacted the CIFS Act to address possible threats to the stability of the Irish financial system. Under the Competition Act 2002 (“Competition Act”), the Authority must be notified of any merger or acquisition (including in the banking sector) that meet certain financial thresholds and other conditions.

Under the CIFS Act, the Minister may require that he be notified of any merger or acquisition in the banking sector which meets the criteria set out in section 7(1) of the CIFS Act. For any bank merger or

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<sup>5</sup> [http://www.centralbank.ie/frame\\_main.asp?pg=nws\\_article.asp%3Fid%3D481&nv=nws\\_nav.asp](http://www.centralbank.ie/frame_main.asp?pg=nws_article.asp%3Fid%3D481&nv=nws_nav.asp).

acquisition notified to the Minister, the Authority will lose its jurisdiction to be notified of that transaction under Part 3 of the Competition Act.

Section 7(1) of the CIFS Act provides that:

*“This section applies to a merger or acquisition (within the meaning of section 16 of the Act of 2002) that involves a credit institution or subsidiary where the Minister:*

- (a) *After such consultation with the Central Bank and the Regulatory Authority as the Minister considers necessary, is of the opinion that:*
  - (i) *The proposed merger or acquisition is necessary to maintain the stability of the financial system in the State, and*
  - (ii) *There would be a serious threat to the stability of that system if the merger or acquisition did not proceed, and*
- (b) *Certifies in writing to the parties to the merger or acquisition, the Competition Authority and the Governor that he or she is of that opinion.”*  
(Emphasis added.)

Although the Authority loses its jurisdiction to review a bank merger or acquisition that is notified to the Minister under the CIFS Act, the Authority may be called upon to provide advice to the Minister. Under section 7(7) of the CIFS Act, the Authority shall provide any “advice, information and assistance” that the Minister requires for the purpose of making a decision on mergers notified to him.

Section 7(7) could be interpreted to mean that the Authority could be asked to advise whether the Authority considers the bank merger in issue will or will not substantially lessen competition. In other words, the Authority could be asked to provide an opinion as if the merger were notified to the Authority under the Competition Act.

Since the beginning of the current financial crisis there have not been any mergers in the banking sector in Ireland. The Minister has not, therefore, had the opportunity to consider invoking his bank mergers notification powers under the CIFS Act. The Minister could invoke the CIFS Act if the merger talks between EBS and Irish Nationwide Building Society materialised.

## **6. Conclusion**

Pre-crisis, Ireland had a concentrated retail banking sector. Hence, it cannot be inferred that consolidation reduces the risk of financial crisis. The current situation is fluid with bank mergers likely to take place in the near future.





## ITALY

### 1. Introduction

The Italian banking system has been subject to deep structural transformation in the last two decades.

As a result, the banking sector, which was very fragmented and mostly publicly held at the beginning of the nineties, has now been completely privatised and consolidated.

The Italian banking sector has so far suffered less than others from the impact of the crisis. No banks have exited the market or had to be bailed out. A solid regulatory and supervisory environment and the structural transformations underwent by the banking system seem to have had a positive effect on its resilience.<sup>1</sup>

The consolidation process led to a significant increase in concentration in the Italian banking sector. In general, from a competition assessment point of view, when mergers were approved they raised competitive concerns in local markets that were solved through remedies concerning the disposal of branches.

However, an element of competitive concern still characterising the sector is the large presence of “interlocking directorates” and shareholder pacts and other characteristics of the banking sector corporate governance. This led the Italian Competition Authority to conduct an extensive sector inquiry into the corporate governance of the Italian financial sector. The inquiry concentrated on four areas of analysis: models of governance, connections between competitors, especially shareholders, deriving from “interlocking directorates”, the role of banking institutions, co-operative banks and co-operative credit banks (BCC) which are characterised by specific regulations (for example on voting rights) making them non contestable. The inquiry revealed a critical need for clear governance models and it underlined the negative effects that shareholder links and other drawbacks in corporate governance might have on competition and contestability as well on the system’s stability itself.

### 2. Privatisation and consolidation in the Italian banking sector

In Italy, at the beginning of the 1990s banks controlled by the Treasury, by municipalities or by other public bodies held almost 70 percent of total assets. The system was split into a multitude of banks, all small by international standards, most active in a restricted geographical area. At that time there were no universal banks and the institutions were classified according to the business specialisation as commercial banks or as special credit institutions. In addition, the regional network and business activities were strictly regulated.

The growing needs to operate in an international environment and to achieve greater efficiency and performance called for a reorganisation of the system, and in particular of its ownership structure. Regulatory reforms were introduced in the course of the nineties leading to the privatisation of the Italian banking system. The first step towards privatisation was the Amato law (law n. 218/1990) that transformed the savings bank into joint stock companies and transferred to (still publicly owned) foundations the banks’ capital. In 1994 law n. 474/1994 repealed the obligation for the foundations to keep control of their joint

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<sup>1</sup> Bank of Italy, The Governor’s Concluding Remarks, May 29 2009.

stock companies and introduced tax advantages for those foundations that would dispose of their banking shares within four years. This law effectively launched the privatisation of the Italian banking system. It is at this time that the largest state owned banks (Credito Italiano, Istituto Mobiliare Italiano, Banca Commerciale Italiana) were privatised. Finally, in 1998, law n. 461/1998, fixed a four year time limit within which the foundations had to dispose of their controlling interests in banking companies.<sup>2</sup>

As a consequence of these reforms the nature of the banking system changed completely. The share of banking assets in the hands of public entities declined from 68 percent in 1992 to 9 percent in 2003.

The privatisation process is now completed and shares owned by public entities have been reduced to a negligible level. Together with the reform of the ownership structure of public banks, a set of other important reforms were introduced, gradually removing mandatory specialisation and geographical diversification.<sup>3</sup>

These trends were accompanied by an important process of consolidation. In the ten years 1998-2007 mergers and acquisitions have involved 300 Italian banks and resulted in the transfer of more than 50 per cent of the total assets of the banks operating in Italy.<sup>4</sup> Stimulated by increased competition, also from abroad, and financial innovation the consolidation process was particularly intense in the last few years, with the merger between Banca Intesa and Sanpaolo IMI and the acquisition of Capitalia by Unicredit, in 2007, creating two large groups, even by European standards, with significant international operations, accounting for 35.4 percent of the system's total assets.<sup>5</sup>

The consolidation process was accompanied with a significant increase in concentration. The top five banking groups' share of the system assets in the domestic market rose from 48.6 percent in 2000 to 54.6 percent at the end of 2007. The Herfindhal-Hirschman index rose from 600 in 2000 to 771 in 2008. In the same period, however, the degree of concentration of local credit markets instead decreased partly thanks to the increase in the average banks per province from 25, at the end of 2000, to around 28, at the end of 2008.

The degree of internationalisation of the banking system also increased. In line with other European countries, the presence of foreign banks in Italy is concentrated primarily in investment banking and remains limited in retail banking. At the end of 2008 there were 82 branches of foreign banks in Italy accounting for 11.7 percent of the system assets. For the Italian banking groups, foreign business accounted for 27.1 percent of total financial assets.

Significant efficiency gains resulted from consolidation and the withdrawal of public ownership of Italian banks<sup>6</sup>. Larger size enabled Italian banks to adopt new technologies; the revenue basis was expanded, increasing the share of revenues from non traditional services; a more efficient organisation of

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<sup>2</sup> For a thorough description of the privatisation of the Italian banking sector see Carletti E., Hakenes H., Schnabel I., The Privatisation of Italian Savings Banks – A Role for Germany?“, *DIW Quarterly Journal for Economic Research (Vierteljahrshefte zur Wirtschaftsforschung)*, 2005, 74, 32-50.

<sup>3</sup> Some of the reforms were the consequence of the implementation of European Directives, in particularly the Second banking Directive (89/646/EEC).

<sup>4</sup> Bank of Italy, Annual Report 2007.

<sup>5</sup> Bank of Italy, Annual Report 2008.

<sup>6</sup> IMF Working Paper, Drummond P., Maechler A. M. and Marcelino S., Italy—Assessing Competition and Efficiency in the Banking System, February 2007.

work and new channels of distribution were adopted. The consolidation process generated economies of scale in the production and distribution of services and increased risk diversification.<sup>7</sup>

### 3. The Italian banking sector and the financial crisis

The financial crisis occurred at a time where the Italian banking system's reorganisation was underway, with new forms of governance already tested and the presence in foreign markets expanding. The major transformation experienced by the Italian banking system increased the average size and efficiency of the Italian banks and helped to improve their resilience in the face of the crisis.<sup>8</sup>

According to the International Monetary Fund the Italian banking system has so far suffered less than others the impact of the crisis.<sup>9</sup> Its resilience reflects a business model based on prudent lending, as well as on funding on the retail market rather than on wholesale capital markets.

The Italian system is still characterised by the prevalence of credit intermediation activity in favour of households and firms, strong local roots and a generally balanced structure of assets and liabilities. It has a limited exposure to structured finance products and lesser recourse to wholesale funding. At the end of 2008 structured credit instruments represented just under 2 percent of the assets of the main banking groups. Wholesale funding made up 29 percent of total funding for the Italian banks, against an average of 41 percent in the euro area.<sup>10</sup> Italian banks, in comparison to European competitors, have lower leverage ratios. The two largest banks' ratio of total assets to core capital in 2008 was, respectively, 24 for Intesa Sanpaolo and 27 for Unicredit, against a European average of 34.<sup>11</sup>

These structural characteristics with a particularly prudent regulatory framework and supervisory approach, seem to have shielded Italian banks from the most serious effects of the financial market turbulence.

However, the effects of the recession on banks' profits have been significant. For the five largest groups, although their operating income held up well, their first-half profits fell by nearly 60 percent compared with the first half of 2008 owing to the increase in provisions against credit risk. Since the beginning of 2009, financial analysts have repeatedly revised their profit forecasts downwards.<sup>12</sup>

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<sup>7</sup> Fiorentino E, Vincenzo A, Heid F, Karmann A, Koetter M., The effects of privatization and consolidation on bank productivity: comparative evidence from Italy and Germany. Deutsche Bundesbank, Research Centre, Discussion Paper Series 2: Banking and Financial Studies: 2009,03. The authors tested the effects of privatisation and consolidation in the Italian banking system and concluded that the privatisation of banks has increased their productivity and that the improvement is remarkably significant not only statistically but also in economic terms.

<sup>8</sup> Bank of Italy, The Governor's Concluding Remarks, May 29, 2009.

<sup>9</sup> IMF Country Report 2009.

<sup>10</sup> Annual Report Bank of Italy, 2009.

<sup>11</sup> R&S Mediobanca, Dati cumulativi delle principali banche internazionali, June 2009.

<sup>12</sup> Address by the Governor of the Bank of Italy to the Association of Italian Savings Banks on the 2009 World Savings Day, October 2009.

### 3.1 *Mergers examined by the Italian Competition Authority (2006-2009)*

The Competition Authority is now fully in charge of antitrust enforcement in banking<sup>13</sup>. In particular, the Antitrust Authority has full powers to apply national and Community rules on agreements and abuse of dominant position in the banking sector.

As for concentrations involving banks, there is a mechanism of separate authorisation by the Bank of Italy and the Antitrust Authority, each for the matters falling within their scope, to be granted within sixty days of notification or completion of the necessary documentation.

The Italian Competition Authority has traditionally assessed the impact of bank mergers in local markets by means of indicators such as the Herfindahl-Hirschmann index and the market shares of undertakings and competitors. These indicators can provide a measure of the market's competitive structure and firms' market power. The prices applied by undertakings and the comparison between prevalent prices in a given geographic area and those prevailing in nearby similar areas are also useful to evaluate whether a merger is likely to raise competitive concerns.

The Italian Competition Authority examined a number of mergers in the banking sector in the last few years. When competitive effects on the local markets emerged, they were generally solved through measures involving divestment of local branches. Competitive concerns involving the structure of corporate governance that might lead to collusive outcomes (such as interlocking directorates) were also tackled through conditions concerning structural and personal ties between competitors. Hereinafter a brief description is provided of the most important mergers in the banking sector reviewed in recent years.

#### **C8027 - BANCA INTESA/SAN PAOLO IMI<sup>14</sup>**

In December 2006 the Authority authorised, subject to conditions, the merger by incorporation of San Paolo IMI Spa and Banca Intesa Spa.

The Authority required the divestment of around two hundred branches to one or more independent third parties and non-shareholders of the new bank; the transfer to Crédit Agricole of 551 branches, in compliance with a series of conditions aimed at guaranteeing the requisite independence between Crédit Agricole and the new bank; sale by Banca Intesa of PO Vita to Crédit Agricole, and the sale to independent third parties of a division that produces and distributes Branch I, III and V life insurance.

#### **C8277 BANCHE POPOLARI UNITE – BANCA LOMBARDA E PIEMONTESE<sup>15</sup>**

In April 2007 the Authority authorised the incorporation of Banca Lombarda e Piemontese in Banche Popolari Unite (hereinafter, UBI Banca), subject to some conditions. The Authority deemed that the merger might have anticompetitive effects, creating a dominant position, in two provinces of Northern Italy. The anti-competitive effects of the merger were amplified by the fact that the new entity would have been a major co-operative bank, with very strong local roots in its area of operations. The governance of co-operative banks, which are practically non contestable, would allow the post-merger entity to enact strategies aimed at further strengthening its market position. The same competitive risk were not

<sup>13</sup> These responsibilities had originally been given to the Bank of Italy. In 2005 Law 262/2005 (Law on the protection of saving and on financial market) transferred to the Competition Authority the responsibility of the application of competition law to banks.

<sup>14</sup> AGCM, provv. n. 16249, 20/12/2006, C8027, Boll. 49/06.

<sup>15</sup> AGCM, provv. n. 16673, 12/04/2007, C8277, Boll. 13/07.

considered significant in the markets for households and SMEs loans in the same provinces, as well as for the distribution of investment funds and asset management.

The Authority authorised the concentration subject to conditions designed to prevent UBI Banca from gaining a dominant position that would entail a significant and lasting reduction of competition, requiring the divestiture of some branches in the relevant geographical markets for deposits and preventing UBI Banca from entering in any agreement or interlocking directorate's arrangements with Intesa San Paolo, in order to avoid any structural and personal ties between the two competitors which could undermine competition.

#### **C8660 UNICREDITO ITALIANO-CAPITALIA<sup>16</sup>**

In September 2007 the Authority authorised the incorporation of Capitalia in Unicredit. The impact of the merger was assessed with reference to several product markets, including deposits, loans and consumer credit. The Authority also analysed the sectors of asset management, life insurance and investment banking.

The Authority made the approval of the merger subject to Unicredit selling about 180 branches, disposing of its equity interest in Assicurazioni Generali and reducing its interest in Mediobanca.

#### **INTESA SANPAOLO – CASSA DI RISPARMIO DI FIRENZE<sup>17</sup>**

In January 2008, the Authority authorised, subject to conditions, the acquisition of Cassa di Risparmio di Firenze by Intesa Sanpaolo. The Authority deemed that the operation could have a competitive impact on some retail banking markets (deposits, credit cards, consumer credit, managed savings and loans to households and SMEs).

The merger was authorised subject to the divestment to third parties of 29 branches owned by Intesa San Paolo/CARI Firenze in the geographical markets most seriously affected by the merger. The Authority required Intesa Sanpaolo to dispose of its entire holding in Agos, one of the subsidiaries operating in the consumer credit markets, in order to exclude the risks of anticompetitive effects in this sector.

#### **C9182 - BANCA MONTE DEI PASCHI DI SIENA/BANCA ANTONVENETA<sup>18</sup>**

In May 2008 the Authority authorised, subject to conditions, the acquisition by Monte dei Paschi di Siena's (MPS) of a controlling interest in the Antonveneta group.

The Authority required the divestment of 110-125 branches to third parties in the geographic markets affected by the merger, so as to reduce any restrictive effects. Other measures were aimed at limiting the anticompetitive effects of the merger in the insurance markets

As for the effects of the merger on competition in terms of corporate governance, remedies were introduced ensuring that no board members serve simultaneously on the boards of directors, management board or supervisory board of competitor banks that are not part of the BMPS group and that are active in the markets for savings and deposits and/or ordinary credit practices in Italy.

<sup>16</sup> AGCM, provv. n. 17283, 18/09/2007, C8660, Boll. 33/07.

<sup>17</sup> AGCM, provv. n. 17859, 17/01/2008, C8939, Boll. 2/08.

<sup>18</sup> AGCM, provv. n. 18327, 07/05/2008, C9182, Boll. 18/08.

#### 4. Issues in corporate governance in banks and insurance companies

In December 2008, the Authority concluded a sector inquiry on the relationship between competition and *corporate governance* in the financial sector, focusing on the corporate governance structure of banks, insurance companies and savings management companies (both public and private) operating in Italy<sup>19</sup>. The survey involved in-depth examinations of four different areas of analysis:

- Models of *governance*, with special attention to the ways in which strategic executive functions are subdivided among corporate divisions, the procedures for selecting *managers*, the relationship between managers and shareholders, and the empirical analysis of shareholders' actual participation in company life;
- Connections between competitors, especially shareholders, deriving from shareholders' agreements and the personal ties of *interlocking directorates*;
- The still relevant weight of banking foundations (*fondazioni bancarie*) as shareholders in the largest Italian banks in spite of several reforms aimed at attempting to reduce their involvement in banks' ownership;
- Co-operative banks and co-operative credit banks (BCC) which, among other things, are characterised by specific regulations exempting the general principle of *one share/one vote*.

The picture that emerged from this inquiry was extremely complex: the degree of concentration among bank shareholders was very high for publicly traded companies and was characterised by a fairly stable core of shareholders, which were sometimes interconnected by shareholders' agreements. It is through this type of agreement that the shareholder nucleus can influence critical aspects of corporate life, such as the appointment of managers.

As regards personal connections, the study found that the governance bodies of 80% of the organisations under examination included individuals that held simultaneous positions within competing organisations. This phenomenon exists also for firms quoted on other European Stock Exchanges but not to the same extent as in Italy. Ties based on cross participation by competitors proved to be problematic as well, with approximately 19% of the companies analysed in the inquiry (representing 42.3% of the assets) characterised by the presence of competitors among their shareholders.

As for co-operative banks and co-operative credit banks (BCC) the inquiry showed that they their traditional business model – activities concentrated at local level and business with shareholders – is changing, making these banks more similar to joint stock companies. This makes their special legal form and their specific rules (limited voting rights, maximum limits on shareholdings and acceptance clauses for new shareholders), that limit their contestability, less justifiable.

The inquiry's findings reveal the need for interventions in the form of new regulation, and self-regulation. As for decision-making transparency the sector inquiry revealed a need for clear governance models in order to remove actual drawbacks of existing shareholder links on competition/contestability and a more precise definition of the prerequisites for independent administrators. The inquiry also underlined the need of increased disclosure of the shareholders' structure, especially when cross-participation by competitors is involved.

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<sup>19</sup> AGCM, IC36, La corporate governance di banche e compagnie di assicurazione, 23/12/2008.

At a more general level, the system seems to require the development of institutional investors, such as pension funds, to complement existing shareholders and a reform of the legal status of co-operative banks (especially publicly-traded ones) in regards to voting rights, participation limits and acceptance clauses.

## **5. Conclusions**

The Italian financial system has proved quite resilient to the effects of the financial crisis. However, the issues of corporate governance highlighted in the Competition Authority's inquiry need to be addressed in order to improve the performance and the stability of the system. Specifically, stronger market disclosure, combined with a more transparent governance that increases autonomy and independence of administrators, can contribute significantly to strengthen furthermore the system's reputation and its level of competition.





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## JAPAN

### 1. Introduction

Since the late 1990s, financial institutions accelerated a process of reorganisation, as a result of factors such as (i) financial infrastructure development through progress in the financial system reform, etc., (ii) the necessity of dealing with the non-performing loan problem, (iii) the legalisation of reorganisation schemes, including holding companies, to realise business strategies. Against these contexts, the major banks leading Japan at the time converged into 3 mega bank groups by the middle of 2000s.

In this paper, we would like to summarise the progress of regulatory reforms in the financial sector in Japan and the process of reorganisations of financial institutions, after which we will introduce the views of competition law and policy followed by cases regarding reorganisations in the banking sector since the late 1990s.

### 2. Financial System Reform and the Competition Environment of the Banking Sector

#### 2.1 Reorganisations of Major Banks

In the progress of financial system reform, major banks, based on their own management judgments, intended to strengthen (i) competitiveness and (ii) management vitality, including improvement of capital adequacy ratios through mergers and alliances. Consequently, the major banks leading Japan converged into 3 mega bank groups (Mizuho Group, Sumitomo Mitsui Group and Mitsubishi UFJ Group).

- *Mizuho Group* (the Dai-Ichi Kangyo Bank, Ltd., the Fuji Bank, Ltd. and the Industrial Bank of Japan, Ltd.)
  - Establishment of Mizuho Holdings, Inc. (a holding company) (September 2000)
  - Reorganisation to Mizuho Bank Ltd. and Mizuho Corporate Bank Ltd. (April 2002)
- *Sumitomo Mitsui Group* (the Sakura Bank Ltd. and the Sumitomo Bank Ltd.)
  - Merger of the Sakura Bank Ltd. and the Sumitomo Bank Ltd. (Sumitomo Mitsui Banking Corporation) (April 2001)
  - Establishment of Sumitomo Mitsui Financial Group, Inc. (a holding company) (December 2002)
- *Mitsubishi UFJ Group* (the Bank of Tokyo-Mitsubishi Ltd., the Sanwa Bank Ltd., the Tokai Bank Ltd., etc.)
  - [Mitsubishi Tokyo Group]* (The Bank of Tokyo-Mitsubishi Ltd., etc.)
    - Establishment of Mitsubishi Tokyo Financial Group, Inc. (a holding company) (April 2001)
  - [UFJ Group]* (The Sanwa Bank Ltd., the Tokai Bank Ltd., etc.)
    - Establishment of UFJ Holdings, Inc. (a holding company) (April 2001)
    - Merger of the Sanwa Bank Ltd. and the Tokai Bank Ltd. (UFJ Bank Limited) (January 2002)

*[Mitsubishi UFJ Group]* (Mitsubishi Tokyo Group, UFJ Group)

- Integration of Mitsubishi Tokyo Financial Group, Inc. and UFJ Holdings, Inc. (Mitsubishi UFJ Financial Group) (October 2005)
- Merger of the Bank of Tokyo-Mitsubishi Ltd. and UFJ Bank Limited (the Bank of Tokyo-Mitsubishi UFJ, Ltd.) (January 2006)

## **2.2 Competition Environment of the Banking Sector**

### **2.2.1 Background**

After the late 1990s, as entries into the banking business gained momentum through Internet-based banks and from other industries, and the move intended to form a new type of banking business was boosted. As a result, Japan saw the emergence of (i) 5 Internet-based banks including Sony Bank Inc. and the Japan Net Bank, Limited, as well as (ii) banks based mainly on collaboration with retail commerce facilities including supermarket, such as Seven Bank, Ltd. and Aeon Bank, Ltd, during the time when reorganisation of major banks made progress.

Additionally, in not only the banking sector but overall financial sectors in Japan, since the late 1990s, regulatory reforms, which enhance the competitive financial environment, have been progressing continuously. Hence, banks have been embarking on securities business acting on their own or through their subsidiaries and competing with securities companies in addition to the traditional banking business, such as loan-deposit business and exchange business (e.g. sales of investment trusts, undertaking of stocks and corporate bonds, etc.)

### **2.2.2 Recent Developments**

During the recent financial crisis, since the Japanese financial system itself has been relatively sound compared with those in the United States and Europe, there have been no cases of major mergers and reorganisations triggered by the crisis in the banking sector, among the 3 mega bank groups.

As regards recent regulatory reform which influences the competition environment of the banking sector, it can be pointed out that businesses other than banks have been permitted to operate money transfer business for a small amount, which was allowed for only banks, under a registration system as the result of the enactment of the Payment Services Act in 2009.

## **3. Reorganisation in the Banking Sector and Competition Policy**

### **3.1 Views of Merger Investigation toward Business Combinations of Financial Institutions**

Chapter IV of the Antimonopoly Act (AMA) prohibits business combinations that may substantially restrain competition in any particular field of trade. And, as guidelines on the interpretation of those provisions, the Japan Fair Trade Commission (JFTC) compiled and published “Guidelines for the Interpretation on the Stipulation that ‘The Effect May Be Substantially to Restrain Competition in a Particular Field of Trade’ Concerning M&A” in 1998 and, as its revision, “Guidelines to the Application of the Antimonopoly Act concerning Review of Business Combinations”<sup>1</sup> in 2004. The views explained in these Guidelines are applied to business combinations in the banking sector, as well as other sectors, concerning the judgment of whether a business combination may substantially restrain competition in a

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<sup>1</sup> These guidelines were also amended partially in 2007. <http://www.jftc.go.jp/e-page/legislation/ama/RevisedMergerGuidelines.pdf>.

particular field of trade or not. In other words, there are no special guidelines or enforcement standards of the AMA that specialise in the business combinations of financial institutions, including banks.

### 3.2 *Main Cases of Business Combinations of Major Financial Institutions since the late 1990s*

The following 5 cases can be named as the main cases in which the JFTC has carried out merger investigations on the reorganisation of major financial institutions since the late 1990s.

- *Mizuho Financial Group Case* (the establishment of a joint holding company by the Dai-Ichi Kangyo Bank, Ltd., the Fuji Bank, Ltd. and the Industrial Bank of Japan, Ltd.) (2000)
- *UFJ Holdings Case* (the establishment of a joint holding company by the Sanwa Bank, Ltd., the Tokai Bank Ltd. and the Toyo Trust Bank Ltd.) (2001)
- *Sumitomo Mitsui Banking Corporation Case* (the merger between the Sumitomo Bank Ltd. and the Sakura Bank Ltd.) (2001)
- *Mitsubishi Tokyo Financial Group Case* (the establishment of a joint holding company by the Bank of Tokyo-Mitsubishi Ltd., Mitsubishi Trust and Banking Corporation and Nihon Trust and Banking Corporation) (2001)
- *Mitsubishi UFJ Financial Group Case* (the business combination between Mitsubishi Tokyo Financial Group, Inc. and UFJ Holdings, Inc.) (2005).

Among those cases of business combinations of financial institutions that the JFTC has made public in the past, there are no examples of the JFTC pointing out that such combinations may substantially restrain competition. However, in some cases, the JFTC indicated problem(s) from the viewpoint of competition policy based on the result of surveys on the impact of the combinations on the industry.

#### 3.2.1 *Mizuho Financial Group Case*

##### *Summary of the case*

In this case, the Dai-Ichi Kangyo Bank, Ltd., the Fuji Bank, Ltd. and the Industrial Bank of Japan, Ltd. attempted to fully integrate their businesses as the “Mizuho Financial Group” by jointly establishing a holding company. The three banks were to be placed under the holding company, while the three securities subsidiaries of the banks (Dai-Ichi Kangyo Securities, Fuji Securities and Kogin Securities) and the two trust bank subsidiaries (Dai-Ichi Kangyo Fuji Trust Bank and Kogin Trust Bank) were to be merged.

##### *Analysis under the AMA*

As regards the impact on competition in the financial market, the JFTC made a careful examination by defining the particular field of trade as each of the deposits, loans, foreign exchange, securities and trust banking businesses. Although the Mizuho Financial Group would be the leader in such fields as deposits and loans, the JFTC judged that it would not substantially restrict competition in any business area taking into account various factors, including competitive pressure from neighbouring markets, the existence of strong competitors and entries from other industries. For example, as regards the deposits business, it was taken into account that under low interest rates, individual deposits flowed to alternative financial products including investment trusts, thus, competition pressure existed from neighbouring markets of financial products which alternate deposits and are provided by securities companies, investment trust companies and insurance companies. And, as regards the loan business, it was taken into account that accompanied

with the diversification of financing methods, major firms carried forward direct finance including corporate bonds, commercial paper and account receivable financing, thus, competition pressure from neighbouring markets of those financial products would operate.

### *Impact on the Industry*

As regards the impact on the industry, the JFTC conducted questionnaire and interview surveys with firms financed by the three banks, as the three banks would be financing about 70% of the listed companies. From the result of the surveys, the JFTC judged that the integration might lead to interference in the management of firms the group would have an increased share in financing and ownership of (for example, by requesting such firms to conduct (or increase) transactions other than borrowing, such as deposits), as well as to the formation of exclusive and closed trading relationships through the selection of trading partners based on whether they belong to the corporate group or not.

Accordingly, the JFTC indicated to the three banks that the necessary measures should be taken to prevent such concerns from being realised.

The three banks responded as follows to the JFTC:

As regards the concern about the new group interfering with management on the strength of its increased share in loans and stockholdings, the three banks are currently doing their utmost to ensure full compliance with the AMA by thoroughly informing their directors, officers and employees of its importance. Such efforts will be continued after the integration. In the holding company to be created, a regime will be built to monitor the compliance of the group as a whole so as to prevent such acts as pointed out by the JFTC.

As regards the concern about closed relationships within the corporate group, the Mizuho Financial Group will be operating its businesses as an impartial and open financial group. The group does not intend to initiate the formation of any specific or exclusive corporate group. By the spring of 2002, when the member banks will be integrated and restructured, they will review the operation of corporate groups that formed with banks as cores and consider the possibility of their dissolution.

As regards the business integration plans, the JFTC concluded that the proposed establishment of a holding company, under which the three banks were placed, and the merger of the three banks' subsidiaries, including 3 securities companies and 2 trust banks, would not be likely to violate the provisions of the AMA. When the further organisational restructuring of the three banks was to take place in spring 2002, the JFTC intended to examine the case as necessary. As to the proposals made by the three banks in response to the indications by the JFTC concerning the impact of the consolidation on various industrial sectors, the JFTC will carefully monitor how the proposals are being carried out and will strictly deal with whatever activities may constitute violations of the AMA.

### *3.2.2 Sumitomo Mitsui Banking Corporation Case (2001)*

#### *Summary of the case*

In this case, the Sumitomo Bank Ltd. and the Sakura Bank Ltd. attempted to merge to deal with tougher competition accompanying the progress of reorganisations in the banking sector and so on. (The Sumitomo Bank Ltd. was the merging company and after the merger it was renamed the Sumitomo Mitsui Banking Corporation or 'SMBC.')

The JFTC investigated this case based on the request of a prior consultation by concerned parties and, from the result of the investigation, the JFTC judged it would not be likely to violate any provisions of the AMA.

### *Analysis under the AMA*

For this case, as regards the impact on competition in the financial market, the JFTC defined a particular field of trade as each of the deposits, loans, foreign exchange and securities businesses, then, the JFTC judged it would not substantially restrain competition in any business area. For example, as regards deposits and loans, although the new company would take second position in the market share and the degree of concentration of the leading banks would increase because other major banks also planned to integrate, various factors including competitive pressure from neighbouring markets, the existence of strong competitors and entries from other industries were taken into account. As regards bond underwritings, although the new company would be the leader in the market share, the prediction on the extension of the securities market and active competition in said market and the existence of strong competitors including major securities companies were taken into account.

### *Impact on the Industry*

Accompanying this merger, the new bank would be financing about 60% of the listed companies, so the JFTC conducted questionnaire and interview surveys on firms financed by the new bank (the listed companies and small and medium-sized companies). As the result of the surveys, it was determined that about 25% of the companies had no alternative method for the procurement of equipment funds and operating funds, thus, they could not change the structure of financing. Furthermore, it was determined that about 30-40% of the companies actually received or expected to receive a request on the transactions other than borrowing, such as deposits, and to use a specific securities company as the main underwriter of corporate bonds.

From the result of the surveys, the JFTC indicated the following problems under the AMA and competition policy to the new bank:

- In the process of the surveys of this case, the firms where the new bank would have an increased share in financing and ownership, expressed concern that the new bank would intervene in the management of said firms, for example, by requests to conduct (or increase) transactions other than borrowing, such as deposits.
- If the new bank carries out such conducts as those described above against the background of an increased share in financing and ownership, and indicates a disadvantage to those firms that do not obey such 'requests' and so on, those conducts will be likely to compose unfair trade practices (violations of Article 19 of the AMA). In this regard, the new bank must take necessary measures to prevent the conducts that cause a disadvantage to the trading firms against the background of its influence in the future operation's activities.

To the above indications, the concerned companies responded their utmost to ensure full compliance with the AMA by thoroughly informing their directors, officers and employees of the measures including (i) the establishment of internal rules including a Compliance Manual, (ii) education and training, (iii) circulation of the Compliance Manual Handbook among their directors, officers and employees for the purpose of avoiding violations of the AMA.

### *3.2.3 Mitsubishi UFJ Financial Group Case (2005)*

#### *Summary of the case*



In this case, Mitsubishi Tokyo Financial Group and UFJ Holdings planned a business integration including the merger between them.

#### *Analysis under the AMA*

In this case, regarding the market definition, the JFTC found that the products and services sold by the group companies of the two banks could be classified into 30 categories. This classification was made based on the criteria of whether products or services offered users similar functions or utilities. Also, the JFTC recognised that the goods and services were generally sold in each national market, but the deposit and loan markets consisted of their national and prefectural markets. In conclusion, forty-seven markets were defined in total, the JFTC carried out an in-depth investigation (Phase II investigation) on 23 categories including deposits (7 markets, including the whole country, Tokyo Metropolitan, Aichi Prefecture and Osaka Prefecture), loans (7 markets, including the whole country, Tokyo Metropolitan, Aichi Prefecture and Osaka Prefecture) and the trust business (7 markets). For example, as regards deposits and loans, although the new group would be the leader with 25%-40% in market share, the JFTC judged that this integration would not be likely to substantially restrict competition from both unilateral behaviour and co-operative behaviour viewpoints by taking into account various factors including competitive pressure from neighbouring markets, influential competitors and entries from other industries. Also, the JFTC judged that this integration would not be likely to substantially restrain competition in any areas other than the above.

### **3.3 *Reorganisation of Financial Institutions and Problems under Competition Policy***

As the above (3.2), although there is no example among the cases of reorganisations of major financial institutions in which the JFTC judged it would be likely to substantially restrict competition, in the questionnaire surveys the JFTC conducted with the industry, there are cases of firms where the new bank would have an increased share in financing and ownership, expressing concern that the new bank would intervene in the management of said firms, for example, to request to conduct (or increase) transactions other than borrowing, such as deposits.

If a bank carries out the sales activities of financial products by unjustly using its influence through loan businesses, it would deprive the firms' free and independent judgment, at the same time, the competitors in the sales of financial products would fall to a disadvantaged position, thus, fair and free competition in the market of these sales would be likely to be impeded. When any entrepreneur, individually or by combination or conspiracy with other entrepreneurs, or by any other manner, excludes or controls the business activities of other entrepreneurs, thereby causing, contrary to the public interest, a substantial restraint of competition in any particular field of trade, such a conduct would be prohibited as a Private Monopolisation under the AMA (Article 3). Also, even when a conduct does not fall under Private Monopolisation, such a conduct could be questioned as a violation of the AMA including an Unfair Trade Practice prescribed in Article 2 (9) of the AMA.

In December 2004, accompanying the relaxation of controls over the classification of business categories and the expansion of scope of business for financial institutions, to prevent violations by clarifying the conducts that will be questioned by the AMA, the JFTC compiled 'the Guidelines for Unfair Trade Practices Associated with the Relaxation of Controls over the Classification of Business Categories and the Expansion of Scope of Business for Financial Institutions.'

In actuality, there is one case in which a major financial institution forced borrower companies to purchase other financial products by using its trade position in loans (the following case of abuse of dominant bargaining position by Sumitomo Mitsui Banking Corporation).

Also, the JFTC published the “Survey Report on the Trade Practices between Financial Institutions and Firms” (June 2006), clarified the actual conditions of unfair trade practices in the trades between financial institutions and borrowers and showed the views under competition policy regarding them. At the same time, the JFTC reiterated its position that it would continue to observe the outcome of the trades between financial institutions and firms and, if it faces a case in which fair and free competition is impeded, it will deal with such a case strictly based on the AMA.

#### **4. Case of Abuse of Dominant Bargaining Position by Sumitomo Mitsui Banking Corporation (2005)**

As of March 2005, the net asset of Sumitomo Mitsui Banking Corporation (SMBC) reached about JPY 91 trillion and SMBC was the banking sector leader in Japan in net assets.

Among companies, in particular small and medium-sized companies, which obtained a loan from the SMBC, there were several that found it difficult to procure funds by obtaining loans from financial institutions other than the SMBC or by other means at that time. Since business operations would have been adversely affected if they could not obtain a loan from the SMBC, borrower companies were forced to accept not only loan terms but also various requests from the SMBC in hopes of continuing their loan transactions. Thus, the bargaining position of these companies was inferior to that of the SMBC.

The SMBC demanded those companies with which it had a financial relationship and which were in an inferior bargaining position to the SMBC to purchase a derivative financial commodity (an interest swap). The SMBC did so by proposing that the said companies purchase the commodity during the process of moving forward with financial procedures and by directly expressing and/or suggesting that the companies’ purchase of the commodity was a condition for receiving a loan and that their requests for a loan would be handled in an unfavourable manner if the companies did not purchase the commodity. These acts left the borrower companies with no choice but to purchase the commodity. On December 2, 2005, the JFTC issued a recommendation for the elimination of such misconduct for violation of Article 19 of the AMA (corresponding to Paragraph 14 (1) of the Designation of Unfair Trade Practices, “Abuse of Dominant Bargaining Position”). (The decision was issued on December 26, 2005.)



## KOREA

### 1. Competition and Market Concentration

In Korea, market concentration level is measured by calculating CR or HHI based on market share. The specific method of measuring concentration is not explicitly set forth in Monopoly Regulation and Fair Trade Act (MRFTA), a major competition law of Korea, but provisions on abuse of market dominance and corporate merger and their subordinate rules indicate standards to measure market concentration. The regulation on market dominance abuse, for example, stipulates that a company is considered a market dominant player if its CR1 is 50% or higher, or CR3 is 75% or higher. As to corporate merger, CR and HHI are used together to assess market concentration. A proposed merger is presumed to have anticompetitive effect if it results in 50% or higher CR1 or 75% or higher CR3. Also in the Merger Review Guideline, HHI is used to define Safe Harbour<sup>1</sup> in merger review.

The above-mentioned general standards of measuring market concentration with CR and HHI also apply in the banking and other financial sectors. That is because as for competitive matters, the banking sector is not seen as different from other industries. Furthermore, measuring market concentration is just a starting point of deciding on market dominance or a merger's anti-competitiveness, so there is no need to reflect industrial characteristics at this stage. If needed, the unique characteristics of the banking sector can be reflected at the stage of substantial reviews.

As of late 2008, the Korean banking sector falls under a moderately concentrated market<sup>2</sup>. The total of 57 banks<sup>3</sup>, 18 domestic and 39 foreign ones, compete with each other in the Korean market. The domestic banks are categorised into seven commercial banks operating across the country, six local banks whose operation is focused on local areas and five special banks established for special purposes. The deposit and lending market concentration of the domestic banks are measured as follows:

Market	CR3	HHI
Deposit Market	51.7%	1,320
Lending Market	50.6%	1,279

The major competition issue of the Korean banking sector has been how to define the market rather than how to measure market concentration. As Korean banks are offering various and disparate banking services, deciding the standard for market definition is a complicated issue. In principle, a product market can be defined according to product features, transaction objects, consumers' behaviour and purpose, etc. However, banking services are so diverse that it is very hard to decide to which level the services should be subdivided and defined as the relevant product markets.

<sup>1</sup> A horizontal merger is considered to fall into Safe Harbour if ① post-merger HHI is 2500 or more and the HHI increase is less than 150, ② post-merger is 1200 or more and less than 2500, and the increase is less than 250, or ③ post-merger HHI is less than 1200.

<sup>2</sup> The terms "highly concentrated", "moderately concentrated" or "unconcentrated" are not explicitly used, but the safe harbour rule of horizontal merger divides market concentration into three levels based on HHI. The market of HHI below 1200 is regarded as unconcentrated, the market of HHI 1200 or higher and below 2500 as moderately concentrated and HHI above 2500 as highly concentrated.

<sup>3</sup> Only commercial banks are included.

Practically, the banking sector is divided into deposit and lending markets, or retail and corporate financing by the kind of customers, or the Korean won market and foreign currency market by transaction object. The method of defining product market of banking services, however, has yet to be firmly established. As to geographic market, whether a certain market is defined as a regional or national market can be controversial. For example, services targeting individual customers or small- and medium-sized companies (SMEs) used to be defined as regional markets, but some of these services are increasingly regarded as belonging to national markets thanks to the internet banking services and other IT-based services blurring the border of the regional markets in the banking sector.

There have not been major bank mergers in the past ten years, because overall restructuring of the banking sector which occurred in the wake of the 1997 Asian financial crisis was completed in the early 2000. The most recent noticeable bank merger is HSBC's attempt to acquire Korea Exchange Bank (KEB), one of the major banks in Korea. KEB received public funds during the 1997 crisis and was sold to Lone Star Funds later on. In a bid to enhance its footprint in the Korean market, HSBC concluded stock purchase and sale agreement with Lone Star in 2007 and notified the Korea Fair Trade Commission (KFTC) of the merger plan.

The HSBC's takeover bid received the KFTC approval in early 2008 without raising any contentious issues. The KFTC concluded that HSBC's acquisition of KEB would not make significant changes in competition of the Korean banking sector, because HSBC's market share in Korea was very small. However, thorough review was conducted on various matters given that this case attracted close attention nationwide as foreign bank's acquisition of a domestic bank provided with government bailout funds during the Asian financial crisis. In fact, most of the previous bank mergers had undergone simple review where the market was divided only into lending and deposit markets and the post-merger market share of each market was examined. In HSBC's acquisition case, however, the relevant market was thoroughly examined and changes in post-merger market share and in substantial competition environment were reviewed closely. Defining the product market was the most important task of the review, since both banks engaged in various business operations in Korea. In this case, the KFTC defined eight relevant markets and examined anti-competitiveness of the acquisition. The market could have been divided into more detailed parts, yet considering the small presence of HSBC in Korea, it was needless. The eight markets were ① the Korean won deposit, ② foreign currency deposit, ③ the Korean won personal loan, ④ the Korean won corporate loan, ⑤ foreign currency loan, ⑥ export-related foreign exchange transaction, ⑦ import-related foreign exchange transaction and ⑧ foreign exchange transaction not related to trade.

According to the review, the acquisition would not cause anti-competitiveness in the four markets of the Korean won deposit, Korean won personal loan, Korean won corporate loan and foreign currency loan, as the combined market share of the two in those areas was so small, around 5~7%, that fits into safe harbour. Meanwhile, in other four markets, HSBC has very small presence while KEB is the biggest player, so the acquisition was expected to result in only negligible change in the market share without restricting competition. In fact, the HHI increases in all those markets were calculated less than 150 points, a clear indication that the acquisition would not make significant change in the market concentration.

## **2. Financial Crisis and Competition in Banking Sector**

The global financial turmoil triggered by subprime mortgage problems in the late 2008 did not deal a severe blow to the Korean financial market. Therefore, it is deemed pointless to analyse the impact of the recent financial crisis on the Korean banking sector. Several reasons have been suggested why the financial crisis which hit the global market has not made a considerable impact on Korea. Among them is the most plausible the argument that the impact has been just limited since the Korean financial institutions were exposed to relatively small risks due to various government regulations, including mortgage regulation, directly or indirectly imposed on the industry. This suggests that the limited impact of the recent financial

crisis cannot be effectively explained from the perspective of competition matters. Likewise, the crisis has not brought about a meaningful change in competition condition of the Korean banking sector. Nevertheless, unlike the recent global financial crisis, the 1997 Asian financial crisis hit the Korean market hard, profoundly changing the paradigm of the Korean economy and greatly affecting the banking sector as well.

The Korean banking sector went through considerable changes in the wake of the 1997 crisis. The most noticeable, among others, was that many banks were forced to leave the market, which was rarely seen in the Korean banking sector before the crisis. The number of banks in Korea, which stood at 29 after the continuous increase since the late 1980s, plunged to 14 in late 2001, as many banks went out of business or were merged. The significant drop in the number of banks, on the one hand, was attributable to the market principle where less competitive businesses are left behind and naturally forced to leave the market. On the other hand, the government policy also contributed to the situation, merging or forcing out unprofitable banks to maintain fiscal soundness of national financial system. Under the situation that most of the banks suffered from the crisis, the government set a certain bar and stopped or decreased funds support for those who failed to meet the requirement, inducing changes in the banking sector.

The decreased number of banks led to much higher level of market concentration. CR3 of the deposit market in late 1997 was 47.1%, but it surged to 70.1% in late 2001 when the crisis was coming to an end. In late 1997, the Korean deposit market was regarded as unconcentrated market with the HHI calculated at 654, which increased continuously, eventually, to 1367 points in late 2001, changing the market into moderately concentrated one. The lending market was no exception. In late 1997, CR3 of the market stood at 49.1% and its HHI 693, which rose to 72.1% and 1496 respectively by late 2001. The followings are changes in deposit and lending market concentration measured from late 1995 to 2001.

**Table 1: Deposit Market Concentration Changes<sup>4</sup>**

	1995	1996	1997	1998	1999	2000	2001
<b>CR3</b>	47.8%	48.7%	47.1%	51.1%	52.1%	54.7%	70.1%
<b>HHI</b>	676	682	654	866	830	913	1,367

**Table 2: Lending Market Concentration Changes<sup>5</sup>**

	1995	1996	1997	1998	1999	2000	2001
<b>CR3</b>	48.4%	48.2%	49.1%	59.4%	60.3%	62.7%	72.1%
<b>HHI</b>	678	676	693	899	924	1,011	1,496

There are several arguments on why the Korean market was hit hard from the 1997 financial crisis. One of them is that relaxed regulation in the Korean banking sector before the crisis led to fierce competition. The fierce competition, according to the argument, made banks engage in business expansion rather than focus on profitable businesses, thereby deteriorating fiscal soundness of the banks, which, in turn, directly resulted in the financial crisis<sup>6</sup>. In short, the increased number of banks lowered market concentration and the consequent fiercer competition reduced the banks' profitability, causing the financial crisis in 1997.

<sup>4</sup> Source: Analysis on market concentration of the Korean banking sector (Financial System Review, January 2002).

<sup>5</sup> Source: Analysis on market concentration of the Korean banking sector (Financial System Review, January 2002).

<sup>6</sup> An empirical Analysis on the Korean Banking Crisis: An Industrial Organisation Approach ( By Jo Byung Tak & Shin Dong Jin, May 2003).

However, the Korea's experience is not considered as strong empirical evidence that shows increased competition among banks leads to a financial crisis. As the Korean banking sector was heavily influenced by the government regulation and support at that time, it is not exactly correct to argue that intense competition and the consequently worsened profitability of the banks brought about the financial crisis. At the time, the governments neither allowed bank mergers nor forced unviable banks out, so even those with the weak financial structure were able to easily finance their business operations under the government guarantee. The banks, therefore, focused on expanding their business without any threat of being merged or forced out if they failed. This market cannot be seen as having active competition even though the market concentration is low. In truly competitive market, inefficient companies lose market share, are forced out of business and finally are replaced by their competitors. As even inefficient banks had no pressure of leaving the market and increased presence with the government support, sudden external impact beyond the government's protection made the banks helpless. Therefore, it is believed that the 1997 crisis was sparked mainly by the banks' reckless operation based on the government regulations and support, rather than by seemingly strong competition of the unconcentrated market.

Another study<sup>7</sup> suggests that Korean banks took more risks as the market concentration level became higher after the 1997 financial crisis. The study analysed the relation between CR4 and loan-to-deposit ratio based on 1996~ 2007 data. CR4 shows the market concentration level and loan-to-deposit ratio means banks' risk-appetite. The analysis found that market concentration proportionately raised loan-to-deposit ratio. In other words, the higher the market concentration becomes, the more risks the banks take. The study also examined the relation between the market concentration and banks' efficiency and found higher market concentration did not meaningfully impair the efficiency of banks. In short, higher market concentration raises banks' appetite for risks without reducing their efficiency and the increased risk-appetite, in turn, is likely to amplify the adverse impact of the business cycle on bank performance and result in the higher risk on the national financial system.

This shows that Korea's experience of the financial crisis is not suitable to identify the relation between competition in the banking sector and financial crisis. As the banking sector, among other financial markets, is particularly subject to various regulations in Korea, it is difficult to single out the sheer impact of competition.

### **3. Conclusion**

The Korean banking sector experienced massive restructuring involving active mergers after the 1997 financial crisis. As the restructuring nearly came to an end in the early 2000s, there have been no significant changes in the banking sector competition level for the past decade. Heavy government regulation still remains in the Korean financial market. It plays a negative role of inhibiting the industrial growth, but from another angle, it prevents reckless business expansion or excessive risk-taking, which has buffered the adverse impact of the recent financial crisis that swept across the world.

This year, however, is expected to see considerable changes in the banking sector competition with the government policy of privatising the so-called "public financial institutions". Under the privatisation policy, large-sized banks of those which received government bailout funds during the 1997 crisis or are owned by the government are targeted for M&As. As some of them rank in the top 5 in terms of the market share, merging of these banks is expected to reshape the sector's competition structure, heightening market concentration. Recognising this, the KFTC will fully prepare for the changes in competition structure of the banking sector so that the privatisation will not excessively heighten market concentration level, damaging consumer benefits.

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<sup>7</sup> The Impact of Market Concentration on Risk-taking and Efficiency of Banks (By Jung Hyung Gwen & Jo Sung wook, March 2009).

## NETHERLANDS

The highly concentrated<sup>1</sup> Dutch banking industry has faced serious instability issues over the last years. Moreover, the only major merger that took place in the last decade eventually led to nationalisation. Those observations seem to contradict a positive correlation between concentration and stability and might even suggest the opposite, although such a negative correlation is unsubstantiated. Furthermore, there is no clear relationship between competition and stability. As for the negative effect of concentration on competition, the NMa is able to support the insights already extensively described in literature based on its own experiences in several cases. Although the NMa's recent experiences do not give a definitive answer to the question of a possible relationship between competition, concentration and stability, they are illustrative and helpful for gaining insight into these dynamics.

### 1. Introduction

This paper is the contribution of the Netherlands Competition Authority (NMa) to the Roundtable Discussion on Competition, Concentration and Stability in the Banking Sector. In this paper, we discuss the relationship between competition, concentration and stability in the financial sector, as well as several cases and studies, limited to the NMa's recent experience on the Dutch banking markets. As such, the paper does not digress on the financial crisis in particular. Because the recent instability has been interrelated with the worldwide financial crisis, this paper does not intend to give a definitive answer, but provides studies and examples that might be useful in the discussion.

Stability of the entire financial system (system stability) differs from stability of individual financial institutions (individual stability). Both levels of stability could be interrelated with concentration as well as with competition. In this paper, each of the three relationships of this conceptual triangle will be discussed, with particular focus on the Dutch banking industry. First, the relationship between concentration and the two abovementioned forms of stability are discussed, followed by the relationship between competition and stability. Furthermore, the relationship between concentration and competition is examined, while at the same time explaining what indicators are used by the NMa when measuring competition. This paper ends with a conclusion.

### 2. The relationship between concentration and stability in the Dutch financial sector

No clear consensus exists in economic literature over what effects an increase in concentration has on both individual and system stability (Uhde and Heimeshoff, (2009)). Papers that have found a positive effect of an increase in concentration on both individual and system stability indicate that:

- Larger banks in a concentrated banking system have higher profits, protecting them against financial shocks (e.g. Boyd et al. (2004));

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<sup>1</sup> Concentration is usually measured by the combined market share of the largest market players or the Herfindahl-Hirschman Index.



- Larger banks do not need to give credit to risky investors, and can therefore select their clients, which increases both the return on investment and the soundness of the credit portfolio (Boot and Thakor (2000));
- Larger banks may be better able to diversify their loan-portfolio and geographical risk due to higher economies of scale and scope (Boyd and Prescott (1986) and Méon and Weill (2005));
- A few larger banks are easier to monitor than many smaller banks (e.g. Allen and Gale (2000)).

However, others have found positive effects of an increase in concentration on both individual and system instability. In these papers, it is argued that:

- Larger banks are more likely to receive public support, and this worsens the moral hazard problem as larger banks may take on risky investments under a government's safety net (Mishkin (1999));
- Higher loan interest rates may be charged by monopolistic banks, which induces borrowers to take on risky investments to compensate for the higher loan repayments (Boyd and De Nicolò (2006));
- Higher risk diversification by larger banks may result in reduced managerial efficiency, less effective corporate control and increased operational risk (Cetorelli et al. (2007));
- Larger banks have a more complex organisational structure (Beck et al. (2006a,b)) and may be associated with lower transparency, which makes them more difficult to monitor.

In practice, it is observed that the Dutch banking sector is highly concentrated: the three largest players (ING, ABN AMRO/Fortis and Rabobank) have a very high combined market share in many relevant national markets. For example, in the Dutch market for commercial banking, the combined market share of these three players was between 90 and 100 per cent in 2007.<sup>2</sup>

Did this high concentration level have any positive effect on the level of the market's stability? The opposite seems to be the case: The Dutch banking sector has faced serious system and individual instability over the last two years. Evidence for system instability are actions such as the forced nationalisation of ABN AMRO/Fortis in October 2008, and the state aid received by ING, SNS Reaal and Aegon.<sup>3</sup> Rabobank was the only major bank that did not apply for financial backing by the State. The Dutch State spent over 14 billion euros on crisis-related aid in 2008, equal to 2.4 per cent of GDP, which is higher than the European average of 1.7 per cent.<sup>4</sup> In addition, one bank in the Dutch financial sector went bankrupt at the end of 2009: The bankruptcy of DSB Bank is an example of individual instability and will be discussed in more detail in the section on the relationship between competition and stability.

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<sup>2</sup> Decision of the European Commission of 3 October 2007 in case COMP/M. 4844 – Fortis/ABN AMRO Assets, paragraph 96.

<sup>3</sup> Aegon is mainly an insurance company; ING and SNS Reaal also spent a part of the aid on their insurance activities.

<sup>4</sup> European Commission (2009). In terms of percentage of GDP, the Netherlands take with 2.4 per cent a 6<sup>th</sup> place after Ireland (19.2%), Luxembourg (7.6%), Belgium (5.2%), Latvia (4.2%) and the UK (3.4%), followed by Germany (2.1%) and the EU-27 average (1.7%). The figures include all state aid that was related to crisis measures in 2008, which is broader than banking aid alone (see figure 20 of the report).

Based on the two observations of both a highly concentrated and unstable Dutch market, we are able to conclude that there was no positive correlation between the concentration level and financial stability, let alone a causal relationship. However, the claim that the opposite is the case, i.e., that the high level of concentration led to system or individual instability, is also unsubstantiated. Two arguments can be given for this statement:

1. The counterfactual situation for the Netherlands is unclear. It may have been the case that the Dutch banking sector would also have suffered from financial instability if the level of concentration had been low. An international comparison of the level of concentration and the degree of stability in other countries may provide additional insight.
2. Based on definitions of relevant markets with a national geographic dimension, the Dutch banking sector is found to be highly concentrated. These definitions are based on the approach taken by competition authorities, which is to define markets from a point of view that look into competitive forces. However, stability in the nationally defined relevant markets is influenced by factors and shocks that have a larger-than-national dimension. This may hold for the Dutch banking sector in particular, where the major players have strong international relationships and obtain a large proportion of their revenues outside of the Netherlands. Therefore, as the level of concentration varies considerably among the different markets, this may not actually explain overall stability of the banking sector as a whole.

Hence, the NMa is reluctant to accept a positive correlation between concentration and either system or individual stability, given that no consensus exists in economic literature. On top of that, the highly concentrated and unstable Dutch market actually seems to suggest the opposite, although this has not been proven. The following case study illustrates the difficulties when it comes to drawing conclusions regarding the effects of an increase in concentration on the individual stability of banks.

### **2.1 Case study: Fortis/ABN AMRO Assets**

The difficulty in determining whether a relationship exists between the level of concentration and individual bank stability can be illustrated by the acquisition of ABN AMRO by Fortis in 2007, which is the only transaction of the past decade that led to a major concentration increase in the Dutch banking sector.<sup>5</sup> The European Commission declared the transaction compatible with the common market, only after the parties offered to divest some of the assets of ABN AMRO in order to allay the competition concerns of the European Commission that the combined position of ABN AMRO/Fortis would be too powerful on the market for financial factoring and some submarkets of commercial banking. It might be tempting to infer that this transaction reduced both system stability and Fortis' individual stability, as the merged entity had to be nationalised by the Dutch State in October 2008. However, during the time before the nationalisation, the merger had not yet taken place from a Competition Law perspective, since the entities Fortis and ABN AMRO remained strictly separate until the aforementioned assets would have been divested.<sup>6</sup> Therefore, in this perspective, this merger cannot be seen as a concentration at all.

From a broader perspective though, one could regard the merger as a financial transaction with obligations and look at it more thoroughly by taking into consideration the possibly negative effect of the merger on individual bank stability. Economic literature posits that a merger or acquisition may have a negative effect on the acquiring firm's (here: Fortis) financial reserves and stability. Acquiring parties are

<sup>5</sup> Formally, Fortis and ABN AMRO remain as two separate entities until certain assets of ABN AMRO have been divested.

<sup>6</sup> The sale of the former ABN AMRO parts HBU and IFN Finance to Deutsche Bank seems to have finally been completed at the end of December 2009.

found to experience a negative stock price return (both in the short and long run), while the acquired parties have a significantly positive stock price return from the transaction. In the financial sector, the negative stock price effect for the acquiring party turns out to be statistically significant.<sup>7</sup> Negative stock price effects can be explained by an expected decrease in the efficiency of the firm (Cybo-Ottone and Murgia (2000), Ayadi (2007), Berger and Humphrey (1992)). This might make a firm more prone to financial stability shocks. The individual stability of an acquiring institution may thus decrease after the transaction. In these studies, a negative causal relationship between the level of concentration and individual stability could be found to exist. It might be interesting to find out whether acquiring parties experience a higher degree of individual instability after major transactions in the financial sector, and what the underlying reasons are for this decreased level of individual stability.

To conclude this section, it is impossible to make general inferences on a relationship between the high level of concentration in the Dutch banking sector and the system and individual instability over the past two years.

### **3. The relationship between competition and stability in the Dutch financial sector**

Economic literature indicates that competition may have a negative effect on either system or individual stability in the financial sector.<sup>8</sup> Two different explanations can be put forward:

In the charter value literature, it is discussed that if banks operate in a more competitive market they have to take excessive risks leading to system instability; and

It is believed that there is a higher rate of individual bank failure in a competitive market, which leads to an increase of the probability of bank runs and the risk of contagion.

In the Netherlands, the level of competition seems to vary across the different relevant markets: for example, the market for consumer credits is competitive, whereas the market for SME business loans is not competitive.<sup>9</sup> On the markets where the level of competition is assumed to be (relatively) high, it can be expected, based on charter value literature and literature on individual bank failure, that the sector's stability is negatively affected by an increase in competition. It is tempting to assume that the high level of competition was a factor that, reasoning in line with the charter value hypothesis, has negatively affected system stability in the Netherlands. However, since there is no evidence that this is the case, it seems impossible to make such a statement for the Netherlands. At first sight, the case study below may seem to suggest a negative correlation, but it turns out to be a special case that cannot support the statement either.

#### **3.1 Case study: DSB Bank**

In October 2009, maverick player DSB Bank (DSB) got into financial trouble and went bankrupt.

Prior to DSB's difficult period, DSB's entry into the Dutch banking sector did, in fact, lead to an increase in competition. DSB was regarded to be a maverick player on its markets,<sup>10</sup> as it heavily advertised cheap credits and high savings interest rates. Research into consumer credit<sup>11</sup> showed that

<sup>7</sup> See e.g. Beitel et. al. (2004), Ayadi (2007) and Kwan and Eisenbeis (1997).

<sup>8</sup> This was also pointed out in the invitation of the Secretariat of the OECD for a contribution to this Roundtable Discussion.

<sup>9</sup> Both examples are discussed in the case studies in this paper.

<sup>10</sup> Main markets of DSB were consumer credits, mortgages, savings and payments.

<sup>11</sup> Internal study by the NMA's Financial Sector Monitor (MFS), case 6339.

DSB's entry had caused a significant shift in market shares,<sup>12</sup> which forced the main banks to introduce new products and stimulate innovation, such as the launch of new labels.

The problems at DSB are a typical example of individual instability, because the problems DSB faced were not caused by the financial crisis. It is commonly believed that DSB's own unsustainable business model<sup>13</sup> was the main cause for its exit, which the financial crisis possibly had only accelerated. It is rather doubtful whether its individual instability was caused by the increased level of competition by the major banks.

DSB's case therefore does not give new material to empirically test whether a relationship between competition and individual stability can be established. This case cannot be seen as an example of one of the two aforementioned explanations (a) and (b).

#### **4. The relationship between concentration and competition in the Dutch financial sector**

The NMa does not have any additional insights next to those extensively described in literature. Concentration levels play a role in the assessment of competition in, for example, merger cases. Market shares are believed to be an indicator for the existence or absence of market power of the firms that are under investigation.

However, our insights (gained from experience) do challenge findings in literature on several counts. Commonly used quantitative models in literature are rarely used in practice by the NMa, because detailed data of the relevant market are needed for their construction, yet are often unavailable. To illustrate this, the NMa has previously argued that if such a model were applied to the entire Dutch banking industry, it could imply that the market is in perfect competition – a claim that is certainly not true for many banking segments in the Netherlands.<sup>14</sup> See for example the case study below on business loans for small and medium-sized enterprises (SMEs). This case shows that this market is less competitive than the one for similar business loans for large corporations. Several other indicators than concentration levels alone are used in order to verify this statement.

##### **4.1 Case study: SME business loans**

In the case concerning SME business loans,<sup>15</sup> the NMa found that the interest rate for SMEs included an additional 75 basis points increment, which neither consumers nor large corporations had to pay for their (almost identical) credits. The three largest banks offering SME business loans had a combined market share of 85 per cent<sup>16</sup> on this particular market. The NMa's main explanation for the higher prices was the high level of concentration, combined with the interest rate transparency which enabled competitors to monitor each other's behaviour and adjust one's own behaviour.<sup>17</sup> Other indicators that the

<sup>12</sup> As of 31 December 2008, DSB's balance sheet reported a € 1.3 billion of consumer credits. This was almost 8% of the total outstanding consumer credits (excluding credit cards) according to Statistics Netherlands (Centraal Bureau voor de Statistiek). DSB entered this market in the early 1990s.

<sup>13</sup> The business model was based on charging high provisions on insurance products that were sold together with the credit products.

<sup>14</sup> Van de Belt (2008) in reaction to Bikker and Spierdijk (2008a and 2008b)

<sup>15</sup> NMa case 5911 (2008) SMB lines of credit attached to business checking accounts (for overdraft protection) (In Dutch: Rekening-courantkredietverlening aan het MKB)

<sup>16</sup> The three banks were ING, Rabobank and ABN AMRO (without Fortis at the time).

<sup>17</sup> The effect of transparency is two-fold: in a competitive market, it increases competition even more, since competitors use the information to outreach one other and customers easily find the cheapest supplier,

NMa took into consideration were the SME's low level of countervailing buyer power and several high entry barriers (such as putting up an office network, legislation, knowledge of local markets, credit portfolio history, and a low customer mobility caused by, for example, the SME's long-term relationship with its bank).

The NMa agrees with Bikker (2008a) that in the highly concentrated banking industry, "the large economies of scale in many financial industries, due to relatively large fixed costs, makes a hindrance for new entries", hence resulting in an even further decrease in competition. Bikker, too, mentions the risk of transparency and frequent interaction by competitors, especially in combination with a symmetric cost structure, in a tight oligopoly, making it easier to closely follow each other's behaviour.

Hence, in this examined market, the high concentration was one of the characteristics that led to a low level of competition.

## 5. Conclusion

In economic literature, no obvious relationship between concentration and stability can be found. Although the NMa has recently observed both a high concentration level and low stability (both systemic and individual) in the Dutch financial markets, there is no evidence that the high level of concentration destabilized the market. Particularly, we are unaware what would have happened in the counterfactual situation and we have no clear idea of potential international causes for the instability. The merger between Fortis and ABN AMRO cannot be analyzed from a Competition Law perspective, since the entities remained separated until its nationalisation. From a broader view, merely taking into account the financial transaction and the negative stock price effect for acquiring parties as described in literature, it might seem to suggest that an increase in concentration may lead to an increase in individual instability. However, the NMa cannot draw general conclusions from this single event. It can be reasonably stated that the level of concentration, as it varies considerably among the various national markets, may not provide an explanation for the overall stability of the banking sector as a whole, with its international influences. Due to the global dimension of the current financial crisis, an international perspective would be required.

Taking the effect of competition on stability into account, it is argued in literature that this may have a negative effect on (system or individual) stability in the financial sector, due to the excessive risk incentive and increased risk of bank runs and contagion. In the NMa's experience, many relevant markets seem to vary in degree of competition, and no clear relationship between a market's level of competition and its stability can be found. The DSB case illustrates the entry of a new player that has increased competition, which turned out to be (individually) unstable and eventually turned into bankruptcy. This instability is believed to be caused by the bank's business model rather than by its competitive nature, and it thus does not provide evidence for the relationship between competition and stability.

Regarding the relationship between concentration and competition, the NMa refers to the extensive discussions concerning this topic in literature, and merely would like to add that, in this discussion, the separate relevant markets must be taken into account, rather than an analysis of the broad financial market as a whole, which could lead to misleading conclusions, as has been shown. Apart from theory, the case on SME business loans has been an example of a market where a high concentration level was one of the causes for low competition.

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whereas in a non-competitive market, it decreases the competition even further, stimulating oligopolistic following behaviour. See also the decision of the European Court of Justice in *Thyssen Stahl v. Commission*, Case C-194/99 P, [2003] ECR I-10821, paragraph 84.

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## SWITZERLAND

The following document is based on a former contribution of Switzerland to the OECD Roundtable on “Competition Policy and the Financial Markets” in February 2009<sup>1</sup>, which remains valid and relevant for the current roundtable.

Based on the fact that the financial crisis had its origin and major impact in the banking sector, we will exclusively focus on this sector. Furthermore, one should keep in mind that the banking sector is not a single market, but composed of a number of different relevant markets such as retail, corporate and investment banking.

### 1. Competition and Concentration

#### ***1.1 How is competition in the financial sector measured in your jurisdiction? Please refer to the applicable decisions or competition guidelines of the relevant authorities in your jurisdiction and are the standard structural measures of competition (market shares, Herfindahl index, etc.) suitable to measure competition in the financial sector in your jurisdiction? If not, why?***

The Swiss Cartel Act (ACart) is also applicable to financial institutions (i.e. banks) reflecting a conviction that the most promising competition policy in financial services is not to distort competition, but to guarantee a free market for everyone, who wishes to offer financial services within the normal restrictions laid down in competition legislations such as merger control.

In merger analysis as well as in the assessment of anti-competitive conducts, the most important measure of competition is the market share of the companies under investigation as well as of their competitors. Related to the market shares is the Herfindahl-Hirschman-Index (HHI) as a measure of concentration and the delta-HHI as a measure of the change in concentration in a relevant market. However, so far the Swiss Competition Commission has not agreed to apply the HHI-thresholds from the EU-Guidelines for Switzerland. In relevant cases, there is only a reference to those values. Furthermore, an analysis of market entry (barriers) and potential competitors is conducted.

Additionally, in concentrated markets the following factors are typically considered to assess the possibility of a collective dominance: high market concentration, similar market shares with little variance over time, similar cost structures, high entry barriers, high degree of homogeneity in the products, low price-elasticity of demand, saturation of demand, stagnation of demand and market transparency.

#### ***1.2 In your jurisdiction, is competition in the banking sector measured differently than in other industries?***

There is no difference in the way competition is measured in the financial sector to other industries.

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<sup>1</sup> OECD, DAF/COMP(2009)11ADD1.



**1.3 How concentrated and how competitive was the banking system in your jurisdiction before the crisis? Can you refer to cases (e.g. mergers) where your agency had to review the degree of competition in the banking sector?**

The Swiss banking system is concentrated. If competition issues arise, it is often in the retail and commercial banking – due to the narrow market definition (e.g. regional or national markets). Most other relevant markets in the banking sector are broader (e.g. European or international markets). The two biggest Swiss banks (UBS, Credit Suisse) are “global players” in most of their business areas.

The degree of competition in the banking sector was examined for example in the UBS / SBV Merger (published in RPW 1998/2, p.278ff.). This merger implied a concentration in the Swiss banking sector in 1998. Competition in the Swiss banking sector rather increased afterwards - above all in the retail and commercial banking - due to the market entry of Post-finance and foreign banks (in retail banking as well as in private banking) and the increased market shares of other Swiss banks.

**1.4 Has your jurisdiction experienced a process of consolidation in the last decade before the crisis? If consolidation took place, please explain the reasons behind this process.**

We didn't experience any significant consolidation.

**1.5 What policies were implemented to facilitate / hinder the consolidation process, if any? What were the main concerns related to these policies? (Consolidation is good because / consolidation is bad because...) How did the consolidation process, if any, affect the degree and nature of competition among financial firms in your jurisdiction?**

The only measure taken that affected the consolidation process was the bail out of UBS. As acknowledged by the OECD in its most recent Economic Review of Switzerland, this measure was timely, concerted and necessary. The measure certainly had an effect on competition, but it is too early to make any final judgment. And most certainly, competition would have been negatively affected if the measure had not been taken: Then, the whole system itself would possibly have been in danger.

**1.6 What are your views regarding the proposals to de concentrate banks, whether in limiting their size in absolute terms or in separating out activities—equity v. commercial activities?**

No measures have been taken so far. See section II, question 5.

## **2. Competition, Concentration & Crisis**

**2.1 Did the degree of competition and/or of concentration of the banking system in your jurisdiction contribute to or exacerbate the harshness of the crisis? And if so, what were the mechanisms through which the degree of competition and/or concentration affected the stability of the financial system in your jurisdictions? For example, did banks have stronger incentives to take risk because of eroded profits? If so, is that really a symptom of competition, or of something else?**

In general, one has to distinguish between the two big banks and the other financial institutions in Switzerland.

- On the one hand, the big banks (most notably UBS and Credit Suisse) are in competition with other global players; a major part of their business is international. The big banks are systemically relevant given their size relative to the Swiss economy. This property of the Swiss banking system did certainly contribute to the harshness of the crisis in Switzerland.

Until now, there is no exact definition for a bank to be “too big to fail”. However, it can be assumed that a financial institution has to unify a significant market size and business activities to be considered “too big to fail” – and therefore it was rather concentration than competition, which contributed to the financial crisis.

The reliance of a bank “too big to fail” on an implicit or explicit state guarantee creates a moral hazard problem of excessive risk taking (due to asymmetric information and an implicit insurance against risk) within this bank.

- On the other hand, the direct impact of the crisis on the small and medium-size banks, most of who operate at a domestic level, was small. The banks did not have any major exposure to distressed or illiquid assets. The cantonal banks and the Raiffeisen Group have fared particularly well, attracting major inflows of new money due to the uncertainty surrounding the large banks. There is no evidence that competition and concentration of the banking system in Switzerland led to excessive risk taking and in consequence to instability so far.

In general, competition should not be blamed for risks of market failure. From an industrial economics perspective, competition is a perfectly adequate means to promote efficiency and welfare in finance. Competition forces banks to become more cost-efficient, to be innovative, and to optimise the risk/return-relation in order to win market shares from competitors. Therefore if a market failure becomes apparent, there is scope for a reform of sector regulation.

Moral hazard problems linked to explicit or implicit state guarantees cause a market failure which gives legitimacy for sector regulation. The financial crisis contributed to this sort of market failure as some banks were rescued and thus the former implicit state guarantee turned into an explicit state guarantee for these institutions. Further explicit or implicit state guarantees for banks “too big to fail” distort competition with smaller banks which are - at least theoretically - allowed to fail.

## **2.2 *Were there measures in place in your jurisdiction aiming at limiting the activities of banks or more generally, aiming at limiting the potential negative effects of competition/concentration on the stability of the financial industry before the crisis?***

In 1998, the two former large banks Union Bank of Switzerland (UBS) and Swiss Bank Corporation (SBC) merged to form the new UBS AG. The size of UBS and SBC before the merger, and also of the new UBS afterwards were already at that time outstanding relative to the other Swiss banks. The merger was evaluated by the Competition Commission (COMCO) and approved subject to certain remedies for domestic business. These remedies were directed to limit the regional market power of the bank in order to guarantee effective competition and not to limit possible negative effects on the stability of the financial industry.

Since the revision of the ACart in the mid-nineties, the substantive provisions (Art. 5 ACart: unlawful agreements; Art. 7 ACart: abuse of a dominant position) as well as the provisions on merger review contain two exceptions of a general nature: Art. 8 and Art. 11 ACart. These exceptions allow firms to ask the Swiss Federal Council for a revocation of the Competition Commission’s decision due to prevailing public interests. Such interests can be among others cultural, industrial, socio-political, structural interests or interests to protect labour or media markets. It is of no doubt that systemic risks in the financial markets would also fall under these two provisions. It is then the task of the Federal Council to assess the unlawful behaviour of the concerned firms or to assess the merger under other, more political aspects.

So far, Art. 8 ACart has never been applied by the Federal Council. The Federal Council refrained from using this exception, even in a situation where the argument of system stability might have been invoked, at that time in the electricity sector. This was the case when the decision of the Competition

Commission to introduce third party access in electricity was upheld in spite of the fact that a national grid operator had not been set up at the time.

Art. 11 ACart has never been applied neither. This provision would allow the Federal Council to overrule a merger decision, e.g. due to a systemic crisis that would seriously affect the Swiss economy. While the Federal Council is entitled to allow a merger between two or several firms due to such prevailing public interests, it would not be allowed to forbid a merger under these aspects.

Furthermore, there are two provisions in the Swiss Cartel legislation, which are related to the peculiarities of the (financial) sector: Art. 9 (3) ACart concerning the calculation of turnover and Art. 10 (3) ACart attributing priority to creditors' interests in the event of a forced bank merger. In this case the merger will be analysed by the Swiss Financial Authority (FINMA), which invites the COMCO for a reference. Art. 10(3) ACart reflects the fact that in extraordinary situations, extraordinary measures may be necessary to restore working markets. In such situations, competition policy should not be set aside in order to prevent large distortions of competition. Exceptional measures must be proportional; they should be non-distortive and temporary (to the extent that this is possible in merger cases).

**2.3 *Have banks or financial institutions merged as a consequence of the crisis? If yes, what was the analysis of your agency on the relation between concentration and competition? Was this analysis in any way different because of the particular situation created by the systemic crisis?***

Only few mergers of financial institutions took place so far in Switzerland as a consequence of the crisis. The acquisition of Commerzbank (Schweiz) AG by Vontobel Group and Sal. Oppenheim by Deutsche Bank indicates a consolidation process in private banking. However, the implications on concentration and competition of the banking system are still marginal.

For the case of a bank merger as a consequence of a financial crisis there are several exceptions of general and sector specific nature defined in the ACart (see answer 3). Further there is the Failing Firm Defence which could have been considered, in the case when the authority would first tend to forbid the merger. The company can then refer to the Failing Firm Defence, provided that three conditions are fulfilled:

- One of the companies would disappear from the market should the merger not happen;
- The other merging company would anyway absorb the market shares;
- There is no better solution, from a competition point of view.

Concerning the „too big to fail“-problem, the question can be raised whether the doctrine of the Failing Firm Defence in merger analysis offers a possible solution or creates an even bigger problem. If a merger is cleared based on the Failing Firm Defence as the company is “too big to fail”, this will prevent the company from failing. On the other hand, the problem of the company being “too big to fail” prevails, or is even aggravated.

The only Swiss Bank (UBS), which was seriously affected by the crisis, was bailed out by a rescue package of the federal government and the Swiss National Bank. In this regard it has to be noted that state ownership should be avoided, but cannot be excluded when it comes to re-establish functioning credit markets. Given the political difficulties to devise and set into force an exit strategy, other instruments to improve bank balance sheets on the event of a crisis need to be examined. If only a single market player is offered government support, the state aid must be based on public interests that outweigh the interest of establishing effective competition (which itself is part of the public interest). State aid as a rescue measure

should be temporary, and tied to the condition that the benefiting company sticks to a restructuring or a liquidation plan. When it comes to restructuring, the firm must provide an adequate and substantive in-house-effort to overcome the difficulties.

Given the scope of cartel legislation in Switzerland, it is not possible for the competition authority to take formal decisions stating that planned state aid measures are in line or not with competition principles. Moreover, art. 2 ACart clearly states that public institutions fall as well under the scope of the Cartel Act. For example, the Swiss National Bank as a public institution must act within the scope of the ACart (but consider the reservation in Art. 3 (1) regarding special sector regulations).

**2.4 *Are there any specific issues that should be addressed in the banking sector from a competition point of view? What has been the rationale for Competition Authorities' choice regarding the parameters to be taken into account and did they focus on the right ones?***

The Swiss Federal Council has set up a working group that is mandated examine the "too big to fail"-problem and relevant measures. Members include representatives of the Swiss National Bank, of the Department of Economic Affairs and of the competition authority. Results are expected for this year.



## TURKEY

### 1. Introduction

As in other industries, competition in banking system is desirable for efficiency and maximisation of social welfare. However, banking sector has specific features that make it of particular importance to an economy and has properties that distinguish it from other industries. Banks contribute greatly to economic growth by playing an intermediating role between borrowers and lenders and providing financial resources to other industries. Banking system is also important since any instability in the system has the potential to lead to a financial instability and economic crisis. Hence, a well functioning banking system is regarded as a cornerstone of a market economy. Policymakers try to ensure that banking system is stable besides ensuring that it is competitive and efficient.

However, there has been a conventional wisdom among policymakers and academicians that more competition and less concentration in banking system are associated with greater instability and therefore there exists a trade-off between competition and stability. This so called “*competition-fragility*” or “*concentration-stability*” view is mainly based on the “*franchise value hypothesis*” which states that higher competition erodes profit margins causing banks’ franchise value to drop, thus reducing incentives for prudent behaviour and leading to more aggressive risk taking in an attempt to earn higher profits.

Recently, there is a counter-argument in the literature that greater competition among banks contributes to banking system stability and hence there exists no trade-off between competition and stability in the banking system. This “*competition-stability*” or “*concentration-fragility*” view is mainly built on the “*risk shifting paradigm*” which states that increase in market power and the resulting higher loan rates have the potential to negatively affect the stability of banks due to moral hazard and adverse selection problems on the part of borrowers. Another argument is about the effect of “too-big-to-fail or too-important-to-fail policies” in concentrated banking systems on risk taking incentives of banks and borrowers.

There is a large empirical literature which aims to examine the impact of banking system structure on its stability and hence shed light on the conflicting theoretical predictions and policy debates on this issue. However, similar to the theoretical literature, empirical studies produce different findings and do not offer concrete single evidence on the validity of either the competition-stability or the competition-fragility views.

Within this context, this paper focuses on the theoretical and empirical literature on the relation between competition and stability in banking system and analyses this relation for the Turkish banking system for the period between 1990 and 2008.

### 2. Competition and stability in banking system: Theory

There are mainly two arguments arising from the theoretical literature on the impact of concentration and competition in banking system. Relatively earlier studies support the “*competition-fragility*” or “*concentration-stability*” view which states that as banking system becomes more competitive and less concentrated, it becomes more fragile and less stable. The second view in the literature is the so-called “*competition-stability*” or “*concentration-fragility*” paradigm which proposes that as banking system

becomes more competitive, it is less prone to risk of bank failures which in turn enhances financial system stability.

## 2.1 *Competition-Fragility or Concentration-Stability View*

The conventional wisdom in the banking literature is that there is a trade-off between competition and stability in the banking sector. This competition-fragility or concentration-stability view states that competition has a detrimental impact on the stability of banks leading to undesirable outcomes in the form of bank failures. In contrast, concentration and hence market power enhances stability by probability of bank failures<sup>1</sup>.

The dominant perception in the competition-fragility view is the “*franchise value hypothesis*”. The essence of this paradigm is the analysis of the relationship between market structure and excessive risk taking by banks. It focuses on the risk incentive of banks and analyses the effects of competition on banks’ risk taking behaviour. Banks choose the risk of their asset portfolio and invest in assets with exogenous distributions of returns. This paradigm allows competition to exist in the deposit market but suppress it in the loan market. Therefore, paradigm takes into account the liability side of the balance sheet of banks to analyse the incentive effects of high franchise values for bank risk taking<sup>2</sup>.

Generally speaking, this view states that competition increases banking system fragility since it negatively affects the franchise value of banks. Franchise value plays a key role in limiting the riskiness of individual banks and hence of banking systems more broadly. The reason is that since franchise value exists only when banks remain in business, banks try to avoid bankruptcy not to lose it. Therefore higher franchise values reduce incentive for banks to take excessive risk. Banks limit or reduce their risk-taking and become relatively conservative in order to protect their franchise values. Banks tend to behave more prudently by holding more equity capital or less risky portfolios which in turn contribute to the stability of the whole banking system<sup>3</sup>.

Higher competition, instead, have a deleterious impact on stability. It erodes market power and profit margins causing banks’ franchise value to drop, thus reducing incentives for prudent behaviour. It leads to more aggressive risk taking in an attempt to earn higher profits. Examples of riskier policies that banks may follow are choosing more risky and lower quality portfolios, taking on more credit risk, lowering capital levels, etc. These riskier policies increase the probability of higher non-performing loan ratios and

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<sup>1</sup> Carletti, E., Hartmann, P. (2002), “Competition and Stability: What is Special About Banking?”, *European Central Bank Working Paper Series, 146*; Beck, T. (2008), “Bank Competition and Financial Stability: Friends or Foes?”, *World Bank Policy Research Working Paper, 4656*.

<sup>2</sup> Carletti and Hartmann (2002); Boyd, J. H., De Nicolo G., (2005), “The Theory of Bank Risk Taking and Competition Revisited,” *Journal of Finance, 60 (3), 1329-1343*; Boyd, J. H., De Nicolo, G., Jalal, A. M. (2006), “Bank Risk-Taking and Competition Revisited: New Theory and New Evidence”, *IMF Working Paper, 06/29*; Martinez-Miera, D., Repullo, R. (2008), “Does Competition Reduce The Risk of Bank Failure?”, *CEMFI Working Paper, 0801*.

<sup>3</sup> Keeley, M. C. (1990), “Deposit Insurance, Risk, and Market Power in Banking”, *The American Economic Review, 80, 1183-1200*; Schaeck, K., Cihak, M., Wolfe, S. (2006), “Are More Competitive Banking Systems More Stable?”, *IMF Working Paper, 06/143*; Jimenez, G., Lopez, J. A., Saurina, J. (2007), “How Does Competition Impact Bank Risk-Taking?”, *Federal Reserve Bank of San Francisco Working Paper Series, .23*; Levy Yeyati, E., Micco, A. (2007), “Concentration and Foreign Penetration in Latin American Banking Sectors: Impact on Competition and Risk”, *Journal of Banking and Finance, 31, 1633-47*; Beck (2008).

more bank bankruptcies resulting in greater fragility and financial instability. Therefore, less concentrated banking systems are more prone to experience crises<sup>4</sup>.

## 2.2 *Competition-Stability or Concentration-Fragility View*

The traditional competition-fragility view is challenged by the relatively recent competition-stability strand of the literature which argues that greater competition contributes to bank stability or in other words financial instability increases as the degree of competitiveness is lessened. Competition-stability view is mainly built on the “*risk shifting paradigm*”. The studies supporting this paradigm basically analyse the effects of competition on moral hazard and adverse selection incentives of borrowers.

Boyd and De Nicolo (2005) states that market power may destabilise the banking system and be detrimental for financial stability. They introduce a model where loan markets exist besides deposit markets and competition is allowed in both. They take into account the fact that banks also invest in loans and therefore when making optimal asset allocation decisions they are faced with both a portfolio decision and an optimal contracting problem. They also point out that besides banks; borrowers also choose the riskiness of their investment financed by bank loans.

As deposit markets become more concentrated, banks become less eager to seek low probability, high return outcomes in turn decreasing their risk profile. Increase in concentration or decrease in competition among banks in the loan markets however translates into higher interest rates charged on business loans. Higher interest rates increase the expected rate of return on bank assets. On the other hand, it also increases the standard deviation of those returns in a moral hazard and adverse selection environment. This is because when confronted with increased interest rates on their loan, borrowers optimally choose higher risk projects and increase their own risk of bankruptcy. The higher interest rates charged to loan customers make it harder to repay loans and create moral hazard incentives for borrowers to shift into riskier projects to compensate for the high loan rates. This practice results in an increase in firm default risk and so in a higher probability that loans turn non-performing and a higher bankruptcy risk for banks and greater bank instability. Also the higher rates may result in a riskier set of borrowers due to adverse selection problems. Bank competition via reducing loan rates, makes it easier for borrowers to repay loans and then reduces moral hazard incentives to shift into riskier projects. Therefore, greater competition reduces default risk of borrowers and hence banks losses and so risk of failure unambiguously declines<sup>5</sup>.

Another argument is the so-called “*too-big-to-fail*” or “*too-important-to fail*” view which is related to the effect of market structure on regulatory policies in the banking system. Advocates of this view argue that policymakers are more concerned about bank failures in concentrated banking systems with fewer and larger banks relative to competitive banking systems with many small banks. The reason is that presence of larger banks constitutes a potential threat to the safety and soundness of the financial system because a failure of a large bank exposes the financial system to systemic risk. Concerns about contagion and financial crisis resulting from the failure of large banks make regulators reluctant to let them fail in the event of solvency problems. Therefore, governments give the implication that they will guarantee the survival of these banks to avoid country-wide crisis. However, these policies in turn pose problems for the safety and stability of the banking system. These problems originate from the fact that unwillingness of the regulator to let the bank fail intensifies risk-taking incentives of banks. Banks believe that they are too-big-

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<sup>4</sup> Berger, A. N., Klapper, L. F., Turk-Ariss, R. (2008), “Bank Competition and Financial Stability”, *World Bank Policy Research Working Paper*, 4696; Keeley (1990), Carletti and Hartmann (2002), Jimenez *et al.* (2007), Beck (2008).

<sup>5</sup> Boyd and De Nicolo (2005).



to-fail and are likely to be protected by the government. From this perspective, concentrated banking systems may lead to more risk taking and tend to be more fragile than diffuse banking systems<sup>6</sup>.

Moreover, too-big-to-fail policies also create moral hazard problem on the part of depositors. Depositors of large banks know that they are likely to be completely protected by government insurance if the bank fails. This enhances moral hazard problem because depositors have little incentive to monitor the bank and withdraw their funds if the bank is taking on too much risk. Because of this lack of monitoring, banks take on even more risks making failure more likely<sup>7</sup>.

### 3. Competition and stability in banking system: empirical literature

There is a large and growing empirical literature which aims to examine the impact of banking system structure on its stability and hence shed light on the conflicting theoretical predictions and policy debates on this issue. However, similar to the theoretical literature, empirical studies produce mixed findings and contradictory evidence. In this part, before reviewing the empirical literature, the measures of stability and competition that are frequently used in empirical studies are explained briefly.

#### 3.1 Measuring Stability and Competition

##### 3.1.1 Measuring Stability

In empirical studies several measures are used to approximate market structure and stability. Stability in banking system is generally measured as either by identifying the occurrence of systemic banking distress or measuring individual bank distress<sup>8</sup>. Systemic banking distress is measured by taking into account the episodes of banking system crisis. It is broadly defined as periods when the banking system is not capable of fulfilling its intermediation function effectively anymore. Individual banking distress, however, is approximated by using bank level accounting data. There are two commonly used measures of individual bank fragility; namely Z-Index and non-performing loan ratio (NPL). They both measure the probability of occurrence of a banking distress<sup>9</sup>.

Z-Index is a proxy for the probability of insolvency or entry into bankruptcy. It is an inverse measure of overall bank risk. Z-Index is defined as the sum of return on assets and capital to asset ratio divided by the standard deviation of return on assets. Z-Index combines in a single indicator the profitability, leverage or capitalisation level and return volatility. It indicates the number of standard deviations in return on assets that a bank is away from insolvency and likelihood of failure. Thus, a larger value of the Z-Index

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<sup>6</sup> Mishkin, F. S. (1999), "Financial Consolidation: Dangers and Opportunities", *Journal of Banking and Finance*, 23, 675-691; Beck, T., Demirgüç-Kunt, A., Levine, R. (2006b), "Bank Concentration and Fragility: Impact and Mechanics", In: Stulz, R., and Carey, M. (eds), *The Risks of Financial Institutions*, National Bureau of Economic Research; Schaeck *et al.* (2006); Levy Yeyati and Micco (2007), Beck (2008).

<sup>7</sup> Beck *et al.* (2006b), Levy Yeyati and Micco (2007), Beck (2008).

<sup>8</sup> Beck *et al.* (2006b).

<sup>9</sup> Beck (2008).

indicates a smaller risk profile for a bank and higher bank stability<sup>10</sup>. NPL is defined as the ratio of the volume of non-performing loans to total loans of a bank and measures the credit or loan portfolio risk<sup>11</sup>.

### 3.1.2 Measuring Competition

The approaches for the measurement of competition can be divided into two major streams: the structural approach and the non-structural approach. The structural approach is based on the traditional industrial organisation literature and centres on the Structure-Conduct-Performance (SCP) paradigm. The SCP paradigm makes links between structure and performance of industries. Structure refers to mainly the concentration in the market. Conduct refers to the behaviour of firms in various dimensions such as pricing, research and development, advertising, etc. Performance refers to efficiency, mainly defined by extent of market power, with greater market power implying lower efficiency. The paradigm is based on the hypotheses that structure influences conduct (lower concentration leads to more competitive behaviour of firms); conduct influences performance (more competitive behaviour leads to less market power, less profits and greater efficiency) and structure therefore influences performance (lower concentration leads to lower market power). Hence the causality goes from structure to performance. Generally speaking, the SCP paradigm argues that greater concentration causes less competitive bank conduct and leads to greater market power and profitability of the bank. This in turn drives loan rates up and decreases deposit rates and hence decrease consumer welfare<sup>12</sup>. Moreover, SCP paradigm assumes that since market structure is related to competitive conduct, competition can be approximated by the degree of concentration. Hence competition is measured by market structure measures such as number of banks, concentration ratios and Herfindahl-Hirschman Index as inverse indicators of the intensity of competition<sup>13</sup>.

SCP paradigm is criticised on the assumption that structure determines performance and it is argued that structure is not necessarily exogenous and market structure itself is affected by conduct and performance. Moreover, the measures of competition based on SCP approach are also criticised since the competitiveness of an industry cannot be measured by market structure indicators alone. They measure the actual market shares without allowing inferences on the competitive behaviour of banks. Hence they are indirect proxies<sup>14</sup>. Claessens and Laeven (2004) and Claessens (2009) argue that the degree of competition in the banking system should be measured with respect to the actual behaviour of banks. The actual behaviour is related not only to market structure but also to entry barriers, barriers on foreign ownership and activity restrictions which can limit the degree of competition.

<sup>10</sup> De Nicolo, G., Bartholomew, P., Zaman, J., Zephirin, M. (2003), "Bank Consolidation, Internationalization, and Conglomeration: Trends and Implications for Financial Risk", *IMF Working Paper*, 03/158; Boyd *et al.* (2006), Beck (2008), Berger *et al.* (2008).

<sup>11</sup> Jimenez *et al.* (2007), Beck (2008), Berger *et al.* (2008).

<sup>12</sup> Bikker, J.A., Haaf, K. (2000), "Competition, Concentration and Their Relationship: an Empirical Analysis of the Banking Industry", *De Nederlandsche Ban, Research Series*, 30; Berger, A. N., Demirgüç-Kunt, A., Levine, R., Haubrich, J. G. (2004), "Bank Concentration and Competition: An Evolution in the Making", *Journal of Money, Credit and Banking*, 36 (3), 433-451; Carletti, E., Hartmann, P., Spagnolo, G. (2007), "Bank Mergers, Competition, and Liquidity", *Journal of Money, Credit and Banking*, 39 (5), 1067-1105; Claessens, S. (2009), "Competition in the Financial Sector: Overview of Competition Policies", *IMF Working Paper*, 09/45; Levy Yeyati, and Micco (2007).

<sup>13</sup> Claessens, S., Laeven, L. (2004), "What Drives Bank Competition? Some International Evidence", *Journal of Money, Credit and Banking*, 36 (3), 563-583; Claessens (2009).

<sup>14</sup> Bikker, J.A., Haaf, K. (2000), "Competition, Concentration and Their Relationship: an Empirical Analysis of the Banking Industry", *De Nederlandsche Ban, Research Series*, 30; Berger *et al.* (2004), Claessens and Laeven (2004), Claessens (2009).

As a response to the theoretical and empirical deficiencies of the structural models, non-structural models of competition are developed. These new industrial organisation approaches provide non-structural measures such as Lerner Index, Iwata model, Bresnahan and Lau model and Panzar and Rosse model to circumvent the problems of the competition measures based on traditional industrial organisation approach. Non-structural measures do not assess the competitive conduct of banks through the analysis of market structure but rather measure banks' conduct directly<sup>15</sup>.

Panzar and Rosse (PR) model which is developed by Panzar and Rosse (1982, 1987) is a commonly used non-structural measure of competition in the empirical literature. The model investigates the extent to which a change in factor input prices is reflected in equilibrium revenues earned by a specific bank. It assumes that equilibrium condition exists in the banking market. Also it supposes a demand with constant elasticity and a Cobb-Douglas production function. Under these assumptions, in perfect competition, an increase in input prices raises both marginal costs and total revenues by the same amount as the rise in costs.

Under a monopoly, an increase in input prices will increase marginal costs, reduce equilibrium output, and consequently reduce total revenues. The PR model provides a measure called "*H-Statistics*" ranging between 0 and 1 which is a competition measure based on the estimated responsiveness of firm revenue to changes in factor input prices. *H-Statistics* is calculated from reduced-form bank revenue equations and measures the sum of the elasticity of the total revenue of the banks with respect to the bank's input prices<sup>16</sup>.

### 3.2 *The Empirical Literature*

#### 3.2.1 *Studies Based on One Country*

Keeley (1990) tests whether increase in competition after deregulation of the banking industry in the US in 1970s and 1980s leads to a decline in bank franchise values and increase in bank default risk. He provides evidence that increased competition erodes franchise values and capital cushions; in turn induces banks to increase their risk profiles resulting in higher bank fragility. Banks with more market power hold more capital relative to assets and they have a lower default risk as reflected in lower risk premiums on certificate of deposits<sup>17</sup>.

Jayarathne and Strahan (1998) contrast Keeley's result. They show that branching restrictions in US banking serve as entry barriers that prevent efficient banks from expanding and therefore reduce the efficiency and performance of the banking system. Once these restrictions are lifted and interstate banking is allowed, competition among banks increases and more efficient banks grow at the expense of their less efficient rivals. Hence the efficiency and performance of the banking system improve significantly. Thus increase in competition has the opposite effect of the franchise value paradigm by improving bank performance and stability. Dick (2006) for the period 1993–1999, examines the effect of the latter stage of

<sup>15</sup> Bikker and Haaf (2000), Levy Yeyati and Micco (2007).

<sup>16</sup> Schaeck, K., Cihak, M. (2007), "Banking Competition and Capital Ratios", *IMF Working Paper*, 07/216; Claessens and Laeven (2004)

<sup>17</sup> Keeley, M. C. (1990), "Deposit Insurance, Risk, and Market Power in Banking", *The American Economic Review*, 80, 1183-1200; Carletti, E., Hartmann, P. (2002), "Competition and Stability: What is Special About Banking?", *European Central Bank Working Paper Series*, 146; Boyd, J. H., De Nicolo G., (2005), "The Theory of Bank Risk Taking and Competition Revisited," *Journal of Finance*, 60 (3), 1329-1343; Jimenez, G., Lopez, J. A., Saurina, J. (2007), "How Does Competition Impact Bank Risk-Taking?", *Federal Reserve Bank of San Francisco Working Paper Series*, .23.

nationwide branching deregulation in the US on banking system performance. He finds that deregulation decreases bank stability.

Jimenez *et al.* (2007) assess the relationship between bank competition and risk taking in the Spanish banking system for the period 1988-2003. Their measure of bank risk taking is the NPL ratio. They use Lerner indices for commercial loans and deposits as well as their average as a measure of market power. In addition to these, they use concentration measures such as HHI, CR<sub>5</sub> and the number of banks to measure the market power. They provide empirical evidence in support of the franchise value paradigm which suggest a negative relationship between market power and risk-taking; as bank market power increases, bank NPL ratios decline.

### 3.2.2 Cross-Country Empirical Studies

Beck *et al.* (2003) investigate the impact of concentration and competition on banking system fragility for 70 countries over the period 1980-1997. Banking fragility is measured by the likelihood of suffering a systemic banking crisis. Concentration is measured by CR<sub>3</sub> based on assets. The concentration ratio is found to be negatively and significantly associated with the probability of a systemic banking crisis consistent with the concentration-stability view.

Beck *et al.* (2006a, 2006b) assess the relationship between bank concentration and the probability of a systemic banking crisis for 69 countries over the period 1980–1997. They find that more concentrated banking systems are subject to lower probability of systemic banking crisis and hence are more stable which is consistent with the concentration-stability view. They also emphasise that concentration measures are not a reliable and sufficient indicator of the lack of competition. They also find evidence that more concentrated banking systems have better-diversified banks and therefore diversification is one of the mechanisms underlying the negative relationship between concentration and banking system fragility.

Boyd *et al.* (2006) examine the relationship between competition and risk-taking of banks. They find that the relationship between competition and probability of failure is negative and significant. This finding is consistent with the competition-stability view.

Schaeck *et al.* (2006) analyse the effect of competition and concentration on banking system soundness for 45 countries over the period 1980–2005 by using systemic banking distress and H-statistics. They find that more competitive and less concentrated banking systems are less prone to experience a systemic crisis and that time to crisis is longer in more competitive banking systems. Therefore they reject the franchise value hypothesis. They also find independent effects of the concentration ratios and H-statistics on both the likelihood and timing of systemic crises. They point out that concentration and competition describe different characteristics of banking systems meaning that concentration is an inappropriate proxy for competition.

De Nicolo and Loukoianova (2007) examine the joint effects of bank ownership and market structure on banks' risk profiles for 133 non-industrialised countries for 1993-2004. In the empirical analysis, Z-Index and HHI are used as a measure of bank risk and concentration respectively. The results indicate positive relation between bank concentration and risk of failure and this relation is stronger when state-owned banks have high market shares.

Schaeck and Cihak (2007) assess the impact of bank competition and concentration on bank safety and soundness for ten European countries over the period 1999-2004. They use CR<sub>3</sub> and H-statistic as a measure of concentration and competition and capital ratios to account for soundness of banks. Their results indicate competition is positively linked with bank soundness. However, they find no consistent

relationship between concentration and capital ratios and conclude that concentration is an inappropriate measure of competition in banking.

Levy Yeyati and Micco (2007) examine the impact of concentration on competitive behaviour of banks and financial stability for eight Latin American countries. They use CR<sub>3</sub>, CR<sub>5</sub> and HHI based on assets to measure concentration; H-statistic to measure competitiveness; and Z-index to proxy insolvency. In terms of banking sector stability, increased concentration is found to have no influence on bank insolvency risk. However, they find that bank solvency risk is positively related with competition which supports the franchise value paradigm. Therefore they observe no evidence that concentration significantly reduces competition.

Berger *et al.* (2009) test the impact of market structure on the risk potential of banks for 23 industrialised countries. They use NPL and Z-Index and equity to total assets ratio to proxy banking system stability and Lerner index and HHI as a proxy for market power. They find that more market power leads to riskier loan portfolios consistent with competition-stability view. However, they also find that overall bank risk is reduced with market. This result implies that banks enjoying more market power seem to be exposed to less overall bank risk as a result of their higher franchise value. Therefore they argue even if market power in the loan market results in riskier loan portfolios, banks may protect their franchise values from through more equity capital, a smaller loan portfolio, or other risk-mitigating techniques.

#### **4. Structure of the Turkish banking system**

In this section, evolution of the Turkish banking system since the 1980s is explained briefly by focusing on major structural features of the economy. Then, structure of the banking system is analysed in the context of some indicators such as number of banks, composition of banks according to their ownership and field of activity, competition and concentration measures (CR<sub>3</sub>, CR<sub>5</sub>, HHI and H-Statistics).

##### **4.1 Evolution of the Turkish Banking System<sup>18</sup>**

In 1980s, Turkish economy witnessed some important structural changes including financial liberalisation and banking system regulation. In this context, ceilings on interest rates were abolished, foreign exchange rates were freed, Interbank Money Market was set up in order to regulate liquidity in the banking system, Capital Markets Board and Istanbul Stock Exchange were established to enhance the efficiency and competition in the financial markets. After capital account liberalisation, transition to full convertibility of the Turkish Lira was achieved in 1989. In order to increase efficiency and competition in the banking system, new entry to the banking sector was eased and foreign banks were encouraged to come to Turkey. Furthermore, Turkish banks began to do business abroad through purchasing banks in foreign countries or opening branches and representative offices. The liberalisation of foreign exchange regulations increased foreign exchange transactions of banks.

Despite these favourable developments in 1980s, many structural problems started to arise in the Turkish banking system in 1990s. First of all, there was a significant weight of public banks in the system. The distortions resulting from the duty losses of these banks marked the 1990s. Furthermore, granting of new bank licenses and hence entry of new banks into the sector was mainly on the basis of political criteria which had a detrimental effect on the development and efficiency of banking sector<sup>19</sup>. Moreover, the

<sup>18</sup> Akyüz and Boratav (2002), Özatay and Sak (2003), Alper and Öniş (2004), Hekimoglu *et al.* (2008), Sayılğan and Yıldırım (2009) and Bankacılıkta Yapısal Gelişmeler (2006, 2008 and 2009) are used as references.

<sup>19</sup> Alper, C. E., Z. Öniş (2004) "The Turkish Banking System and the IMF in the Age of Capital Account Liberalization," *New Perspectives on Turkey*, 30, 25-55.

regulation and supervision of the banking system was weak and the political authority was directly involved in the regulatory process<sup>20</sup>. During this period, the presence of foreign banks was negligible due to the lack of a well-regulated and closely supervised banking system.

During the 1990s, private banks had significant elements of instability. First of all, at the beginning of the 1990s, government changed its borrowing policy from external sources towards internal debt instruments. As a result of the favourable returns of government securities, banks began to decrease the amount of traditional banking activities such as lending to the real sector and invested more in risk free government debt instruments. This also motivated new entries into the banking sector. Moreover, new banks which belong to industrial groups were established in order to finance their own companies using the sources collected as deposits. Hence, increase in the number of banks continued in 1990s. In an environment of free movement of capital, majority of banks especially the private ones tried to take advantage of arbitrage opportunities. They borrow in foreign currency and mainly hold Turkish Lira denominated government securities. Therefore, they had open positions which made them extremely vulnerable to speculative attacks. Moreover, inadequate level of capital, maturity mismatch, high level of open positions, insufficient risk management practices, and bad governance contributed to the structural problems of the Turkish banking sector<sup>21</sup>.

All of these features made the banking system highly vulnerable to macroeconomic crises. Financial crises of 2000-2001 aggravated the weak financial stance of banks. 21 banks were transferred to the Saving Deposits Insurance Fund (SDIF) between 1997 and 2002 as they were not able to meet their liabilities<sup>22</sup>. After the financial crises of 2000-2001, with the initiation of the “Program for Transition to a Strong Economy”, the Turkish economy has experienced a notable improvement. An important part of this program was the restructuring of the banking sector and it produced positive results. The financial and operational restructuring of public banks, strengthening of private banks and the improvement of the regulatory and supervisory framework contributed to improvement of the banking sector. Banks taken by SDIF were sold, merged or liquidated. Consequently, the number of deposit taking banks declined. It also started to decline due to mergers and acquisitions as a result of the consolidation in the sector. Besides, favourable macroeconomic conditions, recapitalising and restructuring processes in the banking sector boosted foreign interest and direct capital flows which enhanced the consolidation process. Banking system which was the main source of financing public deficits in 1990s returned back to their traditional role of intermediation and financing the households and the real sector.

#### 4.2 *Structure of the Turkish Banking System*

Table-1 presents the number of banks in the Turkish banking system between 2000 and 2008. It also shows the composition of the total number according to the field of operation (deposit vs. development and investment) and ownership of banks. As already noted, during 1990s due to the easiness of setting up a bank and attractiveness of banking business, the number of banks has continuously increased. While it was 66 and 68 in 1990 and 1995 respectively, the number reached to 79 in 2000. As presented in the table, the number of banks started to decline during the financial crisis in 2000-2001 since many banks went bankrupt and transferred to SDIF. The number has continued to decrease after 2001 and it has been relatively constant since 2005. The reason of the decline after 2002 is mainly due to the consolidation of

<sup>20</sup> Alper and Öniş (2004).

<sup>21</sup> Akyüz, Y., Boratav, K. (2002), “The Making of Turkish Financial Crisis”, *UNCTAD Discussion Paper*, 158; Sayılğan, G., Yıldırım, O. (2009), “Determinants of Profitability in Turkish Banking Sector: 2002-2007”, *International Research Journal of Finance and Economics*, 28, 207-214.

<sup>22</sup> Özatay, F. and Sak, G. (2003), “Banking Sector Fragility And Turkey’s 2000–01 Financial Crisis”, *The Central Bank of the Republic of Turkey Discussion Paper*.

Turkish banks especially with foreign ones which is a result of the positive outcomes of the restructuring process of banking system and favourable macroeconomic conditions.<sup>23</sup>

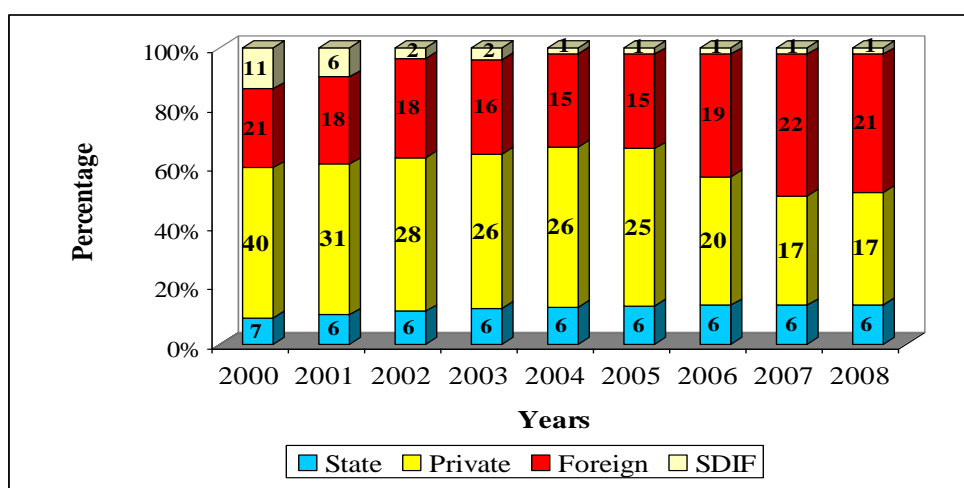
**Table 1: Number of Banks in the Turkish Banking System: 2000-2008**

	2000	2001	2002	2003	2004	2005	2006	2007	2008
<b>Deposit Banks</b>	<b>61</b>	<b>46</b>	<b>40</b>	<b>36</b>	<b>35</b>	<b>34</b>	<b>33</b>	<b>33</b>	<b>32</b>
State-Owned Banks	4	3	3	3	3	3	3	3	3
Private Banks	28	22	20	18	18	17	14	11	11
Banks transferred to SDIF	11	6	2	2	1	1	1	1	1
Foreign Banks	18	15	15	13	13	13	15	18	17
<b>Development and Investment Banks</b>	<b>18</b>	<b>15</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>13</b>
State-Owned Banks	3	3	3	3	3	3	3	3	3
Private Banks	12	9	8	8	8	8	6	6	6
Foreign Banks	3	3	3	3	2	2	4	4	4
<b>Total</b>	<b>79</b>	<b>61</b>	<b>54</b>	<b>50</b>	<b>48</b>	<b>47</b>	<b>46</b>	<b>46</b>	<b>45</b>

Source: The Banks Association of Turkey, Banking Regulation and Supervision Agency

Figure-1 shows changes in the ownership composition of banks. The ratio of privately owned domestic banks has been continuously declining since 2000. The decrease at the beginning of the 2000s was mainly due to the banks transferred to SDIF. However, in recent years it is the result of consolidation especially with foreign banks. Furthermore, the share of foreign banks is at an increasing trend. The reason is that favourable macroeconomic stance and improvement in the banking sector after the crisis increased the interest of foreign banks in Turkey. Lastly, the number and the percentage of state-owned banks have been relatively constant since 2000.

**Figure 1: The Ownership Composition of Banks in Turkey: 2000-2008**

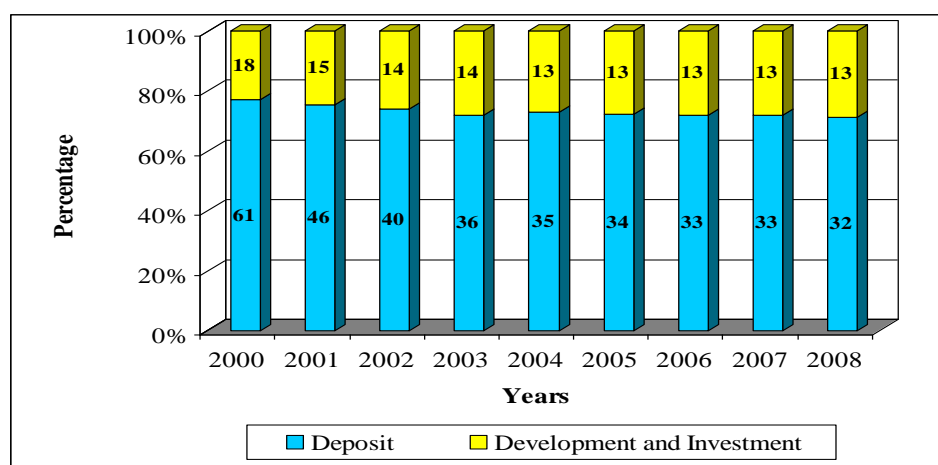


Source: The Banks Association of Turkey, Banking Regulation and Supervision Agency

<sup>23</sup> Banking Regulation and Supervision Agency (BRSA) (2006, 2007, 2008). Bankacılıkta Yapısal Gelişmeler.

Figure-2 shows the composition of banks according to their field of operation. Generally speaking, the share of deposit banks is higher than that of development and investment banks. Deposit banks constitute approximately 75% of the Turkish banking system. Although the number of deposit banks has continuously declined since 2000, the ratio of them was relatively constant during the period between 2000 and 2008.

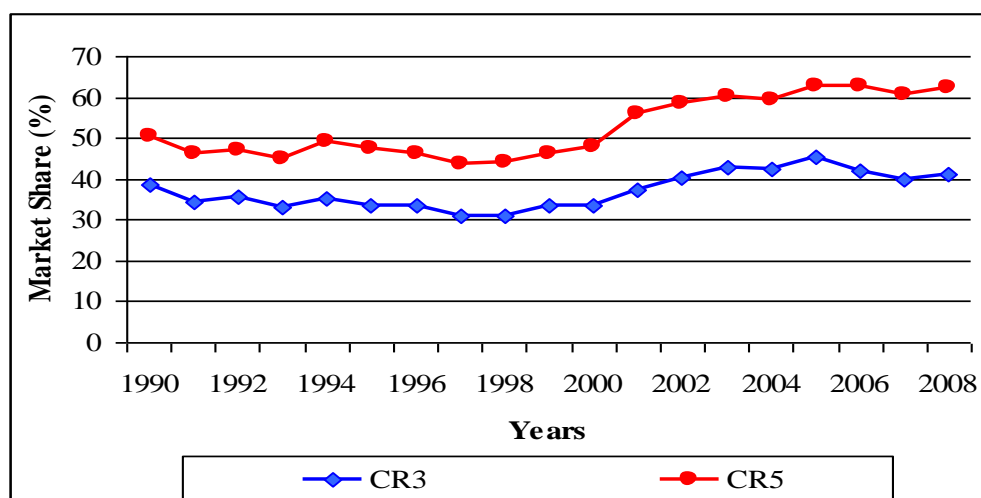
**Figure 2: Composition of Banks According to Field of Operation: 2000-2008**



Source: The Banks Association of Turkey, Bank Regulation and Supervision Agency

Figure-3 and Figure-4 demonstrate trends of three structural measures of competition, namely concentration ratios ( $CR_3$  and  $CR_5$ ) and HHI based on total assets of the Turkish banking system in the period 1990-2008. The concentration ratios were relatively stable between 1990 and 2000. However, they both began to increase after 2000 and reached the maximum value at the year 2005. After a slight decrease, they reached a relatively stable trend again. However, there was a slight decrease in 2006 and they began to rise after 2007 again. The increase in the concentration in the banking system after 2000 was mainly the result of the exit of troubled banks from the system in 2000-2001 crisis and bank merger and acquisitions that took place after 2002.

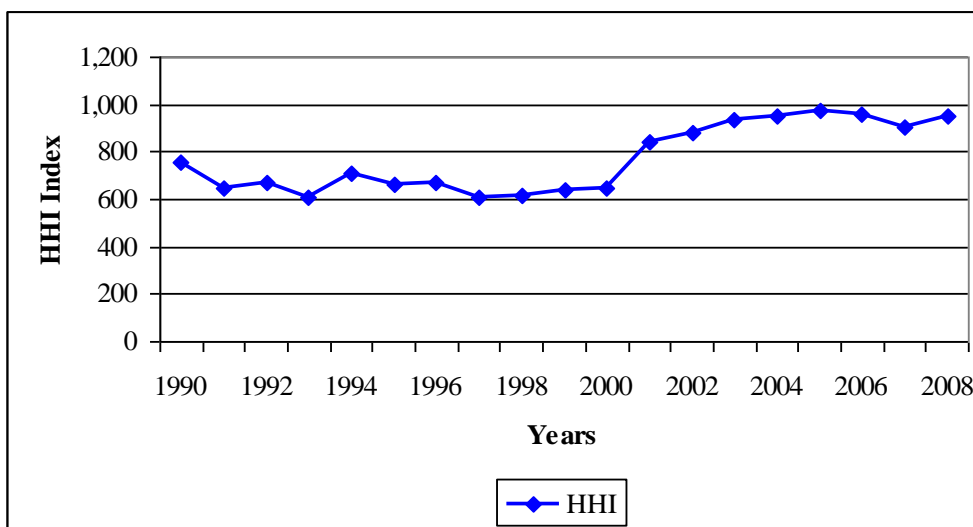
**Figure 3: CR3 and CR5 in the Turkish Banking System: 1990-2008**



Source: Kocabay Ak (2009)



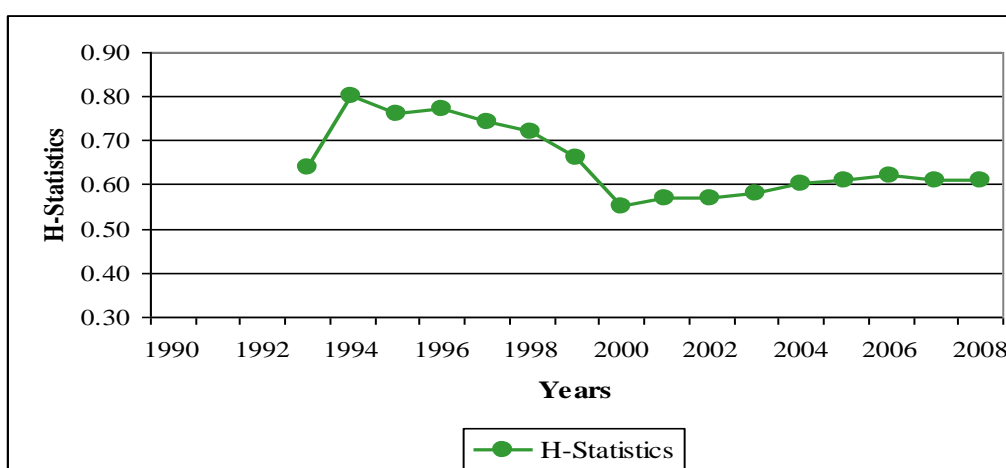
**Figure 4: HHI of the Turkish Banking System: 1990-2008**



Source: Kocabay Ak (2009)

H-Statistics, which is a non-structural measure of competition proposed by Panzar and Rosse (1982, 1987), for the Turkish banking system is calculated using the method proposed by Claessens and Laeven (2004), Schaeck and Cihak (2007) and Bikker and Spierdijk (2008). Following Bikker and Spierdijk (2008), H-Statistics is estimated recursively to assess the change in the banking system competition structure in Turkey during the 1990-2008 periods (fixed effects recursive panel estimation procedure). Figure-5 plots the estimated H-Statistics based on the recursive fixed effects panel estimation. The level of competition in the market increases as the value of H-Statistics approaches to 1. With respect to the trend of H-Statistics for the Turkish banking system, after 1994 when it has a maximum value of approximately 0.80, it starts to decline and reaches its minimum level of approximately 0.55 in 2000. After this year, the H-Statistics has a relatively stable trend around the value of 0.60. The decline until 2000 means that competition in the banking sector decreased and after this year there is a stable level of competition in the sector.

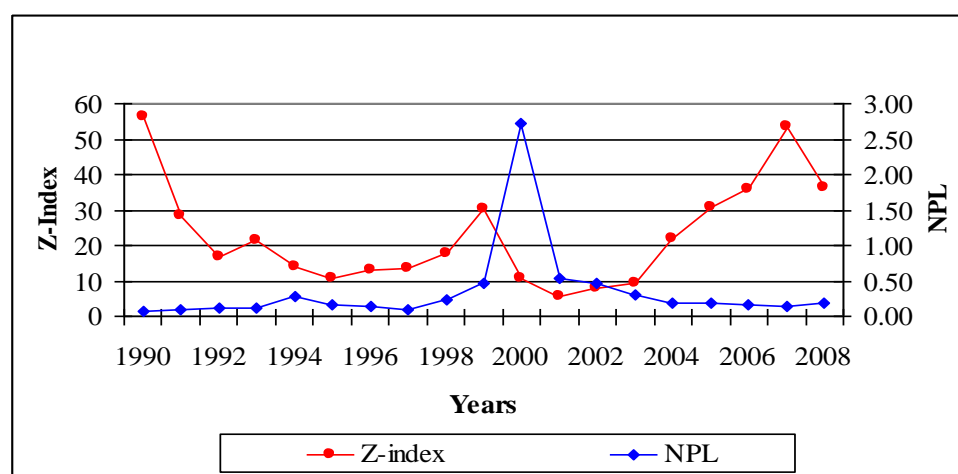
**Figure 5: Recursively Estimated H-Statistics of the Turkish Banking System: 1993-2008**



Source: Kocabay Ak (2009)

Figure-6 presents two alternative stability measures for the Turkish banking system, namely Z-Index and NPL. These indicators are calculated for each bank and then the bank averages are taken for each year. Z-Index of the Turkish banking started to decline from a relatively high level in 1990 and it reached the lowest level of the 1990-2000 periods in 1995. It started to increase after this year and sharply declined after 1999. After the 2000-2001 crises, it again started to increase until 2007. As the figure shows, NPL of the Turkish banking system was relatively stable between 1990 and 1997 except from the 1994 when a crisis was occurred in Turkish economy. However, NPL started to increase after 1997 and it had a big jump in 2000. After 2000, it started to decline again. Since 2004 it has a stable trend.

**Figure 6: Z-Index and NPL in the Turkish Banking System: 1990-2008**



Source: Kocabay Ak (2009)

## 5. Bank competition and bank stability in turkey: empirical results

### 5.1 The Model and Data

The empirical relationship between bank competition and bank stability in Turkey is investigated for the period between the years 1990 and 2008. To analyse the effect of competition on stability of banks, bank stability measure is regressed on different measures of competition, macroeconomic and bank specific indicators. In the regressions, fixed effects panel data estimation produce is applied. All the banks operating in Turkey are included in the estimation (deposit banks and development and investment banks, both domestic and foreign, operating in the Turkish banking system and banks transferred to SDIF).

$$Stab_{it} = \beta_0 + \beta_1 Comp_t + \beta_2 Macro_t + \beta_3 BankChar_{it} + u_{it}$$

In the study the individual bank stability is taken into account. As an individual bank stability measure, Z-Index and non-performing loan ratio (NPL) are used. Both structural and non-structural measures of competition are included in the regression analysis. As for the structural measures, concentration ratios, namely CR<sub>3</sub>, CR<sub>5</sub> and HHI based on total assets are employed. As a non-structural measure of competition H-Statistics is used. To control for the effect of macroeconomic stance of Turkey on the stability of banks, some macroeconomic indicators such as inflation rate, the ratio of public deficit to GDP and real interest rate of total domestic debt stock are taken into account. Since bank ownership also matters for bank performance and stability, ownership of banks is also taken into consideration. The empirical estimation covers deposit banks and development and investment banks, private and state-owned banks and banks taken by SDIF, foreign and domestic banks operating in the Turkish banking sector.

## 5.2 *Estimation Results*

When Z-Index and NPL are regressed on competition measures and macroeconomic condition variables without taking bank ownership into account, the coefficients of competition measures turn out to be all significant. For Z-Index, the negative coefficients of CR<sub>3</sub>, CR<sub>5</sub> and HHI indicate that as competition in the banking system declines, Z-Index increases supporting the competition-stability hypothesis. However, the negative sign of the coefficient of H-Statistics implies that as the level of competition in the banking system rises, stability of banks declines which is in line with the competition-fragility view. As for NPL, the coefficients of CR<sub>3</sub>, CR<sub>5</sub> and HHI are negative suggesting that nonperforming loans ratio declines as competition lessens as in the competition-fragility paradigm. However, the negative sign of the coefficient of H-Statistics means that NPL declines with the competition in the banking system and this in turn enhances the stability, which is in favour of the competition-stability hypothesis.

Then the equations are augmented with dummy variables which represent private banks (including foreign ones), state-owned banks and banks taken by SDIF. The interaction of these dummy variables with the competition measures estimates the different impacts of competition on bank stability for these types of bank ownership. As for the Z-Index, bank stability appears not to be affected by the level of concentration (CR<sub>3</sub>, CR<sub>5</sub> and HHI) for the state owned banks. However, for private banks, concentration in the banking system still significantly and negatively affects stability. Although competition has a significant effect on the stability of all the banks; the distinction in the ownership of banks shows that this is not true for state-owned banks. Hence, there occurs a difference in the behaviour of state-owned and private banks and this should be taken into account. For the H-Statistics, on the other hand, the situation appears to be slightly different from other competition measures. All the coefficients of the ownership dummy variables interacted with the H-Statistics are negative and significant. Consequently, when the H-Statistics is used as a competition measure, the results support the competition-fragility view regardless of the ownership type.

For NPL, the results demonstrate that CR<sub>3</sub> and HHI of the banking system significantly and negatively affect the NPL of private banks while it has an insignificant effect on that of state-owned banks. However, for CR<sub>5</sub>, inclusion of ownership dummy variables does not change the results since stability of both private and state-owned banks are positively affected. For the H-Statistics, there is also a distinction between state and privately owned banks. NPL of state-owned banks is not affected from the competition level in the banking system. However, as competition among banks increases, nonperforming loan ratio hence the fragility of private banks decline.

In the final specification, a distinction is made between domestic and foreign ownership of banks operating in the Turkish banking system. For the Z-Index, for all the competition measures, there is no difference between domestic private banks and foreign banks. They negatively and significantly affect the stability of both the domestic and foreign banks. However for NPL, there is no significant influence of CR<sub>5</sub> on NPL of both domestic private and foreign banks. The direction of the impact of CR<sub>3</sub>, HHI and H-Statistics on NPL is negative for both domestic and foreign banks.

## 5.3 *Implications of Estimation Results*

The empirical investigation of the relation between competition and stability in the Turkish banking system provides several outcomes. The results of the estimation of the relation between competition and stability using macroeconomic indicators as control variables and without differentiating the ownership of banks are summarised in Table-2. The table presents the sign of the relation between bank stability and competition measure and whether this result supports the competition-stability or competition-fragility view.

**Table 2: Summary of the Estimation Results-I**

	<b>Z-index</b>		<b>NPL</b>	
	<b>Sign</b>	<b>The view supported</b>	<b>Sign</b>	<b>The view supported</b>
<b>CR<sub>3</sub></b>	(-)	competition-stability	(-)	competition-fragility
<b>CR<sub>5</sub></b>	(-)	competition-stability	(-)	Competition-fragility
<b>HHI</b>	(-)	competition-stability	(-)	Competition-fragility
<b>H-Statistic</b>	(-)	competition-fragility	(-)	Competition-stability

First of all, it should be noted that there is a contradiction between the outcomes of the two bank stability measures. When Z-Index is used as a proxy for individual bank stability and concentration ratios, namely CR<sub>3</sub>, CR<sub>5</sub> and HHI, are used as an indicator for the level of competition in the system, the results support the competition-stability view or reject the concentration-stability view. Specifically, this result is the opposite of the franchise value paradigm stating that as the banking market becomes more concentrated, the franchise value of banks arising from higher levels of profit discourages banks to take risk and so enhance stability. However, it is in line with the risk shifting paradigm which argues that as competition increases, loan rates decline and this has a mitigating effect on moral hazard and adverse selection incentives of borrowers and hence has a positive impact on bank stability. However, when NPL is used as a proxy for bank stability, the results seem to be in line with the competition-fragility view. Specifically, this result seems to support the franchise value paradigm since franchise values arising from concentration and market power may mitigate the risk taking of banks on their loan portfolio and reject the risk shifting paradigm.

As a result, direction of the impact of competition or concentration on the stability of banks depends on the specification of the bank stability measure. Z-Index measures bank stability by taking into account the return on assets or profitability, leverage or capitalization level of banks and the standard deviation of profitability. It provides a proxy for a probability of bank's going into bankruptcy or bank insolvency. It is an overall measure of bank risk. However, NPL measures only the risk of bank arising from the asset side of the balance sheet or more specifically arising from the loan or credit portfolio of banks. Therefore, the results of the empirical study can be interpreted as, while the level of competition in the banking sector enhances the riskiness of banks arising from loan or credit portfolio, it suppresses the overall riskiness of banks arising from all of the operations. This result can also be interpreted in this way: competition has some mitigating effects on the risk of banks arising from banking operations other than providing loans to agents; hence overall, it has a positive impact on stability.

The second implication of the estimation results is that selection of the competition measure is also important. For both stability measures, concentration ratios and H-Statistics have the opposite effects on bank stability. This result supports the view in the literature that structural measures of competition such as concentration ratios and non-structural measures of competition calculated based on firm level data are different proxies of competition level in an industry.

Another important result arises when differences in ownership of banks are taken into account. First of all, generally speaking, stability of state-owned banks is not affected by the level of competition in the system while that of private banks is significantly affected. This supports the view in the literature that ownership of banks should also be taken into account when making an interpretation. On the other hand, no difference is found among domestic private and foreign private banks in their responsiveness of competition in the banking system.

**Table 3: Summary of the Estimation Results-II**

		<b>Z-Index</b>		<b>NPL</b>	
<b>Bank Ownership</b>	<b>Comp. Measure</b>	<b>Sign</b>	<b>The view supported</b>	<b>Sign</b>	<b>The view supported</b>
<b>Private</b>	<b>CR<sub>3</sub></b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>CR<sub>5</sub></b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>HHI</b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>H-Statistic</b>	(-)	Competition-fragility	(-)	Competition-stability
<b>State</b>	<b>CR<sub>3</sub></b>	insig.	No effect	insig.	No effect
	<b>CR<sub>5</sub></b>	insig.	No effect	(-)	Competition-fragility
	<b>HHI</b>	insig.	No effect	insig.	No effect
	<b>H-Statistic</b>	(-)	Competition-fragility	insig.	No effect
<b>Domestic-private</b>	<b>CR<sub>3</sub></b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>CR<sub>5</sub></b>	(-)	Competition-stability	insig.	No effect
	<b>HHI</b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>H-Statistic</b>	(-)	Competition-fragility	(-)	Competition-stability
<b>Foreign</b>	<b>CR<sub>3</sub></b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>CR<sub>5</sub></b>	(-)	Competition-stability	insig.	No effect
	<b>HHI</b>	(-)	Competition-stability	(-)	Competition-fragility
	<b>H-Statistic</b>	(-)	Competition-fragility	(-)	Competition-stability

## 6. Concluding remarks

This study empirically investigates the validity of the competition and stability trade-off hypothesis for the Turkish banking system during the 1990-2008 periods. Besides annual bank level accounting data, the effects of macroeconomic factors and bank specific indicators including the ownership structure are also taken into account. Results of the study would be beneficial:

- Until macroeconomic indicators enter into the regression, majority of the competition measures have insignificant impact on the two stability measures. This implies that besides competition level in the banking system, macroeconomic stance of the country is an important determinant of banking system stability.
- The fixed effects panel estimation results suggest that the relation between competition and stability is not invariant to the use of alternative indicators. The results based on the Z-Index as a measure of bank stability support the competition-stability and competition-fragility views when concentration ratios and the H-Statistics are used as the alternative competition indicators, respectively. However, when nonperforming loan ratio, a proxy for loan portfolio risk, is used as a stability measure, exactly the opposite outcome is obtained.
- The results also change when the ownership structure of banks is considered. Stability of state-owned banks is not affected by the level of competition on the system while that of private banks is significantly affected. This supports the view in the literature that ownership of banks should also be taken into account when making an interpretation.
- Consequently, in line with the literature stating that there is no clear-cut relation between competition and stability, the direction of this relation for the Turkish banking system changes with different model specifications.

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## UNITED KINGDOM

### 1. Executive Summary

The financial services sector has important characteristics, both in terms of its structure and its role in promoting growth, that make it different to other sectors. Those characteristics do not, however, mean that competition should be measured differently from other sectors or that banks should be treated as a special case in competition terms.

When assessing competition in financial services, concentration is a useful indicator but other indicators of the dynamics of the market, such as barriers to entry or expansion, may be more important. Barriers to exit are also very important when determining the competitive structure of the financial services market. This leads us to the question of how policy should address these issues.

There is no clear case that either competition or concentration impacts on stability in the long term. But actions taken to preserve financial stability can affect competition – in the short term preventing market exit and, more significantly, in the longer term if regulation is badly designed, leading to the development of entry barriers which give incumbents an advantage or facilitate regulatory capture.

Consequently, there is no case for seeking greater stability in the long term if it occurs at the expense of the static and dynamic benefits that competition brings. Rather, it is important to take a flexible approach to mitigating possible negative impacts on competition from action taken to support stability, such as steps to make orderly market exit easier.

The UK competition authorities have continued to emphasise the importance of competition both in the financial services sector and more broadly, including in times of recession<sup>1</sup>.

### 2. The Financial Services sector

The financial services sector has been defined as comprising three distinct areas<sup>2</sup>:

- Financial intermediation, except insurance and pension funding.
- Insurance and pension funding (not including State social security).
- Activities auxiliary to financial intermediation.

Within each of these three categories there will be many hundreds or thousands of different products and services, at wholesale and retail levels, falling into many different economic markets. Banking groups provide many of these services. Moreover, it becomes harder to delineate the financial services markets due to their global nature, notably the level of international interdependence between financial institutions.

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<sup>1</sup> See for example: Financial groups must still be free to compete, John Fingleton, OFT, 6<sup>th</sup> April 2009 and Financial crisis and competition policy, Peter Freeman, CC, 3 November 2009

<sup>2</sup> Under category J of its Standard Industrial Classification of Economic Activities (UK SIC (92)) codes.

According to the UK Office of National Statistics (ONS) data, the financial services sector contributed 7.6 per cent to total UK GDP in 2007<sup>3</sup>. The sector employs approximately one million people in the UK. The financial services sector is, however, particularly important to the world's economy for reasons other than its considerable size. There are two important characteristics that make it different to other sectors.

### **3. Interdependence of financial institutions**

The failure of one bank does not necessarily benefit its competitors, as would usually be the case in other sectors. This differs from other sectors, for example manufacturing, where if one firm fails then other firms can benefit from that failure by competing to take the failed firm's market share. When one bank fails, consumers might lose confidence in the system as a whole; this loss of confidence can lead to a bank run where people rush to withdraw their deposits, as we saw with Northern Rock in 2007.

Furthermore, when there is a crisis in another sector, firms face problems of insufficient demand failing to meet supply. Conversely, in a banking crisis, banks are typically unable or unwilling to supply credit to businesses, consumers or each other. If banks lose the confidence to lend to one another this ultimately undermines confidence and stability in the system as a whole. During the present financial crisis, losses on sub-prime mortgages led banks to radically re-assess the risks that they were willing to take, leading to a drastically reduced supply of available credit. Banks stopped lending not only to consumers but also to each other. This in turn undermined confidence in the banking system and the economy as a whole.

### **4. Role in promoting economic growth**

Financial services play an important role in promoting economic growth. We recently saw their importance illustrated when access to finance for businesses and individuals was severely curtailed during the financial crisis. The crisis led to a sharp contraction in lending to both businesses and individuals.

- Lending to businesses contracted through 2009. According to Bank of England figures, it contracted by 4.6 billion in September 2009 and £4.8 billion in October 2009<sup>4</sup>.
- Lending to individuals has also contracted. Bank of England figures also show that annual growth in secured lending was 3.4 per cent by the end of 2008, compared with an average of 9.5 per cent between 1996- 2007. Similarly, annual growth in consumer credit was 5 per cent in 2008, compared with an average of 13.8 per cent between 1996- 2007<sup>5</sup>.

This reduction in lending to consumers and businesses also affected the economic performance of other markets. It is believed to have contributed to a fall in GDP growth, with figures from the ONS showing that the UK economy contracted by 0.2 per cent in the third quarter of 2009 – marking the sixth consecutive quarter of negative GDP growth<sup>6</sup>. Moreover, ONS figures also show that GDP was 5.1 per cent lower in the third quarter 2009 than it was in the third quarter of 2008.

<sup>3</sup> IFSL Research, Economic Contribution of UK Financial Services, September 2007.

<sup>4</sup> OFT Financial Services Strategy- [www.oft.gov.uk/shared\\_of/consultations/oft1077con.pdf](http://www.oft.gov.uk/shared_of/consultations/oft1077con.pdf).

<sup>5</sup> OFT Financial Services Strategy- [www.oft.gov.uk/shared\\_of/consultations/oft1077con.pdf](http://www.oft.gov.uk/shared_of/consultations/oft1077con.pdf).

<sup>6</sup> National Statistics Online - <http://www.statistics.gov.uk/cci/nugget.asp?id=192>

## 5. The relationship between competition and concentration

Whilst there are characteristics that distinguish financial markets from other markets, the factors for assessing competition remain the same.

Market concentration does not in itself determine whether markets are competitive. Highly concentrated industries can be competitive and this may benefit consumers if larger companies are able to reduce production costs by achieving economies of scale. Measuring market concentration can be a useful initial indicator of competition, but it is by no means the sole indicator. Rather, there are a wide range of factors which determine the level of competitiveness in financial markets. The European Commission, in guidance relating to Article 102 of the Treaty on the Functioning of the European Union, notes the potential importance of market shares as a useful first indication of market structure, but states that ‘the Commission will interpret market shares in the light of the relevant market conditions, and in particular the dynamics of the market and of the extent to which products are differentiated.’

The UK Competition Commission’s inquiry into the provision of Payment Protection Insurance (PPI)<sup>7</sup> found that although there were numerous participants at the retail level, including the 5 largest banks and 7 other large providers, the market was not competitive. By contrast at the wholesale level which was relatively concentrated, vigorous competition took place for contracts to underwrite PPI for distributors. Similarly, the UK Office of Fair Trading (OFT) 2009 market study on the newspaper and magazine distribution industry found that ‘despite the increased concentration, newspaper publishers and magazine distributors remain able to use their power in the supply chains to generate effective competition between, and an effective constraint on, wholesalers<sup>8</sup>.’ High concentration is less of an issue if it is the result of the competitive process because the surviving firms in the industry are efficient by selection and there is still the potential for new firms to enter the market and challenge them.

Structural factors may also influence the level of competition in the financial services sector. For example, a country with a structural customer funding gap (i.e. a country in which banks have fewer deposits than the loans that they make) might, other things equal, be characterised by more intense competition for deposits.

Competition is a dynamic process and any assessment of competition must therefore look at the potential for new firms to enter the industry or existing firms to expand rather than the level of concentration alone.

For instance, both the Competition Commission<sup>9</sup> and the OFT<sup>10</sup> have considered such issues in relation to Personal Current Accounts (PCAs). The OFT’s market study into PCAs found that competition was restricted as a result of barriers to entry and expansion, highlighting the following key factors:

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<sup>7</sup> Market Investigation into payment protection insurance – Final Report <http://www.competition-commission.org.uk/inquiries/ref2007/ppi/index.htm>

<sup>8</sup> Newspaper and Magazine Distribution in the United Kingdom – decision not to make a Market Investigation Reference to the Competition Commission, September 2009, [http://www.offt.gov.uk/shared\\_offt/business\\_leaflets/general/offt1121.pdf](http://www.offt.gov.uk/shared_offt/business_leaflets/general/offt1121.pdf).

<sup>9</sup> Personal current account banking services in Northern Ireland -Final Report <http://www.competition-commission.org.uk/inquiries/ref2005/banking/index.htm>

<sup>10</sup> Personal current accounts in the UK, an OFT Market Study, July 2008, [http://www.offt.gov.uk/shared\\_offt/reports/financial\\_products/OFT1005.pdf](http://www.offt.gov.uk/shared_offt/reports/financial_products/OFT1005.pdf).

- **Switching** – only 6 percent of PCA holders had switched accounts in the twelve months preceding the study, due to perceived difficulties and lack of awareness of alternatives. This left banks with little encouragement to compete to win customers from each other, reducing the incentive to launch new or improved products because they were unlikely to cause consumers to switch. This had the potential to reduce efficiency in the market and led to inferior outcomes for consumers.
- **Reputation** – it is very important to have an established brand name. Ultimately, depositors must have confidence in the system and in the fact that their money is safe. Brand names take time to establish and this provides an advantage to incumbents in the market.
- **Branch networks** – established competitors have strong branch networks that would give them a geographical presence which new entrants would not be able to replicate immediately, making it difficult for them to enter the market.

It is also important to consider barriers to exit in this market. The competitive process needs to facilitate exit from a market so that firms that are unable to compete effectively can be replaced by more efficient competitors. In 2008, the UK Government took control of Bradford and Bingley, a failing bank, and sold its retail deposit book to Santander. This example shows that government intervention can facilitate exit from the industry whilst stimulating competition at the same time. Ensuring that failing businesses can exit the financial services market without affecting stability can help to preserve dynamic efficiency.

Information asymmetries may also make it hard for new entrants to access information about the credit risk posed by certain customers, thus acting as a deterrent to entry.

## **6. Is there a trade-off between competition, concentration and stability?**

Following the financial crisis there is a widespread desire to create a stable financial system which is capable of withstanding shocks and the unravelling of financial imbalances, both in the short term and for the foreseeable future. Could strong competition in the financial services sector make this less likely? Does concentration lead to greater stability?

Theoretical models produced by academics have reached contrasting conclusions on the relationship between both

- Competition and financial stability; and
- Concentration and financial stability.

There is also contrasting empirical evidence on the subject.

## **7. Competition versus stability**

A number of academics have argued that competition has an adverse impact on stability:

- Keeley<sup>11</sup> (1990) has argued that in a banking system characterised by ‘excess’ competition, banks face higher pressure to maintain profits, sometimes leading them to take on higher risk, leading to a more fragile system.
- Allen and Gale<sup>12</sup> (2000, 2004) contend that banks operating in a highly competitive environment, where there is greater potential for borrowers to switch between banks, have lower incentives to develop strong relationships with those borrowers and are therefore unlikely to screen borrowers as effectively.

By contrast there is also a significant amount of academic literature arguing that there is a positive relationship between competition and stability:

- According to microeconomic theory there is a positive relationship between competition and efficiency. Greater efficiency should in turn bring about greater stability because efficient firms operating in a competitive market should be striving to maintain or build upon their market position, keeping their costs as low as possible and achieving profits from innovation. Moreover, efficient banks should be less likely to misjudge the risk of activities within their portfolios, such as screening borrowers.
- Boyd and Nicoló<sup>13</sup> (2005) have argued that a reduction in competition in the banking sector may mean that banks are able to lend money to customers at higher rates of interest, which in turn could lead to investors taking on greater risk and increase the prevalence of borrowers defaulting.

The empirical evidence is also contradictory. Some studies have concluded that competition does increase instability. Keeley (1990) found that increased competition in the US banking system in the 1980s led to lower capital cushions for banks and to increased risk premiums. Dick’s 2006 work<sup>14</sup> found that deregulation in the US financial sector led to greater provisions on asset write-offs and loan losses. In the present context, the OFT does not cite excess competition as a trigger of the financial crisis, as can be seen from its financial services strategy – ‘Although the causes will be debated for some time and is an area outside the OFT’s expertise, we take the view that too much competition was unlikely to be the cause<sup>15</sup>.’

## 8. Impact of concentration on stability

Similarly, some academics have argued that concentration could have a positive impact on stability:

- Matutes and Vives (1996)<sup>16</sup> claimed that a more concentrated financial sector will lead to bigger banks that will develop more diversified portfolios which should shield them from crises.

<sup>11</sup> Keeley, M.C. (1990) Deposit insurance, risk and market power in banking. *American Economic Review* 80, 1183-200.

<sup>12</sup> Allen, F. and Gale, D. (2000) *Comparing financial systems*. Cambridge, MA: MIT Press; Allen, F. and Gale, D. (2004) Competition and financial stability. *Journal of Money, Credit and Banking*, 36:3 Pt.2, 433-80.

<sup>13</sup> Boyd, J.H. and De Nicoló, G. (2005) The theory of bank risk-taking and competition revisited. *Journal of Finance* 60, 1329-343.

<sup>14</sup> Dick, A. (2006) Nationwide branching and its impact on market structure, quality and bank performance. *Journal of Business* 79:2. 567-92.

<sup>15</sup> OFT Financial Services Strategy - [www.ofg.gov.uk/shared\\_ofg/consultations/ofg1077con.pdf](http://www.ofg.gov.uk/shared_ofg/consultations/ofg1077con.pdf).

<sup>16</sup> Matutes, C. and Vives, X. (1996) Competition for deposits, fragility and insurance. *Journal of Financial Intermediation* 5, 184-216.

- Beck (2008)<sup>17</sup> discusses the argument that in a financial services market with fewer players, there are fewer banks to be supervised and regulated, allowing for more effective regulation, which should lead to greater stability.

However, there are also arguments that concentration could undermine stability:

- Mishkin (1999)<sup>18</sup> has argued that a highly concentrated system is likely to increase risk taking and undermine financial stability. Where there are a small number of large banks this may lead governments to conclude that banks are ‘too big to fail’ and make governments more likely to act as a lender of last resort. Their potential willingness to subsidise banks may encourage excess risk taking by these institutions and therefore undermine the stability of the financial system. Whether or not size increases the risk of failure, the failure of a bigger institution, has wider implications for the sector and ultimately greater knock on effects on the economy.
- Furthermore, larger banks are likely to be more complex in structure and as a result may be more difficult to effectively monitor.

Empirical evidence on the relationship between concentration and stability is similarly contradictory.

In 2006, Beck, Demigruc-Kunt and Levine<sup>19</sup> found that the more concentrated a banking sector is, the less susceptible it is to banking crises. By contrast, De Nicoló (2000)<sup>20</sup> finds a positive and statistically significant relationship between the size of a bank and the probability that it fails. Similarly, Chong (1991)<sup>21</sup> and Hughes and Mester (1998)<sup>22</sup> conducted empirical work which showed that consolidation of banks led to an increase in the risk profile of bank portfolios.

This may partly result from the fact that authors use different definitions of competition, concentration and stability. For example, whereas some studies use the terms competition and concentration interchangeably, others explicitly state the distinction between these two terms. Moreover, authors have conflicting views surrounding the duration of a given period of instability.

## 9. Impact of reforms aimed at improving financial stability

While there is no clear case that either competition or concentration impacts on stability in the long term, actions taken to preserve financial stability can affect competition. While competition is a long term guarantor of economic well being, it is possible that a reduction in competition can reduce instability in the short term. When the OFT reviewed the merger between Lloyds/HBOS it concluded ‘there was a realistic prospect that the anticipated merger would result in a substantial lessening of competition in relation to

<sup>17</sup> Beck, T. (2008) Bank Competition and Financial Stability: Friends or Foes? Policy Research Working Paper #4656, World Bank.

<sup>18</sup> Mishkin, F.S. (1999) Financial Consolidation: Dangers and opportunities. *Journal of Banking and Finance* 23, 675-91

<sup>19</sup> Beck, T., Demirguc – Kunt, A. and Levine, R. (2006a) Bank concentration, competition and crises: First results. *Journal of Banking and Finance* 30, 1581-604.

<sup>20</sup> De Nicoló, G. (2000) Size, charter value and risk in banking: An international perspective. International Finance Discussion Paper #689, Board of Governors of the Federal Reserve System.

<sup>21</sup> Chong, B.S. (1991) Effects of interstate banking on commercial banks’ risk and profitability. *Review of Economics and Statistics* 73, 78-84.

<sup>22</sup> Hughes, J.P., and Mester, L. (1998) Bank capitalization and cost: Evidence of scale economies in risk management and signalling. *Review of Economics and Statistics* 80, 314-25.

personal current accounts, banking services for small and medium sized enterprises and mortgages.’ and went on to say that ‘in the long term we will monitor the extent to which competition within the sector is prevented, restricted or distorted by market features or combinations thereof’<sup>23</sup>.

It is important for competition policy to be flexible. The OFT maintains that short term market stabilising measures need to be reviewed once stability has been restored to a market, to ensure that competition is preserved in the long run. It should be possible to promote competition even during a period of consolidation in a market. For instance, the European Commission has taken actions to require divestments of particular assets as part of the negotiation for the State Aid approval which it granted. This presents opportunities for other players to expand their presence in the industry.

## 10. Is greater stability desirable if it comes at the expense of lower competition?

Competition helps to deliver value for money for customers and economic growth. The benefits from competition can be both:

- **Static efficiencies** – where incentives for firms to reduce costs ultimately lead to lower prices for consumers; and
- **Dynamic efficiencies** – where firms strive to improve the quality of their products, add new features and improve the experience of the customer.

The greater efficiency and productivity that have resulted from competition in financial services has probably contributed to higher GDP growth rates over the past two decades, although there are many other factors which could also have contributed. It could therefore be argued that periods of temporary instability are a price worth paying for higher growth in subsequent periods. In the UK and the USA, where financial innovation seems likely to have been greater, growth rates were higher – on average, between 1985 and 2007 GDP grew at 3.04 per cent per year in the USA, 2.70 per cent in the UK and 2.34 across the then ‘EU-15’<sup>24</sup>. Whilst there is a wide body of existing literature on the determinants of economic growth and the cost of crises, the UK authorities would be interested in seeing further research performed in this area in the context of the present crisis.

## 11. Promoting stability through regulation and competition

The need to avoid distortions of competition should be one of the key aims of any future regulatory structure, along with the need to stabilise the financial system and restarting lending. Moreover, it is important to adopt a structure which allows failures to be managed effectively – avoiding systemic risk and protecting depositors, without imposing unnecessary regulatory burdens which restrict competition. Where possible, regulation should allow competition to take place effectively without giving rise to instability.

As the Chief Executive of the OFT John Fingleton<sup>25</sup> has emphasised, regulation must be sure to target the root cause of a problem. New regulation does not necessarily have to impact upon competition at all. As stated in the note by the UK for the OECD *Competition and financial markets* roundtable in February 2009: ‘The financial services sector poses a number of analytical challenges for regulators and policymakers. There are complex products, different issues at wholesale and retail levels, high levels of

<sup>23</sup> OFT Financial Services Strategy- [www.of.gov.uk/shared\\_of/consultations/oft1077con.pdf](http://www.of.gov.uk/shared_of/consultations/oft1077con.pdf).

<sup>24</sup> <http://www.ers.usda.gov/Data/macroconomics/Data/HistoricalRealGDPValues.xls>; The EU-15 included: Belgium, Netherlands, Luxemburg, Austria, Germany, Spain, Portugal, France, the UK, Ireland, Italy, Finland, Denmark, Sweden, and Greece.

<sup>25</sup> Financial groups must still be free to compete, John Fingleton, OFT, 6<sup>th</sup> April 2009.



information asymmetries, the existence of networks, aftermarket and a high degree of innovation making it difficult to keep up with changes in this sector. However the financial services sector is not the only sector to exhibit these characteristics and these features do not in themselves make the sector distinctive or a candidate for the suspension of competition law and policy<sup>26.</sup>

Vickers<sup>27</sup> (2008) has urged the UK government not to depart from competitive principles and guidelines immediately and to work firmly but pragmatically to ensure that actions are appropriate and relevant, but within the competitive framework. He argues that there are a number of ways to deal with the problems that have emerged from the financial crisis and that it is not appropriate to universally state that reducing competition will solve the problem. Instead, he suggests a number of other avenues which can be taken – including central bank liquidity schemes, interest rate cuts, bans on short selling, state backed recapitalisation plans and deposit guarantee extensions.

Prudential regulation should maintain stability, without relaxing competition policy. This coincides with the OFT's opinion on competition and regulation namely that the emerging market structures post-crisis will need to be assessed to ensure that they are pro-competitive and deliver the best outcomes for consumers. Particular attention will need to be paid to how governments withdraw support from the banking sector and ensuring that new entry can be a credible threat to existing players<sup>28</sup>. Ideally, regulatory responses should not try to force a particular model.

Avoiding moral hazard is another crucial issue. This is the risk that following the bail out, banks may behave differently from the way they would have behaved previously, when they may have believed that they were fully exposed to the risks they took. Potential returns for banks taking excess risk are higher as they are not paying for the consequences.

All bailouts have some component of moral hazard, but if designed properly the incentive for the recipients or others to take too much risk in the future should be minimal. Bail outs should give the minimum required amount of capital for banks to operate and any aid offered must be on a temporary basis. In the long run, reform of the regulatory structure will be required to ensure no distortions to competition. Forced asset disposal and restrictions on behaviour in order to achieve state aid clearance at the restructuring phase can also help to reduce the moral hazard issue.

Perhaps just as importantly, the more that regulators and governments can tackle the 'too big to fail' question, and make 'non-chaotic' failure of banks a realistic prospect through appropriate legislation, the more likely we are to see market exit and the prospect of dynamic competition. This is one area where the recent crisis appears to be driving reform across the G-20.

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<sup>26</sup> Competition and Financial Markets, Roundtable 1 on Principles: Financial Sector Conditions and Competition Policy, Note by the United Kingdom.

<sup>27</sup> Vickers, J (2008) The Financial Crisis and Competition Policy: Some Economics, *Global Competition Policy*, December 2008, Release one.

<sup>28</sup> OFT Financial Services Strategy - [www.of.gov.uk/shared\\_of/consultations/oft1077con.pdf](http://www.of.gov.uk/shared_of/consultations/oft1077con.pdf).

## US DEPARTMENT OF JUSTICE

This paper addresses questions from the Chairman's letter of December 2, 2009. For a more detailed discussion of the structure of the U.S. banking industry, see the U.S. Submission to the February 2009 Roundtable on Competition and Financial Markets, DAF/COMP/WD(2009)11.

### 1. Competition and Concentration: General Issues

#### *1.1 How is competition in the financial sector measured in your jurisdiction? Please refer to the applicable decisions or competition guidelines of the relevant authorities in your jurisdiction.*

In the United States, the federal antitrust laws generally apply to commercial banking and investment banking products and services in the same manner as to other economic sectors. Similarly, the Horizontal Merger Guidelines<sup>1</sup> (Guidelines) of the U.S. Department of Justice (Department) and the U.S. Federal Trade Commission apply to the analysis of mergers across sectors. Premerger notifications relating to non-bank mergers in the financial sector are filed pursuant to the Hart-Scott-Rodino Act<sup>2</sup> and are analyzed under the Guidelines. For the review of bank mergers, special procedures have been implemented. These policies are outlined in a document, "Bank Merger Competitive Review,"<sup>3</sup> which is implemented jointly by the Department and the bank regulatory agencies.<sup>4</sup> In the implementation of these policies, the Department applies the principles of the Guidelines and screens for bank merger transactions that would result in market concentration that exceeds the Herfindahl-Hirschman Index thresholds, thereby requiring further review.

#### *1.2 Are the standard structural measures of competition (market shares, Herfindahl index, etc.) suitable to measure concentration in the financial sector in your jurisdiction? If not, why?*

The standard structural measures of concentration are sufficiently flexible to measure concentration in the financial sector in the United States. Calculating market shares and concentration, however, is only the first step in analyzing whether concentration will create or enhance the exercise of market power. With regard to banking, these measures specifically have been adopted by two of the bank regulatory agencies, as discussed in the "Bank Merger Competitive Review" document. Indeed, studies by the Federal Reserve Board staff have found that less concentrated local banking markets perform better in competition terms than more concentrated markets.<sup>5</sup> The joint adoption of these guidelines was necessary, as the bank

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<sup>1</sup> <http://www.justice.gov/atr/public/guidelines/hmg.htm>.

<sup>2</sup> 15 U.S.C. § 18a.

<sup>3</sup> <http://www.justice.gov/atr/public/guidelines/6472.htm>.

<sup>4</sup> The bank regulatory agencies are the Board of Governors of the Federal Reserve System (FRB) and the Comptroller of Currency (OCC). The Federal Deposit Insurance Corporation (FDIC) has issued its own bank merger competitive review guidelines (see "FDIC Statement of Policy on Bank Merger Transactions" at <http://www.fdic.gov/regulations/laws/rules/5000-1200.html>).

<sup>5</sup> See, e.g., Robert Adams, Kenneth Brevoort, & Elizabeth K. Kiser, "Who Competes with Whom? The Case of Depository Institutions," 2007 *Journal of Industrial Economics* 55, at 141-67; Andrew Cohen & Michael J. Mazzeo, "Market Structure and Competition among Retail Depository Institutions," 2007 *Review of*

regulatory agencies and the Department share jurisdiction for competitive review of bank mergers and concurrently analyze the potential competitive effects of such mergers. While the Department applies Section 7 of the Clayton Act, the bank agencies, in addition to considering potential competitive effects, must consider the “financial and managerial resources and future prospects of the existing and proposed institutions, and the convenience and needs of the community to be served.”<sup>6</sup>

**1.3 *In your jurisdiction, is competition in the banking sector measured differently than in other industries?***

As discussed above, the federal antitrust laws and the Guidelines apply to mergers in the financial sector in the same manner as those in other industries.

**1.4 *How concentrated and how competitive was the banking system in your jurisdiction before the crisis? Can you refer to cases (e.g. mergers) where your agency had to review the degree of competition in the banking sector?***

Despite the current financial situation, more than 7,000 separately insured banking entities and more than 12,000 credit unions currently operate in the United States, and most product and urban geographic markets remain relatively unconcentrated.<sup>7</sup> Most recently, in 2008, the Department reviewed the proposed acquisition of National City Corporation by PNC Financial Services; after review, the Department and the Federal Reserve Board required divestitures to eliminate the anticompetitive effects that otherwise would have resulted from consummation of the acquisition.<sup>8</sup> Investment banking markets are more concentrated but, as a general matter, these markets have been competitive.<sup>9</sup>

**1.5 *Has your jurisdiction experienced a process of consolidation in the last decade before the crisis? If consolidation took place, please explain the reasons behind this process.***

During the period 1994 through 2006, the Department reviewed more than 1,000 bank acquisition/merger applications annually.<sup>10</sup> Changes to federal statutes in 1994, allowing for interstate expansion/branching and allowing bank holding companies to engage in a wider range of activities closely relating to banking, affected the number of such transactions.<sup>11</sup> Additionally, in 1999, the Gramm-Leach-Bliley Act allowed for a new entity, a financial holding company, to affiliate bank holding companies, banks, insurance companies, securities firms, and other financial institutions under common ownership.<sup>12</sup>

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Economics & Statistics 89, at 60-74; Timothy Hannan & Robin Prager, “The Competitive Implications of Multimarket Bank Branching,” 2004 Journal of Banking & Finance 28, at 1889-1911.

<sup>6</sup> 12 U.S.C. §§ 1828(c), 1842, and 1849(b).

<sup>7</sup> For a more detailed discussion of the structure of the U.S. banking industry, see DAF/COMP/WD(2009)11 (Introduction).

<sup>8</sup> See [http://www.justice.gov/atr/public/press\\_releases/2008/240315.htm](http://www.justice.gov/atr/public/press_releases/2008/240315.htm).

<sup>9</sup> See Nicola Cetorelli, et al., “Trends in Financial Market Concentration and their Implications for Market Stability,” 2007 Federal Bank of New York Economic Policy Review 13, no. 1, at 33-51.

<sup>10</sup> See Department of Justice, Antitrust Division, Ten-Year Workload Statistics, at <http://www.justice.gov/atr/public/workstats.pdf>.

<sup>11</sup> See Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994; Randall S. Kroszner, “The Effect of Removing Geographic Restrictions on Banking in the United States: Lessons for Europe,” at <http://www.federalreserve.gov/newsevents/speech/kroszner20060406a.htm> (speech by Governor Kroszner).

<sup>12</sup> Gramm-Leach-Bliley Act of 1999, 15 U.S.C. § 6801-6809 (2006).

**1.6 What policies were implemented to facilitate/hinder the consolidation process, if any?**

As explained above, the enactment of certain statutes greatly expanded the geographic areas and the scope of activities within which financial sector companies could compete. Along with these came new restrictions, as the relaxation of geographic entry barriers was accompanied by a national deposit cap of 10 percent for any one bank and a default state deposit cap of 30 percent, with the option for any state to impose its own less restrictive deposit cap. Attendant upon these statutes was an overall approach of less regulation or self-regulation, as evidenced by the 1999 Gramm-Leach-Bliley Act<sup>13</sup> repeal of the restrictions separating commercial banking and investment banking that had been codified in the Glass-Steagall Act of 1933.<sup>14</sup>

**1.7 How did the consolidation process, if any, affect the degree and nature of competition among financial firms in your jurisdiction?**

Based on the Department's antitrust review of proposed acquisitions and actions taken to remedy the potential competitive effects of such acquisitions, competition among U.S. financial firms remains robust.

**2. Competition, Concentration & Crisis**

**2.1 Have banks or financial institutions merged as a consequence of the crisis? If yes, what was the analysis of your agency on the relation between concentration and competition? Was this analysis in any way different because of the particular situation created by the systemic crisis?**

The financial crisis resulted in some mergers of U.S. financial institutions, as less stable firms were acquired by those that were better prepared to withstand the crisis. In analyzing the potential effects of such acquisitions, the Department applied the same antitrust principles and analytical framework that it applies in every merger review.<sup>15</sup> One example is the expedited review of the acquisition by PNC of the financially distressed National City Corporation, in which the Department required significant divestitures to eliminate any anticompetitive effects.

The bank merger statutes provide procedures for even more expedited competitive review of certain bank mergers, i.e., "emergency" transactions and transactions involving a bank that is a "probable failure."<sup>16</sup> In the case of an "emergency" transaction, the bank merger statutes limit both the time in which the Department must advise the bank regulatory agency of the competitive factors relating to the transaction and the post-approval waiting period during which the transaction may not be consummated.<sup>17</sup> The Department has reviewed all of these mergers, and they have raised few competitive concerns. In the case of a "probable failure," the bank regulatory agency may act immediately, without a competitive effects report from the Department; in such a case, the transaction may be consummated immediately upon approval by the bank regulatory agency.<sup>18</sup>

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<sup>13</sup> *Id.*

<sup>14</sup> This law also is known as the Banking Act of 1933 (48 Stat. 162).

<sup>15</sup> In the past 10 years, the Department has required divestitures to preserve competition in 28 mergers. See "Federal Trade Commission Bureau of Competition and Department of Justice Antitrust Division Annual Report to Congress," <http://www.ftc.gov/bc/anncomporeports.shtm>.

<sup>16</sup> 12 U.S.C. §§ 1828(c)(6), 1849(b)(1).

<sup>17</sup> *Id.*

<sup>18</sup> *Id.*



## EUROPEAN UNION

This contribution will (i) recall the objectives of EU control of state support to the financial sector (ii) discuss some insights that have been gained in the course of its implementation in the recent past and (iii) discuss the need for adjustments in the regulatory framework.

### 1. The framework of EU control of state support to the financial sector

The purpose of EU state aid control is to limit the distortions of competition that financial support by governments to certain companies may induce, in particular across Member States, and to balance these distortions against the potential positive contribution of government support towards objectives of common (EU) interest.

A positive contribution towards achieving objectives of common interest can be understood in terms of the market failures that government support aims to alleviate. The financial crisis is characterised by a number of significant market failures. First, there are important *negative externalities* associated with the distress of a financial institution, which might trigger the distress of other institutions (because of reputation, links through the interbank markets or through the assets markets if a distressed institution is forced to liquidate assets leading to a sharp fall in prices). Such systemic effects are at the root of financial institutions being too big or too interconnected to fail, in the current regulatory environment. The crisis has also exposed important *information asymmetries* between buyers and sellers of asset backed securities, which led to a complete breakdown of the securitisation markets, at least for the more complicated and intransparent markets.<sup>1</sup> The liquidity gridlocks due to a hoarding of liquid funds by banks reflected a *co-ordination problem* which brought even the most liquid worldwide interbank markets to a halt.

Addressing these market failures and, thereby preserving financial stability, has involved a wide range of measures including asset relief (purchase and insurance of impaired assets), debt guarantees, and recapitalisations, in addition to the extraordinary liquidity support by central banks.

However, such measures may induce distortions of competition that EU state aid control seeks to minimise.<sup>2</sup> The first concern relates to the ex post provision of (partial) insurance which leads to moral hazard for the recipient and possibly for the competitors (because of its signalling effect). As losses are socialised whereas gains remain private, banks' incentives towards risk taking may worsen in the future.

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<sup>1</sup> This securitisation market breakdown is analogous to the second-hand car market breakdown example of Akerlof (1970), in which potential buyers are assumed to possess less information than the car dealer and are only willing to bid at most the average price between a good car and a bad car ("a lemon"). In case the dealer cannot credibly signal the car's quality ex ante (through an independent quality control), this prospective bidding behaviour of the buyer may lead the dealer to merely offer the lemons, which insight in turn may lead the potential bidder to lower its initial bidding price further from the outset and in the extreme may even lead him to refrain from buying a second hand car altogether. A similar mechanism may have played a role in the drying up of the market for all but the most simple types of securitisation. (Note that the bulk of new securitisation issuances following Lehman's collapse was not reflecting and addressing a real financing need of the economy, but rather reflected banks' desire to access the central bank liquidity facilities with the securitisation as collateral.)

<sup>2</sup> See Commission Communication "*The return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules*" (Official Journal C195, 19/08/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:195:0009:0020:EN:PDF>).

The impact of moral hazard in the future can be minimised by an upfront restructuring of bank liabilities. By imposing losses on shareholders, hybrid capital holders, and possibly in some cases subordinated debt holders and unsecured debt holders as well as management, market discipline on banks going forward is strengthened<sup>3</sup>. A reduction in bank assets (through divestments for instance) might also help addressing moral hazard to the extent that size is valued as such by managers.

The second concern about state support is that competitors, in particular those that do not require support, may end up being penalised and will, as a result, have reduced incentives to compete in the future. This concern can be addressed by compensatory measures so that competitors are not significantly worse off relative to what would have happened in the absence of support. However, given the linkages between financial institutions in the context of a crisis of systemic dimensions, the extent to which competitors would have been better off in the absence of support is far from clear.

EU state aid control is particularly relevant when state support leads to significant distortions of competition across Member States. In contrast to the United States of America where the essential regulatory and supervision functions and fiscal powers lie at the federal level, they lie primarily at the Member State level in the European Union. In the absence of an overarching EU regulatory framework for crisis management<sup>4</sup>, actions taken by authorities to prevent, manage, and resolve crises (supervision, asset relief, debt guarantees, recapitalisations, resolution regimes, etc.) are mainly decided, implemented and funded at the Member State level. EU control is then meant to ensure that Member States internalise the effect of their policies on others and in particular that Member States do not use support of their own financial institutions at the expense of financial institutions in other Member States, so that a level playing field is preserved.

Starting from the early stages of the crisis, the Commission issued four Communications<sup>5</sup>, based on an exceptional legal base (Article 107(3)(b)), in which it provided guidance and legal certainty as to how it intended to assess the state aid measures granted by Member States to their financial sector. These guidelines reflect the objectives of ensuring financial stability while minimising competition distortions and preserving a level playing field in the Single Market.

In addition, the Commission reviewed a large number of individual cases of financial institutions receiving rescue and restructuring aid and ensured that adequate restructuring measures are implemented

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<sup>3</sup> Importantly, dealing with moral hazard is not driven by a desire to "punish" banks for past behaviour, but by the need to provide the right incentives for the future (for the bank that received the aid as well as its competitors).

<sup>4</sup> The Commission has set out its plans to put in place a new framework for crisis management in the Commission Communication "*An EU Framework for Cross-Border Crisis Management in the Banking Sector*" (20/10/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0561:FIN:EN:PDF>).

<sup>5</sup> Commission Communication "*The application of State aid rules to measures taken in relation to financial institutions in the context of the current global financial crisis*" (Official Journal C 270, 25/10/2008, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2008:270:0008:0014:EN:PDF>), Commission Communication "*The recapitalisation of financial institutions in the current financial crisis: limitation of aid to the minimum necessary and safeguards against undue distortions of competition*" (Official Journal C 10, 15/01/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:010:0002:0010:EN:PDF>), Commission Communication "*On the Treatment of Impaired Assets in the Community Banking Sector*" (Official Journal C 72, 26/03/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:072:0001:0022:EN:PDF>), Commission Communication "*The return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules*" (Official Journal C195, 19/08/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:195:0009:0020:EN:PDF>).

for some financial institutions, namely on those that could not be qualified as "fundamentally sound"<sup>6</sup> and which have received large amount of aid. Restructuring aid must be based on a credible and coherent plan to restore a financial institution's long-term viability without further State support. The plan must be submitted to the Commission within six months from the rescue, otherwise the rescue aid needs to be paid back. These restructuring plans focus first and foremost on the long-term viability of the financial institution, but also on the private contribution by the owners to the coverage of the restructuring costs (state aid limited to the minimum necessary), as well as measures to limit the distortion of competition. The first requirement seeks to ensure that state intervention has a lasting positive effect on the aided financial institution and the sector in which it operates. This may comprise a business model reality check given the "new normal" market conditions, a stress test that needs to be applied without being able to rely on explicit state support, the withdrawal from loss-making activities, the diversification and rebalancing of the funding mix, and a de-risking of the balance sheet. The second requirement aims to ensure that the restructuring costs are borne by the owners, managers, and creditors of the entity receiving support, to the extent possible in a systemic crisis, in order to address moral hazard and to limit the state aid to the minimum necessary. Bans on the payment of dividends and coupons to shareholders and hybrid capital holders would be illustrations of measures that would fall under this heading. The third requirement is aimed at reducing the distortions towards competitors and at addressing moral hazard and may consist of measures such as divestments, capacity reductions, the lowering of entry barriers to allow the introduction of credible new competitors in concentrated home market, and behavioural restrictions.

## 2. Financial stability and distortions of competition

Throughout the crisis, the Commission has sought to reconcile short term financial stability concerns with medium-term competition policy concerns, by engaging in a constructive dialogue with the ECB and other relevant stakeholders (notably the EFC and CEBS). This pragmatic reconciliation of competition and stability concerns can be illustrated by means of a number of examples.

A first example concerns the price to be paid to Member States for *bank recapitalisations*. Obviously, a low price is beneficial for short term financial stability, but endangers the competitive level playing field across banks. In its Communication that deals with bank recapitalisations<sup>7</sup>, the Commission incorporated the ECB pricing recommendations<sup>8</sup> on the pricing of hybrid tier 1 recapitalisations, but accompanied them by the requirements of step-up clauses (adding a fee element to the total remuneration of Tier 1 capital notes that would become increasingly expensive over time, and/or requiring a repayment of the Tier 1

<sup>6</sup> The qualification of financial institutions as "fundamentally sound" is established on the basis of an overall assessment of a range of criteria describing the situation of the financial institutions and the amount of state aid that has been injected in these financial institutions during the crisis. See in particular the Annex of the Commission Communication *"The recapitalisation of financial institutions in the current financial crisis: limitation of aid to the minimum necessary and safeguards against undue distortions of competition"* (Official Journal C 10, 15/01/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:010:0002:0010:EN:PDF>) and the Commission Communication *"The return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules"* (Official Journal C195, 19/08/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:195:0009:0020:EN:PDF>).

<sup>7</sup> Commission Communication *"The recapitalisation of financial institutions in the current financial crisis: limitation of aid to the minimum necessary and safeguards against undue distortions of competition"* (Official Journal C 10, 15/01/2009, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:010:0002:0010:EN:PDF>).

<sup>8</sup> See [http://www.ecb.int/pub/pdf/other/recommendations\\_on\\_pricing\\_for\\_recapitalisationsen.pdf](http://www.ecb.int/pub/pdf/other/recommendations_on_pricing_for_recapitalisationsen.pdf) (20/11/2008). Notice that the direct pricing of the long end of the yield curve is not part of the typical toolbox of the central banks, signalling that the financial crisis has truly been an unprecedented event.



capital notes above par, again increasing over time). Such a step up feature effectively strengthens the bank's incentives to redeem the instrument once they are in a position to do so, leading to a levelling of the playing field in terms of state involvement as soon as possible with respect to non-aided banks.

A second example concerns the *treatment of historical hybrid capital holders*. Again, short term financial stability might arguably be reinforced by a generous stance towards historical hybrid capital note holders, as this would entail a lower financing cost for banks and possibly more secure access to new private capital. However, such a stance also would encourage moral hazard (and hence the need for future state aid), would weaken market discipline, would weaken the capital buffer, and would shift the burden disproportionately on taxpayers. In order to minimise moral hazard looking forward and to strengthen capital buffers, the Commission adopted the policy stance that hybrid capital holders of banks that are under formal restructuring obligations should support part of the restructuring burden (through coupon deferral, loss absorption, preventing banks to make use of their option to call these instruments at 100% of nominal value, etc.), according to the level of seniority of the hybrid financial instrument, and to the extent that financial stability is not endangered and legal certainty not breached (i.e. where banks legally have a discretion to impose these burdens on the hybrid capital holders). Although this issue has been contentious when announced and implemented, several observers and academics now concur that this approach was appropriate in the current unprecedented financial crisis (Scharfstein and Stein (2008) and Acharya, Gujral, and Shin (2009)).

A third illustration of how the Commission has tried to reconcile the short term financial stability with the longer term competition concerns is through the provision in the restructuring plans that allows banks to *divest subsidiaries over a relatively long five year time span*, so as not to strengthen the downward pressure on prices and to avoid imposing losses on state aided banks, which would go against the basic rationale.

The design of compensatory measures has also been adjusted to the specificities of the financial industry. As mentioned above, the rescue of a financial institution might actually benefit competitors because of systemic linkages. That is also to say that in the absence of support a collapse of the financial system might have arisen, involving potentially all financial institutions, whether they had sound business model or not. In those circumstances, is it difficult to calibrate the counterfactual that would have arisen in the absence of support and hardly advisable to attempt to approximate this counterfactual through measures to limit the distortion of competition.

In this context, the Commission's pragmatic objectives in designing and enforcing measures to limit competition distortions have been (i) to alleviate identified competition problems in selected markets, (ii) to protect the internal market, and (iii) to ensure consistency across cases. Notably, the Commission has focused on seeking structural and behavioural remedies depending on the relative state aid amount received (in particular, no mandatory restructuring plan for fundamentally sound financial institutions having received relatively limited amounts of state aid), the conditions in which they were granted (in particular, the expected remuneration to be paid by the bank in exchange for the public measures), the characteristics of the markets in which the recipient bank is active, and the market positioning of the bank. The Commission favoured structural divestment of stand-alone entities that allow for new entry of credible competitors in concentrated submarkets, whilst taking care that financial institutions would not unduly retrench from other EU markets. The Commission also sought some behavioural competition remedies and remedies on corporate governance, where appropriate.

### **3. Regulatory and supervisory reform proposals**

Bank supervision and regulation has fallen short of expectations, paving the way for a substantial EU-wide and global reform of bank regulation. Amongst others, regulation and supervision did not prevent the

surge and subsequent collapse of the *shadow banking sector*. There was no EU-wide *macro-prudential supervisor* that presumably would have been able to address the build up of unsustainable systemic risk of the banking sector as a whole and in a timely way. *Capital adequacy requirements* exacerbated rather than dampened the natural procyclicality of the banking sector during the crisis and did not sufficiently reflect the *funding liquidity risk* of excessively short term wholesale market funded banks. *Deposit guarantee schemes* exhibited important design flaws (inappropriate coverage level, lack of harmonisation of eligibility criteria, insufficient funding, restrictive pre-emptive mandates, etc.) which may have contributed to market stress and competitive distortions. Finally, the absence of robust crisis management arrangements including a pre-crisis *special resolution regime (SRR) for banks* in most Member States is perhaps the single most unfortunate regulatory failure prior to the crisis.<sup>9</sup> This issue, which is closely related to the application of state aid rules, is discussed in more detail in the next section.

The Basel II capital framework (and the Capital Requirements Directive that implements the Basel II framework in the EU) is undergoing a number of important revisions aimed at strengthening the risk management of banks and enhancing financial stability. Since the crisis erupted, the Commission has adopted two sets of amendments to the Capital Requirements Directive (CRD). In October 2008, the Commission adopted a proposal (CRD II) to amend the CRD in the area of the management of large exposures, supervision of cross-border banking groups, the quality of banks' capital, liquidity risk management, and risk management for securitised products. In July 2009, the Commission adopted a proposal (CRD III) to amend the CRD addressing capital requirements for the trading book and re-securitisation, disclosure of securitisation exposures, and remuneration policies. In terms of possible further amendments to the Capital Requirements Directive (IV), the Commission launched in July a public consultation focusing on through-the-cycle expected loss provisioning, specific incremental capital requirements for residential mortgages denominated in a foreign currency, and the removal of national options and discretions.

Recently financial regulation reform proposals have been put into consultation by the Basel Banking Committee of Banking Supervision (BCBS).<sup>10</sup> The proposals aim to strengthen the resilience of the banking sector. Specifically, the proposals cover (i) a revision of the bank "capital" concept in order to raise its quality, consistency and transparency, (ii) the introduction of a simple, non-risk-based leverage ratio that should act as a backstop measure on gross exposure in order to reinforce the existing risk-based leverage requirements, (iii) a dampening of the procyclicality of minimum capital requirements by requiring for example countercyclical provisioning, (iv) an extension and re-weighting of the risk coverage of the capital requirements, and (v) a strengthening of the liquidity risk monitoring and supervision.

The latter proposal is elaborated in a separate companion BCBS document<sup>11</sup> and aims to introduce global minimum *liquidity* standards (alongside existing minimum *capital* standards), that will affect both the short term and more structural longer term funding structure of financial institutions. The so-called *liquidity coverage ratio* will require banks to hold sufficiently liquid asset buffers to survive a one month

<sup>9</sup> Note that most regulatory reform initiatives that are currently on the table can basically be slotted in two categories: one category of reforms trying to improve on existing bank regulation so as to avoid that banks will fail in the future (but accepting the continued existence of TBTF banks), and one of not accepting that banks are TBTF, by introducing effective resolution regimes that allow for an orderly winding down of banks and a corresponding revived market discipline. See below for a further discussion.

<sup>10</sup> December 2009 BCBS consultative document "Strengthening the resilience of the banking sector" (<http://www.bis.org/publ/bcbs164.htm>). The Commission is going to launch its own consultation on these issues (definition of capital, liquidity standards, counterparty credit risk, leverage ratio, dynamic provisioning) in February 2010. The legislative proposal is to be adopted by the Commission by end 2010.

<sup>11</sup> December 2009 BCBS consultative document "International framework for liquidity risk measurement, standards and monitoring" (<http://www.bis.org/publ/bcbs165.htm>).

liquidity stress event, whereas the so-called *net stable funding ratio* aims to ensure that banks have sufficient long-term and stable funding against their assets by reducing their (particularly interbank) wholesale dependence.

Importantly, the Commission has also issued a Communication<sup>12</sup> in October 2009 in which it sets out the need and desirability of putting in place a broad framework at EU level for cross-border crisis management. Such a framework should enhance the ability of supervisors and resolution authorities to act quickly, effectively, and in a co-ordinated manner in order to address problems in an ailing bank, either by ensuring the necessary remedial measures are taken by the bank, or else to effect a resolution if bank actions prove insufficient to bring the institution back to going concern. Resolution tools will need to be designed so as to allow authorities to carry out an efficient and effective bank restructuring before technical insolvency limits are being breached. If such orderly resolution and restructuring techniques were to be in place, market discipline would be substantially reinforced, and the cost of unsecured wholesale financing would increase as a result of the increased likelihood of creditors being asked to foot part of the bill.

In fact, a common feature of all of the above regulatory reform proposals<sup>13</sup> is that they will give rise to a higher cost of funding for wholesale financed banks that have relatively few liquid assets on their balance sheets. Indeed, strengthened monitoring and stress testing of funding liquidity risk, imposition of simpler non-risk-based leverage ratios, the strengthening of the risk coverage of the capital adequacy framework, the increased comparability of the effective loss-absorbing capital base, and the increased likelihood of orderly resolution would all contribute to increasing the financing cost for wholesale financed banks. Reflecting the true social cost of their funding risk, margins on wholesale financing (covered bond financing, interbank financing, etc.) are unlikely to return to their relatively low pre-crisis levels if regulatory reforms are adopted and implemented. The "new normal" conditions in wholesale markets and crystallising regulatory reform proposals will likely weaken the sustainability and competitiveness of excessively wholesale financed bank business models going forward.

#### **4. The need for a crisis management framework for financial institutions in the EU**

The unfolding of events in particular since the bankruptcy of Lehman Brothers has highlighted the desirability of introducing specially adapted rules for dealing with failing banks. The amplifying dynamics associated with bank failures can give rise to financial crises of systemic dimensions. The latter refers to a situation whereby sound financial institutions become distressed as a result of the disorderly failure of weaker participants. A new framework of common rules designed to allow an orderly failure of financial institutions could become a central pillar of efforts to avoid future financial crises of systemic dimensions.

Many financial institutions are too big or too interconnected to fail and therefore require public support in the current crisis. Some banks are also simply too big to save. The existence of systemic effects associated with the failure of large financial institutions results in the social costs of failure greatly exceeding the private costs to shareholders and creditors.

In a nutshell, putting in place new crisis management arrangements at EU level should ultimately seek to avoid the stark choice between disorderly bankruptcy leading to disturbances of systemic dimensions

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<sup>12</sup> EC Communication on "*An EU Framework for Cross-border Crisis Management*" (20/10/2009, [http://ec.europa.eu/internal\\_market/bank/docs/crisis-management/091020\\_communication\\_en.pdf](http://ec.europa.eu/internal_market/bank/docs/crisis-management/091020_communication_en.pdf)).

<sup>13</sup> Note that the regulatory reforms can be divided in those that accept the existence of banks being too big to fail but aim to reduce the probability of a bank failure and those that do not allow a bank to be too big to fail. In practice, both avenues are being pursued actively.

and a costly bail-out generating moral hazard. The bottom line is that large financial institutions should be allowed to fail without causing havoc to the rest of the economic fabric.

There are a number of reasons why "normal" bankruptcy procedures are not adapted to deal with the failure of a large systemically important institution.<sup>14</sup> From the perspective of public finances, a new crisis management framework is also the best (low cost) option.

- Corporate insolvency law focuses on individual companies in isolation. This practically means that bankruptcy proceedings do not explicitly recognise the fact that banks, unlike industrial and commercial companies, are vulnerable to runs and contagion.
- Neither bankruptcy courts nor the insolvency practitioners appointed to conduct a proceeding under the corporate insolvency law are required to take into account public policy objectives linked to the maintenance of financial stability. The actions they mandate or carry out in pursuit of their objectives (maximise recovery) could potentially make things worse.
- Bankruptcy proceedings can only be started once an institution has become insolvent. It therefore prevents timely intervention - while the bank is still technically solvent and retains some net worth - designed to prevent deeper problems from materialising and spilling over. In banking, the magnitude of these problems can escalate rapidly and can also affect other banks which are or are thought to be in similar positions.
- Standard bankruptcy is not well suited to ensure the continuity of essential banking functions, such as payments to and from customer accounts and access to overdraft and other credit facilities (once in bankruptcy, these activities are normally frozen).
- Bankruptcy proceedings are not well adapted to allow for quick (and often real time) decisions.
- Bankruptcy does not explicitly recognise the atomistic nature and limited information of bank depositors, leading to co-ordination problems.

An enhanced resolution framework should grant special powers to the actors responsible for financial stability and supervision and to the fiscal authority, for the reasons set out above. In practice, this typically means the financial supervisory authority, the central bank, and ministry of finance.

So far, few EU countries have adopted legislation (or adapted existing laws) to create new resolution frameworks. Although it has been applied only once, the new UK regime contains the key ingredients.<sup>15</sup> On 21 February 2009, the Banking Act 2009 that creates a Special Resolution Regime became law.<sup>16</sup> It gives the Tripartite authorities (Bank of England, Financial Service Authority, Treasury) a permanent framework providing tools for dealing with distressed banks and building societies. It also gives the Bank of England a new role in selecting from the statutory resolution tools. This new framework replaces the temporary special resolution regime set up in the wake of the Northern Rock rescue.

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<sup>14</sup> For an in-depth discussion, see [http://www.bankofengland.co.uk/publications/fsr/fs\\_paper05.pdf](http://www.bankofengland.co.uk/publications/fsr/fs_paper05.pdf)

<sup>15</sup> So far, the UK SRR regime has been applied only once. On March 30 2009, the Bank of England announced that core parts of Dunfermline Building Society had been transferred to Nationwide Building Society. Dunfermline's retail and wholesale deposits, branches, head office and originated residential mortgages (other than social housing loans and related deposits) had all been transferred to Nationwide. This followed a sale process conducted by the Bank of England over the weekend of 28-29 March.

<sup>16</sup> [http://www.opsi.gov.uk/acts/acts2009/pdf/ukpga\\_20090001\\_en.pdf](http://www.opsi.gov.uk/acts/acts2009/pdf/ukpga_20090001_en.pdf).

The 2009 Banking Act sets out five key objectives in choosing which resolution tools to use:<sup>17</sup>

- To protect and enhance the stability of the financial systems of the UK
- To protect and enhance public confidence in the stability of the banking systems of the UK
- To protect depositors
- To protect public funds
- To avoid interfering with property rights in contravention with the Human Rights Act 1998.

The SRR provides for three pre-insolvency “stabilisation options” (i.e. PCA) to be applied to such a bank. The new powers enshrined in the Banking Act allow the authorities to:

- transfer all or part of a bank to a private sector purchaser
- transfer all or part of a bank to a bridge bank - a subsidiary of the Bank of England – pending a future sale
- place a bank into temporary public ownership (the Treasury's decision)

Some other EU jurisdictions favour a gradual approach while others are geared towards rapid emergency intervention.<sup>18</sup> The first tends to apply from an earlier stage and is designed to encourage shareholders' consent to restructuring measures: the first step is often to replace the management with an "administrator" or "special manager" and submit a restructuring plan to shareholders for approval, and only, as a second step, are measures imposed that override shareholders rights. The second, by contrast, imposes measures without the prior consent of shareholders.

The magnitude of the problems that emerge when applying common bankruptcy proceedings to large and complex financial institutions is illustrated by the unfolding of events following Lehman Brothers' demise.

Lehman's European business was one of the biggest and most complex parts of the bank with thousands of intricate investments as well as client and trading relationships that are still being unravelled. This means that Lehman Brothers' European clients and creditors may have to wait another two years before they get back billions of dollars of assets tied up in the bank when it collapsed a year ago.<sup>19</sup> In addition, legal battles have followed Lehman's collapse.<sup>20</sup>

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<sup>17</sup> For a detailed exposition, see <http://www.bankofengland.co.uk/publications/other/financialstability/financialstabilitydepositorprotection080722.pdf>.

<sup>18</sup> See [http://www.bankofengland.co.uk/publications/fsr/fs\\_paper05.pdf](http://www.bankofengland.co.uk/publications/fsr/fs_paper05.pdf).

<sup>19</sup> In a *Financial Times* interview of September 13 2009, Tony Lomas, partner at PwC and administrator for the bank's European operations stated that “I had hoped to break the back of this within 24 months, but with the setback around the scheme and other issues, a more realistic estimate is now 24 -36 months”.

<sup>20</sup> Representatives of the defunct Lehman Brothers estate have asked a US judge to reopen the contract that transferred the bank's North American assets to Barclays Capital a year ago, claiming that up to 8bn USD in cash and securities was transferred to Barclays Capital without the court's knowledge. It has also been reported that leading hedge funds have been buying up Lehman Brothers' debt in the hope that the

The Lehman experience also illustrates that large investment banks excel in regulatory and tax arbitrage, and all that cross-border complexity and opacity enables them to exploit such loopholes with ease. Apart from (legally) avoiding tax, this results in complex, costly and lengthy bankruptcy proceedings.

Another episode illustrates how complexity has the potential to generate huge costs. Indeed, when AIG imploded in September 2008, the potential losses on its credit derivatives contracts were so devastating for the system, because they were so concentrated, that the US government used tens of billions of dollars to honour the deals (which in turn benefited groups such as Goldman Sachs, Société Générale and Barclays). A Fitch survey before the collapse of the credit bubble suggested that AIG was just the 20th largest credit default swap player in the sector, based on gross notional outstanding volumes. Thus, it appears that while bailing-out AIG has come at a huge cost to taxpayers, the alternative of letting it go bankrupt could have led to financial instability and panic of a few orders of magnitude larger than what was observed.

As observed by Charles Goodhart, "*(cross-border) banks are international in life but national in death*". This illustrates the fact that, ideally, the reach of regulation should match the extent of the market in which large financial institutions operate. This requires cross-border regulators *and* fiscal resources or credible burden sharing rules for effective supervision of banks, and in particular, for managing orderly exit or downsizing. In other words, the jurisdiction of the financial regulator/supervisor and of the fiscal authority underwriting the solvency of the banks should ideally be the same as the domain over which these banks operate.

Recent experience has shown that in the absence of a framework for resolution, cross-border crisis management has been carried out in an ad hoc and disorganised manner, with national authorities resorting in practice to one or both of two responses: the use of public money to bail out banks, or the ring-fencing of the bank's assets within their territory and the application of national resolution tools at the level of each entity.<sup>21</sup> The first carries the clear risk of competitive distortion, engages the rules on State aids, and is politically unpopular, while the second response most probably increases the overall cost of the resolution and may not deliver the best result for depositors and other creditors, clients, and employees.

Indeed, it appears that interventions might have imposed a cost on the taxpayer in excess of what was really needed. This often depends on the legal system and on the possibilities it gives the shareholders to steer Government into the solution that benefits them, as illustrated by the Fortis shareholders' attempts to reject the BNP Paribas deal.

An EU resolution framework for cross-border banks could be a vital complement to the new supervisory architecture that the Commission is proposing. A simple backward induction exercise suggests that the effectiveness of regulation/supervision will crucially depend on the nature of the "end

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bankrupt investment bank's estate will be able to win court battles to recover billions of dollars in collateral held by competitors with whom it did business.

<sup>21</sup> The case of Fortis illustrates that relying on national supervisors (which is currently the case, with consolidated oversight by the home country supervisor supplemented by domestic oversight by the host country supervisor), requires co-ordination and co-operation that is going to be tested in times of crisis. The Fortis crisis happened just after the introduction of the European Memorandum of Understanding, which was meant to promote co-operation in financial stability and crisis management. While this Memorandum of Understanding embodies the right principles (on information exchanges, involvement of all interested parties, the pursuit of the interests of the banking group as a whole, "equity", etc.), its problem is that it is "a flexible tool that is, however, not enforceable" as stressed by Praet and Nguyen (2008, page 371; this is a view also shared by the CEPS Task Force Report, 2008).

game". Indeed, the incentive to by-pass, ignore, arbitrage regulation is shaped by the cost of doing so. The latter is in turn determined by the existence of a realistic prospect for orderly bankruptcy whereby shareholders, junior creditors and management would absorb the cost of past actions. The purpose of a new resolution framework should precisely be to create the conditions for such orderly winding-up of a bank without endangering financial stability. The US experience with banks falling under the Federal Deposit Insurance Corporation's (FDIC) remit suggests that this can be achieved, even if it involves very large entities.<sup>22</sup>

As the de Larosière (2009) report concluded: "The lack of consistent crisis management and resolution tools across the Single Market places Europe at a disadvantage vis-à-vis the US and these issues should be addressed by the adoption at EU level of adequate measures."

## 5. Concluding remarks

Competition policy and enforcement has played an important role in the response to the crisis. The public policy challenge in response to the development of a financial crisis is to maintain financial stability while preserving incentives for appropriate risk taking and competition in the future.

Despite their imperfections, supranational state aid control rules have proven to be the best available strategy in the EU to deal with the multiple challenges raised by the crisis. Given that they have addressed to a certain extent and ex post what ex ante adequate regulation should have accomplished, the Commission fully supports the push for regulatory and supervisory reforms that are currently on the table and encourages their swift adoption. The need for a pan-European special resolution regime for banks will be a crucial reform in order to limit and contain moral hazard in the banking sector.

The absence of a special resolution regime for banks is perhaps the single most unfortunate regulatory failure prior to the crisis. The reason is that these kinds of regimes in principle could have injected market discipline in the banking sector, could have avoided banks from becoming TBTF in the first place and could have allowed for orderly winding down of banks that were not viable. In the absence of such a (ideally pan-European) regime, EU State aid policy has provided and should continue to provide a robust and flexible framework enabling the EU and its Member States to take effective measures to combat the crisis in the financial markets and in the real economy, while at the same time minimising the distortive effects on competition and on the level playing field.

The question also arises whether a specific antitrust regime is required for banking, given the possible trade-off between competition and incentives to take excessive risks. However, whether such a trade off prevails is not clear in terms of empirical evidence and such a trade-off is not supported by compelling underlying principles (see annex 1 for more details). In any event, if competition would lead to excessive risk taking, a strengthening of prudential regulation would be a more adequate response, rather than a relaxation of competition policy<sup>23</sup>, as it would directly address the source of the problem.

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<sup>22</sup> In 2009, the number of bank failures during some weeks has approached the yearly historical average. In addition, some of the failures have been large in terms of assets and/or deposits involved. For instance, Washington Mutual (WaMu) that failed in September 2008 shortly after Lehman, held more than 300 billion USD in assets. WaMu's winding down by the FDIC did not lead to panic or contagion.

<sup>23</sup> Similarly, it is sometimes argued that excessive competition has pushed banks towards an excessive reliance on short term wholesale market funding. Some banks appear to have been developing unsustainable business models to retain or gain market share relative to peers that have a more retail based and/or more balanced funding base. However, the most direct and hence appropriate remedy to this problem involves a change in the regulation and supervision of the funding liquidity risk of banks, rather than a relaxation of competition policy.

Finally, it is worth noting that the crisis may have triggered some developments in banking markets which might increase competition concerns. Traditional activities of investment banking arms<sup>24</sup> of banks are often dominated by a small number of high-profile banks and are characterised by relatively high fees compared to other banking activities. Amongst others, debt underwriting, equity underwriting, M&A advisory, loan syndication, and the functioning of the wholesale markets appear to be rather concentrated and may have become more so following the exit of some players. Competition concerns may include the following. Banks may co-ordinate on prices or share markets, possibly in the segments related to very large transactions where a small number of banks dominate. Banks could form syndicates to bid together for an investment banking mandate and reduce significantly the alternatives for the client. Banks could refrain from bidding too aggressively for a book runner mandate in the syndicate on the promise of being later selected as a member of the syndicate. Closer scrutiny of such markets may be warranted.

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<sup>24</sup> Next to equity and debt underwriting and M&A that represent the corporate finance activities, investment banks activities also cover research on equity, bond and derivatives, sales, structuring and trading in bonds, equity, commodities and currency (and their derivatives), proprietary trading and principal investment in funds and assets, prime brokerage activities (stock lending and financing, clearing and settling for hedge funds) and real estate financing.





## **ANNEX 1: DOES MORE COMPETITION LEAD TO HIGHER OR LOWER FINANCIAL SYSTEM RESILIENCE?**

The vast theoretical and empirical literature on the likely impact of bank competition on financial stability unfortunately does not yield unambiguous policy conclusions. Even when making abstraction of the intricacies of measuring banking competition (see box 1), different models yield different predictions as to whether (measured) bank competition reduces or increases stability. Some models only model the deposit side and assume the asset side is being determined by the bank, whereas other models also model the borrower behaviour as a function of the interest rate setting of the bank.

The arguments behind competition being harmful for financial stability are roughly as follows. First and foremost, competition incentivises shareholders and management to take excessive risks, because competition reduces the bank franchise value (Marcus 1984, Keeley 1990) such that owners and managers have less to lose from taking additional risks.<sup>1</sup> Competition also reduces the incentives to screen borrowers, as there are fewer prospects for reaping informational rents, which in turn increases bank fragility through a lower borrower pool quality (Allen and Gale 2000, 2004). Also, competition reduces portfolio and funding diversification (small banks will be less diversified) and hence result in more fragility (Diamond 1984, Allen 1990). Finally, competition may increase the supervisory burden because of the overly large set of small banks to be supervised.

The counterarguments behind competition being desirable for financial stability are as follows. First, competition's tendency towards excessive risk taking (franchise view) need not be a problem and can be addressed by appropriate regulation and supervision. Moreover, absence of competition leads to higher interest rates and results in more severe adverse selection and moral hazard problems and hence greater fragility (Boyd and De Nicolo 2005). Turned around, competition may very well decrease the adverse selection and moral hazard problem and the corresponding bank fragility. The moral hazard problem in lending refers to the fact that ex post the borrower is incentivised to invest in a riskier project than initially announced, as the upward potential is to his benefit, while the losses from a worst case outcome are being borne by the lender. The adverse selection problem in lending is the problem that higher loan rates ex ante will scare off the most creditworthy borrowers, retaining merely the risky borrowers. Competition may also reduce TBTF, moral hazard and contagion problems of large and complex financial institutions. Finally, competition reduces regulatory and supervisory complexity and reduces the risk of being captured by large and complex financial institutions.

The empirical literature is not able to shed light on which of the above theoretical predictions are supported by the data, as findings tend to go in opposite directions depending on sample period and geographic scope (see box 1 for a discussion of the difficulty of measure competition in banking). Moreover, providing policy advice on the basis of the empirical literature will not necessarily be reliable, as results based on inference from "normal times" (correcting for a "great moderation"?) may not be relevant and even misleading for crisis times. However, Claessens (2009) observes a growing consensus on the fact that bank competition does not hurt stability, and that there is an important interaction between the regulatory framework and competition.

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<sup>1</sup> The value of the bank franchise can be seen as the present value of the rents that can accrue from pursuing banking activities and is partly determined by competition. Intensive rivalry might reduce the bank franchise and increase the likelihood that, faced with a shock, banks will choose to gamble for resurrection.

### Box 1: Measuring competition in the banking Sector

Empirical measures such as interest rate spreads or margins are not necessarily good indicators of the competitiveness of a banking system, as they are mainly driven by the level of riskiness of the business model of the bank as well as other bank- and country-specific factors, such as bank size and business, contractual framework, taxation, and macro-performance. In general, all practical measures of bank competition can be grouped in three main categories (see Claessens 2009): (i) market structure measures, (ii) measures that assess the reaction of output prices to input prices, and (iii) measures that give indications about the general contestability of the banking sector.

So far none of the measures is able to give a definite answer on the competitiveness of a banking sector, as all of them focus on particular aspects only and can be criticised on theoretical and empirical grounds.

Simple *market structure measures* such as concentration ratios and Herfindahl-Hirschman indices aim to measure banking sector competitiveness indirectly. They are criticised for relying on the structure-conduct-performance (SCP) hypothesis, by implicitly or explicitly making inferences from market structure to bank competitiveness (or lack thereof). In addition, the relation between concentration and competitive intensity is most probably non-linear. The SCP hypothesis has been challenged theoretically and empirically. First, the general contestability theory suggests that actual entry and exit are not necessarily the most important indicators of market contestability, rather it is the degree of entry and exit barriers that matters (Baumol, Panzar, and Willig 1982). Second, the SCP hypothesis relies on the market structure being exogenous, whereas the alternative "efficiency hypothesis" would argue that efficiency may drive *both* the structure of the market and its pricing efficiency, rendering market structure endogenous. Third, to the extent that the banking sector is characterised by innovation<sup>2</sup> and creative destruction, higher levels of (temporary) concentration and market power would be a prerequisite for continuing innovation (and increases in social welfare). Fourth, next to entry and exit barriers, market failures such as information asymmetries, network externalities, prudential regulation, and other factors can matter as well for determining the effective degree of competition (Claessens 2009). Finally, delineating a relevant market in banking, a precondition for measuring concentration and market structure, may be more challenging than in some other industries, due to the intrinsically complex nature and characteristics of the banking sector alluded to above.

The second set of measures to measure competition aims to measure bank competitiveness more directly by observing *pass-on rates* à la Panzar and Rosse (1987) or *degree of profit reduction* following marginal cost increases à la Boone (2004) (see van Leuvensteijn et al. 2007). Panzar and Rosse (1987) formulate and regress a gross interest revenue (proxy for loan price) function per bank as a function of input prices (i.e. proxies for deposit funding cost, personnel cost, and equipment cost) and control variables. The Panzar and Rosse (1987) H-statistic is defined as the sum of revenue elasticities with respect to the input prices. When the pass on from costs to prices is approximately complete, this is a signal of competitiveness, whereas a partial pass-on would signal market power. This measure has also been criticised theoretically and empirically. First, one needs to impose restrictive assumptions on a bank's cost function and production function. Second, the inference is based on the market being in general equilibrium. Third, estimates vary widely across studies and time (Claessens and Laeven 2004, Bikker and Spierdijk 2008)

The third set of measures aims to give an indication about the contestability of the banking sector, by observing the presence or absence of entry requirements, formal and informal barriers to entry or exit for domestic and foreign banks, activity restrictions, switching costs, etc. Institutions like the IMF and OECD then map these indicators into a single *overall contestability indicator* that can be compared across countries.

All in all, it is obvious from the theoretical and empirical literature that measuring competition in the banking sector is particularly challenging and complicated, possibly even compared to most other markets in the economy, due to the paucity and volatility of data in the banking area, the difficulty of applying sophisticated analysis to the banking sector (unclear production function), and bank-specific complexities such as the presence of network externalities and the frequent sale of bundled services.

<sup>2</sup> Former Federal Reserve Chairman Paul Volcker recently contested this view by referring to ATMs as one of the few innovations that matter in the banking sector innovation over the last decades.

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## BULGARIA

### 1. Competition and Concentration: General Issues

The Law on Protection of Competition (LPC) is the main law in Bulgaria containing provisions on the control of concentrations, entrusting the Commission on Protection of Competition (CPC) with the power to make an assessment of planned concentrations of economic activities and to decide on their authorisation. The CPC is competent to control concentrations which do not fall within the scope of Article 1 of Council Regulation (EC) No. 139/2004 of 20 January 2004 on the control of concentrations.

In assessing the effect of the notified concentration the CPC uses the dominance test. In accordance with this test, for a given concentration to be prohibited, two conditions have to be cumulatively fulfilled: the concentration should lead to creation or strengthening of dominant position thus affecting the effective competition on the relevant market. The new LPC, adopted in November 2008, introduced significant amendments to the previous competition regime, including in the area of control of concentrations.

The new law abolished the rebuttable presumption for a dominant position – market share higher than 35 per cent, as the high market share on its own cannot be a proof for the existence of dominant position.

The threshold for notification of concentrations was also revised. It has been increased from 15 million BGN to 25 million BGN. Also, a second cumulative criterion has been added – the turnover of each of at least two undertakings, which are parties to the concentration or turnover of the undertaking to be acquired on the territory of Republic of Bulgaria for the preceding financial year, should be over 3 million BGN. The objective was to avoid the control of these concentrations, which do not have substantial influence on the competition on the national market.

The main provisions on the methods used by the CPC to determine the market share of undertakings are part of the Methodology on Investigation and Definition of the Market Position of Undertakings in the Relevant Market. The Methodology is adopted with decision No 393/2009 of the Commission and it reflects the amendments, introduced in the law.

This new Methodology makes differentiation when setting how the market shares are to be calculated by the CPC, depending on the markets, in which the undertakings operate - markets of the real economy or financial sector markets, with further delineation for specific financial markets (banks and credit institutions, leasing companies, insurance companies, pension and health insurance companies, investment companies). This differentiation concerns the basis, on which the market share is calculated where markets in financial sector are analysed, as well as the calculation of the turnover of the undertakings, operating in these markets. The necessary data for the calculation by the CPC of the market shares of credit institutions is taken from the statistics of Bulgarian National Bank. The statistical data needed for the calculation of the turnover of the insurance companies, investment companies, etc. is taken from the Financial Supervision Commission. The Methodology provides for two main indexes to be used by the CPC to determine the level of concentration in the relevant market in merger proceedings – the *Herfindahl index* and the CR. The Methodology allows, however, using other indicators in addition to the CR and HHI, depending on the characteristics of the relevant market.

HHI index has been used in the Sector inquiry in the market of retail banking. The fact that Bulgarian National Bank supervises all banking activities provides full coverage and sufficient amount of data,

including trend analysis and sector statistics. In this case, HHI takes into consideration all market participants, making it quite suitable and easy applicable analytical tool.

In the period 2006–June 2008, the Commission on Protection of Competition made an assessment and authorised without conditions 7 concentrations in the banking sector. Analysis made included calculation of market shares of the merging parties as well as the shares of their main competitors – namely the largest market players, which were considered to eventually pose most important competitive constraints.

- MKB Bank, Hungary, to acquire control over Unionbank Commercial Bank (CPC decision No 71/2006);
- Eurobank EFG Holding, Luxembourg, to acquire DZI bank (CPC decision No 243/2006);
- Piraeus Bank Bulgaria, to acquire the retail banking business of ING Bank H.B.-Sofia city branch (CPC decision No 193/2007);
- Piraeus Bank Bulgaria, to acquire control over the leasing company Dient Bulgaria (CPC Decision No 645/2007);
- Setelem S.A., France, to acquire control over Jett Finance International, Sofia – consumer finance (CPC decision No 840/2007);
- KBC Bank H.B., Belgium to acquire sole control over Economic and Investment bank (CPC decision no 981/2007). HHI, CR(3) and CR(4) for the period 2004-2006 were calculated, taking into consideration every concentration in the market, hence pointing at every change in the concentration level.
- Allied Irish Banks Public Limited Company (AIB), Ireland, to acquire control over Bulgarian-American Credit Bank (CPC decision No 639/2008).

In the end of 2008 the Commission on Protection of Competition adopted the abovementioned sector inquiry of the market of retail banking in Bulgaria (CPC decision No 1076/2008). The inquiry covers the period 2006-first half of 2008. Even though the sector inquiry analysed specific banking sub-market, it contained some general conclusions which were representative for the whole sector as such. All banks operating in Bulgaria were covered by the inquiry, as it was established that all of them are active in the market of retail banking.

Bulgarian banks are licensed as universal credit institutions. Most of the banks offer products and services both for corporate and natural persons.

According to the Law on Credit Institutions, the banks in Bulgaria are legal persons (joint stock companies). A license, issued by the Bulgarian National Bank, to perform activities as credit institution is required. After receiving a license, banks from third countries can also operate through a branch in Bulgaria. After Bulgaria became EU Member State, banks, licensed in other EU Member State, can enter Bulgarian market and in such case they are only required to notify Bulgarian National Bank.

**Table 1: Share (in %) of the banks in Bulgaria, as of the origin of their capital, in the total assets of the banking system \***

<b>Share in the total assets of the banking system</b>	<b>2006</b>	<b>2007</b>	<b>2008 (first half)</b>
<b>Subsidiaries of EU banks</b>	75,0	75,3	75,6
<b>Branches of EU banks</b>	2,1	4,1	4,7
<b>Local banks</b>	19,9	17,7	15,9
<b>Banks from non-EU countries</b>	1,9	2,1	2,1
<b>Branches of banks from non-EU countries</b>	0,9	0,8	0,7

\* Based on data of the Bulgarian National Bank.

As it could be seen from the table, in the period 2006-June 2008 the share in the total assets of the banking system of subsidiaries and branches of EU banks raised from a total of 77,3% to 81,2% at the expense of the share of the local banks.

In the end of June 2008, over 90% of the banks in Bulgaria are owned by foreign companies and are parts of big international financial groups: UniCredit Group (UniCredit Bulbank), OTP (DSK Bank), Raiffeisen Zentralbank AG (Raiffeisen Bulgaria), Eurobank EFG (Post Bank and DZI Bank), Allianz (Allianz Bank Bulgaria), ProCredit Holding (ProCredit Bank), Société Générale (Société Générale Express Bank), etc. There is only one state bank (Bulgarian Development Bank as successor of Encouragement Bank) and it holds less than 1% of the total assets of the system.

As a result of the entering of new banks in the market in Bulgaria and of concentrations performed, the following number of banks are operating and competing: 32 banks, incl. 4 branches of foreign banks in 2006 and 29 banks, incl. 5 branches in the end of 2007.

After authorisations from the CPC, the following concentrations took place in 2007: Hebros Commercial Bank, HVB Biochim and Bulbank function in the market as a single participant, part of the UniCredit Group, Bulgarian Post Bank and DZI Bank merged as Eurobank EFG, and Piraeus bank acquired the retail banking activity of ING-Sofia city branch.

During the period 2006-June 2008, analysed in the CPC sector inquiry, new participants entered Bulgarian market: MKB Bank, Hungary, acquired Unionbank Commercial Bank, KBC, Belgium, became owner of Economic and Investment Bank, and the Irish Allied Irish Banks Public Limited Company acquired Bulgarian American Credit bank.

Taking into account the free regime in Bulgaria for the banking activities of EU credit and financial institutions, licensed in EU Member State, the CPC expects that the consolidation and concentration processes in the banking system in Bulgarian market will further continue.

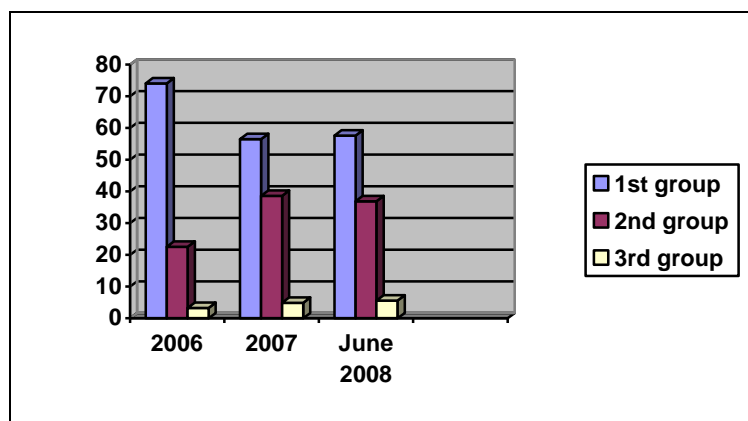
Consolidation in Bulgarian banking sector was moved by objective system features. Harmonised with the *acquis communautaire* regime of carrying out business and supervision, as well as public finance stability, growth prospective and level of services attracted big European banks in a market, where physical presence (offices and branches) is crucial.



As part of the CPC assessment of notified concentrations, as well as in its sector inquiry of retail banking, it was established that the market shares even of the big participants do not indicate presence of dominant position under the Law on Protection of Competition.<sup>1</sup>

According to the banks rating system maintained by the Bulgarian National Bank for statistical purposes, there are three groups delineated in order to follow the dynamics in the banking system. The place of the banks in the groups is determined on the basis of the total amount of their assets.

**Table 2. Distribution of Assets as per Groups of Banks in the Period 2006-June 2008**



During the analysed by the sector inquiry period (2006-June 2008), the financial situation of Bulgarian banks is stable. The opinion, submitted by the Governor of Bulgarian National Bank for the purposes of the CPC sector inquiry, was that, contrary to the world financial crisis and its impact on Bulgaria, the behaviour of Bulgarian banks was adequate with a certain degree of vigilance.

The CPC used the method of calculating the turnover as indication for the financial strength of the participants in the market. The turnover of the banking system in Bulgaria for the period, covered by the inquiry, showed significant values. It was 3,2 billion BGN in 2006 and 4,3 billion BGN in 2007. According to the data, analysed by the CPC, the banks from the first and the second group have considerable contribution to the turnover of the system. These levels of turnover indicate that any future consolidation of participants in the banking sector will pass the minimum threshold above which the concentration is subject to mandatory notification under the Law on Protection of Competition.

During the analysed period the net profit of the banking system raised dynamically, mainly as a result of the significant increase of the volume of the credits and to a smaller degree, due to the increase of the credit interest rates. The banks from the first group generated the major part of the net profit. The most profitable banks in Bulgaria belong to international financial groups. The banks with the biggest volume of the assets and of the capital, report the highest amount of profit.

In calculating the market shares of the banks in the retail banking sector, the CPC reached the conclusion that the share of the participants vary between 19,4%-20,8% for the leader in the first group to 10%-11% for the smallest participant in this group. The market share of the banks in the second group steadily decreases at the expense of the increase of the shares mainly of the banks from the first group and of third group as well.

<sup>1</sup> This conclusion is valid under the provisions both of the acting Law on Protection of Competition, adopted in November 2008, and for the previous LPC, which contained the threshold of 35% market share as criterion for dominant position.

## 2. Indexes of market concentration

For the purposes of its sector inquiry of the retail banking, the Commission on Protection of Competition used HHI and CR for calculating the degree of concentration in the relevant market. Both HHI and CR show border values between normal and relatively competitive market with a moderate level of concentration (HHI in the range 1000-1800) and therefore normal functioning of the relevant market. The analysed sub-markets (non-corporate deposits and credits) are competitive regardless of the consolidation that took place in the banking sector.

The CR, which is not indicative for the whole market but only for the position of the biggest participants (three and four banks), is on its minimum level for a relatively competitive market with a moderate level of concentration.

**Table 3: HHI and CR for the Period 2006-June 2008**

Sub-market	HHI	Number of banks with HHI above 100	CR 3	CR 4
Deposits	1036-1003	3	45-47	54-56
Mortgage credits	1480-1541	3 (2006) 4 (2008)	59-62	67
Consumer credits	1774	2	62-64	69-70

The CPC sector inquiry of the market of retail banking revealed that during the analysed period none of the participants on the relevant market had dominant position. In general, the banks hold their market shares, notwithstanding of the increased competition in this market and the consolidation that took place. The banks, belonging to the first group according to Bulgarian National Bank rating system, have leading positions both for the non-corporate deposits and for the credits.

In the analysis of the barriers for entry to the market no significant obstacles were found. The presence of increasing competition, forcing the banks to adopt flexible and dynamic policies, is considered by the Commission on Protection of Competition to be positive factor, influencing the supply side of the market of banking services.

As none of the concentrations assessed by the CPC actually created a dominant position within the relevant market in Bulgaria, it was presumed it stimulates competition, provides more products and better services.

Consolidation should mainly be regarded as means of entering market by using other bank's presence (offices and branches network, staff, clients) to make a successful penetration. As those haven't change dramatically the level of concentration, mergers already done as well as any further consolidation activity, which would bring the same positive effect to consumers and competition are to be welcomed, In this regard, no need to de-concentrate has so far arisen.

## 3. Competition, Concentration & Crisis

Bulgarian banking system is considered to be stable, regardless of the world financial crisis. The system is well regulated and capitalised, with a good level of liquidity. There are no banks in Bulgaria under supervision by the Bulgarian National Bank due to liquidity problems.

The CPC sector inquiry of the market of retail banking found that during the period 2006-June 2008 the main parameters of the banking system show increase. The CPC analysed the total sum of assets, the attracted resources and the own capital, the profit, the capital adequacy, ROA and ROE, the level of liquidity. The share of classified credits was about 2,1% for the period of the inquiry with no signs of increase.

Financial analysts of Bulgarian banking market consider that the credit institutions, operating in Bulgaria, are not directly endangered by the world financial crisis. The credit activities of the banks on the national market are focused exclusively to Bulgarian economy and have not used financial instruments, which appeared to be problematic for the big banks outside Bulgaria. That could probably explain the fact no mergers were made as a consequence of the crisis.

Prior to the crisis Bulgarian National Bank was concerned with the high level of bank's credit activity, which was considered potentially dangerous and limited with specific regulation.

The main risk endangering the banking system in Bulgaria is the decline of the foreign investments and the increase of the price of the credits, which will eventually delay the credit activities.

Even though in the end of 2009 some of the indicators of the banking system showed slower increase (the profitability of the banks and of the ROA), while the percentage of the classified credits raised, the capital adequacy and the level of liquidity of the banks on Bulgarian market are considered to be sufficient to neutralise the negative trends. Bulgarian National Bank is following closely the developments in the banking system and reacts with measures within its competency in order to cope with identified potential problems.

## RUSSIAN FEDERATION

The basic approaches for competition analysis on financial and on product markets are similar. Competition analysis is conducted in accordance with the Order of the FAS Russia №108 of 25.04.2006 “On Adoption of the Sequence of competition analysis and assessment conduction on the product market”, which includes:

- Definition of period of market analysis;
- Definition of market borders;
- Definition of geographical borders of the market;
- Definition of the range of economic entities operating on this market;
- Definition of the market volume and market shares of players on this market;
- Definition of concentration rate on this market;
- Definition of entry barriers on this market;
- Competition assessment on this market;
- Preparation of analytical report (final document which is a basis for the decision of the competition authority).

Standard methods of competition assessment (market shares, market concentration coefficient, Herfindahl index, etc.) are being used.

According to the data of 01.01.2009 (before the crisis) the banking sector on regional markets is characterised as follows:

- Credit markets are characterised by high capital concentration rates in 46 regions of the Russian Federation; in 19 other regions this rate is growing; in 3 regions the market is monopolised.
- Deposit market is characterised by high capital concentration rates in 61 regions of the Russian Federation; in 11 other regions this rate is growing; in 4 regions the market is monopolised.

Since November 2008 when crisis was spreading the FAS Russia considerably reduced the period for consideration of pre-merger notifications from 90 days, established by the Federal Law №135-FZ of 26.07.2006 “On Protection of Competition”, to 30 days in order to foster the process of transaction completion. Period for consideration of pre-merger notification on acquisition of shares (stocks), assets and rights of financial organisations was reduced up to 5 days.

At the same time there was adopted the Federal Law №175-FZ of 27.10.2008 “On Additional Measures on Ensuring Stability of Banking System until December 31, 2011”, which establishes special rules for acquiring stocks (shares in the authorised capital) of credit organisations in compliance with the steps on prevention of bankruptcy of banks that are parties to the system of compulsory insurance of private deposits in the Russia. In particular, there is no need for gaining the FAS Russia preliminary approval for transactions on acquiring stocks (shares) by those investors, who acquire these stocks (shares)

in accordance with the plan of participation of the state corporation “Agency on deposit insurance” in prevention of banks’ bankruptcy.

Alfa-Bank already took an advantage of this provision when buying Bank “Northern Treasury” which is the one of the largest banks in Urals.

In accordance with the Plan of actions on implementation of the Programme on Anti-crisis Measures of the Government of the Russian Federation for 2009, certain recovery steps have been undertaken to stimulate concentration and consolidation in the banking sector aimed at recapitalisation of the credit organisations. In particular, minimal size of the owned assets of the credit organisations was increased to cover their risks.

Moreover in order to recover the financial sector and other sectors of economy the FAS Russia elaborated and submitted for the consideration of the Government of the Russian Federation the following proposals that were supported by the business financial community:

- The main ways to gain additional liquidity for the credit organisation without any deposit is to attract federal budget funds on the bank deposits and gain credit from the Bank of Russia. Presently restriction of access of credit organisations to the funds of state support due to the absence of rating of long-term credit status issued by international or Russian rating agency is unjustified. The FAS Russia suggests using indices provided for in Instruction of the Bank of Russia №2005-Y of 30.04.2008 “On assessment of economic status of banks” as a basic criteria for ensuring access of the credit organisations to the state funds.
- In order to efficiently control the targeted use of the credit funds the FAS Russia suggests using the system of special accounts with the mode of approving expenditures only in accordance with aims to credit real sector, SMEs and other directions determined by the Government of the Russian Federation.
- To ensure timely allocation of state funds, the FAS Russia is suggesting to introduce a mechanism for such allocation during the certain period of time, for example not more than 3 months.
- With regard to SMEs the FAS Russia suggests that the state support funds are provided to the SMEs at the credit rate not exceeding the rate determined by the Government of the Russian Federation through auction.

It is important to note that the Federal Antimonopoly Service didn’t ease its antimonopoly control over the activity of the economic entities despite crisis. In 2008-2009 the FAS Russia considered a number of transactions on capital concentration that were to be concluded as a result of unstable conditions in the Russian banking sector. As a result of such consideration of these transactions, none was blocked, as all of them could not have led to competition restriction on the market of banking services. One of such transactions was acquisition by Vnesheconombank (Russian Bank for Development) of more than 95% of the voting shares of OJSC AKB “Svyaz-Bank” and of more than 90% of voting shares of “GLOBEXBANK”.

## SOUTH AFRICA

### 1. Introduction

South Africa's financial sector is well-developed by emerging market standards. Its major features include a high degree of integration with international capital markets; relatively mature debt markets; sophisticated insurance underwriting; a world-class payments system; and a stable, privately-owned commercial banking sector. South Africa experienced no bank or insurance company failures during the recent international crisis.

The commercial and retail banking industries comprise a large and important part of the financial sector. These two industries have been highly concentrated since the early 1990s; they are dominated by four large full-service banks, accounting for at least 80% of the various market segments, depending on how markets are defined and market shares measured. Retail banking is especially concentrated, and is where the Competition Commission ('the Commission') has focused most of its attention.

Market shares in South African banking have not been measured consistently over time. In an analysis of an aborted merger between two of the 'big four' banks, assessed by the Commission in 2000, the Commission estimated a four-firm concentration ratio of approximately 82% for deposits; between 92% and 97% for personal transaction accounts (depending on the data source); and about 81% for mortgages. A 2004 study (not conducted by the Commission) claimed that by 2003 the big four accounted for 83% of deposits and 92% of mortgages. The most recent study, commissioned by the Commission but carried out by an independent Panel between 2006 and 2008, showed that in 2006 the big four accounted for 95% of the market for personal transaction services. This was measured using the value of month-end balances in all cheque, transmission, savings, and demand deposit accounts.

South Africa's only banking crisis since the advent of democracy in 1994 occurred in 2002, when the country's then seventh-largest bank, Saambou, collapsed on the back of reckless mortgage lending and outright fraud.<sup>1</sup> Saambou's failure triggered a crisis big enough to force the then sixth-largest bank, BOE, to seek assistance from government. This it received, but was then immediately acquired by the fourth-largest bank, Nedbank. The government's guarantee on BOE was removed only once this transaction had been completed, suggesting that BOE had little choice in the matter. The transaction was not assessed by the Commission.

Concentration rose after 2002, but it is difficult to assess the extent of the increase. In total, 22 financial institutions either collapsed or were acquired by bigger rivals during this period. Today South Africa now has no meaningful 'second tier' of deposit-taking institutions (e.g. regional banks, building societies, or limited-license savings and loans banks), and there has been only one entrant into the deposits market since then (Capitec Bank) that has managed to survive and grow.

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<sup>1</sup> Saambou was a wholly subsidiary of Absa Bank, one of South Africa's big four. Unifer, a micro-lender that collapsed in the same 2002 crisis, was also owned by Absa.

## 2. Regulation of the banking sector

South Africa's prudential regulations are well-developed, and the Bank Supervision Department of the South African Reserve Bank (SARB) has a reputation for strong risk-aversion. Commentators argue it became more risk-averse after the 2002 crisis. This may explain why South Africa was amongst the first set of countries to fully implement Basel II, has ensured the cost of obtaining and maintaining a banking license is high, and has always placed limits on banks' international exposures.

Banks' activities in the national payments system are also tightly controlled and closely monitored on a daily basis by a combination of SARB officials and staff members of the Payments Association of South Africa (PASA), whose members are all registered banks. Non-banks are simply not allowed access to any part of the payments system, and are denied membership of PASA, which is primarily responsible for developing and enforcing access rules. In addition, since 2006 South Africa has enjoyed laws regulating all credit extension, which has been hailed internationally for contributing to responsible and sustainable lending by a large variety of institutions, including commercial banks.

There is evidence to suggest that this policy stance has lessened competition between South African banks considerably. To date this consequence has been on little concern to bank regulators. The fact that South Africa's financial system emerged from the 2008 crisis virtually unscathed is taken by many as proof that South Africa's clear prioritisation of stability is correct and should not change. The Commission's central task in banking has therefore been to show that competition can be increased without altering the risk-profile of the banking and payments systems, and without increasing the risk of instability to unmanageable levels.

## 3. The banking sector and competition law

The Competition Act no. 89 of 1998 (the Act) applies equally in South Africa, with the important exception of bank mergers. The Banks Act no. 94 of 1990, passed prior to the Competition Act, grants the Minister of Finance and/or the Registrar of Banks jurisdiction over bank mergers, subject to certain provisions. This was confirmed in a 2000 high court judgement, which led to the Competition Act being amended in 2001. The Act now states that the competition authorities may not make decisions on mergers involving banks, as long as the merging parties have obtained the permission or consent the Minister of Finance, as per the Banks Act, or the Minister of Finance has certified to the Commission that the bank merger concerned is in the 'public interest'<sup>2</sup>. At any stage, however, the Minister of Finance and/or the Registrar of Banks in the South African Reserve Bank may request the Commission's view.

## 4. Assessing competition in banking in South Africa

South Africa has no specific guidelines for measuring competition in its financial sector. Bank mergers that have been studied by the Commission have assessed competition in much the same way as other mergers and enforcement cases have done. This entails a combination of basic market structure analysis and analyses of contestability and effective competition. Furthermore, the Commission's focus has been limited to merchant and retail banking; no competition assessments in investment banking, for example, have been undertaken.

Standard measures of competition are probably insufficient for South Africa's financial sector *as a whole*. This is because it contains industries subject to rapid innovation and creative destruction, such as

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<sup>2</sup> Public interest is defined in this context as the continued stability and safety of the banking and payments systems.

investment banking. Globally it has been found that in such industries, the number of competitors or their market shares often predict little about the degree or nature of competition amongst them.<sup>3</sup>

However, in other financial services industries, such as retail banking, where dynamic theories of competition are probably less relevant, standard measures of competition are useful departure points, and, importantly, may be arrived at relatively efficiently.

South Africa's focus on merchant and retail banking is explained by long-standing concerns over the lack of competition in these markets. Access to financial services by the poor is still a major policy challenge, and the cost of basic retail banking services are seen as the main obstacle to overcoming it. On the other hand, there appear to be few tradeoffs stemming from greater competition in *retail* banking. Such competition is unlikely to encourage the sort of risk-taking that contributed to the most recent international financial crisis. This is especially true of competition in the payments system, where retail payments account for less than 10% of daily volumes

A 2004 study<sup>4</sup> identified various anti-competitive outcomes such as high prices and financial exclusion, poor quality service, and low rates of innovation (especially in payments). The study attributed these partly to the basic characteristics or structure of the market—very high concentration and profitability in retail banking and payments—and partly to the conclusion that retail banking in South African is not contestable, and competition amongst incumbents is ineffective. Entry barriers in retail banking are very high and the threat of entry is weak; while significant information problems hamper rational consumer choice.

A follow-up study in 2006 focused primarily on competition in the payments system, for three reasons. First, competition in payments is limited and innovation rates are low. Second, because of this, approximately 38% of bank revenue derived from payments in 2004, a high number by international standards. Third and finally, much of the competition problems are caused by regulations. While these have been designed to ensure the safety and stability of the payments system, technological change and improved regulatory design means that the same policy objectives may be achieved without limiting competition as much as is the case today. The central argument in favour of increasing competition in payments is that there is no longer any reason why, with an appropriately-designed regulatory regime, the provision of payments services should be the sole domain of registered banks.

The findings of these two studies, coupled with growing public dissatisfaction and a steadily-increasing list of complaints against banks lodged with the Commission informed the Commission's decision to launch a sector enquiry in August 2006.<sup>5</sup> The Banking Enquiry, which focused on retail banking and payments only, conducted a comprehensive market power assessment, and found that each of the big four banks possess appreciable market power despite none possessing a market share significantly above 30% in any product category. South African retail banks thus operate as a tightly-knit oligopoly, and have traditionally managed to take advantage of this market structure by avoiding obvious price competition.

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<sup>3</sup> See Claessens, S. (2009) - Competition in the Financial Sector: Overview of Competition Policy, The World Bank Research Observer 24, (1), 83-118.

<sup>4</sup> "Competition in South African Banking," Task Group Report for the National Treasury and the South African Reserve Bank, April 2004, Pretoria.

<sup>5</sup> At the time the Commission lacked formal enquiry powers such as those available to the UK Competition Commission, meaning that the Panel conducting the enquiry was unable to summons information; all participation from industry was voluntary.



The Enquiry attributed this mainly to cost structures (high fixed and common costs) that encourage or indeed require banks to achieve large scale economies; and barriers to entry, which have virtually eliminated the threat of entry. The Enquiry argued further that banks have built on these advantages by ensuring that product differentiation and pricing complexity are both high; large information gaps and asymmetries prevail; and customer switching is very low.

The Enquiry placed all of the competition problems it identified into four broad categories: barriers to entering the payments systems; restrictive interbank arrangements (including the payment card, EFT, and automated cash machine networks); the factors contributing to high search and switching costs; and a variety of consumer protection issues resulting from abuses of market power (e.g. penalty fees).

The Enquiry's recommendations naturally also fall into those categories. Their major features include:

- Developing a purpose-designed regime for regulating non-banks' access to the payments system, and then granting that access;
- Establishing a regulator to determine the need for interchange in any card or EFT transaction, and then, if found to be necessary, regulating the relevant fee;
- Regulating penalty fees for dishonoured debit orders (direct debits);
- Replacing the current inter-bank pricing model for automated cash machines with a direct charging model very similar to the one recently implemented in Australia;
- Introducing an account switching code to reduce switching costs, and various other measures to reduce search costs.

All of the Enquiry's 28 recommendations are currently under review by the Commission in conjunction with the SARB, the Department of Finance, and the Department of Trade and Industry, and plans for implementing those that are accepted are still under development. Only one recommendation suggests that the Commission consider initiating an investigation into a potentially prohibited practice, and even then only if regulatory changes cannot be made.

## **5. Conclusion**

Given all of this the Commission is committed to working with regulators and industry to find ways to improve competition in retail banking. The major policy reform challenges concern entry barriers, both to deposit-taking and to the payments system. The Commission believes that one of the major lessons of the crisis, more specifically of governments' responses to it, is that the more concentrated a banking sector is prior to a crisis, the more difficult it is for a government to refuse financial assistance to a failing bank. In other words, the Commission regards highly the notion that no bank should ever be allowed or encouraged to become 'too big to fail'.

## CHINESE TAIPEI

### 1. Introduction

In preparing the present submission, the Fair Trade Commission (hereinafter “the FTC”) consulted with the competent authority, the Financial Supervisory Commission (hereinafter “the FSC”), which is responsible for the enforcement of the Banking Act, the Financial Holding Company Act, the Financial Institutions Merger Act, and other financial regulations. The primary objectives of the FSC are to consolidate supervision over the banking, securities and insurance sectors and to assume the role of single regulator for all of these industries.

This paper will illustrate the issues related to the degree of competition measured in the financial sector, banking consolidation process and related policies, as well as law enforcement activities.

### 2. Competition and Concentration: General Issues

#### 2.1 *Current FTC’s law enforcement in the financial sector*

Pursuant to Article 12 of the Fair Trade Act, the FTC may not prohibit any of the mergers filed if the overall economic benefit of the merger outweighs the disadvantages resulted from competition restraints. The standard for merger review, however, is not specifically defined in Chinese Taipei’s Fair Trade Act, but Chinese Taipei applies the “Guidelines on Handling Merger Filings” when reviewing mergers.

As the FTC reviews a merger proposal, the first step is to define the relevant market and calculate the market share or market concentration ratio, such as the CR4 and HHI index. The FTC uses the market share or market concentration ratio to measure the market power and market concentration of the financial industry. The FTC also evaluates how market competition is affected by the number of enterprises in a merger and the increase in market concentration after the merger.

With the deregulation of banking service, there are more and more financial innovations and savings/loans is not the only business for banks. In practice, the FTC employs industry information provided by the financial competent authority to measure competition in the financial industry, such as the total number of cards in circulation for the credit card market and the outstanding consumer loans for the consumer loans market. The way the FTC measures the degree of competition in the banking sector is not different from that for other industries.

Since November 2001, the FTC has received 35 merger notifications/applications related to financial holding companies. According to our enforcement experience, the HHI index in relevant financial markets is less than 1,000, and the increase in the HHI index after a merger is limited; hence, the likelihood of restricting competition is relatively low. As for other mergers related to the financial industry, the FTC believes the market share of merged enterprises in relevant markets is not high. Such mergers were not prohibited based on the following reasons: there is no significant increase in the market share of the relevant market after the merger, the merger has limited or no significant impacts on financial market structure, no negative impacts were imposed on potential market players, and the financial industry is relatively dispersed in terms of market concentration.

The FTC’s standard for merger review depends on whether the overall economic benefit of the merger outweighs the disadvantages resulted from its restraints on competition. Thus, the net effect between the

economic benefit and the disadvantages of competitive restraint resulting from the merger is the basis of the substantive test. Differing from the financial competent authority, the focus of the FTC merger review is to maintain competition, while the FSC places emphasis on financial supervision and management. The two authorities may have different points of view in merger cases, but they share the goal of creating a stable and prosperous economy.

## **2.2 *Merger case***

In 2007, Citibank N.A., through a fully-owned subsidiary (Citibank Overseas Investment Corp.), established a new subsidiary (Citi Global Bank) in Chinese Taipei to merge with Bank of Overseas Chinese. Citi Global Bank is the surviving company after the merger, and Bank of Overseas Chinese is the dissolved company. This merger satisfied the definition of merger listed in Subparagraph 1, Paragraph 1, Article 6 of the Fair Trade Act; the sales amount for the preceding fiscal year of Citi Taiwan or Bank of Overseas Chinese exceeds the threshold amount publicly announced by the FTC as stipulated in Subparagraph 3, Paragraph 1, Article 11 of the Fair Trade Act, and it did not apply to the exemptions in Article 11-1 of the Fair Trade Act; as a result, the enterprises filed a merger application to the FTC accordingly.

The major markets (i.e., savings, loans, credit cards and trust business) affected by the merger between Citi Global Bank and Bank of Overseas Chinese is the banking sector. Pursuant to data announced by the FSC, there are 37 local banks and 32 foreign banks in Chinese Taipei, each with a tiny market share. The domestic market for financial business has a low degree of concentration.

In the review, the FTC found that this merger did not have a large impact on the market share, the merged enterprise still faced market competition and could not increase the prices of goods or the remuneration for services, the impacts of the merger on the financial market structure were limited, and the merger did not impede competition among existing enterprises. As a result, this merger did not significantly weaken competition in relevant markets; on the contrary, the merger is beneficial to the overall economy, and it was thus not prohibited by the FTC pursuant to Article 12 of the Fair Trade Act.

## **2.3 *Current banking consolidation and policy in Chinese Taipei***

Since the government encourages financial consolidation, there are increasing integration and merger activities in the financial industry. Between September 2004 and the present day, 37 mergers have been completed, and the number of domestic banks has been reduced from 50 in Year 2001 to the present 37. In addition, 18 foreign companies have invested in domestic financial holding companies and banks (in 13 instances). Foreign banks have entered the domestic financial market through mergers; as a result, they have more locations in Chinese Taipei. At the end of September 2009, a total of 32 foreign banks had established 133 branches, 2 subsidiaries, and 150 branches under subsidiaries in Chinese Taipei. These statistics show that financial consolidation has made the domestic financial market more attractive and has helped domestic financial institutions to gain experience from foreign banks.

Due to excessive competition, the banking sector faces the following problems: government-owned banks still have high market shares in relevant markets, the efficiency of financial markets needs to be improved, there is a lack of large and internationally-competitive financial institutions, there are too many banks, and the banks make relatively low profits compared to major banks in other countries.

Financial consolidation is an international trend, and the banks still need to expand their scale of operations and become more competitive. Based on the comparisons between current banking operations and the development of foreign financial institutions, we shall respond to market demand, promote bank

consolidation, and introduce advanced management techniques from abroad, in order to expand the scale/business scope of financial institutions and increase competitiveness in the financial industry.

Since the third quarter of 2008, we have faced the challenges of economic and financial conditions both domestically and internationally; it is thus crucial to improve the quality of financial institutions through financial consolidations. In the future, Chinese Taipei will continue to promote financial consolidation based on the market mechanism and to amend merger-related regulations. The process of consolidation shall be fair, impartial, and public. The consolidations shall also comply with business practices and balance the rights of shareholders, employees and customers.

### **3. Competition, Concentration and Crisis**

The FTC, in the general procedure of a merger review, shall consider the following factors when assessing the competition restraints resulted from a merger:

- Unilateral Effects: After the merger, the enterprises participating in the merger are not restrained from market competition and can thus elevate the prices of goods or the remuneration for services;
- Co-ordinated Interaction: After the merger, the merging parties and their competitors restrict business activities among themselves or, even though they are not mutually restricting one another from competition, they have taken concerted actions to remove market competition in practice;
- Degree of Entry: The likelihood and timeliness of entry by potential competitors, and whether such entry would exert competitive pressures on the existing enterprises in the market shall be examined;
- Countervailing Power: This refers to the ability of trading counterparts or potential trading counterparts to prevent the merging parties from raising the prices of goods or the remuneration for services rendered.

With regard to merger filings that raise suspicion of obvious competition restraints, the filing enterprises shall submit information regarding the following factors with respect to the overall economic benefits to the FTC for deliberation.

- Consumer interests;
- The merging parties were originally in a weaker position when trading;
- One of the merging parties is a failing enterprise;
- Other concrete results related to the overall economic benefits.

Pursuant to Article 12 of the Fair Trade Act, the FTC may not prohibit a merger if the overall economic benefit of the merger outweighs the disadvantages resulted from restrictive competition.

Both before and after the financial crisis, financial institutions seeking to engage in mergers/concerted actions or restrictive competition in the financial industry, if complied with Articles 11 and 14 of the Fair Trade Act, shall apply to or notify the FTC; violations shall be punished pursuant to the Fair Trade Act. Hence, the FTC has the authority to approve/prohibit a merger or concerted actions in the financial

industry. However, Article 46 of the Fair Trade Act stipulates that the Act cannot be applied to conduct which complies with other applicable laws (such as the Banking Act, the Financial Holding Company Act, the Financial Institutions Merger Act, etc.) as long as those laws do not conflict with the legislative purposes of the Fair Trade Act.

The FTC discussed the exemptions from the Fair Trade Act for mergers between financial institutions at its Commissioners' meeting in June 1998. The FTC resolved that in case emergent mergers between banks are mandatory, remedial, and non-voluntary in nature, which differ from regular bank mergers. The main objective is to help problematic financial institutions and maintain financial market order. The FTC respects the decisions of the financial competent authority in implementing necessary measures for failing financial institutions in emergency situations; however, the FTC recommends that the financial competent authority consider market competition factors when stipulating provisions for exemptions under the relevant laws.

In addition, pursuant to statistics compiled by the Banking Bureau of the FSC, there are 37 domestic banks and 32 foreign banks in Chinese Taipei. The domestic market for financial business is moderately or lowly-concentrated. Thus, mergers between financial institutions do not give rise to a significant anticompetitive effect on competition. Therefore, currently there are no specific competition-related issues that should be addressed in the banking sector in Chinese Taipei.

**MR THORSTEN BECK<sup>1</sup>****Abstract**

Theory makes ambiguous predictions about the relationship between market structure and competitiveness of the banking system and banking sector stability. Empirical studies focusing on individual countries provide similarly ambiguous results, while cross-country studies point mostly to a positive relationship between competition and stability in the banking system. Where liberalisation and unfettered competition have resulted in fragility, this has been mostly the consequence of regulatory and supervisory failures. The advantages of competition for an efficient and inclusive financial system are strong, and regulatory and supervisory policies should focus on an incentive-compatible environment for banking rather than try to fine-tune market structure or the degree of competition.

**1. Introduction**

Stability concerns are often at the centre of banking sector policy debates. After a relatively stable period between World War II and the 1970s, developed and developing countries alike have been hit by banking crises in the three decades since then. While the early years of the 21<sup>st</sup> century have seen a period of relative banking system stability around the world, recent turbulences linked to the U.S. subprime crisis have again caused concerns for policy makers, even in emerging economies that are not at the centre of the storm.

Competition in the banking market has been at the centre of the policy debate on financial stability. As in other, non-financial, markets competition is often seen as pre-requisite for an effective banking system. Several theoretical and empirical studies, however, have shed doubts on this proposition, claiming that monopoly rents gives banks higher incentives to invest in relationships with smaller and more opaque borrowers.<sup>2</sup> Similarly, theoretical and empirical studies have not come to a conclusive finding on the relationship between banking market competition and stability. There is a notion that excessive competition can lead to fragility and restraints on competition are necessary to preserve the stability of the banking system. Activity and branching restrictions put in place after the financial crises of the 1930s in many industrialised countries had the explicit goal of restricting competition. Financial liberalisation in the 1970s and 1980s resulting in unchecked competition, on the other hand, has often been blamed for subsequent banking fragility in many developed and developing countries. Unfettered competition in the U.S. financial system has been partly blamed for the recent boom and subsequent bust in the subprime mortgage market.

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<sup>1</sup> Bank Competition and Financial Stability: Friends or Foes? World Bank. This paper was written for the G20 Seminar on Competition in the Financial Sector in Bali, February 2008 and builds on joint work with Asli Demirguc-Kunt and Ross Levine. Comments from Stijn Claessens and participants at the G20 Seminar in Bali are gratefully acknowledged. This paper's findings, interpretations, and conclusions are entirely those of the author and do not necessarily represent the views of the World Bank, its Executive Directors, or the countries they represent.

<sup>2</sup> While theory and some empirical work suggest that market power might entice banks to invest in long-term relationships with small and opaque enterprises as they know that they can regain the initial investment in the relationship at a later stage (Petersen and Rajan, 1995; Bonaccorsi di Patti and Dell'Ariccia, 2004), other empirical papers point to the healthy effect of competition on availability of lending to SMEs (Cetorelli and Strahan, 2004; Beck, Demirgüç-Kunt and Maksimovic, 2004). See Berger et al. (2004) for an overview.

The past decades have also seen a rapid consolidation of banks around the world, which is intensifying concerns among policymakers about bank concentration, as reflected in major reports by the Bank for International Settlements (2001), International Monetary Fund (2001), and the Group of Ten (2001). This consolidation has happened not only within countries, but also across countries. The past decades have seen a wave of foreign bank entry in many developing countries, and, more recently, there have also been cross-border mergers in many developed financial systems, most notably within Europe. Consolidation has happened both within business lines but also across business lines, resulting in financial conglomerates that offer commercial and investment banking, insurance and pension fund services. While consolidation has often been justified by efficiency and scale economy arguments, the process of consolidation and the resulting financial conglomerates have given rise to stability concerns. Specifically, the size and complexity of these institutions might undermine proper regulation and supervision by both markets and authorities; their size and critical role across different segments of financial systems might make it difficult for authorities to intervene and potentially close such as institutions, a phenomenon known as “too-big” or “too-important-to-fail.”

What are the effects of bank competition and the consolidation process on the stability of banking systems around the world? While seemingly opposing trends, consolidation does not necessarily imply less competition, as such consolidation can take place across different business lines or markets or create fewer, but more competitive players. Both competition and consolidation, however, have raised stability concerns among policy makers. This paper summarises the existing literature and tries to derive policy conclusions. This is an important topic for policy makers for several reasons. First, given different policy goals such as deepening, broadening and stability of financial systems, it is important to understand whether there are trade-offs across these different policy goals with respect to competition. Second, given the array of regulatory policies at the disposal of policy makers, it is important to understand how they affect competition and stability as well as how they vary across different competitive environments in their effect on stability.

The discussion on the relationship between bank competition and stability has been made difficult by measuring both stability and competition appropriately, as we will discuss in section 2. While we will not review exhaustively the literature on banking distress or on measuring bank competition, understanding both concepts is important for the remainder of the discussion. Section 3 turns to the theoretical literature, which has derived different predictions concerning the effect of competition on bank stability. Albeit sometimes arbitrary, for presentational purposes, we organise the literature into two opposing views, the competition-stability and competition-fragility hypotheses. Section 4 presents the results of empirical studies. We distinguish between bank-level studies focused on one country, on the one hand, and more recent cross-country studies, on the other hand. While the bank-level studies do not provide unambiguous findings on the relationship between competition and stability, cross-country studies point mostly to a positive relationship. In addition, the review of the theoretical and empirical literature allows two conclusions: first, it is important to consider the interaction of regulatory policies and market structure and, second, bank concentration is not an appropriate measure of bank competition and any effect of bank concentration on stability works through channels other than bank competition. Section 5 uses the theoretical and empirical findings to define the policy space for policy makers, also taking into consideration the related literature on bank regulation and banking system stability. Section 6 concludes and points to future research directions.

It is important to define what this paper does not cover. First, the paper is focused on domestic bank competition; the increased financial integration in the EU – while of increasing importance for policy makers and regulators – will not be specifically touched upon in this paper. Second, an important dimension of competition, as pointed out by Claessens and Laeven (2004), is foreign bank entry. While we do not cover this literature in this paper, our policy discussion will make reference to the findings of this

literature. It remains to be stressed that this paper reflects the current state of knowledge. As discussed in the Conclusions, more research is needed, especially in light of new markets and products.

## 2. Measuring Stability and Competition

In order to test the relationship between stability and competition, we need appropriate measures of both. Bank stability is mostly measured in a negative way, i.e. by considering individual or systemic bank distress. Systemic banking distress can be broadly defined as periods where the banking system is not capable of fulfilling its intermediation function (deposit taking, lending, payment services) for the economy effectively anymore. In this paper, we follow the definition by Demirguc-Kunt and Detragiache (1998, 2002) who define banking distress as systemic if (i) non-performing assets reached at least 10 percent of total assets at the peak of the crisis, (ii) the fiscal cost of the rescue operations was at least 2 percent of GDP, (iii) emergency measures, such as bank holidays, deposit freezes, blanket guarantees to depositors or other bank creditors, were taken to assist the banking system, or (iv) if large-scale bank nationalisations took place.<sup>3</sup> More difficult than defining a crisis is the exact timing, i.e. the start and the end year, and most cross-country papers therefore subject their analysis to alternative definitions of the exact crisis periods.

Using this definition of systemic banking crises, Honohan and Laeven (2005) find 116 systemic banking crises in 113 countries over the period 1974 to 2002, which illustrates how widespread financial crises have become across the globe (Figure 1). Both developed and developing countries have been hit by systemic crises, with fiscal costs of up to 55% of GDP in Argentina in the early 1980s. The 1980s and 1990s have been characterised by a relatively large number of banking crises. During this period, at least 20 countries were in a systemic banking crisis at the same time; ranging from such diverse countries as Japan and U.S. to Argentina and West Africa. In addition to systemic crises, there were numerous nonsystemic banking crises, which disturbed the normal functioning of banking business.

While systemic banking crises top the list of bank supervisors' and policy makers' concerns, individual bank fragility can also be worrying, as it puts countries' financial safety net under pressure (Beck, 2004). Several systemic banking crises have started as crises in individual banks. Furthermore, the failure of large international banks present in several countries can have important repercussions for cross-border financial activities, as the example of Herstatt in 1974 has shown. Today's important cross-border financial sector dependencies have become clear in the recent crisis when first signs of distress in the U.S. subprime market showed up in several German banks.

Individual bank distress can be measured in terms of proximity to bankruptcy or entry into bankruptcy. Specifically, researchers often use the z-score, which is the sum of capital-asset ratio and return on assets, weighted by the standard deviation of return on assets (Boyd, de Nicoló and Jalal, 2006). The resulting ratio indicates the number of standard deviations in return on assets that a bank is away from insolvency and thus the likelihood of failure. Alternatively, researchers have used the non-performing loan ratio as fragility indicator. Unlike the z-score, this measure focuses on credit risk and cannot be related directly to the likelihood of failure. Neither of the two measures considers actual failure of banks.

Even more difficult than measuring bank stability is measuring bank competition. Here, the literature has used a variety of measures, which can be broadly classified into three groups. First, there are market structure measures such as concentration ratios, number of banks or Herfindahl indices. These indicators measure the actual market shares without allowing inferences on the competitive behaviour of banks. They are rather crude measures that do not take into account that banks with different ownership behave differently and that banks might not compete directly with each other in the same line of business. Most

<sup>3</sup> See also Caprio and Klingebiel (1999).



importantly, the literature has not come to a conclusion on whether market structure determines bank behaviour (structure-conduct-performance hypothesis) or market structure is the result of performance (efficient structure hypothesis).<sup>4</sup>

Second, competition measures, such as the H-Statistics, which measures the reaction of output to input prices, gauge the competitive behaviour of banks, but impose certain restrictive assumptions on banks' cost function. Specifically, under perfect competition, increases in input prices cause total revenue and marginal cost to move together, while in imperfect competition they do not. However, the inference from this measure derived from the profit-maximising condition is only valid if the market in question is in equilibrium. Estimates of the H-Statistics vary widely, as the studies by Claessens and Laeven (2004) and Bikker and Spierdijk (2007) show. Similarly, the Lerner index indicates a bank's market power by considering the ratio between marginal cost and price, which should be equal in perfect competition, but will diverge in less competitive environments. Specifically, the ratio of price to marginal cost decreases in the degree of competitiveness. Importantly, the price has to be properly adjusted for lending risk.<sup>5</sup>

Third, indicators of the regulatory framework can provide indications of the contestability of the banking system. Such measures include entry requirements, formal and informal barriers to entry for domestic and foreign banks, activity restrictions and other regulatory requirements, which might prevent new entrants from challenging incumbents. However, one can include even the wider institutional framework among these indicators, such as the contractual and informational framework, a topic to which we will return to in section 5.

An additional challenge in measuring competition is to properly define the relevant market. Cross-country studies typically define an economy as the relevant market, not necessarily a correct assumption. Studies for the U.S. have typically focused on the Metropolitan Statistical Areas (MSAs) as the relevant market. Further, market structure and competition indicators are typically measured on the institutional level, rather than the product level; i.e. competition is assumed to be the same across different product lines, such as deposit, lending and payment services.

### **3. Bank Competition and Stability: What Does Theory Predict?**

Theoretical models have made contrasting predictions on the relationship between bank concentration, competition and stability.<sup>6</sup> These predictions might differ in static and dynamic models and have important interactions with elements of the regulatory framework, such as deposit insurance. Most theoretical models do not make a distinction between market structure, such as concentration, and competition, but rather assume a one-to-one mapping from market structure to competitive behaviour of banks. In the following, we will summarise the theoretical literature under two headings, depending whether the model predicts a positive or negative relationship between competition and stability.

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<sup>4</sup> See Berger et al. (2004) for a discussion of this literature.

<sup>5</sup> Other performance measures such as interest rate spreads and margins are not necessarily good indicators of the competitiveness of a banking system as they are driven by other bank- and country-specific factors, such as bank size and business, contractual framework, taxation and macro performance. See Beck (2007) for a discussion.

<sup>6</sup> See Carletti and Hartmann (2003) for an in-depth literature survey and Allen and Gale (2004) for an excellent exposition on the different theoretical mechanisms that can lead to contrasting relationships between competition and stability.

### 3.1 *Competition-fragility Hypotheses*

Some models predict that more concentrated and less competitive banking systems are more stable, as profits provide a buffer against fragility and provide incentives against excessive risk taking. This “charter value” view of banking, as theoretically modelled by Marcus (1984), Chan, Greenbaum and Thakor (1986), and Keeley (1990), sees banks as choosing the risk of their asset portfolio. Bank owners, however, have incentives to shift risks to depositors, as in a world of limited liability they only participate in the upside part of this risk taking. In more competitive environment with more pressures on profits, banks have higher incentives to take more excessive risks, resulting in higher fragility. In systems with restricted entry and therefore limited competition, on the other hand, banks have better profit opportunities, capital cushions and therefore fewer incentives to take aggressive risks, with positive repercussions for financial stability. In addition, in more competitive environment, banks earn fewer informational rents from their relationship with borrowers, reducing their incentives to properly screen borrowers, again increasing the risk of fragility (Boot and Greenbaum, 1993; Allen and Gale, (2000, 2004). These models thus predict that deregulation resulting in more entry and competition, such as in the U.S. in the 1970s and 1980s and in many emerging markets, would lead to more fragility.

More concentration and less competition can also have positive repercussions for liability risk. Smith (1984) shows that less competition in banking leads to more stability if information about the probability distribution of depositors’ liquidity needs is private and lower competition allows banking relationships to endure for longer periods. Matutes and Vives (1996), however, argue that concentration is not a consistent signal of competition, so that bank illiquidity can arise in any market structure. Specifically, a bank’s distress probability is determined endogenously by depositor’ expectations resulting in the possibility of multiple equilibriums.

Another channel through which competition can impact stability is the interbank market and payment system. As shown by Allen and Gale (2000), perfect competition can prevent banks to provide liquidity to a peer that is hit by a temporary liquidity shortage. If all banks are price takers, no bank has incentive to provide liquidity to the troubled bank, with the result that this bank will eventually fail with negative repercussions for the whole sector. Saez and Shi (2004), on the other hand, show that a limited number of banks can cooperate, act strategically and help a bank with temporary liquidity shortages.

What regulatory policies can enhance banks’ charter value and thus prudent risk taking? Deposit insurance can reduce fragility by preventing bank runs (Diamond and Dybvig, 1983), but also introduces moral hazard and risk shifting into the banking system by providing increased incentives to banks to take excessive risk and reduced incentives for market participants to monitor. A reduction in charter value and more generous deposit insurance can thus act in a multiplicative way to undermine bank stability. Matutes and Vives (1996) show that deposit insurance schemes can prevent a systemic confidence crisis and overcome the coordination failure problem in their model of multiple equilibriums. At the same time, however, deposit insurance schemes can increase unhealthy competition between banks, reduce diversification benefits and ultimately increase failure probability. Cordella and Yeyati (2002) show that with fixed-rate deposit insurance schemes, higher competition increases deposit interest rates and risk, while lowering profits. With risk-adjusted deposit insurance premiums, on the other hand, banks can credibly commit to lower asset risk, thus lowering cost of funding even in competitive environments. Perrotti and Suarez (2003) show that bank failure policies that aim for mergers of failing banks with healthy banks increase the incentives of banks to take prudent risk, as the “last bank standing” increases its charter value. At the same time, an active entry policy can reduce negative effects of increasing concentration in the banking market. The model by Perotti and Suarez also underlines the importance of taking into account dynamic incentive effects for banks.

Another popular regulatory measure is a minimum capital requirement for banks, to thus boost the charter value and reduce incentives for excessive risk taking. Hellmann, Murdock, and Stiglitz (2000), however, show that even with capital requirements, deposit interest rate ceilings are still necessary to prevent banks from excessive risk-taking in competitive markets.

A somewhat different argument of proponents of the competition-fragility hypothesis is that more concentrated banking systems have larger banks, which in turn allows them to better diversify their portfolios. Models by Diamond (1984), Ramakrishnan and Thakor (1984), Boyd and Prescott (1986), Williamson (1986), Allen (1990), and others predict economies of scale in intermediation. While the “large-bank” argument does not rely directly on competition in the market place, it is an important side effect of market structure.

A final argument refers to the number of banks to be supervised by the authorities. If a more concentrated banking system implies a smaller number of banks, this might reduce the supervisory burden and thus enhance overall banking system stability. According to Allen and Gale (2000), the U.S., with its large number of banks, supports this “competition-fragility” view since it has had a history of much greater financial instability than the U.K or Canada, where the banking sector is dominated by fewer larger banks. As in the case of bank size, this argument is about the market structure in banking, not the competition that this implies.

### 3.2 *Competition-stability Hypotheses*

While the charter-value hypothesis predicts that more concentrated and less competitive banking systems are more stable, an opposing view is that a more concentrated banking structure results in more bank fragility. First, Boyd and De Nicoló (2005) argue that the standard argument that market power in banking boosts profits and hence bank stability ignores the potential impact of banks’ market power on firm behaviour. Rather than banks choosing the riskiness of their assets, it is the borrowers who choose the riskiness of their investment undertaken with bank loans. They confirm that concentrated banking systems enhance market power, which allows banks to boost the interest rate they charge to firms. Boyd and De Nicoló’s (2005) theoretical model, however, shows that these higher interest rates may induce firms to assume greater risk, which results in a higher probability that loans turn non-performing. Thus, in many parameterisations of the model, Boyd, and De Nicoló (2005) find a positive relationship between concentration and bank fragility and thus the probability of systemic distress.<sup>7</sup> Similarly, Caminal and Matutes (2002) show that less competition can lead to less credit rationing, larger loans and higher probability of failure if loans are subject to multiplicative uncertainty.

Second, advocates of the “competition-stability” view argue that (i) relative to diffuse banking systems, concentrated banking systems generally have fewer banks and (ii) policymakers are more concerned about bank failures when there are only a few banks. Based on these assumptions, banks in concentrated systems will tend to receive larger subsidies through implicit “too-big” or “too important to fail” policies that intensify risk-taking incentives and hence increase banking system fragility (e.g., Mishkin, 1999). Further, having larger banks in a concentrated banking system could also increase the contagion risk, resulting in a positive link between concentration and systemic fragility.

Proponents of the competition-stability view would also disagree with the proposition that a concentrated banking system characterised by a few banks is easier to monitor than a less concentrated banking system with many banks. The countervailing argument is that bank size is positively correlated with complexity so that large banks are harder to monitor than small banks. Holding all other features of

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<sup>7</sup> Martinez-Miera (2008), however, shows that higher interest rates also imply higher interest revenues for banks, which might result in a U-shaped relationship between competition and bank fragility.

the economy constant, concentrated banking systems tend to have larger banks. Further, the recent consolidation trend has also led to financial conglomerates offering a whole array of financial services, previously offered by specialised institutions, another complicating factor for bank supervisors. Thus, this argument predicts a positive relationship between concentration and fragility.

#### **4. Bank Competition and Stability: What Do the Data Tell Us?**

We can distinguish between several strands of empirical literature, which allow us to infer on the relationship between market structure, competition and stability. Up until recently, the literature either focused on one country or on the comparison of two countries. Only recently, the availability of large cross-country, time-series data sets has enabled cross-country studies to assess the relationship between competition and stability.

##### **4.1. Bank-level Evidence**

In a seminal paper, Keeley (1990) provides evidence that increased competition following the relaxation of state branching restrictions in the 1980s reduced banks' capital cushions and increased risk premiums reflected in higher interest rates on certificates of deposit. Overall, this suggests that higher competition in the U.S. eroded charter values and resulted in higher bank fragility in the 1980s. This is consistent with Dick (2006) who finds evidence of increased charge-off losses and loan loss provisions following deregulation in the 1990s, but contradicts findings by Jayaratne and Strahan (1998) who find that branch deregulation resulted in a sharp decrease in loan losses. Jiménez, Lopez, and Saurina (2007) find for a sample of Spanish banks for the period 1988 to 2003 that banks with higher market power, as measured by the Lerner index, have lower non-performing loans, thus providing evidence for the charter value hypothesis. Notably, they do not find any significant relationship between market structure, as measured by concentration ratios, and non-performing loan ratios.

As discussed by Calomiris (2000) and Calomiris and Mason (2000), an extensive literature finds an inverse relationship between bank scale and bank failure in the United States. Boyd and Runkle (1993), examining 122 U.S. bank holding companies, find that there is an inverse relationship between size and the volatility of asset returns, but no evidence that large banks are less likely to fail. Boyd and Graham (1991, 1996) find that large banks were more likely to fail in the U.S. during the period 1971 to 1986, but less likely in the period 1987 to 1994. De Nicoló (2000), on the other hand, finds a positive and significant relationship between bank size and the probability of failure for banks in the U.S., Japan and several European countries.

An extensive strand of literature infers the effect of market structure and competition on bank fragility by assessing the effect of mergers creating larger banks and increasing market concentration. Paroush (1995) points to higher bank stability caused by increases in market power stemming from diversification gains after mergers. Benston, Hunter and Wall (1995) and Craig and Santos (1997) also point to positive diversification and thus stability gains from bank mergers in the U.S. However, empirical work by Chong (1991) and Hughes and Mester (1998) indicates that bank consolidation tends to increase the riskiness of bank portfolios.

De Nicoló and Kwast (2001) assess the direct and indirect interdependencies of large and complex U.S. banking organisations (LCBO) arising from inter-bank on- and off-balance sheet exposures, including linkages through the payment and settlement systems) by considering the correlation of their stock returns. They find that these correlations increased between 1988 and 1999, as did the market share for these LCBOs, interpreting this as evidence for an increase in systemic risk in the U.S. banking system, partly as consequence of consolidation.

A few descriptive studies have compared banking market structures and stability across pairs of countries. Bordo, Redish and Rockoff (1996) observe a greater stability of Canadian banks than of U.S. banks and relate this to the oligopolistic market structure in Canadian banking, compared to the higher degree of competition in U.S. banking. On the other hand, in spite of higher profitability, there are no indications of less competition in the Canadian market. Comparing the UK and German banking systems, Hoggarth, Milne and Wood (1998) find more competition and less stability in the UK; Staikouras and Wood (2000) find more competition and more stability in the Spanish than in the Greek banking system.

Summarising, there is no clear conclusion from these different empirical studies on the validity of either the competition-stability or the competition-fragility hypotheses. Two conclusions, however, can be drawn. First, a higher degree of market concentration does not necessarily imply less competition. Specifically, testing for the relationship between market structure and stability and for the relationship between competitiveness and stability does not necessarily yield the same results. Second, as predicted by several theoretical studies, there is an important interaction effect between the regulatory and supervisory framework, on the one hand, and market structure and competitiveness, on the other hand, in their effect on banking system stability.

#### 4.2 *Cross-country Studies*

The recent availability of large cross-country time-series datasets has initiated a new wave of literature assessing the validity of the different theoretical models. Beck, Demirguc-Kunt and Levine (2006 a,b) build on the crisis prediction work by Demirguc-Kunt and Detragiache (1998, 2002) to assess the competition-stability and competition-fragility hypotheses. Specifically, using standard panel logit models, they assess whether the probability that a country suffers a systemic banking crisis in a specific year depends on the concentration of the banking system, controlling for other banking system, macroeconomic and institutional factors that the literature has shown to be associated with the probability of a banking crisis. They find that more concentrated banking systems are less likely to suffer systemic banking crises, a finding that is robust to a number of different specifications and controlling for an array of other factors potentially associated with crises. Table 1 presents these results for a sample of 69 countries and 47 crisis episodes over the period 1980 to 1997. These findings hold when they control for general measures of bank competition. When analysing the channels through which concentration might be positively associated with banking system stability, they find tentative evidence that more concentrated banking systems allow better possibilities for banks to diversify risk. On the other hand, they do not find any evidence, that it is easier for bank supervisors to monitor more concentrated banking systems or that the higher stability results from the market power and consequent franchise value of banks in more concentrated banking systems. Bank concentration is thus not an indicator of the lack of competition. Rather, more competitive banking systems are also less likely to suffer systemic banking distress.

Boyd, de Nicoló and Jalal (2006) arrive at a different conclusion using bank-individual fragility data. Rather than focusing on systemic bank distress, they use the z-score, a bank-level measure of distance from insolvency as fragility indicator. Unlike Beck et al. (2006a,b), they find banks are closer to insolvency, i.e. more likely to fail, in countries with more concentrated banking systems. Cross-country results on the effect of concentration thus vary depending on whether one considers individual bank fragility or systemic banking distress. It is important to note, however, the different concepts these studies consider – actual systemic banking distress vs. the probability of individual bank fragility; the latter might not necessarily result in the former.

Schaeck, Cihak and Wolfe (2006) find a negative relationship between bank competition and systemic bank fragility using a more refined measure of competition in the banking market – the H-Statistics. Specifically, using a sample of 38 countries over the period 1980 to 2003, they show that more competitive banking systems are less prone to systemic distress and that time to crisis is longer in more competitive

banking systems (Table 2).<sup>8</sup> Unlike Beck, Demirguc-Kunt and Levine, however, they do not find an independent link between bank concentration and systemic banking fragility. The differences in this finding, however, could be due to the smaller sample utilised by Schaeck, Cihak and Wolfe. Schaeck and Cihak (2007) identify bank capitalisation as one of the channels through which competition fosters stability. Utilising data for more than 2,600 European banks, they show that banks have higher capital ratios in more competitive environments.

Finally, there is cross-country evidence that regulatory policies that restrict entry and banks' activities are negatively associated with bank stability. Specifically, Barth, Caprio and Levine (2004) and Beck et al. (2006 a,b) find that banking systems with more restrictions on banks' activities and barriers to bank entry are more likely to suffer systemic banking distress, while capital regulations are not significantly associated with the likelihood of suffering a crisis. Limiting contestability of the banking sector thus seems to undermine rather than to strengthen bank stability, a result contradicting the charter value hypothesis.

Overall, the cross-country evidence points mostly to a positive relationship between bank competition and stability, but yields mixed results on the relationship between concentration and stability. This also underlines that market structure measures, such as concentration ratios are inadequate measures of bank competition. Higher concentration might result in more stability through channels other than lack of competitiveness, such as improved risk diversification. The rather clear picture arising from the cross-country studies is somewhat in contrast to the ambiguous findings emerging from country-specific bank-level studies, which can be explained by the fact that the latter do not control for the regulatory framework.

## 5. Bank Competition and Stability: Policy Implications

The empirical cross-country results point to overall positive effects of competition on stability, while they yield contradictory results on the relationship between bank concentration and stability. They also underline that crude market structure measures, such as concentration ratios, are not good measures of competition. Overall, maintaining a competitive and contestable banking system seems to have positive repercussions for stability. At the same time, allowing growth of banks even if it implies more concentrated banking systems might have benefits in terms of risk diversification.

While the empirical findings reported so far have important policy implications, it is difficult, for several reasons, to translate them directly into a policy agenda. First, market structure, such as the number of bank or market share of the largest banks, is not directly subject to policy actions in market-based financial systems. Second, many regulatory measures that are associated with banks' competitive behaviour have other, more direct, effects on bank stability than through their effects on competition. We will discuss these different regulatory policies in turn.

A large literature has pointed to the risks of financial liberalisation in a weak institutional environment (Demirguc-Kunt and Detragiache, 1999). This literature points to the dark side of competition in terms of its relationship with individual and systemic bank fragility. Most importantly, theory and international experience with liberalisation episodes over the past thirty years show that liberalisation in an environment where banks can shift risk to the taxpayer leads to excessive and imprudent risk taking, often resulting in systemic banking distress. Most recently, the sub-prime crisis in the U.S. has shown how an increase in the number of competing lenders can result in declining lending standards at times of loose monetary policy

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<sup>8</sup> Levy Yeyati and Micco (2007) find different results for a smaller sample of eight Latin American countries in the 1990s. Specifically, they find that banks in more competitive banking systems are more fragile, as measured by the z-score and the non-performing loan ratio. This contrasting result might be explained by the contemporaneous increase in foreign bank penetration in these countries, which resulted in lower competition.

and financial innovation such as securitisation that allowed easier risk shifting (Dell’Ariccia, Igan, and Laeven, 2008). While proper regulatory safeguards (entry requirements, capital regulations, liquidity requirements etc.) and effective bank supervision are important, an incentive compatible financial safety net that forces banks to assume the consequences of their risk decisions seems especially important.

It is in this context, that restrictions on banks’ activities have often been imposed to prevent financial conglomerates from emerging. Similarly, deposit interest rate ceilings and other restrictions have been proposed to prevent unhealthy competition and excessive risk taking leading to fragility (Hellmann, Murdock, and Sitgilitz, 2000). While theoretically attractive, they are difficult to implement, monitor and enforce in reality, especially in the weak institutional environment they are designed for and might prevent banks from reaping necessary diversification and scale benefits. Critically, they can easily serve as cover for rent-seeking activities, allowing incumbent banks to protect their rent, and can result in political regulatory capture. Not surprisingly, Kroszner and Strahan (1999) find that the strength of lobby groups related to small banks and insurance companies – segments of the financial sector standing to lose from branch deregulation in the U.S. – determined the speed with which states abandoned branching restrictions in the 1970s and 1980s. Mexico offers a well-studied example, where regulatory capture led to a suboptimal privatisation process and subsequent bank distress in the 1980s and 1990s (Haber, 2005).<sup>9</sup>

The role of deposit insurance schemes has been especially controversial. While often introduced to protect small depositors’ lifetime savings and to prevent bank runs, they also provide perverse incentives to banks to take aggressive and excessive risks. These perverse incentives are held less in check in weak supervisory frameworks (Demirguc-Kunt and Detragiache, 2002). While several of the theoretical studies discussed above point to risk-based premiums as solution, other elements such as management of the scheme, compulsory membership and link with the remainder of the financial safety net are important characteristics as well (Demirguc-Kunt and Kane, 2002; Beck and Laeven, 2008).

Another important area that interacts with competition is bank failure resolution, as shown by Perrotti and Suarez (2003). A combination of an active merger and acquisition policy for banks and a liberal entry policy can give banks incentives to take prudent risks, while at the same time maintaining contestability of the banking system. An important issue in the context of increasing consolidation has been the issue of “too-big” or “too-important-to-fail” banks. A clear policy of governments is necessary on how to address large failing banks that are systemically important. While intervention and government support for such institutions might be unavoidable in times of distress, a clear and transparent framework on who takes the decision and assumes the cost is necessary.

The institutional structure of financial sector supervision can be an important factor as well. The recent trend towards consolidated supervision has been justified with the trend towards financial conglomeration across different segments of the financial system and the need to create an even regulatory playing field. Theory suggests that the separation of responsibility for monetary and financial stability and thus also for lender-of-last resort facilities and bank failure resolution might create stability-enhancing incentives (Kahn and Santos, 2005). Empirical analysis of these questions is still outstanding and previous conclusions on the ideal institutional structure might have been put in doubt by the different reactions to the recent crisis.

The contractual and informational framework can also play an important role in interacting with the market structure and competition. Take the example of credit information sharing, which numerous studies have shown to be associated with better access to credit (Love and Mylenko, 2003 and Brown, Jappelli and Pagano, 2007), but also with better credit decisions by banks. For instance, Powell et al. (2004) use the actual data in the public Argentine credit registry to show that availability of system-wide registry

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<sup>9</sup> See Haber and Perrotti (2008) for a recent survey on the relationship between politics and finance.

information can substantially improve the precision of credit decisions even for a large bank. This has important positive repercussions for bank stability. Effective systems of credit information sharing have thus positive ramifications for competition, lowering barriers to entry, and stability.

Another important issue for policy makers, though not covered in the previous sections, is foreign bank entry.<sup>10</sup> Claessens and Laeven (2004) show that foreign bank participation is an important dimension of competition in the banking system. Numerous studies have shown that foreign bank participation has contributed to rather than weakened financial sector stability, as often feared by policy makers in developing countries (see Cull and Martinez Peria, 2007, for a literature overview). Specifically, Cull and Martinez Peria (2007) show, using data on the share of banking sector assets held by foreign banks in over 100 developing countries during 1995-2002, that countries that experienced a banking crisis tended to have higher levels of foreign bank participation than those that did not. Importantly, however, foreign participation increased as a result of crises rather than prior to them.

While foreign bank entry is mostly positively related to banking system stability, government ownership has mostly a negative impact on both competitiveness of the banking system and its stability (Barth, Caprio, and Levine, 2004; Caprio and Martinez Peria, 2002).

A final consideration is competition from the non-bank financial sector and capital markets. As both the East Asian crisis and the recent sub-prime crisis in the U.S. have shown, fragility can start from non- or under-regulated non-bank segments of the financial system. This does not imply limiting interlinkages between different segments of the financial system, but rather calls for a regulatory and supervisory framework that is focused on financial products rather than institutions and avoids possibilities of regulatory arbitrage resulting in risk shifting to less-regulated segments.

## 6. Conclusions

Theory makes ambiguous predictions about the effect of competition on banking stability. Empirical research has been made difficult by finding proper measures of bank competition. Cross-country research has found that more concentrated banking systems are less likely to suffer from systemic banking distress. On the other hand, more competitive banking systems are also less likely to suffer from systemic banking distress. Bank-level analyses give less clear indications, however, and are often confounded with regulatory changes in the country being analysed.

The tentative conclusion of this paper is that competition per se is not detrimental for banking system stability in a market-based financial system with the necessary supporting institutional frameworks. Policies associated with more competitive financial systems – fewer activity restrictions, lower entry barriers, openness to foreign bank entry – have also been found to be associated with higher stability. However, it is important to note the necessary institutional frameworks for countries to reap maximum benefits from competition. While unchecked competition can lead to fragility in weak institutional environment, it is important to focus in improving these frameworks, rather than limiting competition, at least in the long term. Restrictions put in place at times of financial liberalisation to allow upgrading of regulatory and supervisory frameworks and capacities should be temporary and have clear sunset clauses.

Stability is one important concern of policy makers in the financial sector, but should not be the only one. Deep and efficient financial systems are important for economic growth and poverty alleviation (Beck, Levine, and Loayza, 2000; Beck, Demirguc-Kunt and Levine, 2007). Even if there were a trade-off between competition and stability, it is ex-ante not clear whether stability should have a higher priority than efficiency, which has clearly been shown to be linked to higher degrees of competition. It is more,

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<sup>10</sup> Claessens (2006) reviews the effect of cross-border banking on bank competition.



there is evidence that countries with deeper but more volatile financial systems have grown faster over the period 1960 to 2000 than countries with low but stable levels of financial deepening (Ranciere, Tornell and Westermann, 2006, 2008). The positive growth effect of financial liberalisation thus outweighs the negative crisis effect. This is also confirmed by theoretical work that shows that Schumpeterian competition, i.e. competition through innovation, in the financial system can lead to individual bank failures, but also to higher innovation and thus efficiency in the financial system (Allen and Gale, 2004). Designing institutions, including regulatory policies, to create efficient financial markets that allocate society's savings to their best use and support real markets, should therefore be the primary concern of policy makers. Given the increasing evidence that competition per se does not cause financial fragility, it seems important to focus on a regulatory framework and a financial safety net to support competitive and efficient financial markets, rather than restraining competition.

The literature surveyed in this paper and the conclusions point to further much needed research. Better measuring competition (on the product rather than institutional level and taking into account input markets and access to network services, such as the payment system) and banking distress beyond credit risk will be an important challenge. As countries' financial markets become more integrated, as for example in Europe, it is important to design regulatory frameworks and financial safety nets that allow reaping the maximum benefit of this increased competition, while aligning incentives of the different stakeholders to reduce the risk of bank fragility. The recent crisis has reminded us that regulatory and supervisory frameworks need constant updating as new products, markets and inter-linkages emerge.

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**Table 1. Bank Concentration, Regulation and Systemic Stability**

The logit probability model estimated is  $\text{Banking Crisis}_{[Country=j, Time=t]} = \alpha + \beta_1 \text{Real GDP growth}_{j,t} + \beta_2 \text{Terms of trade change}_{j,t} + \beta_3 \text{Real interest rate}_{j,t} + \beta_4 \text{Inflation}_{j,t} + \beta_5 \text{M2/reserves}_{j,t} + \beta_6 \text{Depreciation}_{j,t} + \beta_7 \text{Credit growth}_{j,t-2} + \beta_8 \text{Concentration}_{j,t} + \beta_9 \text{Regulatory measure}_{j,t} + \varepsilon_{j,t}$ . The dependent variable is a crisis dummy that takes on the value of one if there is a systemic and the value of zero otherwise. Growth is the growth rate of real GDP. Real interest rate is the nominal interest rate minus the inflation rate. Inflation is the rate of change of the GDP deflator. M2/reserves is the ratio of M2 to international reserves. Credit growth is the real growth of domestic credit, lagged two periods. Depreciation is the rate of change of the exchange rate. Concentration equals the fraction of assets held by the three largest banks in each country, averaged over the sample period. Moral Hazard is an aggregate index of moral hazard associated with variations in deposit insurance design features. Fraction of entry denied measures the number of entry applications denied as a fraction of the total received. Activity restrictions captures bank's ability to engage in business of securities underwriting, insurance underwriting and selling, and in real estate investment, management, and development. Required reserves is the percentage of reserves regulators require to hold. Capital regulatory index is a summary measure of capital stringency. Official Supervisory Power is an index of the power of supervisory agency to enforce prudential regulations on banks. State ownership is the percentage of banking system's assets in banks that are 50% or more government owned. Foreign ownership is the percentage of banking system's assets in banks that are 50% or more foreign owned. Banking freedom is an indicator of relative openness of banking and financial system, while economic freedom is a composite of 10 institutional factors determining economic freedom. KKZ\_composite is an aggregate measure of six governance indicators. White's heteroskedasticity consistent standard errors are given in parentheses. Detailed variable definitions and sources are given in the data appendix. The sample period is 1980-1997. Source: Beck, Demirguc-Kunt and Levine (2006b)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Concentration	-1.467** (0.565)	-2.556* (1.552)	-2.285*** (0.939)	-2.472*** (1.060)	-2.847*** (1.142)	-2.533** (1.096)	-2.796*** (1.091)	-2.524*** (1.083)	-1.953*** (0.806)	-1.930*** (0.809)	-1.881*** (0.769)
Moral Hazard	0.037 (0.075)										
Fraction of Entry Denied		1.885*** (0.737)									
Activity Restrictions			0.166** (0.072)								
Official Supervisory Power				-0.021 (0.166)							
Required Reserves					0.016 (0.016)						
Capital Regulatory Index						-0.079 (0.129)					
State ownership							0.015* (0.008)				
Foreign ownership								-0.005 (0.008)			
Banking freedom									-0.506*** (0.165)		
Economic freedom										-0.513*** (0.225)	
KKZ_composite											-0.439** (0.201)
No. of Crises	47	21	34	34	27	33	32	31	47	47	47
No. of Observations	989	583	767	767	572	755	686	609	955	955	989
% crises correct	66	62	68	62	63	61	66	68	68	66	68
% correct	71	81	79	78	77	79	74	73	70	70	72
Model $\chi^2$	37.93***	29.34***	38.21***	38***	30.46***	37.62***	30.97***	34.15***	52.41***	47.58***	49.59***

\*\*\*, \*\*, and \* indicate statistical significance at 1, 5, and 10 percent, respectively.

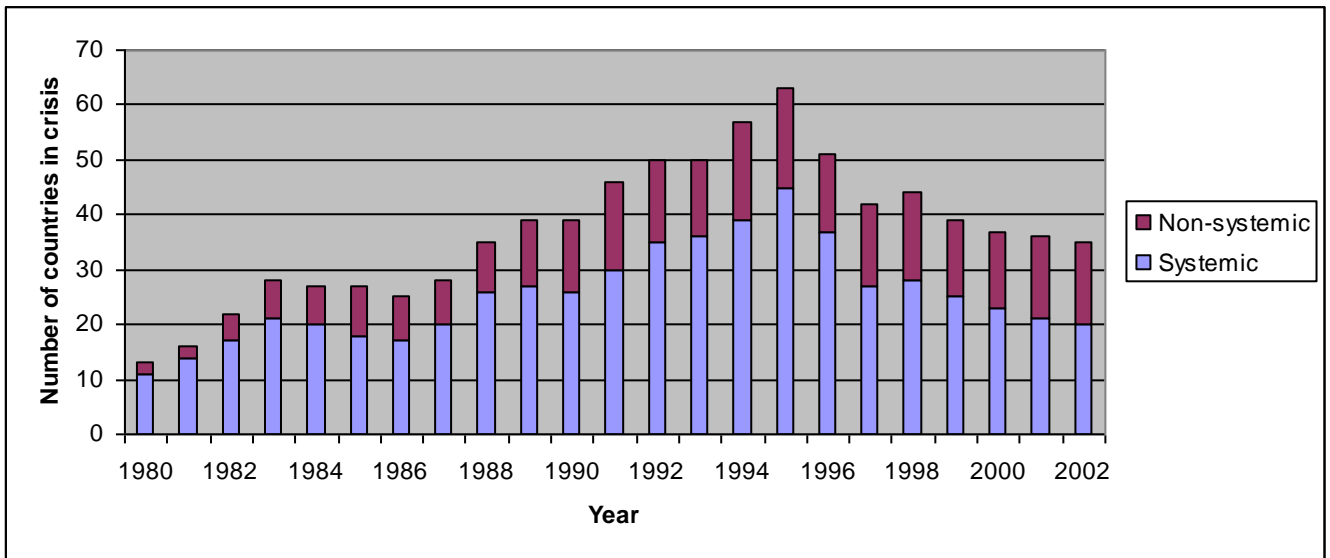


Table 2. Bank Competition and Systemic Stability

	Duration Models				Logit Models			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Constant	4.6274 (0.6236)***	0.8507 (1.5846)	0.0802 (1.9978)	6.5739 (5.2874)	-5.4307 (0.7062)***	-1.1953 (1.4726)	-0.6020 (1.8109)	-2.8211 (4.3279)
GDP growth (real)	-0.0691 (0.0803)	-0.0214 (0.0904)	-0.0184 (0.0909)	-0.0141 (0.0880)	0.1315 (0.0817)	0.0787 (0.0922)	0.0719 (0.0935)	0.0709 (0.0920)
Real interest rate	-0.0084 (0.0118)	-0.0103 (0.0139)	-0.0085 (0.0126)	-0.0067 (0.0131)	0.0219 (0.0100)**	0.0253 (0.0130)*	0.0235 (0.0130)*	0.0231 (0.0130)*
Inflation	-0.0021 (0.0018)	-0.0018 (0.0017)	-0.0010 (0.0018)	0.0002 (0.0022)	0.0053 (0.0031)*	0.0043 (0.0037)	0.0036 (0.0039)	0.0033 (0.0038)
Terms of trade change	-0.0024 (0.0017)	-0.0029 (0.0017)*	-0.0026 (0.0017)	-0.0025 (0.0018)	0.0002 (0.0027)	0.0001 (0.0035)	-0.0000 (0.0032)	-0.0001 (0.0033)
Depreciation	-0.0039 (0.0015)***	-0.0025 (0.0017)	-0.0027 (0.0015)*	-0.0030 (0.0014)**	0.0002 (0.0023)	-0.0010 (0.0020)	-0.0008 (0.0019)	-0.0007 (0.0018)
M2/international reserves	0.0138 (0.0296)	0.0187 (0.0305)	0.0293 (0.0324)	0.0266 (0.0319)	0.0057 (0.0239)	-0.0020 (0.0262)	-0.0110 (0.0326)	-0.0080 (0.0320)
Credit growth (real)	-0.0014 (0.0004)***	-0.0019 (0.0005)***	-0.0020 (0.0005)***	-0.0022 (0.0006)***	0.0010 (0.0008)	0.0016 (0.0008)**	0.0017 (0.0008)**	0.0018 (0.0008)**
Moral hazard index	-0.0372 (0.2190)	0.2685 (0.2772)	0.2602 (0.2933)	0.0527 (0.3306)	0.3375 (0.3417)	0.0299 (0.3690)	0.0601 (0.3683)	0.1363 (0.3984)
British legal origin	-0.5227 (0.6629)	-0.3812 (0.7934)	-0.1951 (0.8777)	-0.6531 (0.9105)	1.1127 (0.8397)	1.1103 (0.9437)	1.0450 (0.9338)	1.2049 (0.9193)
French legal origin	-1.1209 (0.6180)*	-1.5525 (0.5790)***	-1.3319 (0.5518)**	-1.2832 (0.6086)**	1.6562 (0.6230)***	2.2597 (0.6465)***	2.1015 (0.5998)***	2.1036 (0.6185)***
Scandinavian legal origin	-1.1441 (0.5604)**	-1.0797 (0.5249)**	-1.5069 (0.7134)**	-1.2270 (0.7192)*	1.2795 (1.1575)	1.2279 (1.1414)	1.5485 (1.2624)	1.4447 (1.2846)
H-Statistic		5.0854 (1.7922)***	4.2562 (1.9919)**	-6.3020 (8.2633)		-5.8513 (1.7523)***	-5.2130 (1.8819)***	-1.7627 (6.2430)
Concentration			2.3486 (2.4725)	-11.8460 (11.2600)			-1.8366 (2.4980)	2.9196 (8.6863)
H-Statistic * Concentration				23.9997 (18.7818)				-7.8430 (13.1666)
Observations	619	619	619	619	567	567	567	567
Number of crises	22	22	22	22	28	28	28	28
Type I Error (%)	n/a	n/a	n/a	n/a	25.00	28.57	25.00	25.00
Type II Error (%)	n/a	n/a	n/a	n/a	41.37	33.95	33.58	33.21
Akaike Info. Criterion	0.1610	0.1555	0.1571	0.1578	0.400	0.387	0.390	0.393
Pseudo R <sup>2</sup>	n/a	n/a	n/a	n/a	0.091	0.132	0.135	0.136

We estimate exponential duration models with time varying covariates for the period 1980–2003 in column (1) – (4) and logit models in column (5) – (8). The dependent variable is the log of time to crisis in the exponential duration models. The observations are right hand censored if no crisis surfaced during the observation period. The number of observations in the duration models is greater than in the logit models since the data set has to be set up differently for analysing duration data with multiple crises. If a crisis runs over multiple years, the years following the onset of a crisis are deleted from the data set. If a country experienced multiple crises, subsequent systemic episodes are included in the sample. The number of crises in the duration model setup is smaller since duration analysis focuses on time spans for each country and exploits information in the data at the end of each span. Therefore, values of the first observation for each country recorded in the initial data set are discarded in this analysis. The dependent variable in the logit models is a dummy variable that equals one if a crisis is observed or zero otherwise. All explanatory variables are lagged in the models by one period to avoid simultaneity problems. If a crisis runs over multiple years, the years following the onset of a crisis are deleted from the data set. If a country experienced multiple crises, subsequent systemic episodes are included in the sample. The Appendix provides detailed information on the explanatory variables. Specifications (1) and (5) are our baseline models that include covariates used in previous studies, whereby we update the Moral Hazard Index by Demirgüç-Kunt and Detragiache (2002). We also incorporate three dummies for origin of the legal system, whereby we capture German legal origin in the intercept. Specifications (2) and (6) include the *H-Statistic* as measure for the competitiveness of the industry and Specification (3) and (7) incorporate the level of concentration as measured by the three bank concentration ratio, averaged over the sampling period. To control for nonlinear relationships between the degree of competitiveness and the level of concentration, we include an interaction term of these two variables in Specification (4) and (8). White's heteroskedasticity consistent standard errors are given in parentheses. Type I and Type II Error are calculated as the total number of crisis observations (28) divided by the number of observations in the sample (567); this yields a cut-off point of 0.0494. Significance levels of 1, 5 and 10 percent are indicated by \*\*\*, \*\* and \*.

Figure 1. Crisis frequency



This graph shows the number of countries that were in a systemic or non-systemic crisis at a given year. Source: Honohan and Laeven (2005)



## MR THORSTEN BECK<sup>1</sup>

### 1. Introduction

The relationship between competition and stability has been at the centre of financial policy debate for a long time.<sup>2</sup> The current crisis has refreshed the debate, as the degree of competition and the market structure seemed to have played an important role in the run-up to the crisis. Critically, the current regulatory reform debate will have important repercussions for market structure and competition, so that a fresh look at the relationship between competition and stability seems more than justified.

This note summarises the theoretical and empirical literature on the relationship between competition and stability, discusses to which extent the current crisis sheds doubts on previous conclusions and to which degree theory and empirical literature can explain the contribution of competition to the current crisis. The note then turns to competition concerns in the resolution of the crisis and finally discusses several issues related to competition implications of the current regulatory reform debate.

This note is not a full-fledged literature survey on the competition-stability relationship. For this, I would like to refer to Beck (2008) and Carletti (2010). Part of the material in this note is based on Beck et al. (2010) who discuss the competitive implications of state aid in the European Union as well as necessary regulatory reform steps.

### 2. Competition and Stability – The Evidence So Far

Theoretical models have made contradicting predictions on the relationship between bank concentration, competition and stability.<sup>3</sup> The charter value hypothesis predicts that more concentrated and less competitive banking systems are more stable, as profits provide a buffer against fragility and provide incentives against excessive risk taking. On the other hand, monopoly power can lead to higher interest rates, which in turn increases principal-agent problems between bank and borrower and thus lead to higher fragility. The relationship between competition and stability is similarly ambiguous on the liability side.

A somewhat related argument concerns the relationship between bank size and stability. A more concentrated banking system implies fewer banks that might be better able to diversify risk and might constitute less of a supervisory burden. On the other hand, larger banks might constitute a higher risk of too-big-to-fail and might be too complex to be supervised properly.

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<sup>1</sup> Bank Competition and Financial Stability: A Fresh Look after the Crisis  
CentER and European Banking Center, Tilburg University. This note was written for the OECD Roundtable on Competition, Concentration and Stability in the Banking Sector

<sup>2</sup> See Group of Ten (2001), Bank for International Settlements (2001), International Monetary Fund (2001) and Bank Indonesia and Banco de Mexico (2008).

<sup>3</sup> See Carletti and Hartmann (2003) for an in-depth literature survey and Allen and Gale (2004) for an excellent exposition on the different theoretical mechanisms that can lead to contrasting relationships between competition and stability.

While the theoretical literature typically assumes a one-to-one mapping between market structure and competition, the empirical literature has struggled with properly defining competition. First, market structure indices, such as concentration ratios or Herfindahl indices do not take account of contestability and face the difficulty that the market has to be properly defined. Second, price-cost indices such as the H Statistics or Lerner index gauge the competitive behaviour of banks but their calculation requires certain assumption about cost function and equilibrium conditions. Finally, regulatory indicators of entry barriers are an important component, but often refer to the laws and rules on the books or previous supervisory behaviour. A final limitation of all indicators is that the competitive nature of banking might vary across different services (credit, deposit and payment) or even within segments of, e.g., the credit market.

Empirical studies for specific countries – many if not most for the U.S. – have not come to conclusive evidence for an either stability-enhancing or stability-undermining role of competition. Two conclusions, however, can be drawn. First, a higher degree of market concentration does not necessarily imply less competition. Specifically, testing for the relationship between market structure and stability and for the relationship between competitiveness and stability does not necessarily yield the same results. Second, as predicted by several theoretical studies, there is an important interaction effect between the regulatory and supervisory framework, on the one hand, and market structure and competitiveness, on the other hand, in their effect on banking system stability.

The cross-country literature has found that more concentrated banking systems are less likely to suffer a systemic banking crisis as are more competitive banking systems (Beck et al. 2006a,b; Schaeck, Cihak and Wolfe, 2009). There seems also evidence that banks in more competitive banking systems hold more capital, thus compensating for potentially higher risk they are taking (Schaeck and Cihak, 2007; Berger, Klapper and Turk-Ariss, 2009).

Related to the question of market structure is the issue of activity restrictions, i.e. the mixing of commercial and investment bank activities. Cross-country evidence has shown a positive relationship between activity restrictions and the likelihood of a systemic crisis (Beck et al. 2006a,b). Recent cross-country evidence has also shown that there are diversification benefits from combining lending and non-lending activities in terms of higher profit, but also risks, i.e. banks that focus on fee-based income, are, on average, riskier (Demirguc-Kunt and Huizinga, 2010). Similarly, Baele, De Jonghe and Vander Vennet (2007), find for a sample of European banks over the period 1989 to 2004 that a bank's share of non-interest income is positively associated with systemic risk, as measured by the market beta, while related in a non-linear manner with idiosyncratic risk. Further, De Jonghe (2010) finds that non-interest generating bank activities increase banks' sensitivity to market movements, especially in volatile times. This might also explain why banks that diversify across interest-generating and non-interest activities trade at a discount (Laeven and Levine, 2007). On the funding side, Huang and Ratnovski (2008) show that wholesale financiers might have an incentive to withdraw on the basis of cheap and noisy signals of bank solvency, thereby causing solvent banks to fail. Demirguc-Kunt and Huizinga (2010) confirm for a broad cross-section of banks that high wholesale funding is associated with higher returns but also greater bank fragility.

It is in this context that restrictions on banks' activities have often been imposed to prevent financial conglomerates from emerging. While theoretically attractive, these restrictions are difficult to implement, monitor and enforce, and might prevent banks from reaping diversification and scale benefits. Critically, they can easily serve as cover for rent-seeking activities, allowing incumbent banks to protect their rent, and can result in political regulatory capture. Not surprisingly, Kroszner and Strahan (1999) find that the strength of lobby groups related to small banks and insurance companies – segments of the financial sector

standing to lose from branch deregulation in the U.S. – determined the speed with which states abandoned branching restrictions in the 1970s and 1980s.<sup>4</sup>

Furthermore, the regulatory framework might interact with the governance structure of banks, as shown by Laeven and Levine (2010) who find for a sample of 250 banks across 48 countries that banks with concentrated ownership take more risks in countries with more restrictions on banks' activities, possibly to compensate for the inability to branch out into new areas.

To which extent has excessive competition contributed to the current crisis? The high profits levels throughout the industrialised world do not indicate an excess of competition, at least not across the whole of the banking world. In addition, countries with different market structures were affected by the crisis. While Australia and Canada, both concentrated banking markets, were less affected by the global crisis, the UK – also a concentrated banking market – was.

Along the same lines, it does not seem clear that a specific business model bears special responsibility for the current crisis. Not only universal banks in Germany but also investment banks in the U.S. have been at the centre of the crisis. Rather, business practices across different bank types have contributed to the build-up of the bubble and helped exacerbate the subsequent bust, such as the herding trend towards derivative products. On the other hand, reliance on wholesale funding and non-interest revenues seems to be associated with a greater likelihood of a bank to be affected by the global turmoil (Ratnovski and Huang, 2009).

Overall, it seems that it is the interaction of regulatory policies and macroeconomic environment, on the one hand, and market structure, on the other hand, that can explain the variation in crisis exposure. Regulatory regimes focusing on retail rather than wholesale activities, seem to have fared better, as have more conservative capital regimes that prohibited certain regulatory arbitrage manoeuvres through SIVs. Similarly, a macroeconomic environment of low interest rates and rising house prices can lead to bubbles and herding effects, as the examples of Spain and the U.S. have shown. Ultimately, these effects of regulatory and macroeconomic conditions might be stronger in countries with more competitive banking systems.

### **3. Competition and Stability – Do we have to Reassess the Evidence?**

Empirical findings can be driven not only by the quality of the data and estimation techniques, but also by sample countries and sample period. This is especially a concern in the context of the recent empirical literature on the relationship between competition and stability, for two reasons. First, the sample period in some studies is dominated by the period of the Great Moderation and in all cases does not contain a global crisis of the extent of the current crisis. The relationships found by the empirical literature might therefore be driven by an overall trend towards consolidation during the past decades. A second related concern is that the relationships identified by the empirical literature hold in normal times, but not during times of systemic global distress, as we are living right now.

I would like to discuss two specific issues in this context. Take first the issue of bank size. While larger banks might be better able to diversify risks and even exploit scale or scope economies, thus explaining a positive relationship between size and stability in normal times, this relationship might be reversed during tail events like the current global crisis. First, as shown by de Nicoló and Kwast (2002), correlations of the stock returns of large U.S. financial conglomerates increased between 1988 and 1999, as did the market share for these institutions. On the theoretical level, Wagner (2010) shows that diversification can make large financial institutions look alike, which will hurt in times of crisis. Second,

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<sup>4</sup> See Haber and Perotti (2008) for a recent survey on the relationship between politics and finance.

growth in bank size increases the moral hazard risk of becoming too-big-to-fail, a risk which will only become obvious in times of crisis. The transition to Basel II allowed banks to reduce their capital cushions, which seemed adequate in normal times but have proven too small in the current global distress.<sup>5</sup>

Take next the issue of competition. More competitive and contestable financial systems allow financial innovation and reduce the risk of regulatory capture, thus fostering stability during normal times. However, they might also contribute to the build-up of bubbles and herding behaviour that are not taken into account in the banks' cost of funds. When some banks invest in one type of product (say in subprime loans) that generates high profits, other banks are forced to imitate them, as otherwise their shareholders will hold them responsible for the lower profitability of the institution. This ultimately results in a too-many-to-fail situation, as we observe in the current crisis (Acharya and Yorulmazer, 2007; Dell'Ariccia, Igan and Laeven, 2007). Again, the second effect will only be observed during a tail event such as the current crisis.

Critically, however, the current global crisis underlines the interaction of competition and macroeconomic circumstances and the regulatory framework. One could argue that it is the global liquidity glut due to global imbalances as well as the transition to Basel II which encouraged aggressive risk taking, not necessarily the degree of competition in the marketplace per se. It was the (i) trend towards lower capital buffers justified by banks' risk management models under the Basel II regime and (ii) the procyclical nature of the capital requirements that drove the recent increases in leverage and therefore aggressive risk taking.

#### **4. Crisis resolution and competition concerns**

In the context of crisis resolution, one can caricature the debate as being between two schools. On the one hand, one can argue that the resolution of the crisis has to take priority over any competition concern; on the other hand, one can argue that competition concerns are even more important in the current crisis, in order to avoid long-term negative repercussions for efficiency of banking systems. The truth is certainly somewhere in the middle.

First of all, it is important to recognise the critical differences between banking and other non-financial sectors in times of crisis. Specifically, the fact that one bank is being helped could well imply a positive externality for its competitors, either because it prevents systemic problems, or because these competitors are themselves its creditors, and so are indirectly also recipients of aid. This means that bank bailouts do not necessarily require compensation for competitors, in contrast to the normal assessment of state assistance in other industries. This does not take away from the fact that in the medium- to long-term, the survival of less efficient banks can hurt their competitors and the whole banking system by providing perverse incentives.

Second, banking is not characterised by excess capacity during the current crisis, unlike other sectors, e.g. the car industry. To the contrary, bank lending has to be supported in times of crisis, as there is a trend per se to reduce lending due to declining credit worthiness of borrowers. In periods of generalised bailouts, any remedies that will tend to contract new lending must be avoided, although the economic crisis means the desired amount of lending will decline and the credit-worthiness of some borrowers will have declined.

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<sup>5</sup> Beck et al. (2009) show that German commercial banks reduce their capital level as they increase in size, which explains the negative relationship between stability and bank size for private banks. Six months before needing government support, Northern Rock concluded that under the current Basel II requirements it was overcapitalised, and proceeded to reduce its capital accordingly so as to increase leverage.

On the other hand, bail-outs can also be distortionary, by affecting the marginal cost of funding. While a one-time recapitalisation should not affect marginal funding costs, the government will often be unable to commit to give no further aid in the future, given that taxpayers' money is now at stake and because such aid has established the bank as too-big or too-interconnected-to-fail. This will ultimately reduce marginal funding costs of the aid-receiving bank. Similarly, loan guarantees can have a perverse effect on lending risk management and thus distort lending markets. Both recapitalisation and guarantees can therefore have distorting effects on competition. Finally, recapitalisation, loan guarantees and blanket deposit guarantees, as imposed by several European countries, increase moral hazard risk and provide preserve incentives to take aggressive risks. State aid during a financial crisis can thus distort the playing field and can change the dynamic incentives of the sector as a whole.

There are two principal tools that have been suggested to counter negative effects of state aid on competition. A first tool are growth restrictions or even balance sheet reductions. Imposing balance sheet reductions as an automatic condition of state aid, however, does not have the rationale that it often has in other sectors of the economy, as there is not a problem of overcapacity in banking, as already discussed above. This does not imply that concerns about balance sheet *growth* are unjustified: on the contrary, limiting growth through acquisitions does make sense as a way to prevent the recipients of a bailout gaining an unfair advantage vis-à-vis other banks. And, in fact, there is a case for requiring balance sheet reduction in the case of banks whose prior over-expansion was the reason for their needing a bailout. Nevertheless, a lot of restructuring in the sector will be desirable following the crisis, and there is no reason to prevent acquisitions which are compensated by divestitures and therefore avoid net growth of balance sheets.

A second tool are behavioural restrictions such as prohibition to be a price leader or hiring or wage restrictions. Standard competition policy imposes both structural and behavioural restrictions on firms receiving subsidies and there are no grounds for applying these less vigorously to banks in a crisis: leniency in merger approval, or greater tolerance of predatory behaviour, are no more justified for weak banks than for any other financial or non-financial firm. However, the opposite tendency should also be avoided: in particular, there is no case for specific behavioural restrictions following bailouts that would put the rescued bank at a competitive disadvantage with respect to competitors, such as caps on the compensation of new hires - especially since failing banks need fresh talent to clean up the mess created by previous executives -, limitations on their pricing strategies relative to competitors, or advertising restrictions - as failing banks need to regain trust and confidence of the public. To the contrary, imposing such restrictions can undermine competition as it allows market players without state aid to exploit their increased market power. A final concern relates to the enforceability of such restrictions. Take the example of price leader restrictions. Even standard deposit products are characterised not only by an interest rate but often also by certain fees and charges that can vary across products and across banks. They may even vary across customers depending on whether they have one or several products from this bank. So, properly measuring and comparing prices for specific products across banks is very cost-intensive and impractical.

Overall, there is a clear case for caution before mechanically applying to bailed-out banks the standard approach to state aid policy that has been developed for other sectors. It is important that bank bail-outs be allowed to produce banks that can behave as full competitors, not ones that are restricted to behave as timid followers of others. More meaningful might be in this context, to address underlying governance problems. Take the example of the German Landesbanken, especially hard hit by the crisis. It is governance problems in these banks - that is, only limited supervision by their owners, state governments and the saving banks association, as well as by bank supervisors - that can explain their relatively larger need for recapitalisation in the first place. Addressing governance deficiencies in these institutions and assessing their long-term viability at the same time as providing them with new resources should be a critical element of any state aid plan.



## 5. Looking Forward – Regulatory Reforms and their Impact on Competition

I would like to finish this note with some remarks about the repercussions that the crisis has for regulatory reform, especially with respect to competition. I would like to focus on three issues – bank size, function of the financial sector and bank resolution.

The bail-out of many large financial institutions has resulted in calls to restrict the size of institutions. While large banks might offer the advantage of risk diversification across markets and activities, the current crisis has shown that the effect can be turned around in case of a global shock. Critically, the moral hazard risk of too-big-to-fail weighs heavily. One approach would be therefore to impose a size limit, either in terms of absolute size or in terms of market share. While this has the benefit of being seemingly easy to implement, it has the shortcoming that it can be arbitrary and orthogonal to the actual importance of an institution (in terms of market share or position in specific markets). Further, the limit will have to be adjusted over time. A more flexible, market-harnessing and price-based approach would be to tax financial institutions for being large or for being complex in the form of higher capital charges. This could take different forms. One could envision increasing capital charges as banks grow larger. Another possibility would be additional deposit insurance premiums. Similarly, one could envision additional capital charges if banks become active in additional business areas, as well as capital charges as function of the maturity mismatch or the share of funding derived from wholesale rather than retail markets. An advantage of such an approach would be that it would be continuous rather than discrete; financial institutions thus have to balance the benefits of a larger size or additional potentially risky activities with the costs of higher capital charges. On the aggregate level, this would allow balancing of benefits and risks of scale and scope.

A second issue relates to the kind of financial sector the regulatory reform aims for? The *financial facilitator view* emphasises the role of the financial sector in mobilising funds for investment and contributing to an efficient capital allocation in general. This supports capital formation and productivity growth, and ultimately economic growth. It also encompasses additional, more or less public services such as providing access to basic payment, transaction and savings services that are important for the participation of the whole population in a modern market economy. A very different view is one that focuses on financial services as a sector in itself. The *financial centre view* towards the financial sector sees it more or less as an export sector, i.e. one that seeks to build a nationally based financial centre stronghold by building on relative comparative advantages, such as skill base, regulatory policies, subsidies, etc. National policies in various countries see considerable economic benefits that would come from professional services (legal, accounting, consulting, etc.) that typically cluster around a financial centre.

The different approaches to the financial sector have different implications for economic growth and volatility. While the financial centre approach has been credited with the rapid development of certain areas such as Greater London or Iceland, the current crisis has shown that it can also lead to higher volatility and potentially large fiscal liabilities, first contingent and then – in the crisis- real. The first question we should ask ourselves in the current reform debate is what kind of financial system we are aiming for. Continuing to focus on the financial centre approach while at the same trying to reduce riskiness of finance through restrictions and tighter regulation will have negative repercussions for competition, without truly reducing riskiness. To the contrary, a continuous focus on large banks will create more of the same bail-out expectations that have built up in the years leading up to the current crisis. So, a first lesson out of the current crisis should be to refocus the attention of public policy on the facilitating role of financial sectors and away from the attempt to create national champions and financial centres.

The issue of bank size and the approach to the financial sector also affects the way weak financial institutions are being solved. While mergers are an efficient way to do so – as discussed below – they can

create even larger national champions and stronger bail-out expectations. Combining effective resolution with contestability, i.e. allow new entry – both domestic and foreign – is important in this context (Perotti and Suarez, 2003).

A final important point is bank resolution. The crisis has exposed significant deficiencies in the failure resolution framework of financial institutions. In September 2008, at the height of the financial crisis, Lehman Brothers were allowed to go into liquidation, while AIG was bailed out. In Europe, the failure of national authorities to cooperate on the resolution of the cross-border financial conglomerate Fortis led first to nationalisation of the resolution process and ultimately to the nationalisation of the financial conglomerate in Belgium, Netherlands and Luxembourg. The inability to deal with the failing Icelandic institutions not only led to the effective bankruptcy of the country, but international tensions! The inefficient resolution of failing banks is not only costly for taxpayers but has also negative repercussions for competition.

An effective bank resolution system intervenes fast to avoid bank runs, contagion and domino effects, while at the same time forcing shareholders and other senior claimants to bear the losses caused by their risk decisions. “Regulator-induced” and supported mergers, purchase-and-assumption techniques and bridge banks are some of the solutions that have been applied in the U.S. and elsewhere and have proven successful in minimising the disruptive effect of bank failures while imposing a certain degree of market discipline. This would also call for a prompt corrective action framework where regulators have to intervene – in an escalating manner – before capital is completely exhausted. Property right concerns of shareholders – such as expressed in the case of Fortis shareholders in Belgium – should have less of a weight, given the external costs that a bank failure imposes on society and the implicit government guarantee that especially large banks carry.

An effective crisis resolution framework is critical for competition. By intervening early, it reduces the risk of competition from undercapitalised banks that bet the bank. By avoiding unnecessary bail-outs, it reduces distorting effects on marginal funding costs. Most importantly, by imposing a certain degree of market discipline, an effective bank resolution framework reduces the moral hazard risk that can lead to aggressive risk taking and herding effects in the financial system and that we have seen at work in the current crisis.

The geographic definition of the bank resolution framework is important in this context, especially within Europe. Large banks might be too-big-to-fail within a country, but not on the European level. Market-based solutions, such as mergers, might be impossible on the national level, but feasible on the European level. Important for such a framework to work, however, is not only creating regulatory powers on the European level, but also the necessary resources, e.g. in form of ex-ante binding burden sharing agreements.



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MR ROSS JONES





APRA

## Competition, Bank Concentration and Risks: The Australian Experience in the GFC

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1



## Australia's macroeconomic conditions during the crisis



- No recession
- Unemployment peaked at less than 6%
- No bank failures
- No bank bailouts via government equity
- Banks highly profitable
- Equity raising by banks to fund acquisitions

2

## Competition in the Australian banking market



- High levels of concentration
- Four major banks have:
  - 70% of household savings
  - 70% of household loans
  - 71% of personal lending
  - 68% of business lending
- In mid 2008, Australian Competition and Consumer Commission (ACCC) approved acquisition of 5<sup>th</sup> largest bank by one of the big 4

3

## Financial sector regulation



- The role of the prudential regulator
- Changing risk appetite in the last decade
- Governance, risk management and capital adequacy

4

## Why was Australia less affected by the crisis?



- Recent past history in banking and regulation
- Nature of mortgage market
  - NINJA loans
  - 'Jingle mail'
  - Unemployment rate
- Limited exposure to 'toxic' securities

5



Nature of Australian banking business  

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- Little reliance on trading income
- Low incentive to seek high yield, high risk assets
- Focus on domestic market

6

Australian market pre crisis  

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- No relaxation of lending standards
- Interest rates higher than many other countries
- Housing price growth peaked 2003
- Strong consumer credit code
- Domestic savings deficit and strong demand

7

## The Australian financial sector regulatory model and environment



- 'Twin peaks' ASIC and APRA
- Close coordination between regulators
- Not a 'light-handed' regulatory model
- Less focus on short term reward
- Political support



**MR LAWRENCE J. WHITE\*****Abstract**

The U.S. financial crisis of 2007-2008 has been a searing experience. The popping of a housing bubble exposed the subprime lending debacle, which in turn created a wider financial crisis. In its response to this crisis, the federal government has provided financial assistance to a number of financial institutions that are often described as “too big to fail” (TBTF) – which, to those who associate antitrust with size, seems to bring antitrust potentially into the picture.

This paper will offer a guide to the antitrust community that will cover the U.S. financial sector, financial regulation, and the debacle and subsequent financial crisis. The tensions that can arise between financial regulation and antitrust will be highlighted. TBTF is not one of them, however, because TBTF is about size and interconnectedness, but not about competition and market power. Although much progress has been made in removing anticompetitive elements from financial regulation over the past three to four decades, there are still important advances that can be made. The paper concludes by offering a set of policy recommendations for the removal of some of the important remaining elements of financial regulation that impede competition.

**1. Introduction**

The U.S. financial crisis of 2007-2008 has been a searing experience. The popping of a housing bubble exposed the subprime lending debacle, which in turn created a wider financial crisis, which has had international ramifications; and the weakened financial sector has contributed to a U.S. recession that currently is the worst since the early 1980s and that may become the worst since the Great Depression of the 1930s.

One theme in discussions of the crisis has been the roles and regulation of very large financial institutions: large commercial banks (e.g., Citigroup, Bank of America, JPMorgan Chase, Wells Fargo); large investment banks (e.g., Bear Stearns; Lehman Brothers; Merrill Lynch; Morgan Stanley; Goldman Sachs); large insurance conglomerates (e.g., American International Group [AIG]); and large “government sponsored enterprises” (GSEs) that are devoted to residential mortgage finance (Fannie Mae and Freddie Mac). Many of these institutions are described as “too big to fail” (TBTF). And discussions of financial size and excessive bigness seem to invoke antitrust issues.

This paper will offer an overview of the financial sector, financial regulation, the subprime debacle, and the wider financial crisis that followed.<sup>1</sup> An antitrust – and thus a competition --perspective will be

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<sup>1</sup> A comprehensive discussion of these topics is beyond the capabilities of this paper. In many places, however, this paper will draw on other writings of the author that have addressed these topics at greater depth: e.g., White (1986, 1991, 2002, 2003, 2008, 2009a, 2009b, 2009c, 2009d, 2009e).

maintained throughout. This perspective will reveal that there has been a longstanding tension between the operation of financial regulation and the promotion of competition. Beginning in the late 1960s that tension progressively lessened in many areas of financial regulation, as important anticompetitive elements of financial regulation were eliminated (although there was one important area – the regulation of large credit rating agencies – where new regulation fostered less competition, with consequences that can be linked to the subprime lending debacle). The financial sector has considerably fewer regulatory impediments to competition today than was true forty years ago, although regulatory impediments to competition still remain in too many places. This perspective will also reveal that, although TBTF is a size issue, it is not an antitrust issue, since competition issues are not at stake (and modern antitrust is about competition, not about size).

This paper will proceed as follows: Section II will set the stage by providing an overview of the important features of finance and of financial regulation in the U.S. Section III will add a discussion of U.S. policy toward housing finance, since housing finance has figured so prominently in the financial crisis. Section IV will offer a selective history of financial regulation and some of the anticompetitive features of financial regulation that have arisen at various times, which will highlight the history of tensions between financial regulation and antitrust. Section V reviews the subprime lending debacle and the wider financial crisis that followed and uses that backdrop to discuss the concept of financial institutions that are considered to be TBTF. Section VI concludes with a set of pro-competitive policy recommendations for the financial regulation area.

## **2. Finance and Financial Regulation**

### **2.1 *Understanding Finance***

#### **2.1.1 *Finance is special***

Finance is special in at least three ways: First, finance is ubiquitous. Almost all enterprises need finance in order to obtain the resources for investments and to bridge the gap between the time when inputs are paid and the time when outputs are sold. Almost all governments need finance, again to obtain the resources for investments and to bridge the gap between the time when expenditures are made and the time when tax revenues are received. Almost all individuals need finance, so as to accommodate large investments and purchases and to bridge smaller expenditure/income gaps. In addition, finance underlies the operation of the monetary/payments system of any modern economy.

Second, finance unavoidably involves a time dimension: A loan or investment is made at an initial point in time;<sup>2</sup> and then repayment is expected to occur at some future point in time.<sup>3</sup> This time dimension means that lenders always face some uncertainty as to whether the borrower will actually repay the loan. This uncertainty reflects the lender's informational disadvantage ("asymmetric information") vis-à-vis the borrower:<sup>4</sup> Before making the loan, the borrower may have difficulty figuring out whether a prospective borrower is likely to repay the loan;<sup>5</sup> and after making a loan, the lender may have difficulty in monitoring

<sup>2</sup> For ease of exposition, the following discussion will be in term of "loans" that involve a "lender" and a "borrower"; but the same principles apply to issues of equity investment rather than lending.

<sup>3</sup> There is a similar time element to insurance: A commitment (to insure against an event) is made at an initial point in time (with the insured party making a "premium" payment); and then subsequently, if the insured-against event occurs, the insurance payment is made.

<sup>4</sup> Because issues involving bank deposits and depositors will arise frequently in the discussion below, it worth remembering that a depositor is a lender (creditor) to a bank and thus potentially faces all of the problems of a lender.

<sup>5</sup> This is the problem of adverse selection.

the borrower's actions, some of which may adversely affect the borrower's likelihood of repaying the loan.<sup>6</sup>

Third, largely because of the time dimension, finance can easily become complicated; and many individuals (especially those who have difficulties dealing with numbers) appear to have difficulty comprehending even simple financial concepts. More complicated concepts clearly make the problem worse.<sup>7</sup>

### 2.1.2 *Financial intermediaries, financial facilitators*

The essence of finance is the loan, which ultimately involves a borrower and a lender.<sup>8</sup> However, because of the asymmetric information problems that pervade finance, there are often parties in between. It is worth discerning two major categories of parties: financial intermediaries and financial facilitators.

Financial intermediaries are companies that hold financial assets (e.g., loans, bonds, equity shares) and finance those asset holdings by issuing liabilities. Commercial banks and other depositories, investment banks, insurance companies, pension funds, mutual funds, finance companies, and the GSEs are major categories of financial intermediaries. Table 1 provides a sense of their relative importance. Leverage and capital are important phenomena for financial intermediaries. [Because discussions of financial intermediaries, leverage, and capital will recur throughout this paper, a "primer" in the appendix provides a non-technical explanation of the concepts and their implications.]

Financial facilitators are entities that facilitate financial transactions but that are not primarily involved in the holding (and financing) of financial assets. These entities include: brokers, dealers, underwriters, analysts, advisors, accountants and auditors, lawyers, and credit rating agencies.

### 2.1.3 *Securitization*

Because securitization has figured prominently in the discussion of the subprime debacle and of the problems of the GSEs, a brief explanation of the securitization process is warranted. The process of securitization is perhaps best illustrated by contrasting the "traditional" process of home mortgage lending by a financial intermediary (typically, a bank or a thrift institution) with the "newer" securitization method.

Under the traditional method, the bank would originate the loan and hold the loan as an asset in its portfolio. It would service the loan itself (i.e., collect the monthly payments and deal with any delinquencies). It funded the loan largely through collecting deposits (which, since 1933, have been federally insured). In essence, this was (and, for many depositories, still is) a vertically integrated process.

Under the securitization method, the loan is originated by a "mortgage bank", which does not hold the loan for any extended period of time. Instead, the mortgage bank either packages the loan (along with many other mortgage loans) into a security, or sells the loan to a "packager" or securitizer, who does the

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<sup>6</sup> This is the problem of moral hazard.

<sup>7</sup> And sometimes specialized labelling doesn't help. "Credit default swaps" (CDSs), for example, are basically insurance contracts that protect against the default of a bond repayment obligation; but somehow CDSs have acquired a reputation for being exotic financial instruments that are difficult to understand. Similarly, the term "financial derivative" seems to invoke in many individuals an immediate reaction of "too complicated to understand".

<sup>8</sup> Again, the discussion readily extends to the concept of equity investment.

securitization, creating mortgage-backed securities (MBS).<sup>9</sup> The MBS represent claims on the stream of interest and principal payments by the borrowers on the underlying mortgage. The MBS can be a “plain vanilla” pro rata pass-through of the borrowers’ payments to the security holders;<sup>10</sup> or the MBS can be “sliced and diced”, with separate layers or “tranches” of MBS representing differing claims on the underlying cash flows.<sup>11</sup> Also, the servicing of the mortgage loan can be done by the originator, or the servicing can be done by another (specialist) firm.<sup>12</sup> The securitization method thus is considerably more disintegrated than is the traditional method.

As compared with the traditional method, the securitization offers some clear advantages: By tapping the capital markets for funding, it allows the borrowing/lending process to gain access to a wider array of funders. For example, an investor, either directly or indirectly (e.g., through a mutual fund) can receive the payment streams from residential mortgages by buying residential MBS; under the traditional method, the investor could only place deposits in a bank or thrift institution. Further, so long as the risks are properly understood, the risks that attach to residential mortgages (the credit risk of default, and the interest rate risk that accompanies a fixed-rate 30-year financial instrument that usually allows penalty-free prepayments) can be “sliced and diced” and absorbed by those parties that are in the best position to absorb those risks. And it allows companies that have narrow specialties at which they excel (e.g., originating loans; servicing loans; packaging loans) to make good use of their specialties.

But securitization has drawbacks as well: First, the vertical disintegration of the processes opens more avenues for agent-principal (i.e., moral hazard) problems in the relationships between the various parties. And, second, in the event that the borrower experiences difficulties in repaying, any potential for renegotiating the loan becomes far more difficult, because there is not a single lender with whom the borrower can negotiate; instead, there are the multiple fractional owners of the security or securities that have been issued against the package of mortgages, and various securities owners (if they represent different levels of seniority) may have different perspectives and interests in any negotiations, which the loan servicer may have difficulties representing.

## 2.2 *Financial Regulation*

Financial regulation is ubiquitous as well. It encompasses a myriad of laws and regulations, at the federal and state levels, that include (but are not limited to):

- Safety-and-soundness (prudential) regulatory provisions for banks, thrifts, credit unions, insurance companies, pension funds, money market mutual funds, and government sponsored enterprises (GSEs);<sup>13</sup>
- Consumer protection provisions across the same spectrum;
- Information revelation requirements for these institutions;

<sup>9</sup> The loans are usually placed in a bankruptcy-remote special purpose entity, so as to reassure the buyers of the securities that their claims are secure.

<sup>10</sup> This is true of the MBS that are issued by Fannie Mae and Freddie Mac.

<sup>11</sup> The distinctions among the tranches can be based on seniority (in terms of the absorption of losses from borrowers’ defaults) and/or based on prepayments of mortgage principal and/or based on the nature of the cash flow (i.e., there can be “interest only” and “principal only” tranches from a MBS.)

<sup>12</sup> In addition, a separate category of “mortgage brokers” has sprung up, who help bring borrowers and originators together, thus adding an additional layer to the mortgage process.

<sup>13</sup> These are, specifically, Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System.

- Financial statement revelation and corporate governance requirements for publicly traded companies;
- Rules that apply to exchanges and to the financial instruments that are traded on those exchanges; and
- Information revelation and competency requirements for credit rating agencies.<sup>14</sup>

The ubiquity of financial regulation is surely linked to the three special characteristics of finance that were discussed above. However, because financial regulation is a central topic in this paper, it is worth stepping back and examining somewhat more formally why financial regulation is ubiquitous.

We start with the neoclassical microeconomics model of well-functioning markets, with a large number of competing and knowledgeable sellers and a large number of well-informed buyers. The benefits and the costs of these transactions are borne by the participants themselves; there are no significant spill over or externality effects. This is the world about which economists wax rhapsodic when they describe the efficiencies and social benefits that flow from competitive markets. It is the world that antitrust policy holds as an abstract ideal.

### 2.2.1 *Market failure*

What could go wrong that could create a case for government intervention? What are the potential market imperfections or market failures?

First, competition could be absent, replaced by monopoly. Prices will be higher, output lower, and efficiency reduced in the presence of monopoly. That's why cities and/or the 50 states have traditionally limited by regulation the prices that can be charged by the local electricity company, the local natural gas company, the local water distribution network, and the local telephone company. Alternatively, states or localities have sometimes tried to provide these services themselves to their citizens.

Though this kind of monopoly power is only occasionally present in modern financial markets, it was a traditional argument for taming the perceived power of the local bank in a small community.<sup>15</sup> Perhaps the most prominent place in financial services today where market structure is likely indicative of market power is in credit card networks, where there are the two major networks (Visa and MasterCard) and two more modest networks (American Express and Discover). The rating agency market is similarly dominated by two large firms (Moody's and Standard & Poor's), a modest size firm (Fitch), and a few smaller competitors.

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<sup>14</sup> The varied types of financial regulation are further complicated by a myriad of federal and state regulatory agencies: There are five federal regulators of depository institutions, as well as one or more regulator in each of the 50 states. The states also regulate lenders and mortgage originators that are not depositories. There is a separate federal agency that has responsibility for regulating Fannie Mae, Freddie Mac, and the Federal Home Loan Bank System. There are two federal regulators of the securities markets and financial instruments, as well as 50 state regulators (and 50 state attorneys general, who are prepared to bring law suits against securities firms on behalf of their respective states' citizens). The regulation of insurance companies is exclusively the domain of the 50 states. Pension funds are regulated by two federal agencies, and again the 50 states also have a say. Consumer fraud in financial products can be the responsibility of yet another federal agency (the FTC), as well as the 50 states.

<sup>15</sup> An illustration, at least in fiction, would be the mean Mr. Potter, the owner of the local bank, in the 1946 film "It's a Wonderful Life".



Second, there could be spill over or externality effects -- positive or negative -- from production or consumption activities. If an act of production or consumption affects third parties, outside of a market context, then the efficiencies of the market may dissipate. Too much of a negative externality (e.g., air or water pollution, or greenhouse gases) interferes with others' production or others' enjoyment of their consumption. Too little of a positive externality (e.g., the positive spill overs from an individual's education) similarly reduces the benefits for society more widely.<sup>16</sup>

Bank runs are in the category of negative externality.<sup>17</sup> The failure of one bank could cause poorly-informed (see below) depositors at other banks to become nervous and to "run" on their bank to withdraw their deposits, which could cause the failure -- or at least, the temporary closure -- of other banks, with yet further "contagion" or cascading effects. On the other hand, there does seem to be a positive social benefit to households' becoming homeowners (although, as we have recently learned to our collective sorrow, home ownership is not for everyone), which argues for some encouragement for home ownership -- and encouragement inevitably involves finance.<sup>18</sup>

Third, as noted above, the problems of asymmetric information -- one side of a transaction's knowing things about itself or its actions that the other side doesn't know -- are pervasive in finance. The essential acts of finance -- lending or investing or insuring -- involve initial commitments and subsequent repayments. If the borrower knows more about its repayment proclivities than does the lender, the latter is at a disadvantage; if an insured party knows more about its riskiness than does the insurer, the latter is at a disadvantage. The presence of these asymmetries can lead to partial or complete breakdowns of markets that, in the presence of better information, could thrive.

Fourth, an extended version of the asymmetric information problem might be termed the "widows and orphans" problem: Some market participants may be incapable of looking after their own best interests and will not learn from their own mistakes. As discussed above, many retail customers in financial transactions -- whether as depositors or borrowers or investors -- may well qualify here.

These four rationales would probably qualify with many economists -- perhaps most -- as "legitimate" qualifications to the standard argument with respect to the efficiencies of the competitive markets.<sup>19</sup>

There is, of course, a fifth motive for regulation that would not be in that list: income redistribution. Regulation can be used to redistribute income from one category of market participants to another group of participants. Though usually a far less efficient form of income redistribution than a direct subsidy, it is also less blatant and therefore easier to "fuzz up" and justify under some other rubric. In the financial sector, limits on anything from fees and interest rates to specific bans on financial products may well have substantial income distribution consequences but be justified -- with greater or lesser legitimacy -- under one or more of the earlier four rationales.

### 2.2.2 *Government failure*

Lest one think that only markets fail, it's worth remembering that governments too can be imperfect.

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<sup>16</sup> Public goods -- such as the provision of defence or police services, or mosquito eradication efforts -- can be considered to be a good or service where the positive externalities are pervasive.

<sup>17</sup> For arguments along these lines, see Diamond and Dybvig (1983), Postlewaite and Vives (1987), and Chen (1999).

<sup>18</sup> This argument will be expanded upon below.

<sup>19</sup> As is argued below, however, whether government should attempt to address the market failure requires more than just an identification of the market failure.

First, asymmetric problems apply also to government efforts to regulate, with the consequence that government's inadequate information leads to inferior regulatory outcomes.

Second, when government does make regulatory mistakes, undoing those mistakes may well be difficult. Often there are few or no alternatives, and the costs persist -- or there are workarounds (take the activity abroad; or try an alternative unregulated activity that isn't as good), but at higher costs.

Third, the pursuit of income distribution gains through regulation can lead to the "capture" of the regulatory process, with consequent distortions in otherwise efficient allocations of resources. The large gainers from capture find it worthwhile to devote the effort to doing so; the more numerous small losers from capture find the costs of organizing to resist capture to be too great.

Fourth, even if regulatory capture doesn't occur, the pursuit of such gains -- "rent seeking" -- can cause large amounts of society's scarce resources to be squandered in wasteful (and often mutually nullifying) efforts to influence those regulatory outcomes.

In sum, because both markets and governments are prone to imperfections, any proposal for governmental intervention to correct a market imperfection should pass a benefit-cost test and a threshold of non-triviality.

### **2.3 *Types of Financial Regulation***

At first glance, government regulation may appear to be a jumble of intervention, with no discernible pattern. There are, however, major categories of regulation that can help organize our thinking about regulation.

First, there is "economic" regulation: the direct control over prices, profits, entry, and/or exit. This form of regulation is often used to address monopoly problems (such as the public utility regulation mentioned above), but it may be used to address other problems and is often employed in income redistribution efforts. In financial services, "usury" limits on interest rates are (arguably) an effort to deal with the market power of lenders. Merchants' periodic campaigns to try to limit the "interchange" fees levied by the credit card networks can also be interpreted through this market-power lens. Consumers' efforts to limit credit card fees, on the other hand, are not so much about the abuses of monopoly (after all, there are hundreds of credit card issuers, who are the entities that determine these fees) as the problems of asymmetric information.

Second, there is health-safety-environment regulation, which is usually aimed at altering production processes or product characteristics to bring about desired improvements in health, safety, or environmental outcomes. The underlying problems that are being addressed may be those of externalities or of asymmetric information.

In the financial sector, safety is the paramount concern. In turn, the focus on safety comes in two versions: safety as applied to financial institutions; and safety as applied to the customer.

Safety as applied to financial institutions usually is formalized as a safety-and-soundness (or "prudential") regulatory regime. There are four major categories of financial intermediary to which such regimes apply: depositories, such as banks, savings institutions (thrifts), and credit unions; insurance companies; defined-benefit pension funds (i.e., the "traditional" company-funded pension arrangements); and the GSEs. Money market mutual funds (MMMFs) are, arguably, a fifth category; but the safety regime that has been applied to MMMFs (a requirement that most of their investments be in comparatively safe short-term debt obligations) is far less extensive than those that apply to the other three categories.

The goal of the four main prudential regimes is to keep the regulated financial institution solvent, so that it can meet its obligations to its creditors: the depositors, insureds, pension claimants, and GSE creditors. The reasons for singling out these categories of financial institution for this special treatment are threefold. First, for all but the GSEs, their creditors (i.e., depositors, insurance claimants, and pension claimants) are probably in a poor position to be able to protect themselves against the failures of these institutions, which could then mean substantial hardships in the event of failures. It is no accident that these types of institutions all have government-operated insurance funds (federal deposit insurance, state guarantee funds for insureds, and federal pension guarantees)<sup>20</sup> as a backup in the event that prudential regulation fails to prevent insolvencies.<sup>21</sup> Second, especially for banks and other depository institutions, depositors' fears of failures could lead to runs on institutions and a consequent contagion or cascade of failures.<sup>22</sup> Third, for the GSEs, the implicit government guarantee of their debt obligations that has accompanied their special hybrid public-private status has caused government to want to limit its exposure.

Safety as applied to retail customers encompasses the prudential regulatory regimes just discussed but also encompasses requirements that financial institutions provide specified types of information (e.g., about interest rates and extra fees on loans), often in a standardized format so as to enhance comparisons; limits on prices and fees (e.g., "usury" limits on interest rates on loans; limits on credit card fees); and outright bans on sufficiently "dangerous" products and services, such as "payday" loans or other "predatory" loan products with obviously onerous terms. Further, consumer safety is the justification for licensing and qualification requirements for some categories of financial facilitators, as well as the notion of "fiduciary obligation" on the part of some financial agents.

The third broad category of regulation is information regulation, whereby firms are required to provide standardized information on their products (similar to the "nutrition facts" labels on canned and packaged foods), so as to help deal with asymmetric information problems. As was discussed above, financial firms are required to provide standardized interest rates and fee information for credit cards and other kinds of loans; and all publicly traded companies are required to provide certified (by an auditing firm) financial statements to shareholders in a standardized format ("generally acceptable accounting principles", or GAAP).

This broad categorization is not airtight nor are individual instances of regulation always capable of being pigeonholed exclusively into one category of regulation or another. Nevertheless, this categorization does provide some coherence to what otherwise might look like an undifferentiated mass ("financial regulation") of intervention.

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<sup>20</sup> And MMMFs acquired a Federal Reserve guarantee on existing MMMF shares in September 2008, as a consequence of a widespread run on MMMFs that developed after one large MMMF (the Reserve Fund) "broke the buck" and told its shareholders that they would receive only 97 cents for every share instead of the \$1.00 "par" value that MMMF shareholders had come to expect. The Reserve Fund's actions, in turn, occurred because it held a sizable amount of Lehman Brothers' commercial paper, which became worthless after Lehman declared bankruptcy on September 15.

<sup>21</sup> In the presence of these kinds of government insurance and guarantee arrangements, prudential regulation can be interpreted also as the equivalent of the set of rules that insurance companies always establish to protect themselves against problems of adverse selection and moral hazard.

<sup>22</sup> One of the lessons of the financial crisis has been that other large financial institutions, such as investment banks, had issued large amounts of short-term obligations (commercial paper) that could be subject to similar runs. And, as was noted above, MMMFs are subject to runs.

### 3. The Special Place of Housing Policy

#### 3.1 An Overview

American government policies, at all levels of government, encourage the construction and consumption of housing. These policies include:

- Income tax deductions and exemptions for home owners;
- Subsidies for renters;
- Tax breaks for housing construction;
- Explicit subsidies for mortgage finance, through the Federal Housing Administration (FHA), the Department of Veterans Affairs (VA), and the Government National Mortgage Association (Ginnie Mae), as well as through some states' mortgage finance subsidy programs;
- Implicit subsidies through the “government sponsored enterprises” (GSEs): the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the Federal Home Loan Bank System (FHLBS); and
- Direct provision of rental housing (“public housing”).

“Too much is never enough” is a not unreasonable characterization of U.S. housing policy.

The motives for this encouragement of housing are, as is true of much public policy, a murky mixture. Partly the encouragement of housing is seen as a way of redistributing income through in-kind transfers. Partly it is seen as a sop to the housing construction industry and its vertically related (upstream and downstream) complementary partners, including the employment that is generated directly and indirectly from housing construction. And partly it seen as an encouragement for households to become home owners.<sup>23</sup>

In turn, the encouragement for home ownership has at least four underlying motivations: First, it is simply seen as part of “The American Dream”. Second, since housing prices in most parts of the U.S. had tended (over most time periods) to trend upward since the 1940s, housing investment was seen as a good way of building household wealth (and on a leveraged basis, as well, since a 20% down payment meant that the house purchase was leveraged five-to-one). Third, it is a way to internalize the agent-principal problems that otherwise arise between landlords and tenants. And it is a means of exploiting the positive social externality that appears to accompany home ownership.

On this last point, the theory that argued that there should be positive social externalities from home ownership -- that a homeowner is more likely to care about his/her community than is a renter, more likely to participate in community activities, etc. -- has been around for decades. But only since the middle 1990s has a small but growing body of empirical studies provided support for this notion.

An important caveat should immediately be added to these positive motivations for home ownership: Home ownership is not for everyone. It is a large, illiquid asset, which can impede labour mobility across geographic regions. It requires a relatively steady income stream and requires disciplined budgeting. And,

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<sup>23</sup> The national home ownership rate – the percentage of U.S. households that own their own homes – has become a politically important statistic.

as millions of households (and their lenders) have discovered to their regret over the past three years, housing prices do not always increase.<sup>24</sup>

Further, a sensible and efficient approach to addressing the social externality would be to have a modest and focused program that is aimed at the likely margin for action: modest subsidies (e.g., for down payments and/or monthly payments) for low- and moderate-income households so as to encourage them to become first-time home owners. Unfortunately, with only minor exceptions,<sup>25</sup> housing encouragement instead is broad-brush in scope. The most extensive subsidy, for example, is the income tax deduction for mortgage interest and capital gains exclusion on the sale of a household's principal residence.

Such broad-brush subsidies tend to encourage households who would be homeowners anyway simply to purchase larger and better appointed houses on larger lots. Further, the main beneficiaries are higher income households who would be more likely to itemize their deductions (and thus be able to take advantage of the interest deduction) and who would tend to have larger capital gains to shield. The implicit subsidy on mortgage interest provided through the GSEs operates through the same broad-brush path (and also subsidizes the purchase of second homes and rental housing), with the same broad encouragement of larger amounts of housing on larger lots. It is hard to see the social benefit that accrues from encouraging upper income households, who would likely purchase homes anyway, to buy larger quantities of housing on larger lots and/or to buy second homes.

Indeed, the research of the past quarter century indicates that U.S. housing policies have distorted consumption and investment choices, causing an inefficiently large fraction of U.S. investment to be devoted to housing (and correspondingly less devoted to other productive physical capital, as well as human capital).

### 3.2 *Fannie Mae and Freddie Mac*<sup>26</sup>

Until their government takeover in September 2008, Fannie Mae and Freddie Mac were two large, hybrid (private-public) companies that dominated the secondary residential mortgage markets. They engaged in two lines of business: securitizing mortgages that generally conformed to high lending standards, with the mortgage-backed securities (MBS) carrying their guarantees if the mortgage borrower failed to repay; and investing in similar mortgages, funded overwhelmingly (around 96%) with debt.

Though they were publicly traded companies with shares listed on the New York Stock Exchange, the two companies were also creatures of Congress that had special governmental ties and advantages, as well as limitations (e.g., they were restricted to secondary mortgage markets, there was a ceiling on the size of mortgage that they could buy or securitize, and they were subject to prudential regulation) and obligations (they were expected to make a special effort to support lending to lower-income households -- an obligation that became more burdensome in 2003). Within the past few years the term "government-sponsored enterprise" came into common use to describe the two companies (as well as the Federal Home Loan Bank System, a wholesale bank for banks and thrifts that similarly enjoys special privileges and limitations).

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<sup>24</sup> Also, of course, rental subsidies run counter to the goal of encouraging households to become homeowners.

<sup>25</sup> One exception is the American Dream Downpayment Assistance Act of 2003, which instructs the Department of Housing and Urban Development (HUD) to provide down payment assistance to low- and moderate-income families. However, the appropriations for HUD's administration of this program have been relatively modest.

<sup>26</sup> Further discussion of these two companies can be found in Frame and White (2005) and White (2003, 2008).

As a consequence, the financial markets believed (correctly, as it turned out) that if Fannie or Freddie were ever in financial difficulties, the federal government would likely keep their creditors whole.

This belief in the federal government's "implicit guarantee" meant that Fannie and Freddie were able to borrow in the bond markets (in normal times) at about 0.35-0.40 percentage points less (i.e., at lower interest rates) than their financial condition would otherwise have justified. In turn, they caused interest rates for the mortgages that they could securitize or hold to be about 0.20-0.25 percentage points lower than otherwise would have been the case.

Both Fannie and Freddie grew rapidly in the 1990s and in the early years of this decade. Accounting scandals at Freddie in 2003 and at Fannie in 2004 caused their growth to slacken, especially for the mortgages that they held in their portfolios. Nevertheless, at year-end 2007 their holdings of mortgages and their outstanding mortgage-backed securities (which carried their guarantees) together totalled about \$5 trillion, or over 40% of the total residential mortgage market.

It is easy to understand the political popularity of their hybrid structure, since it looked like they were providing a free lunch: lower interest rates on mortgages, some efforts to expand lending to lower-income households, and no explicit cost to the federal government. The way that these outcomes were reconciled with adequate returns to shareholders was through low capital requirements (only 2.5% for holding a mortgage in portfolio; only 0.45% to support the guarantees on their MBS) and thus high leverage, as well as an expansion into higher-risk mortgages around 2005.

Although Fannie and Freddie were not at the centre of the subprime debacle, their portfolios and MBS did become more risky in the middle of this decade, as they expanded into "Alt-A" (between prime and subprime) mortgages. Further, as housing prices fell steeply in some areas like Las Vegas, parts of California, Arizona, and south Florida, even some "prime" mortgages (i.e., those where the borrower made a 20% down payment, had an adequate income, and had a good credit score) yielded borrower defaults and losses. Other apparently good mortgages, where private mortgage insurance was covering shortfalls in borrowers' down payments, came into doubt because of rising questions about the solvency of the mortgage insurers and thus their ability to make good on their obligations. And Fannie and Freddie were also burned on investments (intended to help satisfy those distributional requirements) in supposedly safe tranches of mortgage-based securities that had lower-quality mortgages as their underlying collateral.

At the end of the day, however, it was inadequate capital for the overall risks in their portfolios and their MBS that did them in. The free lunch turned out to be a costly meal indeed. As of early 2009, the U.S. Treasury had set aside \$400 billion to cover the possible losses of the two companies.<sup>27</sup>

### 3.3 *The Community Reinvestment Act.*<sup>28</sup>

The Community Reinvestment Act (CRA) of 1977 requires that commercial banks and savings institutions "to help meet the credit needs of the local communities in which they are chartered." Although the Act encompasses a range of financial services (to be provided by banks and thrifts) that is far broader than housing finance, the CRA has recently been implicated by some critics as playing a major role in the

<sup>27</sup> In the current shaky environment, Fannie and Freddie should remain as wards of the government. But the hybrid model is clearly too fraught with problems. After the financial markets have stabilized, the two companies should be fully and truly privatized, with no remaining special ties to the federal government -- but also no special burdens or restrictions on their activities, except for those that would be part of their inclusion in the special prudential regulatory regime discussed above. The privatization of the Federal Home Loan Bank System should similarly occur, for similar reasons.

<sup>28</sup> Further discussion can be found in White (2009b).

expansion of the subprime lending that subsequently went sour and thus as bearing a major responsibility for the subprime debacle.

The CRA has many flaws.<sup>29</sup> But responsibility for the subprime mortgage lending and securities debacle does not appear to be one of them. It appears that the bulk of the subprime lending of the earlier years of this decade was made by non-bank lenders – i.e., by mortgage “banks” that either securitized the mortgages themselves or that quickly sold the mortgages to securitizers. These non-bank lenders were not covered by CRA requirements. Further, the major financial difficulties that were related to investments in these mortgage securities were experienced mostly by investment banks (such as Bear Stearns, Lehman, Morgan Stanley, and Merrill Lynch) and by a large insurance conglomerate (AIG) – none of which were covered by the CRA. Where banks did experience difficulties that were related to subprime mortgages – such as CitiBank, Washington Mutual (WaMu), Wachovia (having absorbed Golden West in 2006), IndyMac, and Countrywide – it appears that they were heavily involved in subprime lending because of its perceived profitability (and their under-appreciation of the risks) and not because of CRA pressures.<sup>30</sup>

#### **4. Financial Regulation versus Competition: A Selective History**

The regulation of financial institutions in the U.S. has a long history, going back at least as far as the late eighteenth century. A complete history is not possible in this paper. Instead, a competition perspective on some major historical landmarks in financial regulation will be offered.

##### **4.1 Banking Regulation**

###### *4.1.1 Before the 1930s*

From the late eighteenth century until the 1860s, banking was almost entirely a state-focused and state-regulated industry.<sup>31</sup> Entrepreneurs who wanted to open a bank needed a charter from the state in which the bank was located, and the charters were usually restrictive in terms of the activities that the bank could undertake – an early indication that banks were special. Some states gave out charters relatively freely; others were more restrictive. Some states allowed unlimited branching; others restricted branching.<sup>32</sup> Some states had usury limits on the interest that could be charged on loans; others did not.

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<sup>29</sup> The Act is a regulatory effort to “lean on” banks and savings institutions, in vague and subjective ways, to make loans and investments that (the CRA’s proponents believe) those depository institutions would otherwise not make. It is a continued effort to preserve old structures in the face of a modernizing financial economy. At base, the CRA is an anachronistic and protectionist effort to force artificially a local focus for finance in an increasingly competitive, increasingly electronic, and ever-widening realm of financial services. Further, ironically, the burdens of the CRA may well discourage banks from setting up new locations in low-income neighbourhoods and thus providing local residents with better-priced alternatives to high-cost check-cashing and payday lending establishments. It should be replaced with explicit, on-budget subsidies to provide the community financing and development that are the goals of the Act’s proponents. Greater details can be found in White (2009b).

<sup>30</sup> An empirically based, quantitative evaluation of the role of CRA in subprime lending – which similarly finds that the CRA did not play a role in the debacle – can be found in Laderman and Reid (2009).

<sup>31</sup> The exceptions were the First Bank of the United States (1791-1811) and the Second Bank of the United States (1816-1836), which operated somewhat like rudimentary central banks.

<sup>32</sup> At the extremes, some states (such as California) allowed a bank to have unlimited branching throughout the state, while other (“unit banking”) states (notably Illinois and Texas, but other Midwest states as well) restricted individual banks to a single physical location. In between, some states allowed a bank to branch only within the county where it had its home office (i.e., headquarters), or only within that county and adjacent counties, or only into counties where another bank did not have its home office. As late as the mid

One important consequence of this state-centered regulation was that branching across state lines was not possible.<sup>33</sup> More generally, since (because of the problems of asymmetric information) location was destiny for banks, branching limitations (whether interstate or intra-state) meant that banks could not readily expand to compete with banks in other areas. In an important sense, these branching restrictions were an expression of American populism's fear of the economic and political power of large financial institutions. Many Americans seemed to prefer their banks small, with lots of them.

In 1863 the Congress authorized national charters for commercial banks, and created the Office of the Comptroller of the Currency (OCC) for their prudential regulation. In many respects, however, even these nationally chartered banks were subject to the state regulations of the state in which they were headquartered. Until 1927, national banks were restricted to a single location, regardless of the state in which they were headquartered; legislation in 1927 permitted city-wide branching for national banks – but only in states where state-chartered banks were permitted to branch at least city-wide.

Prior to the 1930s, state-chartered commercial banks could and did engage in securities activities. Whether national banks could also do so was ambiguous, until legislation in 1927 specifically authorized securities activities for national banks as well.

Finally, it is worth noting that, prior to the 1930s, both the states and the OCC were relatively free and open with respect to the chartering of new commercial banks. As of 1928, there were over 25,000 banks in operation in the U.S.

#### 4.1.2 *The 1930s through the 1960s*

The stock market crash of 1929-1933 was accompanied not only by a steep economic decline into the great Depression but also by the failures of over 9,000 banks. Thousands of savings institutions failed as well.

A major component of the general economic reforms that were enacted in the 1930s involved changes in bank regulation. The Congress was convinced that excessive competition among banks had caused them to pay excessively high rates on deposits and to make excessively risky loans, which had led to those thousands of bank failures. Consequently, in addition to mandating tighter prudential regulatory standards and creating the Federal Deposit Insurance Corporation (FDIC), the Banking Acts of 1933 and 1935 insisted that entry by new banks be allowed only if the “convenience and needs of the community” weren't already being served by the existing banks.<sup>34</sup> In the same spirit, the Congress banned the payment of interest on checking accounts and instructed the Federal Reserve to set ceilings on the interest that could be paid on other types of deposits. (The Fed's rules subsequently came to be called “Regulation Q”.) In separate legislation the Congress created a national charter and regulatory system for mortgage-oriented savings institutions (savings and loan associations, or S&Ls), and a separate deposit insurance system for them, but with similar entry restrictions as were placed on commercial banks. However, Regulation Q was not applied to savings institutions at the time (but eventually did apply, starting in 1966).

Further, the Congress was also convinced that there were severe conflicts of interest between the lending operations of a bank and its securities activities, and that these conflicts had contributed to the

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1970s, for example, New York allowed its large banks that were headquartered in New York City to establish branches only in the five boroughs of the city, the two counties of Long Island, and Westchester county; expansion farther upstate was off limits.

<sup>33</sup> It was possible, however, for a holding company to own separately chartered banks in two or more states.

<sup>34</sup> These restrictions on entry were in addition to the restrictions that would sensibly accompany prudential regulation: that an entrant have adequate capital, competent management, and a sensible business plan.



stock market crash and to bank failures.<sup>35</sup> Consequently, as part of the Banking Act of 1933, the Congress inserted four sections, which subsequently became known as the Glass-Steagall Act, that mandated that investment banking (i.e., securities activities) be separated from commercial banking, with no common ownership allowed, whether in the banks themselves or in the affiliates or holding companies of banks.<sup>36</sup> The Glass-Steagall Act was not applied to S&Ls, however.

Prudential regulation by both the states and the federal government generally restricted banks to financial activities (and the Glass-Steagall Act meant even greater restrictions). But the owners of commercial banks – including holding companies -- were largely unrestricted (except for the Glass-Steagall prohibitions) in their activities. Reflecting the Congress’s belief that a bank might unduly favour a commercial affiliate and thereby provide a competitive advantage to that affiliate, the Bank Holding Company Act (BHCA) of 1956 restricted holding companies that owned two or more banks to activities that were closely related to banking and a proper incident thereto.<sup>37</sup> Such holding companies were also prevented from owning banks in two or more states (but existing multi-state bank holding companies were “grandfathered” and not required to dissolve). In 1970 the BHCA’s restrictions on commercial activities were extended to holding companies that controlled a single bank. The 1970 legislation also made tying of products or services by banks illegal, but the language of the legislation was harsher than that of the Clayton Act, since there was none of the latter Act’s language of “where the effect... may be to substantially lessen competition or tend to create a monopoly...”

As of the early 1970s, then, there were substantial features of bank regulation that were clearly anti-competitive: Bank regulators restricted entry; all states restricted interstate branching, and many states restricted intra-state branching. Regulation Q inhibited price competition with respect to deposits offered by banks and (as of 1966) thrifts. The Glass-Steagall Act prohibited banks and their holding companies from entering investment banking (and equally prevented investment banks from entering commercial banking); the BHCA prevented bank holding companies from engaging in activities that were not closely related to banking (and equally prevented commercial or industrial companies, and even insurance companies, from owning a bank.

#### 4.1.3 *Procompetitive policies since the early 1970s*

Consistent with the general trend in the U.S. toward deregulation and a greater emphasis on competition in markets that began in the 1970s, bank regulation also moved in the direction of fewer restrictions on entry and competition. First, in the 1970s bank and thrift regulators eased their non-prudential restrictions on de novo entry; in essence, they interpreted a potential entrant’s willingness to enter as an indication that the “convenience and needs of the community” weren’t being satisfied by the incumbents. Second, in the mid 1970s, some states began allowing wider ranges of intrastate branching; and in the late 1970s, several states began signing compacts among themselves that permitted interstate branching. These compacts progressively grew in number and scope during the 1980s. Eventually, in 1994 the Riegel-Neal Act effectively permitted unlimited interstate branching, although the Act set a ceiling of 10% of the total of national deposits as the limit on the deposit size of a merging bank. Third, restrictions on the ability of S&Ls to expand their investments beyond residential mortgages and to be able to make adjustable-rate mortgages were loosened in the late 1970s and early 1980s.

<sup>35</sup> For a refutation, see Benston (1990).

<sup>36</sup> As an indication of the strength of the Congress’s sentiments on this point, the Glass-Steagall Act did not permit any “grandfathering” of the existing arrangements.

<sup>37</sup> For example, insurance was not considered to be closely related to banking.

Fourth, in the early 1980s Regulation Q was repealed and phased out, although a vestige remains in place today: the prohibition on banks' paying interest on business checking accounts. Fifth, starting in the 1970s the Federal Reserve gradually allowed commercial banks to enter various parts of the securities business (such as offering discount brokerage service, offering mutual funds, and doing limited amounts of securities underwriting). Finally, in 1999 the Gramm-Leach-Bliley Act erased the Glass-Steagall prohibitions on bank holding companies engaging in investment banking activities and the BHCA's prohibitions on holding companies' engaging in insurance.<sup>38</sup>

An important restraint remains, however: the BHCA's limits on what bank holding companies can do and, concomitantly, what kinds of companies can own a bank. These restrictions were highlighted in 2005, when Wal-Mart made an effort (as a few other non-financial firms had earlier succeeded in doing) to enter banking by obtaining a charter for an industrial loan company – a type of bank chartered in Utah – but was stymied by the FDIC's refusal to grant deposit insurance.

#### **4.2 Insurance Regulation**

From the middle of the nineteenth century onward, the regulation of the insurance industry has been the province of the states. The Supreme Court affirmed the states' role in Paul v. Virginia, 75 U.S. 169 (1868). Seventy-six years later, in the context of a Sherman Act Section 1 conspiracy case against a group of fire insurance companies in Missouri, the Supreme Court seemed to reverse itself in U.S. v. South-Eastern Underwriters Association, 322 U.S. 533 (1944), by deciding that insurance was interstate commerce and was subject to federal regulation -- such as antitrust. The Congress promptly passed the McCarran-Ferguson Act of 1945, which declared that the business of insurance was the subject of state law, unless the Congress subsequently decided otherwise – which it has not. The Act also effectively exempted the business of insurance from federal antitrust jurisdiction.

State regulation of insurance has been a mixture of prudential regulation (i.e., efforts to maintain the solvency of insurance companies through minimum capital requirements, limits on risky investments, etc.); information regulation; safety regulation (i.e., preventing some insurance products from being offered and insisting on certain coverages in other products – e.g., in health insurance policies); and, especially for some lines of property-casualty insurance (e.g., auto insurance; home owner's insurance) maximum price regulation.

In terms of an antitrust or competition concern, some states have authorized collective rate filings for some lines of property-casualty insurance (e.g., title insurance).

#### **4.3 Securities Regulation**

Securities regulation primarily involves information regulation: disclosure. However, the SEC's jurisdiction also extends to the operations of securities exchanges and securities trading. In this regard, the major triumph of a pro-competitive stance was the pressures of the Antitrust Division of the U.S. Department of Justice (DOJ) on the SEC and on the New York Stock Exchange (NYSE) in the late 1960s and early 1970s – ultimately successful – to eliminate the NYSE's system of fixed stock brokerage commissions.<sup>39</sup>

<sup>38</sup> In the wake of the subprime lending debacle, there have been many claims that the repeal of the Glass-Steagall barrier between commercial banking and investment banking was somehow responsible for the debacle. There is neither evidence nor logic to support these claims. A continuation of the Glass-Steagall barrier would not have inhibited the packaging of the subprime mortgages into securities, and it would not have inhibited commercial banks and investment banks from investing in those securities.

<sup>39</sup> Greater detail can be found in White (2007) and the sources cited there.

Prior to December 1968, the stock brokerage commissions for buying and selling shares of stocks that were traded on the NYSE were uniform across all members of the NYSE. Those commissions were set collectively by the members of the NYSE, with automatic approval for any changes by the SEC. The commissions were fixed at a dollar amount per “round lot” (100 shares), with no “quantity discounts” for trades that were in multiples of round lots, despite the obvious economies of scale that were involved in handling larger trades. As the trading volumes by institutional investors (i.e., mutual funds, pension funds, insurance companies, and bank trust departments) grew in the 1960s, these institutions increasingly chafed under the cost burdens imposed by the rigidly proportional fixed commission rate structure. In addition to efforts to evade the rigid structure, the institutions complained to the SEC. Their complaints were supported by the DOJ, which hinted at the possibility of antitrust suits.

The SEC held hearings in 1968 on the fixed commission system; and in December 1968 the SEC – over the NYSE’s objections – required that a set of volume discounts be added to the NYSE’s rate schedule. In the early 1970s the SEC required that commissions be subject to increasing degrees of competition; and, finally, on May 1, 1975, all brokerage commissions were required to be negotiated with customers; i.e., the jointly determined fixed commissions were wholly abolished, and competition in commissions prevailed.

The end to the fixed commission system meant not only lower prices for the standard, full-service brokerage transaction, but it also allowed brokerage firms to offer a wider range and variety of services, including the development of discount brokerage services, that had not been possible under the fixed commission system.

#### **4.4      *The Credit Rating Agencies***

Because the credit rating agencies were central parties in the subprime lending debacle, and the anticompetitive regulatory structure that surrounded them for over 30 years is not well known and understood, and the regulatory reasons for why they were central parties in the subprime debacle are also little known or understood, an explication of this regulatory morass is worthwhile.<sup>40</sup>

Rating agencies offer judgments – “opinions” is the word that they prefer<sup>41</sup> -- about the creditworthiness of bonds that have been issued by various kinds of entities: corporations, governments, and (most recently) the packagers of mortgages and other forms of debt. Those judgments come in the form of “ratings”, which are usually a letter grade. The best-known scale is that used by Standard & Poor’s and some other rating agencies: AAA; AA; A; BBB; BB; and so on (with pluses and minuses, as well). These ratings can be used by bond investors to help them determine the riskiness of the bonds that they might buy and the risk premiums that they should require.

The three major rating agencies in the U.S. – Moody’s, S&P, and Fitch -- clearly played a significant enabling role in the subprime lending debacle. Absent their excessively optimistic ratings on the increasingly poor quality mortgage-related securities in 2005 and 2006, the housing boom would have

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<sup>40</sup> More information on the credit rating industry and its regulation can be found in Cantor and Packer (1995), Partnoy (1998), Sylla (2002), White (2002, 2009d), and Richardson and White (2009).

<sup>41</sup> They thereby try to wrap themselves in the First Amendment – thus far, largely successfully – when challenged in lawsuits by disgruntled investors who claimed that they were misled by ratings or by disgruntled issuers who claimed that they have been unfairly rated too low.

ended sooner, and the collapse would have been less severe. Further, it is clear that their basic business model, in which they charge the securities issuers fees for the rating, didn't help matters.<sup>42</sup>

Credit rating agencies have never been the only source of information about bonds. So, why were they so central to the bond markets and especially to the securitization process? An historical perspective is necessary:

For decades financial regulators -- bank regulators, insurance regulators, pension fund regulators, and the SEC -- have been requiring that their regulated entities heed the ratings of a select few rating agencies. For example, since the 1930s banks have not been allowed to invest in bonds that are below "investment grade" (which, for example, is BBB- or better on the S&P scale) -- as determined by the select few rating agencies. Although the goal of having safe bonds in the portfolios of banks (as part of prudential regulation) was (and remains) a worthy one, the bank regulators essentially delegated (or outsourced) their safety judgments to the rating agencies. Equivalently, the safety judgments of these third-party rating agencies acquired the force of law.

When the SEC in 1975 decided to delegate its safety judgments with respect to broker-dealers, it wanted to ensure that the delegations weren't made to bogus agencies. It therefore created the category "nationally recognized statistical rating organization" (NRSRO) and immediately "grandfathered" into the category the three large rating agencies. Other financial regulators soon adopted the NRSRO category for their delegations.

Over the next 25 years, the SEC allowed only four more rating firms to achieve the NRSRO designation; but mergers among the entrants and with Fitch reduced the number of NRSROs back to three by year-end 2000. The SEC never developed criteria for the designation and handled the entire designation process in a remarkably opaque fashion. And, once designated, a NRSRO was never again scrutinized by the SEC for competence or accuracy.

As a practical matter, the SEC had created a substantial barrier to entry into the rating business (since only the NRSROs' ratings mattered for the bond investment decisions of regulated financial institutions). It shouldn't be a surprise that the protected rating industry incumbents -- whose importance for bond markets was greatly magnified by all of those safety delegations by financial regulators -- might grow sluggish and careless. Also, although the issuer-pays business model had not created major problems when the agencies were primarily rating corporate and municipal bonds from thousands of issuers, the model proved more problematic when there were only a handful of investment banks that were bringing most of the mortgage-related securities to the agencies for ratings.

Although the SEC has designated seven additional NRSROs since 2000,<sup>43</sup> and legislation passed in 2006 required that the SEC cease being a barrier to entry and gave it limited regulatory powers over the

<sup>42</sup> The original business model for rating agencies, started in 1909 by John Moody, was an "investor pays" model: Moody and successor firms (Poor's, the Standard Statistics Company [which merged with Poor's in 1941], and Fitch) sold ratings to investors in thick rating manuals. In the early 1970s, the industry's business model changed to an "issuer pays" model. The reasons for this change have never been established definitively. Among the candidates: (a) The high-speed photocopy machine, which was gaining widespread use, opened the prospect of free-riding among investors; (b) The bankruptcy of the Penn-Central Railroad in 1970 clearly shocked the bond markets and made bond issuers more willing to pay to be able to clarify the safety with investors (but why weren't investors more willing to pay to learn about safe bonds?); (c) The industry may have belatedly realized that the issuers needed their ratings, for the reasons that are discussed in the text below; and (d) In two-sided information markets (newspapers and magazines are another example), the question of which side pays is idiosyncratic.

<sup>43</sup> One in 2003; one in 2005; three in 2007; and two in 2008.

NRSROs, the pattern that had been established in the earlier decades has had lasting consequences: When the securitization of subprime mortgages took off early in this decade, the Big Three rating agencies were the only ones to whom the securities packagers could bring the securities, so as to obtain the ratings that were required to place the securities in the portfolios of regulated financial institutions.

## **5. The Debacle, the Crisis, and Too-Big-to-Fail**

### **5.1 *The Debacle, and the Crisis***

Since the subprime lending debacle of 2007-2008 is what got us here, it is worth reviewing what went wrong: A 10-year national housing bubble expanded dramatically, and then popped just as dramatically. That bubble was inflated by progressively looser lending standards, allowing increasingly inappropriate households to borrow increasingly excessive amounts of money on residential mortgages that couldn't be repaid. These mortgages were often bundled/packageged into securities that were blessed with high ratings by rating agencies and sold to insufficiently cautious investors; in some instances the securities became the collateral for yet further rounds of securities that again were blessed and sold. The Federal Reserve's fears of deflation and a consequent monetary policy that was too easy for too long in the first half of this decade added fuel to this fire.

Much of this loose lending happened because the participants -- from the borrower to the mortgage broker (who made the match between the borrower and the initial lender/originator) to the initial lender/originator to the securities packager to the rating agency that rated the securities to the investor who bought the securities -- were collectively "drinking the Kool-Aid" of "housing prices can only increase". If housing prices would always increase, then even otherwise inappropriate mortgages would not be a problem, because the borrower could always refinance the mortgage or repay by selling the house at a profit. Further, the parties that acting as agents between the borrower and the investor could all earn handsome fees from the transactions and could comfort themselves with, "These mortgages won't be a problem because housing prices will always increase -- but even if some mortgages do become a problem, they will be somebody else's problem," and then pocket the money and move on to the next transaction (which, of course, is the problem of moral hazard).

This is not the whole story. On the borrowing end, there were clearly some instances of fraud -- sometimes committed by the borrower with the connivance of mortgage broker and/or the lender; and sometimes committed by the mortgage broker in inducing unwitting households to sign and commit to obligations that were patently beyond their capabilities. But fraud (which ought to be prosecuted vigorously when discovered) was only a modest part of the story.

On the lending and investing end, mortgage finance was occurring in the context of an even wider under-recognition of risk. Normally cautious banks were making loans to highly leveraged private equity firms and not insisting on the tight controls that would have been commonplace a few years earlier. Similarly, cautious bond investors, who earlier had been requiring that high-risk "junk bonds" pay interest rates that were 5-6 percentage points above Treasury bonds of the same maturity were apparently satisfied with interest rates that were only 3-4 percentage points above Treasuries.

In sum, the combination of a housing boom and a surprising disregard for risk by lenders and investors conspired to create an environment where slipshod practices by "middlemen" remained profitable for too long. When housing prices ceased to rise -- as had to happen sooner or later -- the house of cards collapsed. When subprime borrowers couldn't refinance, they defaulted, the mortgage securities fell in value, and the mortgage finance system imploded, dragging much of the rest of the financial sector down with it because of the relatively low capital levels and concomitant high leverage of most of the institutions in the financial sector, some of which -- including some very large institutions -- owned significant slugs of

these toxic mortgages and mortgage-related securities. (Readers are again urged to consult the appendix for help in understanding the concepts of “capital” and “leverage”.)

By now the major pieces of this story are understood, although why so many participants continued to believe for so long that housing prices could only go up and why so many lenders and bond investors disregarded the standard precautionary actions of those who should be worrying about whether they will be repaid are puzzles that are better tackled by psychologists than by economists.

The importance of leverage in explaining why the losses of the subprime debacle were transmitted to and brought down the U.S. financial sector is worth emphasizing. This importance is best illustrated by a comparison of the effects of the collapse of the “dot.com” bubble and the collapse of the housing bubble:

Between year-end 1999 and year-end 2002, the value of all shares of stock traded on U.S. exchanges declined by about \$7.5 trillion.<sup>44</sup> Although this decline in national wealth was painful, and contributed to the 2001-2002 recession, it did not rip apart the U.S. financial sector.

At the height of the housing bubble (mid-year 2006), the aggregate value of the stock of U.S. housing was about \$22 trillion. Housing prices have fallen since then by about 20-25% nationally, and a reasonable estimate is that the overall fall will be about 35% by the time that the housing market stabilizes. That 35% decline, multiplied by \$22 trillion, implies a decline in wealth of \$7.7 trillion. Most of that decline will be absorbed by homeowners, who will be less wealthy than they thought they were in mid 2006. But about \$1-1.5 trillion of the loss will be transferred to the financial sector, via defaults on mortgages. The anticipation of these latter losses has ripped apart the U.S. financial sector.<sup>45</sup>

Why did the earlier \$7.5 trillion of stock market losses not decimate the U.S. financial sector, whereas the more recent mortgage losses that are only a fifth to a sixth as large have required massive federal intervention? The difference is leverage. Most of the earlier losses were absorbed by U.S. households in direct holdings of shares, in mutual funds, and in pension funds – all of them unleveraged. By contrast, the later losses are hitting the highly leveraged financial sector, where too many (and, especially, large) institutions have had too little capital to be able to absorb these losses without federal intervention.

Federal efforts to deal with the problems of the large and troubled financial institutions have confronted the issue of TBTF. It is to that issue that we now turn.

## 5.2 *Too-Big-To-Fail*<sup>46</sup>

The construct of TBTF is best understood by first illustrating what the failure of a not-too-big-to-fail bank looks like:

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<sup>44</sup> From \$19.4 trillion to \$12.4 trillion; these data are taken from the Federal Reserve’s “Flow of Funds” data base.

<sup>45</sup> The serious recession into which the U.S. economy has slipped, starting in December 2007, has meant that losses on other types of loans will also be incurred by banks and other lenders; nevertheless, it is clear that it was the anticipation of the losses on subprime mortgages and mortgage-related securities that led to the initial crisis for the U.S. financial sector.

<sup>46</sup> This section will address the concept of TBTF for financial institutions. With respect to other large enterprises, such as automobile companies, the driving force appears to be political fears of the immediate unemployment and disruptions to related enterprises in the event of the closure of the large enterprise.

### 5.2.1 *The failure of a small bank*

Figure A3 in the Appendix portrays in stylized form the balance sheet of an insolvent bank. Its assets – primarily loans – are inadequate to cover its fixed liabilities – primarily deposits.<sup>47</sup> Insolvency is the major grounds for bank regulators to declare that the bank is in an unsafe and unsound condition and thus to declare a receivership for the bank, with the FDIC appointed as receiver.<sup>48</sup> With the receivership, the FDIC takes control of the bank. The shareholder owners are washed away (after all, their equity stake is now negative), and senior management is almost always removed (after all, they are the managers who drove the bank into the ditch).

Because the depositors have been insured by the FDIC, the FDIC now has obligations of \$92 but has only \$80 (expected value) of assets that it has acquired as receiver. It will have to “fill the hole” of \$-12, in one way or another. The usual method of “resolving” the insolvent bank is to find an acquirer for the bank.<sup>49</sup> Since the bank has a negative net worth of \$-12, the FDIC will have to pay the acquirer: add cash of (approximately) \$12 to the bank’s assets, in order to provide a balanced institution to the acquirer (which will then be expected to inject its own capital into the acquired bank, so as to achieve appropriate capital levels for a healthy bank). This is the type of transaction that the FDIC strongly prefers, since it usually minimizes the FDIC’s costs<sup>50</sup> and minimizes disruptions to the bank’s customers.

If the FDIC cannot find an acquirer for the whole bank, then it will try to find an acquirer for the deposits and some of the assets (with the FDIC providing a larger upfront cash payment to the acquirer and then liquidating whatever assets the acquirer has refused to take).<sup>51</sup> At the extreme, the FDIC might not be able to find an acquiring bank. It could then operate the bank itself, in the hopes that with more time an acquirer could be found.<sup>52</sup> Or it can liquidate the bank: pay off the depositors (typically mailing out checks on the next business day after the receivership was declared), and liquidate the assets.<sup>53</sup>

### 5.2.2 *The failure of a large bank*

What potential complications arise when a large bank failure is imminent? We can stay with the stylized balance sheet of Figure A3 (but remember that more zeroes are at stake than was the case for the small bank).

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<sup>47</sup> To simplify the discussion that follows, I will initially assume that all of the fixed liabilities are deposits and that all of the deposits are insured by the FDIC.

<sup>48</sup> This typically happens on a Friday evening, after the close of business.

<sup>49</sup> Often in the week or two prior to the declaration of the receivership, the FDIC will “shop” the target bank around to potential acquirers.

<sup>50</sup> By transferring the whole bank, any brand name recognition/going concern value for the bank that may still exist is preserved; this has value for the acquiring bank, which may thereby be willing to accept a bit less than \$12 from the FDIC as the “hole filling” payment. Also, by transferring the whole bank the FDIC avoids the costs of liquidating the assets and of mailing checks to depositors.

<sup>51</sup> The acquirer might refuse to take some of the assets (and prefer cash from the FDIC instead) because of the acquirer’s uncertainties about the true value of the assets. At the limit, the acquirer might prefer all cash from the FDIC to balance the deposit liabilities that the acquirer is absorbing.

<sup>52</sup> The FDIC did this in the case of the IndyMac receivership in 2008.

<sup>53</sup> During the S&L debacle of the late 1980s and early 1990s, such liquidations were rare, with whole bank or partial bank transfers to acquirers being far more common. Despite the fact that owners were washed away and senior managers were removed, the term “bailout” came to be commonly used to describe such transactions – apparently because the bank was still operating (albeit, under different ownership and management).

The first complication arises because a larger fraction of the fixed liabilities of a large bank are likely to be uninsured obligations – either deposits that are in excess of the amount insured by the FDIC,<sup>54</sup> or other kinds of obligations (bonds, notes, commercial paper, etc.) that are uninsured.<sup>55</sup> Table 2 shows that deposits as a percentage of assets fall as average bank size increases. Table 3 extends that comparison by showing that the percentage of a bank's deposits that are covered by FDIC insurance tends to be smaller for banks that are larger. If a bank with a substantial amount of uninsured fixed liabilities (i.e., uninsured deposits and other uninsured liabilities) is put into receivership, the uninsured creditors may experience losses, or may fear experiencing losses, which could cause contagion or a cascade (or both); i.e., if the sums are large enough, these losses could have systemic consequences.<sup>56</sup>

Second, a larger bank is more likely to have off-balance sheet exposures, such as derivatives positions. Table 4 shows the relevant data by size of bank. If a bank is put into receivership, the counterparties to these derivatives contracts may suffer losses, or fear that they may suffer losses, again possibly causing contagion or a cascade (or both) and systemic consequences.

Third, a larger bank is more likely to have a sizable holding company, where a major asset of the holding company is its investment in the underlying bank. The fixed liabilities of the holding company are not insured. If the underlying bank is put into receivership, the holding company is likely to have to declare bankruptcy. There currently is no receivership arrangement for holding companies. As of year-end 2007, Citigroup consisted of a \$900 billion (in assets) holding company sitting on top of a \$1,200 billion (in assets) bank. The bankruptcy of a \$900 billion holding company would likely have systemic consequences.

Finally, it is worth remembering that the scenarios that we have thus far constructed in this section have involved a commercial bank, the deposits of which are guaranteed by the FDIC and over which the FDIC has receivership powers. But there are large financial institutions for which there are no government guarantees of the fixed liabilities and there are no receivership powers: large investment banks,<sup>57</sup> large finance companies (e.g., GE Capital, which had \$650 billion in assets at year-end 2007),<sup>58</sup> large bank holding companies (as was discussed above), and the holding companies of other large financial firms (e.g., American International Group [AIG]). Table 5 lists the 15 largest financial institutions in the U.S. at year-end 2007. It is worth noticing the relatively thin capital levels of all of the companies that are listed in Table 5, especially the investment banks.

### 5.2.3 *Understanding TBTF*

The concept of TBTF can now be parsed: It involves a financial company (with thin capital); the company must be large; its interconnections with other financial companies must be extensive; and a

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<sup>54</sup> From 1980 until the summer of 2008 the insured deposit amount at a bank, thrift, or credit union was \$100,000. In the summer of 2008 the insured amount was increased to \$250,000 for individuals, and business transactions accounts obtained complete coverage without limits.

<sup>55</sup> As a consequence of the financial crisis, the FDIC has begun offering insurance on bonds issued by banks.

<sup>56</sup> Stern and Feldman (2004), as a general characterization, express substantial doubt that contagion or cascades are likely to be significant phenomena.

<sup>57</sup> As of year-end 2007, there were five large free-standing investment banks: Goldman Sachs, Morgan Stanley, Merrill Lynch, Bear Stearns, and Lehman Brothers. By the end of September 2008, Lehman had declared bankruptcy, and the remaining four had either become bank holding companies (Goldman and Morgan Stanley) or had been absorbed into bank holding companies (Bear Stearns into JPMorgan Chase; Merrill Lynch into Bank of America).

<sup>58</sup> It is interesting to note that *Fortune* magazine, in its annual "Fortune 500" listings, includes the entirety of General Electric in the category "diversified financial" companies.



receivership and government guarantee for all, or almost all of the company, must not be possible, so that a bankruptcy (and its uncertainties) are the only legal remedy for creditors.

It is important to realize that a large bank (if it has only a small or nonexistent holding company) can “fail”, in the sense that the FDIC could declare a receivership, guaranty the fixed liabilities (so long as they are primarily deposits, or the FDIC is prepared to guaranty other bank liabilities), wash away the owners, and remove senior management. The FDIC would be unlikely to want to liquidate a large bank; the costs and inconveniences would be too great. Instead, it would want to find an acquirer. Although finding an acquirer for a very large insolvent bank might be difficult, the FDIC might choose instead simply to operate the bank for a while (as it did for IndyMac in 2008 and early 2009), inject sufficient cash to balance the bank’s assets and fixed liabilities, and then eventually do an initial public offering (IPO) to place the bank back into the private sector.<sup>59</sup> In this sense, a large bank is “too big to liquidate”; but it is not too big to fail.<sup>60</sup>

Arguably, a similar process was applied to Fannie Mae and Freddie Mac in early September 2008: Their regulator (the Federal Housing Finance Agency) declared a conservatorship and took control of the company. Although the shareholders were technically kept in place, their shares now trade for less than a dollar per share, far less than their value a few months before the receivership. Senior management was dismissed. The two companies’ liabilities had always had an implicit guarantee; with the receivership, that guarantee became a bit stronger, but has still not become fully explicit. The two companies clearly failed; but they were too large to liquidate. A similar phenomenon occurred with respect to AIG in September 2008; it failed, but was not liquidated. And the same might be described for the absorption of Bear Stearns into JPMorgan Chase in March 2008.

The crucial element for the true TBTF phenomenon, then, in addition to size and interconnectedness, is the absence of government guarantees for the fixed liabilities and the absence of a receivership process. These were the elements that were in place when Lehman Brothers (\$650 billion in assets) declared bankruptcy in September 2008. It was a failure that did traumatize the financial markets, leading the federal government immediately to decide that it would not force a bankruptcy of AIG.<sup>61</sup> These elements remain in place for most of the large financial companies that are listed in Table 5.

Finally, it is important to recognize that, although size is clearly an issue with respect to TBTF, antitrust and competition issues really are not. TBTF does not represent an instance in which size involves the exercise of market power. There clearly is a market distortion: A TBTF firm, in essence, is receiving a government subsidy.<sup>62</sup> But subsidies and other distortions are rife in the U.S. economy. Anyone interested

<sup>59</sup> This is approximately what the FDIC did with respect to Continental Illinois Bank in the 1980s, after the FDIC declared a receivership in 1984. At the time Continental Illinois was the seventh largest commercial bank in the U.S. See Sprague (1986) for more details.

<sup>60</sup> It is also worth noting that the FDIC was able to dispose of a near-insolvent Washington Mutual (\$300 billion in assets, and only a small holding company) in September 2008 to JPMorgan Chase, and to dispose of a near-insolvent Wachovia Bank (\$750 billion in assets, including a modest sized holding company) to Wells Fargo.

<sup>61</sup> There was also an important cascade and contagion that followed from the Lehman bankruptcy: A large money market mutual fund (the Reserve Fund) owned a large enough amount of Lehman’s commercial paper, which became worthless after the Lehman bankruptcy, that it had to “break the buck” and tell its shareholders that they would receive only 97 cents per share (rather than the \$1.00 per share that is the norm). This immediately started a run on the Reserve Fund and on other money market funds, which caused the Federal Reserve to intervene and to issue a guarantee on existing money market mutual fund shares.

<sup>62</sup> Equivalently, one might argue that a TBTF firm is imposing a negative externality on society.

in good public policy should argue for their reduction and eventual elimination. But the mantle of antitrust should not be stretched to cover such arguments.<sup>63</sup>

As another way of making this last point, consider a hypothetical merger between two financial companies that currently are not TBTF but that, post merger, might be considered to be TBTF: Would the DOJ-FTC Horizontal Merger Guidelines be of any benefit in helping analyze the merger? Since market power is not at issue, the answer would surely have to be “no”.

## **6. What Is to Be Done? An Antitrust/Competition Perspective**

The reform of financial regulation is clearly a high priority task for current public policy. This concluding section will focus on potential reforms for which competition is an issue.<sup>64</sup>

### **6.1 *Eliminate Exemptions from the Antitrust Laws***

Exemptions are, of course, a broader issue than just their presence in financial regulation. Nevertheless, financial regulation would be a good place to start. The McCarran-Ferguson Act’s exemption of the insurance industry from antitrust review should be repealed, as well as the Bank Merger Act’s system of shared merger review responsibility between the DOJ and the banking regulators.<sup>65</sup>

### **6.2 *Maintain the Merger Guidelines Perspective in Merger Reviews***

The U.S. financial sector has a history of being highly fragmented, at least partly because of its orientation toward localism and state regulation. Despite several decades of numerous mergers among financial services firms, the financial sector remains fragmented, as is indicated by the large numbers of financial institutions that are found in Table 6. Given those numbers, mergers will surely continue; the current weakness in the financial sector may well spur additional financial mergers.

As a general matter, the perspective of the DOJ-FTC Horizontal Merger Guidelines should be maintained.<sup>66</sup> In that light, many financial markets – e.g., investment banking, securities trading, insurance, loans to large enterprises, mortgage loans, consumer loans – are likely to be national in scope. Accordingly, even mergers between large firms such as Bear Stearns/JPMorgan Chase and Merrill Lynch/Bank of America will not pose antitrust issues.<sup>67</sup>

Some financial markets, however – notably, for deposits and for loans to small- and medium-size enterprises (SMEs) – appear to be largely local. In the case of loans, this is because of problems of asymmetric information and the consequent need for a local presence by the lender to be able to assess the prospects of potential borrowers and to monitor actual borrowers; in the case of deposits, customers want the convenience of easy physical access to bank personnel. In these markets, then, antitrust concerns may

<sup>63</sup> The characterization of a negative externality generates a possible policy route: a tax on the negative externality that is equal to the social cost of the externality. See Archarya and Richardson (2009) for an elaboration of this argument.

<sup>64</sup> For a wider set of potential reforms, see White (2009a).

<sup>65</sup> See also the recommendations of the Antitrust Modernization Commission (2007, ch. IV.B).

<sup>66</sup> Whether a merger creates or exacerbates a TBTF problem is, however, a separate issue, as was discussed in Section V.

<sup>67</sup> Again, TBTF issues are a separate matter. For each of the two mergers in question, both parties were already in the TBTF category, and the merger was seen as a “rescue” of the faltering investment bank by the healthier commercial bank. It’s unclear whether the mergers exacerbated the TBTF problem.

be raised by mergers between even small banks (if the local market is small as well) or by mergers between large banks that have extensive branch networks that overlap in individual local markets.<sup>68</sup>

The DOJ and the bank regulators have been aware of these issues, and the requirement that mergers between banks with large branch networks be accompanied by branch divestitures (which include deposits and loans, as well as the physical premises) is commonplace.<sup>69</sup> In the recent absorptions of Wachovia by Wells Fargo and National City by PNC, the DOJ and the Federal Reserve insisted on branch divestitures in multiple metropolitan areas. Over the longer haul, as Table 7 shows, despite the diminishing numbers of banks in aggregate and the rising concentration of banks in deposit holdings when measured at the national levels, HHI measures at the level of metropolitan statistical areas (MSAs, which are used as approximations to urban local markets) and non-MSAs (which are individual counties and are used as approximations to rural local markets) have actually fallen over the past few decades. This vigilance should be maintained.

As a final consideration in any antitrust assessment of financial mergers, one special aspect of finance should be kept in mind: Entry is likely to be a less rapid and less powerful force for checking the exercise of market power than might be the case in otherwise similar non-financial industries.<sup>70</sup> The reason is asymmetric information: Lenders are likely to be more wary of entering and of expanding rapidly in unfamiliar markets, because of fears of adverse selection and moral hazard; and in financial industries where prudential regulation is in place, financial regulators should be additionally wary of rapid growth by their regulated firms, for the same reasons.

### **6.3 *Don't Be Distracted by TBTF***

As was discussed in Section V, TBTF is not an antitrust issue. It should not become part of an antitrust agenda.

### **6.4 *Modifying Financial Regulation to Encourage More Competition***

There are at least four areas in the discussion of financial regulation in Section IV where modifications could allow more competition and better outcomes.

#### **6.4.1 *Allow banks to pay interest on business checking accounts***

The prohibition on the payment of interest on commercial checking accounts is the remaining vestige of the more widespread regulation of interest on bank deposits. The rest of the restraining regulations were

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<sup>68</sup> In this regard, the 10% national deposit limit set by Riegel-Neal is irrelevant from an antitrust perspective and should be repealed. It is not a good TBTF instrument either, since (as the discussion in Section V indicated) it is not large amounts of deposits that create TBTF problems but large amounts of uninsured liabilities.

<sup>69</sup> One institutional feature is worth noting: In almost all instances, it is the branches of the acquired bank that must be divested to a third-party bank. This is a sensible requirement. Because customer loyalty in finance is significant (again, because of asymmetric information), there are fears that if the acquiring bank's branches were divested, the customers of the divested branch would abandon the third-party bank and return their business to the nearest branch of the acquiring bank. Since the customers of the acquired bank are going to experience a new enterprise with a new brand name in any event (and their old enterprise and old brand name has disappeared), they are more likely to stay as customers of the third-party acquirer.

<sup>70</sup> See, however, Geroski (1995) for a survey of the economic evidence on entry, which argues that even in non-financial industries, entry may not be as powerful a force in checking the exercise of market power as is commonly believed. See also Siegfried and Evans (1992, 1994).

jettisoned almost 30 years ago, in the early 1980s. The time is long overdue for this regulation to be repealed as well.

#### 6.4.2 *Allow non-financial companies to own banks*

Although the Gramm-Leach-Bliley Act of 1999 eliminated the investment banking- commercial banking barrier, it left in place the Bank Holding Company Act's prohibition on non-financial firms' ownership of banks (via a BHC). It should be no surprise that incumbent banks favour the continuation of this prohibition (and vigorously opposed Wal-Mart's efforts to enter banking a few years ago, which was discussed in Section IV). The arguments used by the banking industry – either that such ownership arrangements would threaten the safety and soundness of these banks, or that somehow these ownership arrangements (and especially Wal-Mart's ownership) would either decimate community banking or decimate local commercial rivals – do not stand up to close scrutiny.<sup>71</sup>

There is a legitimate prudential regulatory concern that accompanies any ownership arrangement of a bank: that the owners will try to drain resources out of the bank -- e.g., by making loans (that aren't repaid) to the owner, or to the owner's companies, or to the owner's customers or suppliers or friends, or simply by paying excessive dividends to the owner) -- so that the bank becomes insolvent and the FDIC has to take over the bank's obligations to depositors. But this potential problem is present regardless of whether the bank is owned by individuals or by a holding company, and regardless of whether the holding company is engaged in financial businesses or in non-financial businesses.

Bank regulators have long understood this potential problem and have “arm's length terms” rules for transactions by a bank with related parties, as well as limits on excessive dividends. Those rules can be as readily enforced when the holding company is engaged in non-financial activities as when it is engaged only in financial activities or when the bank is owned by individuals. It is a regulatory absurdity that the local car dealer can own a bank, but AutoNation, Inc. (a publicly traded company that owns multiple car dealerships) cannot.<sup>72</sup>

In sum, the BHCA's prohibitions on a bank holding company's engaging in non-financial activities should be repealed.<sup>73</sup>

#### 6.4.3 *Repeal the Community Reinvestment Act*

As was argued above in Section III, the CRA is fundamentally an effort to “lean on” banks and savings institutions, in vague and subjective ways, to make loans and investments in local communities that (the CRA's proponents believe) those depository institutions would not otherwise make. As a non-trivial side effect, the CRA may well discourage banks from entering low-income neighbourhoods. The CRA should be repealed and replaced with explicit, on-budget governmental subsidies that would provide the community financing and development that are the goals of the CRA's proponents.

<sup>71</sup> For more details, see White (2009e).

<sup>72</sup> If non-financial enterprises were to be allowed to own banks, TBTF problems would arise only if the specific conditions discussed in Section V were to arise – which seems highly unlikely.

<sup>73</sup> On the assumption that Wal-Mart still has an interest in entering banking, an additional advantage to repeal would be to increase banking services for the “unbanked” and “underbanked” (since Wal-Mart's business model of catering to low- and moderate-income households with appealing goods and services at reasonable prices would likely carry over to banking as well). This, in turn, could allow other restrictive banking regulation (the Community Reinvestment Act) to be repealed. For more details, see White (2009b).

#### 6.4.4 *End collective filing of insurance rates*

There are no good arguments to support the practice of group filing of insurance rates for property-casualty lines of insurance. Where states currently allow this to occur, it should be prohibited and instead be considered a violation of Section 1 of the Sherman Act.

#### 6.4.5 *Offer a federal insurance charter*

As an alternative to the state regulatory regimes, the federal government should establish a federal regulatory agency for insurance, which would offer a federal charter, establish regulatory rules and procedures, and establish a guarantee fund for policy holders in the event of insurance company failures. The dual (federal/state) banking system has worked well; a dual insurance system should work well also (and would be in the spirit of more competition among regulatory regimes, which is discussed below).

#### 6.4.6 *Replace the regulation of credit rating agencies with a regulatory structure that would encourage competition*

In the wake of the credit rating agencies' major stumble in being excessively optimistic with respect to the creditworthiness of subprime mortgage-related securities (discussed in Section V), the SEC has implemented regulations to try to alleviate their conflict-of-interest problems and to increase transparency.

It is tempting to want to regulate the rating agencies, so as somehow to force them to do a better job in the future. Forcing them to deal better with the conflicts of interest that are inherent in the issuer-pays model -- perhaps even banning the issuer-pays model as inherently too dangerous -- and insisting on greater transparency has its attractions.

But the story of how the Big Three rating agencies came to be at the centre of the market for bond information, which was recounted at the Section IV, is worth remembering: Starting in the 1930s, financial regulators have forced their regulated institutions (banks, insurance companies, pension funds, broker-dealers, money market mutual funds) to heed the judgments of the major rating agencies, thus endowing these judgments with the force of law -- and the problem was compounded by the SEC's erection of the "nationally recognized statistical rating organization" (NRSRO) category and its maintenance as a barrier to entry for over 30 years.

This experience suggests that there is another way to deal with the rating agencies: reduce their regulatory importance.

This second path should be pursued as follows: Financial regulators would still have the goal that their regulated financial institutions should have safe bond portfolios, and regulatory requirements to that effect should remain in place. But the regulators would withdraw their delegations of safety judgments that they have made to the credit rating agencies. Instead, the burden would be placed directly on the financial institutions to justify the safety of their bond portfolios to their regulator. This justification might involve the institution's doing its own research on the bonds (and showing that research to its regulator). Or it might involve the institution's relying on the information provided by a trusted advisor -- which might be one of the incumbent rating agencies but might instead be an alternative provider of bond creditworthiness information (and again, the institution would have to justify its choice of advisor to its regulator). Since these are regulated financial institutions, it is reasonable to expect that they would be able to ascertain and choose reliable advisors -- with, of course, the oversight of their regulators.

With the regulatory burden for safety now placed directly on the financial institution, there would be no necessity to maintain the NRSRO category. Competition and entry in the market for bond information --

including the possibilities of new ideas, new methodologies, new technologies, new business models<sup>74</sup> -- would be opened up in a way that has not happened since at least 1975 – and, arguably, not since the 1930s.

### **6.5 Beware of Proposals for Regulatory Simplification**

This final proposal does not directly affect competition in financial markets, but it is in the same spirit and could well have indirect effects.

As was noted in Section II, not only is the substance of financial regulation terrifically complicated, but the organizational structure of the U.S. regulatory system is mind-bogglingly complex:

- There are five federal regulators of depository institutions, as well as one or more regulator in each of the 50 states;
- The states also regulate lenders/originators that are not depositories;
- There's a separate regulator for Fannie Mae and Freddie Mac and the Federal Home Loan Bank System;
- There are two federal agencies that deal with securities and related financial instruments, as well as 50 state regulators (and 50 state attorneys general);
- The regulation of insurance companies is exclusively the domain of the 50 states;
- Pension funds are regulated by two federal agencies, and again all 50 states have a say; and
- Consumer fraud in financial products can be the responsibility of yet another federal agency (the FTC), as well as the 50 states.

There are overlapping responsibilities and jurisdictional disputes galore. Indeed, any attempt to diagram these multiple agencies and their responsibilities ends up looking far more complicated than a 1930s radio wiring diagram.

This crazy-quilt pattern -- and its extra costs -- provides the ammunition for periodic proposals to simplify the architecture of financial regulation, even in the absence of a financial crisis. The Treasury's "Blueprint for a Modernized Financial Regulatory Structure," for example, though released in March 2008, was initiated a few years earlier as yet another proposal to simplify the structure, even before the subprime debacle was a spectre on the horizon.

In the consideration of any simplification proposals, however, two important points should be kept in mind. First, there is no credible argument that links this complexity to the subprime debacle or the wider financial crisis that followed. Equivalently, it is far from obvious that a simplified regulatory framework would have addressed these problems any more readily.

Second, there is an important advantage to the complicated structure that is never mentioned by simplification proponents: The duplication of agencies provides alternate outlets for someone with a good idea -- whether it's a better way to regulate or a better financial instrument. Just as a monopoly in the private sector can be an impediment to new ideas, so can a monopoly in government regulation.

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<sup>74</sup> Whether the issuer-pays model would survive in this more open environment would be a question that would be decided by the market rather than by regulation.

A few anecdotes can illustrate the benefits of diversity and alternatives in regulation. In the 1970s, the introduction of exchange-traded financial derivatives happened in Chicago, on exchanges that had previously handled agricultural and minerals futures, and under the regulatory jurisdiction of the Commodity Futures Trading Commission (CFTC). This was not a coincidence. The instruments were seen as competition to the stocks and bonds that were traded in New York and that were under the jurisdiction of the SEC, which was usually sympathetic to the concerns of the New York-based brokerage community. Had there been only one regulator -- which surely would have been the SEC -- the development and flourishing of these instruments would have been restricted and delayed.<sup>75</sup>

A second anecdote also focuses on the 1970s: the beginning of the process of eliminating the Federal Reserve's ceilings on the payment of interest on bank deposits ("Regulation Q"), which were discussed in Section IV. It is worth noting that the consequence of Regulation Q for a roughly competitive banking (and thrift) industry was exactly what is taught in Economics 101 to freshman: a shortage of supply (of deposits) by households and businesses, an excess of demand, and less efficient ways of inducing households to bring and keep their deposits in the bank (such as offering them toasters, which began in response to Regulation Q).

The breaking of this gridlock started with a different regulator: the National Credit Union Administrator (NCUA), which in the early 1970s placed no restrictions on the interest rates that credit unions could pay to their depositors. Competition for deposits from credit unions then placed pressure on thrifts, which received some exemptions, and then on banks, which also received some exemptions. Finally, in the early 1980s, most of Regulation Q was repealed (although, as mentioned above, a vestige remains in the prohibition on banks and thrifts from paying interest on business checking accounts). The regulatory competition inspired by the NCUA surely hastened the demise of this inefficient regulatory restriction.

A third anecdote involves regulatory expertise in the 1990s concerning methods of measuring and regulating the interest rate risks that are embedded in the residential mortgages that are held by depository institutions. In this respect, the Office of Thrift Supervision (which regulates thrifts) had far better knowledge of the problems and regulatory procedures for dealing with them than did the commercial bank regulators at the time. It took a while for the latter to catch up.

This defence of a complicated regulatory structure may well be quixotic. And it is surely true that the initial designers of a regulatory structure would never create the duplication and overlaps of jurisdiction that this defence supports.<sup>76</sup> Also, duplication sometimes risks a "race to the bottom" among regulators that try to retain financial institutions within their jurisdiction. Still, the proponents of simplification ought to think hard about the loss of diversity that would accompany it.

In Robert Bolt's "A Man for All Seasons," Sir Thomas More asks his son-in-law (William Roper), "What would you do? Cut a great road through the law to get after the devil?" When Roper replies affirmatively, More responds, "Oh? And when the last law was down and the devil turned 'round on you, where would you hide, Roper, the laws all being flat?"

A monopoly regulator need not be the devil. Still, the cause of financial innovation, and even regulatory innovation, will be better served in a more diverse environment.

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<sup>75</sup> See, for example, the discussion in Gramm and Gray (1994).

<sup>76</sup> However, complex systems where an accident could have large negative consequences – e.g., a passenger jet aircraft – are often designed with deliberate redundancies and duplication so as to protect against unexpected failures.

## APPENDIX

### A Primer On “Capital” And “Leverage”<sup>1</sup>

“Capital” and “leverage” figure prominently in discussions of the Debacle of '07-'08 and in discussions of remedies. This primer is intended to clarify these terms, as they apply to financial institutions.

We need to start, however, somewhere else: with the stylized balance sheet of a typical manufacturing corporation, as portrayed in Figure A1. That firm has assets of \$100, consisting of plant, equipment, inventories, accounts receivable, cash on hand, etc. Its direct obligations to creditors are \$60, consisting of loans owed to banks, any bonds owed to bond investors, accounts payable, etc. By simple subtraction, its net worth or owners' equity -- the value of its assets minus the value of its direct obligations -- is \$40.

This firm has a leverage ratio -- its ratio of assets to net worth -- of 2½ to 1. The sense of the leverage ratio can be seen as follows: If the firm's assets increase by \$10 (to \$110) -- say, because it makes and retains operating profits of \$10, or its assets simply appreciate by \$10 -- without an increase in its direct obligations, then its net worth also increases by \$10 (to \$50). Thus a 10% increase in the value of its assets results in a 25% increase in its net worth -- a notion of “leverage” that is comparable to the high school physics example of a plank and a fulcrum.

Leverage also works in reverse: A 10% decrease in the value of the firm's assets results in a 25% decrease in the value of its net worth.

One other point to keep in mind: In a legal system of “limited liability” for the shareholder-owners of a corporation, those shareholders cannot be required to support the company beyond their initial contributions. Thus, if the company's assets were to fall below \$60 (which would wipe out its net worth) and thus be inadequate to cover the claims of the company's creditors, those creditors normally have no claim against the owners. The creditors will simply have to divide the (inadequate) assets among themselves to satisfy their claims, usually in a bankruptcy proceeding.

Accordingly, from the creditors' perspective the level of net worth is the extent of the buffer that protects them against a fall in the value of the assets that would expose them to a loss. The thicker the buffer (other things being equal), the more assured the creditors should feel. Typically, the terms of a bank's lending agreement or the covenants in bonds will allow the creditors to place restrictions on the actions of a company as that company's net worth buffer gets thinner.

Since net worth is also owners' equity, the extent of net worth is also a measure of the disincentive for the owners to take large risks, since a larger net worth means that they have more to lose and are farther away from the limit on their losses that limited liability provides.

We can now describe a commercial bank or thrift institution. Figure A2 provides the stylized balance sheet of a healthy bank or thrift. Its \$100 of assets are primarily the loans that it makes and the bonds that it

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<sup>1</sup> This section draws heavily on White (2009c).



owns. Its direct obligations of \$92 are primarily its deposits. And, again, by simple subtraction, it has \$8 of net worth or owners' equity. For financial institutions, this net worth is also called "capital".

Note that this bank has a substantially thinner net worth (capital) buffer than does the manufacturing firm. Equivalently, it is much more leveraged: 12½ to 1. A 10% increase in the value of the bank's assets yields a 125% increase in the bank's capital. Note also that "capital" is not "money", or "cash", or "liquidity". It is net worth. Although a bank can increase its "capital" by getting a "cash injection" from investors, the increase in capital occurs because the additional cash adds to the assets of the bank and therefore to its net worth. If the bank lends or invests the cash, its capital is still augmented by the investors' infusion. By contrast, a loan of an equivalent amount of cash to the bank would not increase its capital (and would instead increase its leverage).

Again, leverage also works in reverse. A 10% decrease in the value of the bank's assets wipes out its capital and exposes its depositors to losses (again, because of the limited liability of the bank's owners). Of course, a larger decline in the value of the bank's assets would mean an even deeper insolvency. An insolvent bank is portrayed in Figure A3.

If some depositors are unsure about the value of the bank's assets but are worried that the assets may be inadequate to satisfy all depositors' claims, those depositors may want to "run" to the bank to withdraw their funds before other depositors get the same idea. Other depositors, seeing or hearing about the first group's actions, may similarly rush to withdraw their funds.

This general depositor "run" on the bank can be exacerbated by the realization that even a solvent bank is illiquid, in the sense that it has loaned out almost all of the depositors' funds and keeps only a small amount of cash on hand to deal with "normal" withdrawals. (Think of Jimmy Stewart's efforts, in "It's a Wonderful Life", to stop his depositors' run by explaining to them that their money is not in the till but has been loaned to their neighbours.)

And, if depositors in the bank across the street see the run on the first bank and they fear that the same problems may apply to their bank as well, the depositors in this second bank may start a run on their bank. Thus can a "contagion" or "cascade" of bank runs develop.

The roles of a central bank, a prudential regulator, and deposit insurance in maintaining a stable banking system can now be seen. The central bank can lend (provide liquidity) to an otherwise illiquid but solvent bank, to help it deal with any temporary nervousness that might develop among its depositors. Prudential regulation is intended to prevent the bank from becoming insolvent and thereby prevent depositors from being exposed to losses. And deposit insurance provides a back-up reassurance to depositors, in the event that prudential regulation has failed to prevent the bank's insolvency.

Finally, Figure A4 portrays a highly leveraged investment bank. Its \$100 in assets are its investments in bonds, loans, shares of stock, real estate, and just about any other asset -- real or financial. Its \$97 in direct obligations are in the form of loans, bonds, commercial paper, and other obligations. By simple subtraction, it has only \$3 in capital.

The investment bank's leverage ratio is 33-1/3 to 1. Only a modest decrease in the value of its assets can expose its creditors to losses. It's easy to understand how creditors would become nervous and begin a run on such an institution. (It's harder to understand why anyone would lend to such an institution in the first place -- but that's part of the mystery of the general neglect of risk by investors and lenders that is at the heart of the Debacle of '07-'08.) Until March 2008 investment banks did not have access to the Federal Reserve for liquidity, the SEC was a weak prudential regulator, and there was no creditor insurance.

For all financial institutions, capital levels are so thin that accurate measurements of the value of the institution's assets -- and thus of its capital (because capital is determined by simple subtraction) -- are crucial. An accounting system that relies primarily on market values for the determination of asset values (with some allowance for the vagaries of thin markets), rather than on historical costs or on projected cash flows, is essential.



**Figure A1. The Balance Sheet of a Typical Manufacturing Corporation**

Assets	Liabilities
\$100 (plant, equip., inv., cash, etc.)	\$60 (bank loans, bonds issued, accts. payable, etc.)
	\$40 (net worth, owners' equity)

**Figure A2. The Balance Sheet of a Well Capitalized Bank or Thrift**

Assets	Liabilities
\$100 (loans, bonds investments)	\$92 (deposits)
	\$8 (net worth, owners' equity, capital)

**Figure A3. The Balance Sheet of an Insolvent Bank or Thrift**

Assets	Liabilities
\$80 (loans, bonds, investments)	\$92 (deposits)
	\$-12 (net worth, owners' equity, capital)

**Figure A4. The Balance Sheet of a Highly Leveraged Investment Bank**

Assets	Liabilities
\$100 (loans, bonds, stocks, real estate investments)	\$97 (bonds, loans, c.p.)
	\$3 (net worth, owners' equity, capital)



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**Table 1. Asset Sizes of Categories within the U.S. Financial Sector**

<b>Category</b>	<b>Assets (\$ billion)</b>
<b>Commercial banks</b>	\$11,176
Savings institutions (thrifts)	1,857
Credit unions	755
Finance companies	1,911
Life insurance companies	5,092
Property/casualty insurance companies	1,373
Securities brokers and dealers*	6,777
Pension funds: private	6,392
Pension funds: public	4,354
<b>Government sponsored enterprises (GSEs)**</b>	2,949
GSE mortgage backed securities	3,501
Mutual funds: equity & bond	8,200
Mutual funds: money market	3,107
Mutual funds: hybrid	713
Aggregate stock market value	25,196
U.S. GDP (annual flow)	13,844

(December 31, 2007)

\* Includes investment banks

\*\* Fannie Mae, Freddie Mac, and Federal Home Loan Bank System

Sources: Federal Reserve, FDIC, FHFA, NCUA, ACLI, III, ICI, BEA

**Table 2. Deposits as a Percentage of Assets, All Banks and Savings Institutions**

<b>Asset size category (\$ billion)</b>	<b>Deposits as a % of assets</b>
Under \$0.1	81.4%
\$0.1 - \$1	79.4
\$1 - \$10	71.0
Greater than \$10	61.4

(by size category, December 31, 2007)

Source: FDIC

**Table 3. Insured Deposits as a Percentage of All Commercial Bank Deposits**

<b>Category of institution</b>	<b>Average asset size (\$ billion)</b>	<b>Insured deposits as a % of all deposits</b>
State-chartered bank, non Fed member	0.4	67.6%
State chartered bank, Fed member	1.7	59.5
National bank	\$4.8	55.6

(by charter category, December 31, 2007)

Source: FDIC



**Table 4. Notional Value of Derivatives, as a Percentage of Bank Assets**

Asset size category (\$ billion)	Derivatives as a % of assets
Under \$0.1	1.9%
\$0.1 - \$1	6.4
\$1 - \$10	12.3
Greater than \$10	1887.2

(by size category, for banks that have derivatives, December 31, 2007)

Source: FDIC

**Table 5. Fifteen Largest Financial Institutions in the U.S.**

Rank	Financial institution	Category	Assets (\$ billion)	Equity as a % of assets
1	<b>Citigroup</b>	Commercial bank	\$2,182	5.2%
2	Bank of America	Commercial bank	1,716	8.6
3	JPMorgan Chase	Commercial bank	1,562	7.9
4	Goldman Sachs	Investment bank	1,120	3.8
5	American International Group	Insurance conglomerate	1,061	9.0
6	Morgan Stanley	Investment bank	1,045	3.0
7	Merrill Lynch	Investment Bank	1,020	3.1
8	Fannie Mae	GSE	883	5.0
9	Freddie Mac	GSE	794	3.4
10	Wachovia	Commercial bank	783	9.8
11	Lehman Brothers	Investment bank	691	3.3
12	Wells Fargo	Commercial bank	575	8.3
13	MetLife	Insurance	559	6.3
14	Prudential	Insurance	486	4.8
15	Bear Stearns	Investment Bank	395	3.0

(by asset size, December 31, 2007)

Note: The Federal Home Loan Bank System (\$1,272) and TIAA-CREF (\$420) have been excluded from this list; if GE Capital were a standalone finance company, its asset size (\$650) would place it at #12.

Source: Fortune 500, May 5, 2008.**Table 6. Numbers of Financial Institutions**

Category	Number of institutions
Commercial banks	7,282
Savings institutions	1,251
Credit unions	8,101
Life insurance companies	1,009
Property/casualty companies	2,723
Securities firms	5,562
Mutual fund companies	683

(as of December 31, 2007)

Sources: FDIC; NCUA; ACLI; III; SEC; ICI

**Table 7. Trends in U.S. Bank Consolidation**

<b>Year</b>	<b>Number of banks</b>	<b>MSA Average HHIs</b>	<b>Non-MSA Average HHIs</b>	<b>Percent of national deposits held by 10 largest banking firms</b>
1980	14,435	1973	4417	18.6%
1985	14,268	1990	4357	17.0
1990	12,819	2010	4291	20.0
1995	9,941	1963	4171	25.6
2000	8,314	1921	4019	36.1
2004	7,554	1820	3934	44.3
2008	7,282	1768	3830	51.4

Source: Adams (2007, p.37); FDIC



## MRS MONA YASSINE

### 1. **Brief history to answer the Question: Is there a strong relationship between concentration, competition and stability?**

#### *1.1 Status of the banking sector in the year 1990:*

A total of 64 banks of which 4 government owned commercial banks with 80% of the market (in terms of Assets size), 4 specialised real estate, agricultural and industrial development banks, 21 foreign banks branches (dealing in foreign currencies only) and the remaining 36 banks were fully fledged local banks with Egyptian majority ownership (i.e. foreign ownership not exceeding 49%). The Central Bank of Egypt fixed the prices for financial transactions, foreign exchange rates and interest rates. Minimum Capital requirement was LE50 Million (US\$15Million).

*1990's events;* Free pricing of transactions, foreign banks allowed to deal in local currency resulting in fierce competition in the mid nineties with lax of supervision and controls. There was an anti tourist action end 1997 which, as result of the financial mismanagement of the situation, caused a run on foreign currency (depreciation of the Egyptian pound), lack of foreign direct investments, and a large foreign exchange positions in the banking sector as a whole. Investment and touristic projects came to a halt and companies started to default. Banks (especially the government owned) had lent aggressively to the private sector that started Greenfield projects with short term borrowings. The government owned companies' performance was a drain to the budget. Banks were lending against stocks with no controls on caps or mark to market prices. If not for the government support, and the Central Bank announcing full support to the financial institutions, many banks would have declared bankruptcy.

#### *1.2 Status of the banking sector in the year 2000:*

A total of 64 banks of which government owned banks 4 (they lost market share to probably around 60%) characterised by very low rates of returns. Foreign banks branches now allowed dealing in the local currency. Banks could price financial transactions, foreign exchange and interest rates freely.

*2000's events:* 2002/04 marked a new banking reform policy due to the failures of the 1999 to 2002 period. Minimum capital requirement for any bank was raised to USD100 million. Opening new branches required capital increases. Stricter adherence to capital ratios, individual loans to capital ratios, deposit reserves, maximum foreign currencies exposures, maximum deposits or investments in any one foreign institution, credit risk rating of loans and investments. Off balance sheet transactions were limited to real trade deals with acceptable hedging mechanism. No new banking licenses issued. Acquisitions were allowed with restrictions of individual ownerships to 10%. Mergers were encouraged and many were imposed. The Central bank imposed conditions covering clarity and transparency of promoting new products.

#### *1.3 Status of the banking sector at time of crisis 2008/10:*

A total of 39 banks of which government owned commercial banks reduced to 3. One bank was privatised through sale to a foreign bank investor (its market share around 6%). Government owned banks market share decreased to 40% mainly due to new competitive institutions in the market meeting the needs of a growing market. Emergence of over 10 fully owned foreign financial institutions. The international financial crisis did not hit the banking sector as banks had minimum investments with foreign investment

banks. The Central Bank's reserves were held mostly with other developed governments in a basket of different currencies. The banking sector has been liquid at the time of the crisis as it was emerging from a recession period in the 2000/04 to a 7% GDP growth in 2006 and 2007. The main sectors that were affected by the recent financial crisis were the trade sectors. Demand on exports has been affected and the prices of foreign goods started to decline below the local production cost causing more competition from abroad. The banks are now competing on quality and personalised services and transaction prices. Lending is more active but more selective. Tenor lending is adequate to the project planning. Foreign currencies are available and traded freely. Country foreign reserves increased. Stability was established.

#### **1.4 Conclusion**

In my personal opinion, and looking at the Egyptian banking Sector, which I could prove through facts given the time, is that competition without regulation may become a disaster. Level of concentration may result in stronger banks in terms of capital, but may not provide all the services required by the consumer at large or the distribution required. Therefore concentration is relative to the market and less concentration will provide more competition.

The international financial crises actually emanated from international investment banks that were not properly regulated and supervised. Rating agencies were not ahead of the problems. Auditing firms were either not equipped or aware of the nature or risks of some of the off balance sheet/contingent transactions. Profits were recorded upfront and bonuses paid while the transaction and risks remained on the books.

In summary, prices need not be regulated, but there must be controls and regulation related to capital ratios, exposures to markets, asset/liability management gaps, and proper credit ratings of investment and banking transactions, proper accrual systems and the existence of a strong regulatory body. It is important to review and apply the Basle II rules to Investment banks as well as commercial banks. In that respect, prices and products will be differentiated by consumers based on the ratings of the banks or the transaction or the quality and speed of service. Efficiency not profits would be the issue.

#### **1.5 Additional Notes of Interest**

There has certainly been a very positive turn in the banking Sector in Egypt. The concern however at this stage is governance. The Central Bank plays the role of the banks' regulator and designer of the country's monetary policy. It heads the General Assembly Board of all government owned banks. 3 commercial banks' Chairmen are members of the Central Bank Board. These banks constitute over 40% share of the market. They are used as tools to control/adjust the financial market. This may provide stability, but can hinder competition. The Egyptian competition authority did not have any bank investigation yet.

## BIAC

### 1. Introduction

The Competition Committee of the Business and Industry Advisory Committee (BIAC) to the OECD appreciates the opportunity to submit these comments on competition, concentration and stability in the banking sector to the OECD Competition Committee.

The financial services sector is at the heart of every well functioning market economy. Certainly, the events leading up to, during and following the recent financial crisis have highlighted this point well. If there is any breakdown or failure in this sector, its effects, as recently witnessed, are felt across national borders and throughout market economies. While the failure of other industries or sectors may be painful, the same concerns regarding a potential collapse of the global financial system do not exist. In this regard, the financial services sector is unique and stands separate and apart from other industries as a cornerstone of the global market economy.

With this in mind, it is important to consider the interrelationship among competition, concentration and stability in the banking sector.<sup>1</sup> This paper provides BIAC's views on this issue generally, and focuses in particular on the role competition policy should play given the interconnection among competition, concentration and stability in the financial services sector. The paper also briefly discusses whether the crisis in the financial sector was caused by failure of adequate prudential regulation in the financial sector, or whether there were also failures of competition policy that may have contributed to the crisis in the financial sector, although this latter point was discussed in BIAC's submission to the *OECD's 2009 Competition Committee Roundtable on Competition and the Financial Crisis* in February of 2009.

### 2. Background – Competition, Concentration and Stability

There is a longstanding debate both in academic literature and in the policy arena on the relationship between competition, concentration and stability in the banking sector.

On the one hand, there are academics and policy makers who believe that more competition in banking results in greater instability and more market failures, other things being equal.<sup>2</sup> This theory suggests that banks operating in a concentrated market (or in a market that restricts entry) will earn profits that can serve as a buffer against fragility, and as an incentive against excessive risk taking. More competition, which puts more pressure on profits, is thought to create higher incentives for banks to take greater (potentially excessive) risks, resulting in greater instability. This theory predicts that deregulation, resulting in more entry and competition, would ultimately lead to more fragility. It also holds that a more concentrated banking system might reduce the supervisory burden of regulators, thus enhancing overall stability.<sup>3</sup>

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<sup>1</sup> BIAC recognises that the banking sector is made up of many different types of services and activities (e.g. consumer lending, retail banking, investment banking) which have unique features requiring particular regulatory focus.

<sup>2</sup> Beck, T. (2008), "Bank Competition and Financial Stability: Friends or Foes?" World Bank Policy Research Working Paper, 4656, Washington DC. See also Boyd, H.J., De Nicolo, G., Jalal, A.M. (2005), "Bank Competition, Risk and Asset Allocations", IMF Working Paper No. 09/143.

<sup>3</sup> Beck, T. (2008), "Bank Competition and Financial Stability: Friends or Foes?" World Bank Policy Research Working Paper, 4656, Washington DC.

The opposing view is that a more concentrated banking structure in fact results in more bank fragility.<sup>4</sup> Such an environment is believed to enhance fragility by, for instance, allowing banks to boost the interest rates they charge to firms which may induce firms to assume greater risk, resulting in a higher probability of non-performing loans. A higher concentration of larger firms is also thought to increase contagion risk. In concentrated markets, it is presumed that banks will tend to receive larger subsidies via “too-big to fail” policies, thereby intensifying risk-taking incentives and increasing banking system fragility. This perspective counters the argument of less need for supervision in a highly concentrated market with the idea that concentrated banking systems tend to have larger banks, which offer an array of services, making them more complicated to monitor.<sup>5</sup>

Studies and empirical research results testing each of the above theories have shown mixed results.<sup>6</sup> BIAC appreciates that these schools of thought will have an impact on how the banking sector is regulated, and how competition policy may need to be adapted or tailored with respect to the banking sector.

### 3. Competition Policy and the Banking Sector

In general, in the absence of the risk of market failures, open and competitive markets are expected to function efficiently, with little need for regulation.<sup>7</sup> However, there are situations where a market or sector has certain unique characteristics that make intervention through regulation prudent. The banking sector (in fact the whole financial services sector) is a prime example of one such sector; it is, therefore one of the most regulated sectors of the economy.<sup>8</sup>

Banks are regarded as unique and deserving of special treatment for several reasons. First, they are fundamentally crucial to a well-functioning economy. The ability of a firm to obtain credit is often crucial to its ability to invest and is consequently a necessary ingredient for growth and innovation. Accordingly, problems in the financial sector inevitably affect the performance of other markets for goods and services and the economy as a whole. And as the recent financial crisis demonstrated, a crisis that arises in one country can quickly move to another. Banks have a central position in the economic system. Once they stop functioning, the modern monetary economy stops working. And there is a high social cost associated with their failure.<sup>9</sup>

Thus, any competition policies that are set, either in response to the financial crisis, or in response to policy initiatives that attempt to address the impact of competition, concentration and stability in the financial services sector, must take into consideration the effect that such policies could have on the broader economy, not only in the home jurisdiction where regulation is imposed, but in other countries around the world. Policies should be closely co-ordinated, not only within regulatory agencies in each country, but also globally.

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<sup>4</sup> *Ibid.*

<sup>5</sup> *Ibid.*

<sup>6</sup> *Supra*, note 2.

<sup>7</sup> ICN (2005) “An Increasing Role for Competition in the Regulation of Banks” – International Competition Network Antitrust Enforcement in Regulated Sectors, Subgroup 1.

<sup>8</sup> The recent financial crisis has shown that, even though a sector may be highly regulated, it is still susceptible to potential instability; in other words, the focus should be on regulation that is well reasoned and sensible, rather than too much or too little.

<sup>9</sup> Presentation by X. Vives, “Competition and Stability in Banking: A New World for Competition Policy?”, IESE Business School, Amsterdam (March 5, 2009).

Banks also have unique characteristics which make them more vulnerable to instability than firms in other sectors.<sup>10</sup> Instability can arise because of a variety of factors. For example, banks are vulnerable to runs or panics. The great majority of their liabilities are liquid deposits, redeemable upon demand, whereas their assets are illiquid loans. Thus, if all depositors tried to withdraw their deposits at the same time, a bank would face serious problems in meeting its obligations to its depositors.<sup>11</sup>

Banks are also susceptible to instability because they are subject to inter-bank contagion. Banks can be linked through inter-bank commitments or indirect market-based balance sheets. Thus, the failure of a bank can lead to the decline in the value of the assets in another bank, sufficient to induce its failure. It can also cause the failure of a completely solvent bank through a flight of funds (i.e., as depositors, unable to determine the solvency of any banks, indiscriminately rush to withdraw their funds).<sup>12</sup>

Instability can also arise from excessive risk taking, especially where, in this sector, the risk of failure of financed investment is mostly carried by depositors, while profits which arise from successful investments accrue to banks.<sup>13</sup> This problem is exacerbated by two important features of the banking system: (i) it is easy for banks to cover any misallocation of resources (at least in the short term) because bank assets are opaque, with a long maturity; and (ii) bank debt is spread among several depositors/debt holders, who may be small and uniformed, thereby making effective monitoring and discipline on banks difficult.<sup>14</sup> As summarised in a recent article, “because banks can behave less prudently without being easily detected or paying additional funding costs, they have stronger incentives to take risk than firms in other industries.”<sup>15</sup> Moreover, incentives to take greater risks increase where a bank is in financial trouble (e.g. institutions close to insolvency have “incentives to gamble for resurrection”).<sup>16</sup>

Excessive risk taking by banks was identified as one of the causes of the recent global financial crisis.<sup>17</sup> In recent remarks made by U.S. President Barack Obama on the financial crisis and financial reforms, he stated:

*This economic crisis began, when banks and financial institutions took huge, reckless risks in pursuit of quick profits and massive bonuses. When the dust settled, and this binge of irresponsibility was over, several of the world’s oldest and largest financial institutions had collapsed, or were on the verge of doing so. Markets plummeted, credit dried up, and jobs were*

<sup>10</sup> *Supra*, note 7. See also Carletti, E., Vives, X. (2009), “Regulation and Competition Policy in the Banking Sector” X. Vives (ed.), *Competition Policy in Europe: Fifty Years of the Treaty of Rome*, Oxford University Press.

<sup>11</sup> *Ibid.*

<sup>12</sup> *Supra*, notes 7 and 9.

<sup>13</sup> *Supra*, note 7.

<sup>14</sup> *Supra*, note 9. See also Carletti E. (2008), “Competition and Regulation in Banking”, A. Boot and A. Thakor (eds.), *Handbook in Financial Intermediation*, Elsevier, North Holland and Presentation by X. Vives, “Competition and Stability in Banking: A New World for Competition Policy?”, IESE Business School, Amsterdam (March 5, 2009).

<sup>15</sup> Carletti E. (2008), “Competition and Regulation in Banking”, A. Boot and A. Thakor (eds.), *Handbook in Financial Intermediation*, Elsevier, North Holland.

<sup>16</sup> *Supra*, note 9.

<sup>17</sup> Carletti, E., Vives, X. (2009), “Regulation and Competition Policy in the Banking Sector” X. Vives (ed.), *Competition Policy in Europe: Fifty Years of the Treaty of Rome*, Oxford University Press.



*vanishing by the hundreds of thousands each month. We were on the precipice of a second Great Depression.*<sup>18</sup>

For all of these reasons, regulation of the banking sector is viewed as essential. Indeed, since the writings of Adam Smith, market experts and analysts have recognised that the profit incentive particularly in certain sectors such as financial markets needs to be subject to proper and effective oversight by government authorities. Two principal questions that arise are: what is the appropriate level of this ‘proper and effective oversight’? For example, should regulation limit the size of banks (and reduce concentration)? Should regulation limit the activities that banks can engage in (e.g. separating commercial banking from investment banking)? And second, what role does competition policy play? The first question is beyond the scope of this paper. Rather, as noted, the paper focuses on the appropriate role of competition policy.

In order to assess the proper role of competition policy, it is necessary to first ask whether competition policy was a contributing factor to the financial crisis. As discussed in BIAC’s submission to the *OECD’s 2009 Competition Committee Roundtable on Competition and the Financial Crisis*, the financial crisis was not caused by a lapse in competition policy. Commentators have suggested that the recent financial crisis had some footing in a lack of proper regulatory oversight by financial sector authorities in various countries in relation to certain key areas. As a result of the financial crisis, governments around the world have tried to address such concerns by taking measures to increase and improve regulatory oversight and also by implementing changes to current policy.<sup>19</sup> While lapses in prudential regulation may have played a role in the financial crisis, the failure of competition policy or adequate competition law enforcement was not a contributing factor to the crisis in the financial sector.<sup>20</sup> However, as discussed in BIAC’s submission, competition policy, suitably applied, can have an important role to play in the recovery.<sup>21</sup>

#### **4. The Role of Competition Policy and Banking Sector Stability**

Presently, the banking sector is subject to scrutiny by competition/antitrust regulators across many jurisdictions. Firms in the financial services sector are not exempt from the application of laws which regulate mergers and unilateral conduct and which prohibit cartels.

For example, the European Union has frequently applied competition laws to various cases involving financial institutions, including mergers (e.g. such as the BSCH/A. Champalimaud case relating to a merger involving Portuguese banks),<sup>22</sup> cartels (e.g. where fines were imposed on German banks and

<sup>18</sup> See January 21, 2010 remarks by U.S. President Barack Obama (source: [www.whitehouse.gov/the-press-office/remarks-president-financial-reform](http://www.whitehouse.gov/the-press-office/remarks-president-financial-reform)).

<sup>19</sup> For example, the European Union’s (“EU”) Council of Finance Ministers agreed, on June 9, 2009, to a new structure of supervision in the EU, essentially consisting of four new entities, including the creation of the European System of Financial Supervisors, which will be composed of three authorities that will have supervisory responsibilities (such as the participation in supervisory colleges of international groups and the control of national supervisory authorities) and extensive regulatory tasks (such as the realisation of a single rulebook and the consistent application of EU law). One of the three authorities is the European Banking Authority. (See K. Lannoo, “Comparing EU and US Responses to the Financial Crisis”, ECMI Policy Brief, No. 14/January 2010.)

<sup>20</sup> For a greater discussion on this issue please see BIAC’s submission to the OECD’s policy roundtable on Competition and Financial Markets. OECD (2009), “Competition and Financial Markets” DAF/COMP (2009) 11 (source: <http://www.oecd.org/dataoecd/45/16/43046091.pdf>).

<sup>21</sup> *Ibid.*

<sup>22</sup> See BSCH/A. Champalimaud, Case No. IV/M.1616.

Austrian banks for price fixing),<sup>23</sup> and abuses of dominance (e.g. such as the Clearstream Banking AG case where the company, and its parent company, were found to have infringed competition rules for applying discriminatory prices and for refusing to supply cross border securities clearing and settlement services).<sup>24</sup> Additionally, financial institutions in the EU have also faced scrutiny from national competition regulators in the member states.

In other jurisdictions, competition laws have special provisions or exemptions that are applicable to firms in the banking sector. For example, the United States has special rules which apply to the review of bank mergers. Unlike most other industries, bank mergers in the United States are generally exempt from the merger review process under the *Hart-Scott-Rodino Act of 1976*. The federal banking agency considers likely competitive effects, along with financial soundness and other banking-specific concerns. The U.S. Department of Justice provides its competitive analysis to the banking agency, and, in practice, the banking agency usually works closely with DOJ and defers on competition concerns.<sup>25</sup>

In Canada, mergers are analysed by the Commissioner of Competition (the head of Canada's Competition Bureau) under special *Merger Enforcement Guidelines* that have been developed with respect to banking mergers and she will advise the Minister of Finance of her conclusions regarding the competitive effects of a proposed merger. However, it is the Minister of Finance who is given the authority, under Canadian legislation, to approve mergers in the financial sector. Canada's *Competition Act* also has a special criminal provision dealing with agreements between federally regulated financial institutions and special foreign ownership restrictions apply to the financial sector.

As discussed above, the banking sector has certain unique characteristics that make it susceptible to market failures. Hence, as a starting point, competition policy alone is likely not enough to ensure that the financial system will continue to function with an adequate measure of stability – virtually every jurisdiction will have some form of prudential regulation over the banking sector. And as recent history has shown, where such prudential regulation is lax or lacking, systemic problems can ensue with significant consequences.

This does not mean that competition policy does not have a role in maintaining stability for the banking sector. On the contrary, competition policy can serve to keep markets open, foster integration, weed out inefficient institutions, and remove artificial barriers, all of which can contribute to the stability

<sup>23</sup> See “Commission fines eight Austrian banks in « Lombard Club » cartel case” (June 11, 2002 press release) (source: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/02/844&format=HTML&aged=0&language=EN&guiLanguage=en>) and 2004/138/EC: Commission decision of 11 June 2002 relating to a proceeding under Article 81 of the EC Treaty (Case COMP/36.571/D-1: Austrian banks — "Lombard Club") (notified under document number C(2002) 2091). See also “Commission fines five German banks for fixing the price for the exchange of euro-zone currencies” (December 11, 2001 press release) (source: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/01/1796&format=HTML&aged=0&language=EN&guiLanguage=en>) and 2003/25/EC: Commission Decision of 11 December 2001 relating to a proceeding under Article 81 of the EC Treaty (Case COMP/E - 1/37.919 (ex 37.391) — Bank charges for exchanging euro-zone currencies — Germany) (notified under document number C(2001) 3693).

<sup>24</sup> See “Final decision in Clearstream case” (June 2, 2004 press release) (source: <http://europa.eu/rapid/pressReleasesAction.do?reference=IP/04/705&format=HTML&aged=0&language=EN&guiLanguage=en>) and Commission Decision (2 June 2004) Case COMP/38.096 – Clearstream (Clearing and Settlement) (source: <http://ec.europa.eu/competition/antitrust/cases/decisions/38096/en.pdf>).

<sup>25</sup> See OECD (2006), “Competition and Regulation in Retail Banking” DAF/COMP(2006)33. See also Memorandum from the Antitrust Modernization Commission staff dated Dec. 1, 2006 re. Merger Reviews in Regulated Industries available at: [http://govinfo.library.unt.edu/amc/pdf/meetings/061201\\_SuppDiscMemo.pdf](http://govinfo.library.unt.edu/amc/pdf/meetings/061201_SuppDiscMemo.pdf).

of the banking sector.<sup>26</sup> (Indeed, for those types of banking activities where consumers are more directly affected, the role of competition law and policy may be particularly important.) Competition policy can also help to keep in check distortions that may be introduced by rescue packages and can play a crucial role in the recovery period following a crisis.<sup>27</sup>

Moreover, from BIAC's perspective, healthy competition *per se* is not detrimental for banking system stability in a market-based financial system. For example, the incentive for banks to develop innovative products does not necessarily imply less stability, provided that the necessary supporting prudential safeguards are in place to backstop excessively risky behaviour. In other words, there is an important interaction between the regulatory and supervisory framework, on the one hand, and market structure and competitiveness, on the other hand, in achieving banking system stability.

While *unchecked* competition may lead to fragility in a weak institutional environment, from an institutional framework perspective, it is important to focus on improving the mechanisms for prudential supervision, rather than placing limits on competition. Otherwise, the benefits that competition provides, generally and to the banking sector in particular, may be diminished (e.g. lower prices or fees and interest rates, better services for retail customers, choice and availability of affordable financing).

From BIAC's perspective, there is no clear evidence that businesses have suffered from the manner in which competition law and policy has been applied to the banking sector over the past decade.

That being said, some commentators have suggested that the application of competition policy as applied to the banking sector may need to be modified in certain respects to recognise the uniqueness of the banking sector. For example, perhaps competition should be limited for troubled institutions (such as those that are close to insolvency or those that are "too big to fail") and activities of at risk institutions should be restricted.<sup>28</sup> Where behavioural commitments are negotiated, collaboration between the competition authority and the regulator may be needed to enforce/monitor these commitments.<sup>29</sup>

In addition, there has been much focus on the types of financial services banks and other financial institutions should be permitted to engage in, the extent to which such institutions should engage in a variety of activities, as well as the optimal size of financial institutions.<sup>30</sup>

As a general principle, in our view, concentration should not be restricted by rules applicable to the banking sector in terms of a specific size or separation of activities. For example, a system that relies on a large number of smaller and less diversified banks (which are more likely to depend on the capital market for their borrowing requirements) may not be more stable than a system that relies on larger, more geographically and sectorally diversified institutions. Moreover, BIAC is concerned that a crude separation of commercial banking and investment banking activities intended to constrain excessive risk-taking with customer deposits may be counterproductive. Commercial and investment banking activities

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<sup>26</sup> *Supra*, note 9.

<sup>27</sup> *Ibid.*

<sup>28</sup> *Ibid.*

<sup>29</sup> *Ibid.*

<sup>30</sup> One of the proposed reforms to the financial system that President Barack Obama announced on January 21, 2010 related to the separation of certain financial activities. Termed the "Volcker Rule", banks would no longer be allowed to own, invest or sponsor hedge funds, private equity funds, or proprietary trading operations for their own profit, unrelated to serving their customers. See January 21, 2010 remarks by U.S. President Barack Obama (source: [www.whitehouse.gov/the-press-office/remarks-president-financial-reform](http://www.whitehouse.gov/the-press-office/remarks-president-financial-reform)).

are not by definition irreconcilable and in our view do not in and of themselves require separation into wholly unconnected entities. Indeed, the OECD itself has suggested that these two types of activities be separated within banks through the use of internal holding structures, without the need for a complete divestment. In this way, with appropriate oversight, risks associated with both activities may be adequately contained.<sup>31</sup>

Principles of competition law and policy focusing on the promotion of fair and effective competition through open, transparent and non-discriminatory markets should continue to apply to the banking sector. Deviation from such normative principles should occur only after careful consideration, in light of other important policy objectives and based on sound empirical evidence that such modifications will produce the desired policy outcome of greater stability for the financial system while continuing to capture the benefits that arise from effective and vigorous competition within the financial services sector.

## **5. Conclusion**

In sum, competition policy does play an important role in the stability of the financial sector by maintaining fairness through open markets and providing the necessary incentives for firms to maintain lower prices, allow for enhanced choices for individual and business customers, and produce innovative financial service products. These benefits do not have to be sacrificed for the sake of banking stability, provided competition policy is suitably applied in the context of an appropriate, non-discriminatory and balanced regulatory environment. In this connection, it is clear that competition policy enforcement needs to work in tandem with, rather than in place of, prudential regulatory safeguards in the banking sector.

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<sup>31</sup> See OECD Press Release, dated January 25, 2010, “Obama plan for banks can help to avoid a new financial crisis”, Angel Gurría, Secretary-General of the OECD (source: [http://www.oecd.org/document/55/0,3343,en\\_2649\\_34487\\_44475383\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/55/0,3343,en_2649_34487_44475383_1_1_1_1,00.html)).



## SUMMARY OF DISCUSSION

*by the Secretariat*

### 1. Introduction

The Chair opened the session by noting that the idea to hold this roundtable originated from a presentation by the Secretariat at the Competition Committee meeting in October 2009 regarding the competition / concentration nexus and the lively discussion that followed it.

He noted that countries' experiences, as well as the competition authorities' interventions, have been very different during the recent financial crisis. Moreover, the debate in the academic literature regarding the existence of a causal link between competition / concentration and stability has not yet produced any conclusive results.

The Chair thanked Professor Helmut Kotz, Member of the Executive Board of the Deutsche Bundesbank, and Chair of the OECD Financial Markets Committee for joining the discussion. Then, he introduced the panel of experts: Thorsten Beck, Professor of Economics and Business Administration at Tilburg University; Elena Carletti, Professor at EUI, author of the background paper for the roundtable; Ross Jones, Deputy Chairman of the Australian Prudential Regulation Authority; Xavier Vives, Professor of Economics and Finance, IESE Business School; Prof. Lawrence J. White, Professor of Economics at the NYU Stern School of Business; Mr Stephanou, representing the Secretariat of the Financial Stability Board (FSB); Adrian Blundell-Wignall, Deputy Director, OECD Financial & Enterprise affairs; and Mr Rudiger Ahrend from the OECD Economics Department.

### 2. Presentations by the Panellists

According to Prof. Carletti, the recent financial crisis was triggered by different factors: macro and micro economic reasons can be distinguished. From a macro perspective, a prolonged low interest rate and large global imbalances, which emerged after the Asian crises, led to a bubble in stock prices and also in real estate markets. From a micro perspective, there were high leverage, manager compensation and financial innovation. In this scenario, considering the experiences of the different countries, it is not clear whether competition also contributed to the crisis and how.

The academic literature, both theoretical and empirical, offers inconclusive results about the relation between competition, concentration and stability. In the theoretical literature, there are two opposite views: one (competition - fragility view) is that competition is bad for stability as it induces financial intermediaries to take more risk. Another view (competition - stability view) argues that the less intense the competition, the higher the risk taken by borrowers. However, there is no real distinction between competition and concentration in this literature.

The empirical literature also reaches ambiguous results on the relationships between competition and stability and between concentration and stability. The results are very sensitive to the data samples and they depend very much on how competition, concentration and stability are measured.

Two main insights, however, can be derived from the empirical analyses: concentration is not a proxy for lack of competition, and regulation is important. Thus, according to Prof. Carletti, an estimated positive

effect of concentration on stability is not necessarily caused by market power but other factors, such as better diversification opportunities and bank size, could explain it.

Prof. Carletti also identified other factors which played a crucial role in the crisis: the institutional and regulatory framework, as well as the bank funding structure. Appropriate regulation, for example, can mitigate the negative effects of competition and concentration on stability.

Prof. Carletti concluded her presentation by stating that so far, all the studies about the relationship between competition, concentration and stability have taken quite a conservative view of the banking sector. They have not considered that, as a consequence of financial innovation, banks do not just raise deposits and invest in loans, but they engage in trading many derivative instruments and properties. Understanding the impact of financial innovation on stability would be important and beneficial for the analysis.

The Chair then gave the floor to Mr Blundell-Wignall. Mr Blundell-Wignall emphasized the importance of considering that banks are no longer just commercial banks but they are also active in capital markets. This drastically changes the way competition between banks works. It is thus crucial to understand exactly what banks do with respect to capital markets and investment banks.

According to Mr Blundell-Wignall, in the period 2004-2007, capital market products started to appear on banks' balance sheets. As banks started to be active in capital markets, the way they competed with each other changed completely. One major change was the introduction of CDS contracts: banks started to short credit. Indeed, the effectiveness of regulation decreased dramatically as banks were able to use derivatives to get around capital rules and ratings by transforming their positions through shortening credit with a CDS contract. Mr Blundell-Wignall noted that initially, when these changes were introduced, banks' spreads were very large. Then they became very narrow due to the fierce global competition that characterizes capital markets: more banks, attracted by the high profits, moved into securitization. In the three years before the crisis, increasing leverage and risk taking were observed, as well as a dramatic change in banks' balance sheets. Mr Blundell-Wignall gave the example of a German bank having just 15% of its balance sheet in lending. All the rest was in derivatives, credit swaps and other structured products. Banks with such a large exposure in capital markets got themselves into serious trouble. When banks got involved in capital markets, they started to face two types of risk: credit risk and portfolio risk. Indeed, losses on the capital markets spread to other bank activities and to commercial banks through no fault of their own. Therefore, Mr Blundell-Wignall suggested that a separation between commercial banking and capital market activities is needed as it is not possible to control both types of risk at the same time. Regulatory provisions, like leverage ratios, have not been sufficient in the recent crisis.

The Chair then gave the floor to Mr Kotz. Mr Kotz emphasized the importance of an exchange of views between the Financial and Competition Committees in addressing the relationship between competition and stability and of a mutual learning experience in order to come to policy-relevant judgements. No "off the shelf" solutions exist to address the relationship between competition and financial stability.

In particular, Mr Kotz referred to the existence in the literature of two opposing views: the "supervisor's paradise" and the "consumer protector's paradise". The first view is analogous to the competition-fragility view described by Prof. Carletti and it is also known in the literature as franchise value theory: excessive competition reduces banks' returns and, in turn, their capacity to absorb shocks. According to the consumer protector view, competition is beneficial as it reduces intermediation margins and thus increases consumer welfare. These two views are potentially in conflict. The supervisor's perspective tries to shield producers from excessive competition in order for them to have satisfying margins; the consumer protector's view, of course, protects consumers and, thus, encourages competition.

Mr Kotz emphasized the need of combining the two views and their policy implications through joint work between the Financial and Competition Committees.

Mr Kotz agreed with and emphasized the caveat made by Prof. Carletti: academic research has ignored what banks are really doing. He also wondered whether regulators' reluctance to restrain competition (because that would reduce financial innovation) actually produced the expected positive effect on welfare and efficiency. Mr Kotz reflected on the possibility that not all innovation in the financial sector is really enhances welfare and efficiency.

The Chair then began the discussion with the delegates. He suggested that they should focus on four themes: (i) measures of competition and concentration in the banking sector; (ii) the competition / concentration / stability nexus; (iii) the role of financial regulation; and (iv) the effects of measures taken to remedy the crisis on competition and stability.

### **3. Measures of Competition and Concentration in the Banking Sector**

The Chair emphasised two points made by Prof. Carletti: concentration should not be confused with market power and the standard structural measures of competition are no longer adequate. He noted that the contribution from the US, among others, considers structural measures (e.g. market shares) as a good starting point to assess market power in the banking sector. The Chair asked the US to discuss these conclusions and also to indicate whether any other factors should be taken into account when assessing market power in the banking sector.

A delegate from the US described how banking mergers are assessed in the US. The reviewing agency generally segments the market by customer groups (retail banking customers, commercial or business customers) and then it considers the effect that the merger will have on those particular customers. The delegate noted that, in each case, the focus of the analysis is on whether the merger will harm customers. Regarding retail customers, among others factors, the effect of the merger on the density and geographic coverage of the bank's branch network as well as brand recognition are important criteria for consideration.

Regarding business customers, the delegate pointed out that the US also considers the effects on relationship banking. In evaluating whether and how a merger is harmful for business customers, the agencies consider "the overall knowledge of customer business by the bank" and the variation in the offers of sophisticated products. Switching costs are also important in assessing the effect of a merger in the banking sector. However, switching costs are difficult to measure as they are affected by subjective factors.

Finally, the US delegate supported Prof. Carletti's point about the importance of considering changes that have occurred in financial markets and in the activities performed by banks. There is a need to enhance and update the analysis in order to correctly assess the effects of melding of banking and financial services on competition.

Next, the Chair asked Bulgaria to present its views about measuring market shares.

A delegate from Bulgaria noted that there are no major differences between Bulgaria's competition authority and those of other countries in assessing financial sector mergers. The market share measure for financial institutions depends on the specific characteristics of the financial sectors. These peculiarities make the standard calculations of market shares in other sectors inapplicable to financial markets. For example, in a merger assessment in the real sector, the calculation of market shares is based on the total volume. In the financial sector, both for banks and non banking institutions, this computation relies mostly on the analysis of balance sheet assets.



The Chair then observed that Finland's contribution raised two interesting points: the role of switching costs in assessing market power and the existence of factors other than concentration that can explain the resilience of the Finnish banking system. Regarding the first point, the contribution noted that it is crucial to consider the existence of switching costs when measuring market power in financial markets. Switching costs and other peculiarities of financial markets make market power measurement different in this sector .

Regarding the second point, like Bulgaria, Finland has a quite concentrated financial sector and banks have not been seriously affected by the crisis. However, Finland's contribution observed that other factors, besides concentration, might explain the resilience of their financial system. The Chair asked Finland to enumerate these possible alternative explanations and to comment on the market share measures.

A delegate from Finland argued that structural measures are not very informative about banks' competitive behaviour either statically or dynamically.<sup>1</sup>

Regarding the measurement of competitive behaviour, the dele first thing to do is to establish the parameters of competition: what banks compete in and which variables are involved. The delegate mentioned three studies which produced very different estimates of the degree of competition in the market to explain how important the specifications and the assumptions behind these models are.

In this context, the delegate also reported the results of a Bank of Finland study in which market power was measured using an elasticity with which the overnight deposit interest rate reacts to changes in market rates. The study found a very slow adjustment of deposit rates to changes in money market rates. This rigidity was considered as a reflection of market power. The delegates argued that elasticity could be a good measure of market power as long as deposit interest rates are a central variable for competition between banks.

Regarding switching costs, there are rigidities in the banking system that enable banks to exercise market power. A dynamic view of these costs rather than a static one could be more informative about the degree of competition. Moreover, it is important to understand where the costs originated: are they informational, contractual or implicit switching costs?

Regarding the existence of a causal relationship between concentration and stability, the delegate stated that it is very difficult to draw the conclusion that such a causal relation exists: one of the main concerns regards the role of regulation. However, based on Finland's experience in the Nordic banking crisis in the early 1990s, instability induces concentration and it also contributes to making the bank less prone to take risks.

A delegate from France asked whether, in measuring market power, the two-sided nature of the banking sector is usually taken into account.

The US answered that they take that into account and look at it very carefully. However, they do not have specific instruments to use.

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<sup>1</sup> They yield some information about the ability of banks to collude but it is impossible to derive clear insight about the actual agents' behaviour. They are even less informative from a dynamic perspective: they just give some indirect evidence of competitive behaviour.

#### **4. The Competition, Concentration Stability Nexus as well as other Factors Influencing Stability**

The Chair gave the floor to Professors Beck and Vives to open the second part of the roundtable. Prof. Beck began his presentation by focusing on the validity of the empirical results about the relationship between concentration, competition and stability. Many empirical findings refer to “normal times”, and most of them have been obtained while looking at what is called the great moderation. Thus, it is reasonable to think that a relationship between competition and stability, holding in normal times, does not hold in extreme crisis times. Some phenomena are only observed during crises: the too big to fail problem, for example, only arises during crises times when big banks have to be bailed out.

Furthermore, competition allows financial innovation and it might also increase stability by reducing the risk of regulatory capture. But, as observed in the US sub-prime crisis, competition can also lead to herding effects that are only observed during crisis times.

Prof. Beck then discussed the factors that might have contributed to the recent crisis. In his opinion, neither excessive competition nor a particular market structure can be considered to have caused the crisis.

Different countries’ experiences during the crisis allow us to exclude a particular market structure as being among its causes: countries with highly concentrated financial sectors as well as those with very low concentration have been affected by the crisis.

Moreover, Prof. Beck continued, the banks’ very high pre-crisis profits exclude excessive competition as a possible cause of the financial instability. Those very high profits did not seem consistent with the excessive competition hypothesis. Indeed, like competition and concentration, neither a particular business model nor type of ownership can be identified as factors contributing to the financial crisis: countries with different dominant business models as well as banks with different kinds of ownership (private and public banks) have been affected by the crisis.

Agreeing with Prof. Carletti, Prof. Beck also emphasized the importance of the regulatory framework: competition is not per se detrimental for financial stability; competition without an adequate regulatory framework might cause instability. Considering the funding structure, for example, the issue of regulation becomes tremendously important.

In the second part of his presentation, Prof. Beck analyzed the competition repercussions of bailouts implemented during the recent crisis. He emphasized that in the banking sector, different criteria than those used in the sectors should be applied to evaluate bailouts and state aid. Indeed, in the banking sector, bailouts might have distortionary effects for the bank receiving such aid and for the whole banking system. This is because state aids reduces banks’ marginal costs below social costs and, from a dynamic perspective, they encourage excessive risk taking. However, state aids might avoid contagion effects. Thus, they are not necessarily detrimental for competitors. It is, therefore, crucial to understand how to limit the potential competitive distortions generated from their use.

Prof. Beck briefly commented on the detrimental effects on competition of different types of behavioural restrictions (i.e. forcing banks not to be price leaders, marketing restrictions) and downsizing on bailed out banks: these measures could lead to down cycles in the asset market or help competitors that did not receive such aids to reap monopoly rents.

He concluded with three brief comments on: (i) banks’ size, (ii) desirable characteristics (beyond competition) of the financial sector, and (iii) the crisis resolution framework.

With regard to the last point, Prof. Beck, referring specifically to the resolution measures implemented in Europe during the last financial crisis, wished for a reform of the system and the definition of a European-level resolution framework.

Concerning bank's size, he noted that there are costs and benefits associated with it. Two key issues are the too big to fail problem and the social costs generated by a bank's failure. These costs increase disproportionately with the size. One possible way to address this problem would be to have a disproportional increasing tax on things such as size, scope, new products, etc. However, too many restrictions are also undesirable. For example, the US experience in '50s-'60s showed that excessive restrictions backfire in terms of regulatory and political capture.

Ideas about how the financial sector should look have changed in recent years. Before, the financial sector was always seen as a facilitating sector, helping to pool savings and channelling them to entrepreneurs. In the new approach (financial centre approach), instead, the role of financial institutions has changed: the financial sector is seen as one among other sectors. Financial services can be exported just like all other goods. Moreover, through regulatory and tax subsidies, an economy might gain a comparative advantage by exporting them. However, Prof. Beck doubted that long term benefits derive from that approach. He mentioned the Iceland case as an example of failure of the financial centre approach.

The Chair then gave the floor to Prof. Vives. Prof. Vives began his presentation by mentioning the complexity of clearly defining the competition-stability and concentration-stability nexus. This complexity is mainly due to the existence of several tradeoffs: there are always opposing forces that drive these relationships.

Regarding the relationship between concentration and stability, he noted that a system with few and large banks is easier to monitor and those large player are usually better diversified. However, they are also more prone to take risks as, in case of distress, they are likely to receive more subsidies (too big to fail problem).

Prof. Vives, stated that, in theory, this trade off can be regulated away but, in practice, based on what he observed in the past, it can only be alleviated, at most. Indeed, in theory, very sophisticated capital requirements can be designed; in practice, though, the level of capital requirements depends on the degree of competition in the market: the more intense the competition, the stricter the solvency requirements must be.

Next, Prof. Vives tackled the post-crisis issues: (i) the optimal level of market power and concentration in properly defined relevant markets in banking, (ii) the size and scope of banking firms, (iii) merger policy and failing banks, and (iv) the interaction between competition policy and regulation.

Regarding the first issue, he expected that a kind of intermediate position would emerge.

Concerning the optimal size and scope of the banks, Prof. Vives remarked that the main issue is the conflict of interest from the fact that modern banks perform many different functions (retail, asset management, insurance, public trading etc). This might also exacerbate the problem of "systematic failure interconnectedness".

With respect to merger policy and failed banks, he stated that a key issue is whether prudent banks should be rewarded for their good behaviour, allowing them to gain some extra market power thanks to these acquisitions. In his opinion, also supported by some theoretical papers, that policy could be fine as long as it is only temporary. Indeed, these measures are good as long as the entry of future competitors is

not prevented, implying that the extra market power gained with the acquisition is temporary and contestable.

Prof. Vives concluded his presentation by considering the issue of the interaction between competition and regulatory policies. Regulatory and competition policies should be more coordinated to prevent meltdowns in systemic crises and, at the same time, not to compromise long term competition in the market. A comparison of the US and EU approaches to the too big to fail problem in the current crisis exemplified the two different approaches.

In the EU, the European Commission has been in charge of it: it punished misbehaviour with divestitures and several constraints on the institutions. Thus, the authority served as a device to solve the too big to fail problem, forcing the banks to internalize the costs of an excessively risky behaviour.

In the US, the approach of the Obama administration has been quite different: it has been a regulatory approach more than an antitrust one. They, indeed, are considering introducing restrictions on size and scope.

The Chair noted that the post crisis issues will be discussed in detail in the June 2010 roundtable on exit strategies. Then, he noted that the contribution from Chinese Taipei pointed out that the government strongly supported a consolidation process in the banking sector as it would have improved the quality of the banks. He asked Chinese Taipei to highlight the reasons (i.e. market failures) why competition did not lead to better quality of the banks and whether the government feared that the consolidation process would eventually undermine the stability of the system.

A delegate from Chinese Taipei stated that the consolidation process was part of a large reform program for the financial system implemented in 2000. The aim of the reform was to correct some problems (i.e. low profitability, bad debts) that emerged in the financial sector as consequences of an aggressive liberalization program, launched in the early '90s, and to favour the international competitiveness of the financial institutions.

Until now, there have been no specific competition issues. The FSC (Financial Supervisory Commission), rather than the FTC (Fair Trade Commission), is the authority in charge to assess mergers in the financial sector. Nevertheless, it has considered competition an important factor in the process of approving a bank merger and has consulted the FTC about some merger cases.

The Chair then remarked that in Italy, as in Chinese Taipei, the financial sector has been characterized by a consolidation process in the last decades. Italy's contribution contends that the high concentration of the Italian banking sector contributed to its resilience in the recent financial crisis. The contribution also mentioned some serious governance issues in the banking sector that have required regulatory intervention. The Chair asked Italy to explain how concentration contributed to the resilience of the sector, also considering the governance issues mentioned in the contribution.

A delegate from Italy pointed out that the governance issue is just a second order problem and focused on the Italian experience with the competition/concentration/stability nexus during the recent crisis.

In Italy, since the beginning of the mid-90s, a contemporaneous increase in concentration, competition and stability has been observed. The increased concentration in the financial sector was the consequence of a process of consolidation, while the increase in competition was mostly due to the opening up of the market for banking ownership.

The increased competitive pressure induced banks to improve their efficiency and productivity and the risk of takeover. Indeed, this has contributed to the resilience of the system. Moreover, during the

consolidation process, weaker and poorly managed banks were acquired by stronger players and thus, this has improved the efficiency of the system.

The consolidation process produced another positive effect: as the banking system became more concentrated, the size of the banks increased, too. Through the increase in their size, financial institutions were able to improve diversification (geographical and sectorial diversification).

The delegate mentioned two other important factors contributing to the resilience of the system: a small presence of non financial ownership in the financial sector and the regulatory framework in place. Regarding the former, a small presence of non financial ownership, as well as the separation between banks and industry, has prevented contagion effects. About the latter, the delegate stressed the role played by a strong prudent regulatory framework. It has enabled Italian banks not to be highly leveraged and to rely mostly on retail deposits rather than on wholesale funding.

The Chair then noted that the Netherlands has a quite opposite view about the relationship between concentration and stability. Moreover, the Netherlands' contribution did not seem to share Prof. Vives' view about the importance of not having high barriers to entry as a factor promoting stability: The DSB bank case showed that the entry of a new competitor actually increased instability. The Chair asked the Netherlands to present the DSB case and to discuss why concentration did not increase the resilience of their banking system.

Regarding the link between concentration and stability, a delegate from the Netherlands stated that they have no definite answer. This is partly due to the fact that their banking market is very international: besides a particular market structure, other factors affected financial stability during the recent financial crisis.

Concerning the DSB case, the delegate pointed out that the failure of DSB bank was the result of a poor business model; it had nothing to do with the crisis and with stability. DSB collapsed when the depositors took their money out of the bank after rumours about its insolvency started to circulate.

The Chair said that, like the Netherlands, Japan has a very concentrated financial sector, with three major mega groups, as a consequence of a rapid consolidation process that started at the end of the 1990s. He asked Japan whether the consolidation created competition problems and whether it had a positive effect on the resilience of the system.

A delegate from Japan stated that the consolidation process did not create any substantial competition problems. The delegates presented the Mizuho financial group case as an example. The JFTC examined the mergers that created the Mizuho group. The inquiry focused on five relevant markets (including deposits, loans, holdings, and exchange) and found that the newly emerged group would not have substantially restrained competition because of the competitive pressure from neighbouring markets and the existence of a strong competitor in the regional market.

Japan pointed out that the Mizuho case, as well as all the other business combinations that created the other two mega groups, were examined only from a competition point of view. Financial stability was not an issue. The Bank of Japan and other financial service agencies are in charge of preserving the stability of the financial sector .

The Chair turned to Russia next. Its contribution described a number of measures which have been taken to remedy the crisis. He asked Russia to comment on the reasons behind these measures. In particular, he wanted to know whether these measures are going to increase concentration and what the effects on stability will be.

A delegate from Russia stated that the way recapitalization enforcement is usually implemented in Russia does not take into account the peculiarities of local banking services markets and the potential negative effects on risk taking. The recapitalization enforcement just consists of increasing the minimum size of owned assets. This requirement alone makes the banks more prone to take risks and it cannot ensure stability in the banking system. Thus, other specific measures aimed at establishing proper banking sector regulation are needed.

Moreover, rather than simple capital requirements, capital adequacy (ratio of bank's owned assets to total size of assets weighted for their riskiness) is more effective in ensuring financial stability

In addition, the delegate emphasized that the Russian banking system has a strong regional dimension. However, the current approach to recapitalization has not taken into account the strong regional features of the Russian banking system.

The majority of regional banking sectors in Russia are characterized by high concentration levels. In such cases, implementing the existing approach to bank recapitalization can lead to the withdrawal of licenses from a large number of regional banks including stable banks, and a reduction in the number of banks would lead to a restriction of competition, the monopolization of the banking sector at the regional market level, a minimization of services and a possible increase in banking service costs.

Considering all these issues, the delegate said, the recapitalization should be pursued as recommended by the FAS (Federal Antimonopoly Service). Restrictions to competition would be limited to the short run period. The FAS proposal consists of toughening the requirements for financial stability through changes in the relative indices of required standards. The positive effects on financial stability generated by such a plan would lead to further development of the banking system, i.e. better access of consumers to diversified banking services and long term investments.

The Chair then noted that, unlike most of the contributions, the Swiss submission stated that "it was concentration rather than competition that contributed to the financial crisis". He asked Switzerland to explain the reasons why concentration rather than competition was detrimental for financial stability and to comment on the Swiss Central Bank Governor's proposal to limit bank size.

A delegate from Switzerland said that the governor suggested this measure when talking about the UBS case. UBS was the result of a merger which took place twelve years ago, and it was severely affected by the crisis.

The delegate stated that size was a necessary condition for the collapse of UBS but it was not a sufficient one. The main cause was probably the easing of capital requirements in the 1990s.

Moreover, limiting absolute size is very difficult, especially from a competition point of view: it is difficult to decide what the optimal size is and it is also very hard to deal with cases in which a bank achieves that size due to internal growth. Setting a limit size relative to GDP is also very difficult and it would have several implications for a relative small economy.

The delegate concluded by noting that the problem is rather control and separation of banks' activities than fixing bank size. However, these three issues are indeed related.

## **5. The Competition/Stability Nexus**

The Chair then turned to the issue of whether competition undermines the stability of the banking sector. He noted that Egypt's submission stated that "competition without regulation is a disaster" and asked how the delegation from Egypt came out to this conclusion.

A delegate from Egypt explained that she came to this conclusion considering Egypt's experience. In particular, she referred to the causes of the 1997-1999 Egyptian financial crisis and the measures that were taken by the government to remedy it.

She then described the changes that had occurred in the financial sector since the 1990s. At the beginning of that decade, most of the restrictions on fees and rates were relieved, causing a tremendous increase in competition. Foreign banks also started to have local licenses. The competition with foreign banks induced local banks to take more risk in order to keep their market shares. This process of liberalization was not followed by any change in the regulatory framework. Thus, from 1997 to 1999, Egypt faced a severe financial crisis.

In 2001, change in the management of the Central Bank of Egypt occurred. The new managers started to reform the financial sector: government banks were reformed and the regulatory framework was improved. This reform significantly contributed to the resilience of the financial sector in the recent financial crisis. Indeed, the reform significantly improved the regulatory framework without undermining competition.

The Chair mentioned Korea's submission and noted that it seems to indicate that there is a causal link between competition and financial distress. In the 1997 financial crisis, intense competition induced banks to engage in business expansion rather than to seek prudent and profitable business. In spite of this, it is not possible to consider this experience to be strong evidence that competition leads to financial instability. The Chair asked Korea to explain this conclusion.

A delegate from Korea first described the pre-crisis situation. Before the Asian financial crisis in 1997, there had been a relaxation of entry regulation in Korea's banking sector. Moreover, the government implemented some policies that had the effect of minimizing the possibility of bank mergers and exit of the inefficient banks from the market. The overall effect of these policies was an increase in the number of active banks. This induced banks to focus on expanding their size, relying on the government's too big to fail policy. Furthermore, the government regulation schemes were actually ineffective. All these factors together contributed to make the financial system more prone to financial distress.

The delegate emphasized that, in 1997, the financial sector instability was mainly due to the increase in the number of market participants in the absence of a serious threat to expel inefficient banks from the market and of effective government regulation schemes.

The resilience of the financial system during the recent financial crisis was proof that factors other than competition caused financial instability. In fact, after the 1997 crisis, the Korean government actively restructured the banking sector: it forced poorly performing banks to merge or exit the market. The threat of forcing the bank out of the market induced banks to compete fiercely for higher profitability. In addition, changes in the regulatory framework (i.e. BIS capital adequacy ratio) prevented the banks from taking excessive risk.

The Chair noted that in several contributions a clear link between competition, concentration and stability seemed to emerge but countries are very reticent to make any conclusion based on their own observations.

He then turned to Turkey's contribution, noting that it summarized the literature on the relation between competition and stability and discussed the estimates of this relationship for the period 1990 to 2008 using an original data set. He asked Turkey to illustrate the methodology and the results.

A delegate from Turkey pointed out that the Turkish competition authority tried to find empirical evidence of the relationship between competition and stability in the Turkish banking system for the period

from 1990 to 2008. They used several different measures for both competition and stability and compared the results.

To measure competition, they used structural and non structural measures, i.e. CR3, CR5, HHI, and Panzer-Rosse H-Statistics. The data showed a stable concentration level between 1990 and 2001. Since 2001, after the financial crisis that affected the Turkish financial system, the concentration increased as a consequence of the exit of troubled banks and of mergers and acquisitions.

In the empirical exercise, financial stability was measured using non performing loan ratios and Z-Index. The results showed a positive effect of competition on Z-Index, but a negative impact on non performing loan ratios: competition has some mitigating effects on the risk of banks arising from overall banking operations. However, the results appeared to be very sensitive to the competition measures used (structural and non structural) with opposing effects on stability. Therefore, it was not possible to define a clear relation between competition and stability.

Next, the Chair turned to Hungary's contribution. It referred to an empirical analysis of the relationship between competition and stability. However, it also stated that the results were not very persuasive. An interesting point raised in this study was the view that ownership structure might affect stability. The Chair asked Hungary to explain why the results were not persuasive and to elaborate on the relation between stability and ownership structure.

A delegate from Hungary stated that several studies have been conducted to estimate the level of competition in the banking sector. Nevertheless, as the data used were not specifically designed for competition measures, inconclusive results were produced about the level of competition in the financial sector.

The first study, conducted by independent researchers in 1999, focused on the deposit side and found that the stickiness of prices was considerably lowered as a result of decreasing concentration. Banks tended to pass on lower interest rates to consumers very slowly, but after competitors entered the market in the retail segment this pass-through became faster.

The second study, commissioned by the National Bank of Hungary in 2004-5, concentrated on loan markets and used the so-called rational model to estimate market power. It found that the Hungarian market is characterized by oligopolistic behavior.

The third study, commissioned by the GvH, found quite high mark ups for loan products. Based on the results of the study, the competition authority proposed several actions to reduce switching costs and to implement changes to the legislative framework.

Regarding the relationship between ownership structure and stability, the delegate stated that a more diversified ownership structure makes the banking sector less prone to systemic risk because it results in a diversified means of handling risks and in different kinds of business decisions.

The Chair then moved on to the submission from Greece, which stated that the oligopolistic structure of the Greek banking system might have contributed to the resilience of the system in the current crisis. Moreover, it mentioned some studies commissioned by the Bank of Greece to evaluate the resilience of the system to exogenous shocks. The Chair asked Greece to present these studies.

A delegate from Greece began describing the characteristics of the Greek banking system: it is very concentrated, with six banks behaving in an oligopolistic way. The high concentration is a consequence of a merger wave that started in 2002.



Regarding the studies conducted by the Bank of Greece, they seemed to confirm the resilience of the Greek system to exogenous shocks but further research is needed in order to check whether the real data confirm those results.

The Chair turned to Ireland's contribution. Ireland has a quite concentrated banking sector and it has been seriously affected by the crisis. However, the submission stated that neither competition nor concentration can be associated with this instability. It argued that bad practices or "violations of good governance practices" have to be considered as the main factors that create instability. The Chair noted that, from the contribution, it seemed that instability was caused by a failure in regulation and asked Ireland to elaborate and identify the role of the competition authority in restoring the banking sector to better practices.

Regarding the violations of some rules and the inadequacy of other legislative provisions, a delegate from Ireland stated that several different enquiries are currently being conducted: parliamentary investigations by regulators as well as police investigations.

Regarding state aids, the delegate said that Ireland has notified the Commission about state aid to a number of banks. The main concern of the Commission is about the distortions to the marketplace and how to restore competition. During the crisis, a National Asset Management Agency (NAMA) was created to buy, at book value, 88 billion Euros of toxic assets from Irish banks. The acquisitions of these assets by NAMA are exempt from mergers rules. However, as soon as the "emergency time" is over, the NAMA will be subjected to all the competition rules.

Regarding bank mergers, two of the six domestic Irish banks have announced merger talks. These mergers will be assessed by the Irish Competition Authority applying the normal analysis (i.e. the authority will consider whether there is a substantial lessening of competition), unless they raise concerns about financial stability. In that case, as stated by the Credit Institutions Financial Support Act, enacted in 2008, the Ministry for Finance takes over the role of the competition authority in assessing the merger.

## **6. Is Financial Regulation Crucial to the Stability of the Banking Sector?**

The Chair then invited Prof. White to comment on the discussion so far. Prof. White began by stating that bank size is not necessarily a good indicator for market power: in a large market even a very large institution might not have market power; unlike in small markets where even small banks can exercise market power.

Prof. White focused on three topics: market power and stability, capital and leverage and the consequences and implications for prudential regulation. Regarding the first topic, Prof. White agreed with the view that market power leads to financial stability. The opposite view, as developed in the analysis by Boyd and De Nicolò<sup>2</sup>, seems unsupported by clear evidence. However, he also noted that having both competition and stability is not impossible. Indeed, it requires good prudential regulation and capital requirements.

Then Prof. White turned to capital and leverage. He gave several examples with solvent and insolvent companies/ banks to explain these two concepts. Capital is the net worth or owners' equity of a corporation. Leverage measures the percentage change in net worth due to a change in assets, keeping liabilities constant. Leverage works on the upside but also on the downside. In the case of a bank, the assets are the loans and the liabilities are the deposits. The difference between assets and deposits is the

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<sup>2</sup> In Boyd and De Nicolò's analysis, higher market power leads to higher interest rates and due to the high interest rates, borrowers take more risks so more loans will fail.

capital. Prof. White noted that, just before the crisis, the major investment banks in the US were very highly leveraged (i.e. 33/1).

Capital and leverage are crucial for prudential regulation. It is, thus, crucial to correctly measure capital. According to Prof. White, capital should always be measured on a market value basis.

Prudential regulation consists of: limitations on activities, managerial competence requirements, close monitoring of the flows between financial institutions and their owners, risk based capital, adequate capital for very large institutions and even owner risk capital to serve as a cushion and disincentive to risk taking. Only with adequate capital requirements, prudential regulation and a deep understanding of the process of capital and leverage, would it be possible to correct for the negative impact of competition on financial stability.

The Chair then observed that Australia's submission stated that "The Australian Government is of the view that strong competition in the financial services sector is critical to ensuring consumers get the services they want at the lowest possible prices" and that "it is possible to design regulatory systems and Government policy that simultaneously support competition and stability objectives". The Chair asked Ross Jones and the Australian delegation to discuss the regulatory and competition aspects of the Australian system, respectively.

Mr. Jones said that the Australian banking system has been quite resilient, due to the combination of good prudential regulation and favourable macroeconomic conditions. He emphasized that prudential regulation rather than market structure is responsible for the good health of the Australian financial system.

Australia has a very concentrated financial system, with four major banks having a very large market share. Nevertheless, the system is quite competitive as the assessment by the ACCC showed when one of the above mentioned banks merged with the fifth largest bank.

The current Australian prudential regulation approach is due to an important reform made in 2003 after Australia's largest corporate crisis and the largest corporate failure in 2001. Since then, the approach to prudential regulation has become more aggressive and interventionist. Thanks to this, Australia has no such things as NINJA loans (loans to people with no income and no job), for example, and there was no relaxation of lending standards.

Mr. Jones continued, noting that other factors that might have contributed to the resilience of the financial system are: (i) Australian banks focusing on domestic markets, (ii) funding structure, and (iii) consumer credit code.

With regard to the first factor, the balance sheets of Australian banks were very much weighted to low risk Australian households. Australian banks had very low incentives to seek high yield and risk assets as they were able to get good returns from domestic borrowers. This meant that Australian banks relied very little upon trading income and were not so exposed to toxic securities. Moreover, a very strong consumer code prevented Australian banks from investing in "toxic loans".

Regarding the funding structure, Mr. Jones noted that Australia has long had a domestic savings deficit with very strong growth rates. Thus, it has had to use the wholesale market. Moreover, in order to use overseas wholesale markets, Australian banks had to maintain very high credit ratings. This imposed strong market discipline.

Mr. Jones also mentioned the importance of strong political support. He argued that since 2003, the new regulatory approach was strongly supported by the Australian Government. He also noted that in Australia, unlike other countries such as the UK, there is a clear separation between prudential regulation

and corporate and financial market regulation. The Australian Securities Investment Commission and the Australian Prudential Regulation Authority are in charge of, respectively, financial market regulation and prudential regulation. Having a single focus improves the effectiveness and efficiency of the two authorities.

A delegate from Australia stressed the importance of the role played by the Prudential Regulatory Authority and the Central Bank for their “not light-handed” regulation in maintaining the resilience of Australia's financial system. The delegate expressed concerns about the diminution of competition in the financial sector as result of the recent financial crisis, though. The main issue is the role of small players, the non bank financial institutions, that have found that their funding has completely dried out as result of the collapse of the securitization markets.

The delegate then described the “four pillar policy”. In dealing with mergers, there are two areas of control: a normal competition test and a national interest test. The former is similar to tests performed in other jurisdictions. It aims to assess whether a merger leads to a substantial lessening of competition. The latter relates to the “four pillars policy,” stating that the Government will not allow mergers between the 4 major trading banks. This is possible as the Financial Sector Shareholding Act and the Banking Act apply: the Treasurer is vested with the power to prevent mergers based on national interest grounds that cover a range of factors, including competition, stability of the system, and too big to fail considerations.

#### **7. Measures Taken to Remedy the Crisis May Have an Effect on Competition and Stability in the Financial Sector**

The Chair read an extract of the UK submission and invited the UK to comment on it: “While there is no clear case that either competition or concentration impacts on stability in the long term, actions taken to preserve financial stability can affect competition”. It acknowledges that “While competition is a long term guarantor of economic well being, it is possible that a reduction in competition can reduce instability in the short term”

A delegate from the UK distinguished between what competition authorities should do in the immediate future, when “emergency measures” are taken, and what their role is over time, when the system starts to return to normal conditions.

In the first circumstance, as was the case in the Lloyds -HBOS merger, the authorities should be able to express their concerns about competition.

With regard to the long term horizon, the delegate mentioned that too big to fail is an issue for financial regulation but it also raises some indirect competition issues: if a bank is too large to fail then the state steps in to support it, or to allow mergers, or it takes other actions. All these actions may undermine competition.

Next, the Chair gave the floor to a delegate from BIAC, who said that the way competition policy and law have applied in the banking sector over the past decades cannot be considered a contributing factor to the crisis. As competition policy alone is not enough to ensure financial stability, most of the jurisdictions have some form of prudential regulation for the banking sector. Based on the experiences of several countries, prudential regulation seemed to have played a very important role: countries in which it was lacking have been seriously affected by the crisis. Adequate regulation and a strong institutional environment may correct the negative effects of competition and thus, enhance its positive effects in terms of lower prices, better services and consumer choice.

Competition policy can also help to keep markets open, to foster integration and to move artificial barriers, thus, contributing to the stability of the banking sector. In addition, it can help to keep in check potential distortions introduced by rescue packages.

The delegate further stated that banking sector concentration should not be restricted by rules mandating a specific size or separation of activities. He expressed concern about crude separations of commercial banking and investment banking activities. This type of intervention, intended to constrain excessive risk taking, might actually be counterproductive. Australia, for example, stated that, as the OECD has already suggested, a complete separation of these two types of activities might be implemented within the institutions but without the need for a complete divestment. This goal could be reached through the use of internal holding structures.

The Chair then asked Mr. Stephanou of the FSB to make the last intervention. Mr. Stepahnou said that the FSB mandate focuses on financial stability. Thus, competition is of interest to the FSB but from a more narrow perspective than what has emerged at this roundtable. For example, negative effects on consumers and competitors produced by an increase in the market power of some financial institutions are beyond the mandate.

Increased market power for institutions operating in certain segments could raise costs for consumers in general and increase the potential for abusive behavior.

Second, static government involvement in the financial sector, including the ownership of equity stakes in financial institutions, could distort market incentives and prevent a level playing field vis-à-vis private market participants.

Furthermore, the adoption of piecemeal and uncoordinated regulatory reforms in different countries in response to the crisis may increase barriers to entry and thereby reduce effective competition across sectors in jurisdictions.

Mr. Stephanou also referred to the too big to fail problem. Some institutions are seen as becoming or have been confirmed by events to be interconnected or too big to fail. They may be able to fund themselves at lower costs than competitors and, as a result, they operate with an unfair advantage that could lead them to take excessive risks.

Moreover, Mr. Stepahou identified some issues on which the work of the OECD could usefully complement the FSB's efforts: (i) anticompetitive behaviour, especially in the wholesale markets; (ii) the possibility that the pre-existing long term trend toward increased concentration will be reinforced after the crisis; (iii) the competition implications of emerging global structures; and (iv) whether and how competition authorities should take part in financial regulation reform.

The Chair then made a brief summary of the main issues that emerged from the discussion: (i) excessive concentration and competition might lead to financial instability, but an adequate competition policy may mitigate those possible negative effects; (ii) banking is a very large category and it would be useful to separate different types of banking; and (iii) there is a huge role for competition authorities, especially in establishing a dialogue with regulators to preserve a balance between competition and prudential regulation.



## COMPTE RENDU DE LA DISCUSSION

*par le Secrétariat*

### 1. Introduction

Ouvrant la séance, le Président note que la présente Table ronde a été organisée suite à une présentation du Secrétariat à la réunion d'octobre 2009 du Comité de la concurrence sur l'articulation entre concurrence et concentration, et aux débats animés auxquels elle a donné lieu.

Il constate que le déroulement de la récente crise financière, ainsi que les interventions des autorités de la concurrence, ont été très différents dans les pays concernés. De plus, les analyses présentées dans les travaux de recherche concernant l'existence d'un lien de cause à effet entre, d'une part, la concurrence et la concentration et, d'autre part, la stabilité n'ont pas encore abouti à des résultats concluants.

Le Président remercie M. Helmut Kotz, membre du Directoire de la Deutsche Bundesbank et président du Comité des marchés financiers de l'OCDE, de se joindre à la présente discussion. Il présente ensuite les experts présents : M. Thorsten Beck, professeur d'économie et d'administration des entreprises à l'Université de Tilburg ; Mme Elena Carletti, professeur à l'Institut universitaire européen de Florence (IUE), auteur de la note de référence pour la présente table ronde ; M. Ross Jones, vice-Président de l'Autorité australienne de réglementation prudentielle ; M. Xavier Vives, professeur d'économie et finance à l'IESE Business School ; M. Lawrence J. White, professeur d'économie à la Stern School of Business de NYU ; M. Stephanou, représentant le secrétariat du Conseil de stabilité financière (CSF) ; M. Adrian Blundell-Wignall, directeur adjoint, Direction des affaires financières et des entreprises de l'OCDE ; et M. Rudiger Ahrend, du Département des affaires économiques de l'OCDE.

### 2. Exposés introductifs des experts

Mme Carletti estime que la récente crise financière a été déclenchée par différents facteurs, parmi lesquels on peut distinguer ceux d'ordre macroéconomique et ceux d'ordre microéconomique. Du point de vue macroéconomique, la longue période de bas taux d'intérêt, associée aux graves déséquilibres à l'échelle mondiale apparus après les crises asiatiques, a créé une bulle sur les marchés d'actions et sur le marché immobilier. Sur un plan microéconomique, on peut noter le niveau élevé de l'endettement, l'envolée des rémunérations des dirigeants et le développement de l'innovation financière. Dans ce contexte, si l'on tient compte de ce qui s'est passé dans les différents pays, il est difficile de savoir si la concurrence a elle aussi contribué à la crise et, le cas échéant, de quelle manière.

Les travaux de recherche sur le sujet, tant théoriques qu'empiriques, aboutissent à des résultats peu concluants quant à la relation entre concurrence, concentration et stabilité. Dans les études théoriques, deux thèses s'opposent : l'une ("concurrence-fragilité") est que la concurrence nuit à la stabilité, car elle incite les intermédiaires financiers à prendre davantage de risques. L'autre ("concurrence-stabilité") est que moins il y a de concurrence, plus les emprunteurs prennent des risques. Ces recherches n'établissent toutefois aucune distinction claire entre concurrence et concentration.

Les études empiriques, elles aussi, parviennent à des conclusions ambiguës quant aux relations entre concurrence et stabilité, et entre concentration et stabilité. Leurs résultats sont très sensibles aux échantillons de données retenus et dépendent beaucoup de la manière de mesurer la concurrence, la concentration et la stabilité.

Les analyses empiriques nous offrent cependant deux éclairages intéressants : i) concentration ne signifie pas absence de concurrence, et ii) la réglementation est importante. Ainsi, selon Mme Carletti, si l'on estime que la concentration a un effet positif sur la stabilité, celui-ci ne résulte pas nécessairement du pouvoir de marché, mais peut s'expliquer par d'autres facteurs, tels que de meilleures possibilités de diversification ou la taille des banques.

Mme Carletti mentionne également d'autres facteurs qui ont joué un rôle crucial dans la crise : le cadre institutionnel et réglementaire, ainsi que la structure de financement des banques. Ainsi, une réglementation appropriée peut atténuer les effets néfastes de la concurrence et de la concentration sur la stabilité.

Mme Carletti conclut sa présentation en indiquant que, jusqu'à présent, toutes les études portant sur les relations entre concurrence, concentration et stabilité ont adopté un point de vue très conservateur sur le secteur bancaire. Elles négligent le fait que, en conséquence de l'innovation financière, les banques ne se contentent plus de recueillir des dépôts et d'investir en accordant des prêts, mais effectuent des transactions sur de nombreux produits dérivés et de nombreux biens. Il serait important et bénéfique pour l'analyse du sujet de comprendre l'incidence de l'innovation financière sur la stabilité.

Le Président donne ensuite la parole à M. Blundell-Wignall. Celui-ci souligne qu'il importe de tenir compte du fait que les banques ne sont plus simplement des banques commerciales, mais également des acteurs sur les marchés financiers, ce qui change fondamentalement le fonctionnement de la concurrence entre les banques. Il est donc crucial de comprendre exactement ce que font les banques par rapport aux marchés financiers et aux banques d'affaires.

M. Blundell-Wignall explique que, pendant la période 2004-2007, on a vu apparaître dans les bilans des banques des produits relevant des marchés financiers. Lorsque les banques ont commencé à opérer sur les marchés financiers, la nature de la concurrence qui s'exerçait entre elles a complètement changé. L'un des grands changements a été l'apparition des CDS (*credit default swaps*, swaps sur défaillance de crédit) : les banques ont commencé de prendre des positions à découvert sur titres de crédit. De fait, l'efficacité de la réglementation s'est spectaculairement dégradée lorsque les banques ont pu utiliser des produits dérivés pour contourner les règles relatives aux fonds propres et aux notations, en transformant leurs positions par le biais d'opérations à découvert reposant sur des CDS. M. Blundell-Wignall fait remarquer que, au départ, quand ces changements sont apparus, les marges des banques étaient très confortables. Puis elles se sont fortement réduites sous l'effet de la féroce concurrence qui caractérise les marchés de capitaux à l'échelle mondiale : de plus en plus de banques, attirées par le niveau élevé des bénéfices, se sont lancées dans la titrisation. Pendant les trois années qui ont précédé la crise, on a observé une hausse de l'endettement et de la prise de risque, ainsi qu'une profonde transformation du bilan des banques. M. Blundell-Wignall donne l'exemple d'une banque allemande dont le bilan était à 15 % seulement constitué de prêts. Tout le reste se composait d'instruments dérivés, de swaps de crédit et d'autres produits structurés. Les banques ayant de tels encours sur les marchés financiers ont connu de graves problèmes. Lorsque les banques ont commencé à opérer sur les marchés financiers, elles se sont trouvées face à deux types de risques : le risque de crédit et le risque de portefeuille. De fait, les pertes enregistrées sur les marchés financiers se sont propagées aux autres activités bancaires et aux banques commerciales sans qu'elles aient provoqué cette situation. M. Blundell-Wignall estime par conséquent qu'il est nécessaire d'établir une séparation entre les activités de banque commerciale et les activités sur les marchés financiers, car il est impossible de maîtriser simultanément ces deux types de risques. Durant la crise récente, les dispositions réglementaires, tout comme les ratios d'endettement, ont été insuffisants.

Le Président donne ensuite la parole à M. Kotz. Celui-ci souligne qu'il est important que le Comité des marchés financiers et le Comité de la concurrence procèdent à des échanges de vues concernant la manière d'aborder les relations entre concurrence et stabilité, et qu'ils tirent mutuellement parti des

enseignements acquis en vue d'aboutir à des opinions pertinentes au sujet de l'action des pouvoirs publics. Il n'existe aucune solution "toute prête" pour aborder la relation entre concurrence et stabilité financière.

En particulier, M. Kotz évoque l'existence, parmi les chercheurs, de deux points de vue opposés : le "paradis des instances de contrôle" et le "paradis des instances de protection des consommateurs". Le premier point de vue est analogue à l'opinion décrite comme "concurrence-fragilité" par Mme Carletti, et est également dénommée "théorie de la valeur de franchise" dans les études sur ce sujet : une concurrence excessive réduit les rendements des banques et, partant, restreint leur capacité à absorber les chocs. Selon le point de vue de la protection du consommateur, en revanche, la concurrence est bénéfique, car elle abaisse les marges d'intermédiation et augmente par là même le bien-être du consommateur. Ces deux positions sont potentiellement conflictuelles. La perspective de l'instance de contrôle tente de protéger les producteurs contre une concurrence excessive pour qu'ils puissent dégager des marges satisfaisantes ; la perspective de l'instance de protection du consommateur, bien entendu, cherche à protéger le consommateur et encourage donc la concurrence. M. Kotz estime qu'il faut combiner ces deux points de vue et leurs conséquences pour l'action des pouvoirs publics via des travaux conjoints des comités des marchés financiers et de la concurrence.

M. Kotz s'associe aux réserves émises par Mme Carletti et souligne lui aussi que les recherches théoriques ne tiennent pas compte de ce que les banques font réellement. Il se demande par ailleurs si la réticence des autorités réglementaires à restreindre la concurrence (au motif que cela entraverait l'innovation financière) a effectivement produit l'effet positif attendu sur le bien-être et l'efficacité. M. Kotz évoque la possibilité que l'innovation dans le secteur financier ne soit pas toujours favorable au bien-être et à l'efficacité.

Le Président entame le débat avec les délégués. Il leur propose de se concentrer sur quatre thèmes : i) la mesure de la concurrence et de la concentration dans le secteur bancaire ; ii) l'articulation entre concurrence, concentration et stabilité ; iii) le rôle de la réglementation financière ; iv) les effets des mesures anticrise sur la concurrence et la stabilité.

### **3. Mesurer la concurrence et la concentration dans le secteur bancaire**

Le Président souligne deux points mis en évidence par Mme Carletti : il ne faut pas confondre concentration et pouvoir de marché ; et les critères structurels classiques de mesure de la concurrence ne sont plus adéquats. Il note que la contribution des États-Unis, entre autres, considère que les indicateurs structurels (par exemple les parts de marché) constituent un bon point de départ pour évaluer le pouvoir de marché des acteurs du secteur bancaire. Le Président demande à la délégation des États-Unis de développer ces conclusions et d'indiquer en outre si d'autres facteurs doivent être pris en compte dans l'évaluation du pouvoir de marché dans le secteur bancaire.

Un délégué des États-Unis décrit la manière dont les fusions bancaires sont évaluées dans son pays. L'organisme de contrôle procède généralement à une segmentation du marché en fonction de la clientèle (particuliers, entreprises) et examine ensuite l'effet que la fusion aurait sur ces groupes de clients en particulier. Le délégué signale que, dans chaque cas, l'analyse est centrée sur la question de savoir si la fusion va nuire aux clients. En ce qui concerne la clientèle de détail, les critères importants sont, entre autres, l'effet de la fusion sur la densité et la couverture géographique du réseau d'agences de la banque, ainsi que la reconnaissance de l'enseigne.

Pour ce qui est de la clientèle d'entreprises, le délégué indique que son pays examine également les effets sur les relations commerciales de la banque avec ses clients. Pour évaluer si une fusion nuirait à la clientèle d'entreprises d'une banque, et dans quelle mesure, les instances d'évaluation étudient "la connaissance globale des activités des clients" par la banque et la variation de l'offre de produits



complexes. Les coûts de changement de banque jouent aussi un rôle important dans l'évaluation des effets d'une fusion au sein du secteur bancaire, quoiqu'ils soient difficiles à mesurer, car ils subissent l'influence de facteurs subjectifs.

Enfin, le délégué des États-Unis appuie l'argument de Mme Carletti quant à la prise en compte des changements qui se sont produits sur les marchés financiers et dans l'activité des banques. Il est nécessaire d'améliorer et d'actualiser les analyses afin d'évaluer correctement les effets de la combinaison des services bancaires et financiers sur la concurrence.

Le Président demande ensuite à la Bulgarie d'exposer son point de vue sur la mesure des parts de marché.

Un délégué de la Bulgarie fait remarquer qu'il n'existe pas de différences notables par rapport aux autres pays dans la manière dont les autorités bulgares de la concurrence évaluent les fusions dans le secteur financier. La mesure de la part de marché des établissements financiers dépend des caractéristiques propres au secteur financier. Du fait de ces spécificités, le calcul standard des parts de marché dans d'autres secteurs ne peut pas s'appliquer aux marchés financiers. Par exemple, lors de l'évaluation d'une fusion dans le secteur réel, le calcul des parts de marché se fonde sur le volume total, alors que dans le secteur financier, tant pour les banques que pour les établissements non bancaires, ce calcul repose essentiellement sur l'analyse des actifs présents au bilan.

Le Président fait observer que la contribution de la Finlande soulève deux points intéressants : le rôle des coûts de changement dans l'évaluation du pouvoir de marché et l'existence de facteurs autres que la concentration qui peuvent expliquer la résilience du système bancaire finlandais. En ce qui concerne le premier point, le document indique qu'il est crucial de prendre en compte l'existence des coûts de changement lorsqu'on mesure l'influence commerciale sur les marchés financiers. Du fait des coûts de changement et d'autres spécificités des marchés financiers, la mesure du pouvoir de marché est différente dans ce secteur.

Pour ce qui est du second point, on constate qu'en Finlande, comme en Bulgarie, le secteur financier est très concentré et les banques n'ont pas été gravement touchées par la crise. La contribution finlandaise note cependant que d'autres facteurs, outre la concentration, peuvent expliquer la résilience du système financier. Le Président demande à la Finlande d'évoquer ces autres explications possibles et de commenter la façon de mesurer les parts de marché.

Un délégué de la Finlande observe que les indicateurs structurels ne fournissent guère d'informations sur le comportement concurrentiel des banques, que ce soit d'un point de vue statique ou dynamique.<sup>1</sup>

En ce qui concerne la mesure du comportement concurrentiel, la première chose à faire est d'établir les paramètres de la concurrence, en déterminant sur quel terrain les banques sont en concurrence et quelles sont les variables en jeu. Pour souligner l'importance des critères et des hypothèses qui sous-tendent ces modèles, le délégué mentionne trois études qui ont donné lieu à des estimations très différentes du degré de concurrence sur le marché.

Dans ce contexte, le délégué évoque en outre les résultats d'une étude de la Banque de Finlande qui a mesuré le pouvoir de marché à l'aide de l'élasticité selon laquelle le taux d'intérêt des dépôts au jour le jour

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<sup>1</sup> Ils offrent certaines informations quant à la capacité de collusion des banques, mais il est impossible d'en tirer des enseignements clairs quant au comportement effectif des agents. Ils sont encore moins informatifs dans une perspective dynamique, puisqu'ils ne font que donner des indices indirects sur le comportement concurrentiel.

réagissait à l'évolution des taux du marché. Cette étude concluait que le taux servi sur les dépôts s'ajustait très lentement en fonction des variations des taux du marché monétaire. Cette rigidité est jugée refléter le pouvoir de marché. Les délégués estiment que l'élasticité peut être une bonne mesure de la puissance de marché pour autant que le taux de rémunération des dépôts soit une variable centrale de la concurrence entre les banques.

Quant aux coûts de changement d'établissement, il existe des rigidités dans le système bancaire qui permettent aux banques d'exercer un pouvoir de marché. Une vision dynamique plutôt que statique de ces coûts apporterait plus d'informations sur le degré de concurrence. De plus, il importe de connaître l'origine de ces coûts : sont-ils liés à l'information, résultent-ils des contrats, ou sont-ils implicites ?

Au sujet de l'existence d'une relation de cause à effet entre concentration et stabilité, le délégué affirme qu'il est très difficile de conclure à l'existence d'une telle relation : l'une des principales questions concerne le rôle de la réglementation. Cependant, si l'on s'en tient à l'expérience de la Finlande dans la crise bancaire des pays nordiques du début des années 90, l'instabilité engendre la concentration, et contribue en outre à rendre les banques plus frileuses à l'égard des risques.

Un délégué de la France demande si la nature duale du secteur bancaire est généralement prise en compte dans la mesure du pouvoir de marché.

Les États-Unis répondent que leur pays prend bien cette dimension en compte et l'examine attentivement. Ils ne disposent toutefois pas d'instruments spéciaux à cet effet.

#### **4. L'articulation entre concurrence, concentration et stabilité, et les autres facteurs influant sur la stabilité**

Le Président donne la parole à MM. Beck et Vives pour la seconde partie de la Table ronde. M. Beck débute sa présentation en la centrant sur la validité des résultats empiriques au sujet de la relation entre concentration, concurrence et stabilité. De nombreux résultats empiriques portent sur des périodes "normales", et la plupart ont été obtenus en étudiant ce qu'on appelle la "grande modération". Ainsi, il est raisonnable de penser que la relation existant en temps normal entre concurrence et stabilité n'est plus la même en période de crise extrême. Certains phénomènes ne s'observent que pendant les crises : le problème des établissements "trop grands pour faire faillite", par exemple, ne se pose qu'en période de crise, lorsqu'il s'agit de sauver de grandes banques de la faillite.

De plus, la concurrence permet l'innovation financière, et il se pourrait aussi qu'elle renforce la stabilité en réduisant le risque de captation réglementaire. Mais, comme on l'a constaté aux États-Unis pendant la crise des crédits hypothécaires à haut risque, la concurrence peut aussi avoir un effet de mimétisme qu'on observe uniquement en temps de crise.

M. Beck examine ensuite les facteurs qui ont pu contribuer à la crise récente. À son avis, la crise n'a été provoquée ni par une concurrence excessive ni par une structure de marché particulière.

La façon dont la crise s'est déroulée dans différents pays nous autorise à éliminer des causes possibles une structure de marché particulière : des pays dont le secteur financier est extrêmement concentré ont souffert de la crise au même titre que des pays ayant un faible degré de concentration.

De plus, poursuit M. Beck, le niveau très élevé des bénéfices engrangés par les banques avant la crise exclut une concurrence excessive comme cause possible de l'instabilité financière et ne paraît pas corroborer l'hypothèse d'un excès de concurrence. De fait, pas plus que la concurrence ou la concentration, ni un modèle économique ni un type de propriété particuliers ne peuvent être désignés comme des facteurs

ayant contribué à la crise financière : la crise a touché des pays ayant différents modèles économiques dominants et des banques régies par différents types de propriété (banques privées et publiques).

Comme Mme Carletti, M. Beck souligne l'importance du cadre réglementaire : la concurrence n'est pas nuisible en soi à la stabilité financière ; c'est la concurrence hors de tout cadre réglementaire adéquat qui pourrait causer l'instabilité. Si l'on regarde la structure de la collecte de ressources par les banques, par exemple, la question de la réglementation devient extrêmement importante.

Abordant la seconde partie de sa présentation, M. Beck analyse les répercussions sur la concurrence des plans de sauvetage mis en œuvre durant la crise récente. Il met l'accent sur le fait que, dans le secteur bancaire, il convient d'appliquer des critères différents de ceux qui sont utilisés dans d'autres secteurs pour évaluer les plans de sauvetage et l'aide gouvernementale. De fait, dans le secteur bancaire, le sauvetage peut induire une distorsion pour la banque qui reçoit une aide, mais aussi pour l'ensemble du système bancaire. La raison en est que les aides gouvernementales abaissent le coût marginal des banques au-dessous du coût social et, d'un point de vue dynamique, encouragent une prise de risque excessive. Elles peuvent cependant éviter les effets de contagion. Elles ne s'exercent donc pas nécessairement au détriment des concurrents. Il est par conséquent indispensable de déterminer comment on peut limiter les distorsions concurrentielles que leur usage peut générer.

M. Beck commente brièvement les effets concurrentiels néfastes de différents types de restrictions comportementales (par exemple, interdire aux banques de fixer des prix directeurs, restrictions en matière de commercialisation) et de la réduction de taille qui peuvent être imposés aux banques aidées : ces mesures peuvent se traduire par un cycle de baisse sur les marchés d'actifs ou aider les concurrents qui n'ont pas reçu d'aide à percevoir des rentes de monopole.

Il conclut par trois brefs commentaires sur : i) la taille des banques, ii) les caractéristiques souhaitables (autre que la concurrence) pour le secteur financier, et iii) le cadre de résolution des crises.

En ce qui concerne le dernier point, M. Beck, se référant spécifiquement aux remèdes mis en œuvre en Europe pendant la dernière crise financière, appelle de ses vœux une réforme du système et la création d'un cadre de résolution des crises à l'échelle européenne.

En ce qui concerne la taille des banques, il fait remarquer qu'elle a des coûts et des avantages. Deux points clés sont d'une part le problème des établissements trop grands pour qu'on les laisse faire faillite et d'autre part les coûts sociaux qu'entraîne la faillite d'une banque. Ces coûts augmentent de façon disproportionnée avec la taille. Une solution possible à ce problème serait d'imposer une taxe qui augmenterait de façon disproportionnée en fonction de variables telles que la taille, le périmètre d'activité, les nouveaux produits, etc. Mais un excès de restrictions n'est pas souhaitable non plus. Par exemple, les politiques appliquées par les États-Unis pendant les années 50 et 60 ont montré que des restrictions excessives pouvaient avoir des effets indésirables en termes de captation de la réglementation et des politiques publiques.

Depuis quelques années, les idées changent quant à la nature souhaitable du secteur financier. Auparavant, le secteur financier était considéré comme un secteur "facilitateur", qui était là pour collecter l'épargne et l'acheminer vers les entreprises. Désormais, la nouvelle vision (approche dite du centre financier) attribue aux institutions financières un rôle nouveau : le secteur financier est considéré comme un secteur parmi d'autres. Les services financiers s'exportent au même titre que tous les autres biens et services. De plus, grâce aux aides réglementaires et fiscales, une économie peut tirer un avantage comparatif de leur exportation. M. Beck doute toutefois que cette approche puisse être bénéfique à long terme. Il cite le cas de l'Islande comme exemple d'échec de l'approche du centre financier.

Le Président donne ensuite la parole à M. Vives. Tout d'abord, celui-ci indique qu'il est complexe de définir clairement l'articulation entre concurrence-stabilité et concentration-stabilité. Cette complexité est due principalement à l'existence de plusieurs arbitrages : ces relations sont toujours sous-tendues par des forces opposées.

S'agissant de la relation entre concentration et stabilité, il fait remarquer qu'un système où les banques sont grandes et peu nombreuses est plus facile à surveiller, et les grands établissements sont généralement mieux diversifiés. Cependant, ils sont aussi plus enclins à prendre des risques, car, en cas de nécessité, ils recevront probablement plus de subventions (problème des établissements trop grands pour faire faillite).

M. Vives affirme que, en théorie, la réglementation permet de résoudre ce problème, mais en pratique, d'après ce qu'il a observé par le passé, elle ne fait, au mieux, que l'atténuer. De fait, en théorie, on peut concevoir des exigences très détaillées en matière de fonds propres mais, en pratique, le niveau de fonds propres exigé dépend du degré de concurrence existant sur le marché : plus la concurrence est intense, plus les exigences en matière de solvabilité doivent l'être aussi.

Ensuite, M. Vives aborde les questions qui se posent après la crise : i) le niveau optimal de pouvoir de marché et de concentration sur les marchés bancaires pertinents, correctement définis ; ii) la taille et le périmètre d'activité des entreprises bancaires ; iii) la politique en matière de fusions et les banques en difficulté ; et iv) les interactions entre politique de la concurrence et réglementation.

Sur le premier point, il s'attend à voir émerger une sorte de position intermédiaire.

En ce qui concerne la taille et le périmètre optimaux des banques, M. Vives fait remarquer que le principal problème est le conflit d'intérêts qui découle du fait que les banques modernes exercent de nombreuses fonctions différentes (services de détail, gestion d'actifs, assurance, transactions en bourse, etc.). Cela peut aussi exacerber le problème de l'interconnexion systématique des faillites.

Pour ce qui est de la politique des fusions et des banques qui font faillite, il indique qu'un élément clé est de savoir si les banques prudentes devraient être récompensées de leur bon comportement, et se voir autorisées à gagner des parts de marché supplémentaires grâce à ces acquisitions. Son opinion, confortée par certains travaux théoriques, est que cette politique peut se justifier pour autant qu'elle soit temporaire. De fait, de telles mesures sont bénéfiques sous réserve qu'elles n'empêchent pas l'entrée de nouveaux concurrents, ce qui implique que le supplément de pouvoir de marché obtenu grâce à l'acquisition soit temporaire et contestable.

M. Vives conclut son exposé en examinant la question des interactions entre la politique de la concurrence et l'action réglementaire. Ces deux types d'intervention publique devraient être mieux coordonnés pour prévenir un effondrement généralisé en cas de crise systémique et, dans le même temps, pour ne pas compromettre la concurrence à long terme sur le marché. Un exemple de ces deux approches différentes nous est offert par la réaction des États-Unis et de l'UE face au problème des établissements trop grands pour faire faillite durant la crise actuelle.

Dans l'UE, c'est la Commission européenne qui s'est chargée du problème : elle a puni les mauvais comportements en imposant des cessions de participations ainsi que différentes contraintes aux institutions concernées. Ainsi, elle a été l'outil utilisé pour résoudre le problème des établissements trop grands pour faire faillite, obligeant les banques à internaliser les coûts d'un comportement excessivement risqué.

Aux États-Unis, le gouvernement Obama a adopté une attitude très différente : son approche a été d'ordre réglementaire plutôt que de type antitrust. Il envisage d'ailleurs de mettre en place des restrictions sur la taille et le périmètre d'activité.

Le Président indique que les questions qui se posent après la crise seront examinées en détail lors de la Table ronde de juin 2010 sur les stratégies de sortie. Puis il note que la contribution du Taipei chinois explique que le gouvernement était très favorable à un processus de consolidation dans le secteur bancaire, car cela aurait amélioré la qualité des banques. Il demande au Taipei chinois d'explicitier les raisons (c'est-à-dire les lacunes du marché) pour lesquelles la concurrence n'a pas amélioré la qualité des banques et d'indiquer si le gouvernement redoute que le processus de consolidation ne mine, à terme, la stabilité du système.

Un délégué du Taipei chinois explique que le processus de consolidation faisait partie d'un vaste programme de réforme du système financier mis en œuvre en 2000. L'objectif de cette réforme était de corriger certains problèmes (faible rentabilité, créances douteuses) qui étaient apparus dans le secteur financier à la suite d'un programme volontariste de libéralisation lancé au début des années 90, et de favoriser la compétitivité internationale des établissements financiers.

Jusqu'à maintenant, il n'y a pas eu de problèmes particuliers en matière de concurrence. C'est la FSC (*Financial Supervisory Commission*, Commission de contrôle du secteur financier) et non la FTC (*Fair Trade Commission*, Commission de la concurrence) qui est chargée d'évaluer les fusions dans le secteur financier. Néanmoins, la FSC considère que la concurrence est un facteur important à prendre en compte lors de l'approbation d'une fusion bancaire, et elle consulte la FTC dans certains cas.

Le Président fait remarquer qu'en Italie, comme au Taipei chinois, le secteur financier se caractérise par un processus de consolidation en cours depuis plusieurs décennies. La contribution de l'Italie affirme que le degré élevé de concentration du secteur bancaire italien a concouru à sa bonne résilience lors de la récente crise financière. Elle mentionne en outre quelques graves problèmes de gouvernance dans le secteur bancaire, qui ont nécessité une intervention réglementaire. Le Président demande à l'Italie d'expliquer comment la concentration a contribué à cette résilience du secteur, compte tenu des problèmes de gouvernance mentionnés dans la contribution.

Un délégué de l'Italie indique que les questions de gouvernance ne sont qu'un problème secondaire, et il centre son intervention sur ce que l'Italie a appris au sujet des relations entre concurrence, concentration et stabilité durant la crise récente.

En Italie, on observe depuis le milieu des années 90 une augmentation concomitante de la concentration, de la concurrence et de la stabilité. Le renforcement de la concentration dans le secteur financier est la conséquence du processus de consolidation, tandis que l'intensification de la concurrence est principalement due à l'ouverture du marché des participations au capital des banques.

La pression accrue de la concurrence a incité les banques à améliorer leur efficacité et leur productivité face au risque de prise de contrôle, ce qui a contribué à la résilience du système. De plus, pendant le processus de consolidation, les banques peu solides et mal gérées ont été reprises par des établissements plus robustes, ce qui a amélioré l'efficacité du système dans son ensemble.

Le processus de consolidation a eu un autre effet positif : la concentration du système bancaire a entraîné une augmentation de la taille des banques. Devenues plus grandes, les institutions financières ont pu améliorer leur diversification (géographique et sectorielle).

Le délégué mentionne deux autres facteurs importants qui ont contribué à la résilience du système : la présence modeste de participants non financiers dans le capital des établissements financiers et le cadre réglementaire en place. S'agissant du premier point, cette faible présence, ainsi que la séparation entre banques et industrie, a prévenu tout effet de contagion. Quant au second point, le délégué met l'accent sur le rôle qu'a joué le solide cadre réglementaire prudentiel, grâce auquel les banques italiennes ne sont pas

excessivement endettées et ont recours essentiellement aux dépôts de la clientèle de détail plutôt qu'aux ressources collectées sur les marchés financiers.

Le Président fait alors remarquer que les Pays-Bas ont un point de vue tout à fait opposé au sujet de la relation entre concentration et stabilité. De plus, la contribution néerlandaise ne semble pas partager l'opinion de M. Vives quant au fait que l'absence d'obstacles à l'entrée est un facteur important de stabilité : le cas de la banque DSB montre que l'entrée d'un nouveau concurrent a, en fait, accru l'instabilité. Le Président demande aux Pays-Bas de présenter le cas de la banque DSB et d'expliquer pourquoi la concentration n'a pas renforcé la résilience de leur système bancaire.

En ce qui concerne le lien entre concentration et stabilité, un délégué des Pays-Bas indique que son pays n'a pas de réponse certaine à cette question. Cela tient en partie à ce que, dans ce pays, le marché bancaire est très international : des facteurs autres que cette structure de marché particulière ont influé négativement sur la stabilité financière pendant la récente crise.

S'agissant du cas de la DSB, le délégué attire l'attention sur le fait que la faillite de cette banque est imputable à un modèle économique défaillant et n'a rien à voir avec la crise ni avec la stabilité. La DSB s'est effondrée quand les déposants ont retiré leurs fonds suite à des rumeurs d'insolvabilité.

Le Président note que, comme les Pays-Bas, le Japon possède un secteur financier très concentré, où dominant trois groupes géants, par suite d'un processus de consolidation très rapide qui a commencé à la fin des années 90. Il demande au Japon si la consolidation a provoqué des problèmes de concurrence et si ce processus a eu un effet positif sur la résilience du système.

Un délégué du Japon indique que le processus de consolidation n'a pas donné lieu à de graves problèmes de concurrence. Les délégués présentent l'exemple du groupe financier Mizuho. La JFTC a examiné les fusions qui ont abouti à la création du groupe Mizuho. Son enquête a porté principalement sur cinq marchés (dépôts, prêts, portefeuilles de participations et opérations de change) et a conclu que le nouveau groupe ne restreignait pas substantiellement la concurrence, en raison de la pression concurrentielle des marchés voisins et de l'existence d'un concurrent puissant sur le marché régional.

Le Japon souligne que le cas de Mizuho, de même que tous les autres regroupements de sociétés qui ont abouti à la création des deux autres groupes géants, n'a été examiné que sous l'angle de la concurrence. La stabilité financière n'était pas une question en jeu. Ce sont la Banque du Japon et d'autres organismes responsables des services financiers qui sont chargés de sauvegarder la stabilité du secteur financier.

Le Président s'adresse ensuite à la Russie. Sa contribution décrit un certain nombre de mesures qui ont été prises pour remédier à la crise. Il demande à la Russie de commenter les raisons qui ont motivé ces mesures. En particulier, il souhaite savoir si elles vont accroître la concentration et quels seront leurs effets sur la stabilité.

Un délégué de la Russie explique que la mise en œuvre des opérations de recapitalisation ne tient généralement pas compte des spécificités du marché local des services bancaires ni des éventuels effets négatifs sur la prise de risque, mais consiste simplement à accroître le volume minimal des avoirs détenus. Cette seule exigence incite les banques à prendre davantage de risques et ne peut pas assurer la stabilité du système bancaire. Il est donc nécessaire de prendre d'autres mesures spécifiques en vue d'instaurer une réglementation adéquate du secteur bancaire.

De plus, pour maintenir la stabilité financière, il est plus efficace d'imposer un ratio d'adéquation du capital (avoirs détenus par une banque / volume total des actifs pondérés en fonction des risques) que d'exiger simplement un certain niveau de fonds propres.

En outre, le délégué souligne que le système bancaire russe est marqué par une importante dimension régionale. L'approche actuelle de la recapitalisation ne prend toutefois pas en compte cette dimension régionale.

En Russie, la majorité des secteurs bancaires régionaux se caractérisent par un degré de concentration élevé. Dans de tels cas, l'application de la méthode actuelle de recapitalisation bancaire peut conduire au retrait des licences de très nombreuses banques régionales, y compris des banques stables ; pourtant, une diminution du nombre de banques peut aboutir à une restriction de la concurrence, à une monopolisation du secteur bancaire au niveau régional, à une limitation des services proposés et à une éventuelle hausse du coût des services bancaires.

Compte tenu de toutes ces considérations, indique le délégué, la recapitalisation devrait se poursuivre selon les recommandations du Service fédéral antimonopole. Les restrictions à la concurrence seront limitées à une courte période. La proposition du SFA consiste à durcir les exigences de stabilité financière en modifiant les indices relatifs des critères requis. Les effets positifs d'un tel plan sur la stabilité financière pourraient favoriser le développement du système bancaire et offrir aux consommateurs un meilleur accès à des services bancaires diversifiés et à des placements à long terme.

Le Président fait ensuite remarquer que, contrairement à la plupart des contributions, celle de la Suisse affirme que "c'est la concentration, plutôt que la concurrence, qui a contribué au déclenchement de la crise financière". Il demande à la Suisse d'exposer les raisons pour lesquelles la concentration, et non la concurrence, a nui à la stabilité financière et de commenter la proposition du gouverneur de la Banque centrale suisse (la BNS) visant à limiter la taille des banques.

Un délégué de la Suisse précise que le gouverneur a suggéré cette mesure dans le contexte du cas de UBS. Ce groupe, qui résulte d'une fusion réalisée il y a douze ans, a gravement souffert de la crise.

Le délégué indique que la taille fait partie des raisons qui ont conduit à l'effondrement d'UBS, mais ce n'est pas la seule. La cause principale est probablement l'assouplissement des exigences de fonds propres qui s'est produit pendant les années 90.

De plus, il est très difficile de limiter la taille absolue, en particulier du point de vue de la concurrence : il n'est pas aisé de déterminer quelle est la taille optimale, et un problème se pose aussi dans le cas où une banque atteint cette taille par suite de croissance interne. Fixer une taille maximale en fonction du PIB ne vaut guère mieux, d'autant que cela ne serait pas sans conséquence pour une économie relativement petite.

Le délégué conclut en indiquant que le problème réside plutôt dans le contrôle et la séparation des activités des banques que dans la fixation de leur taille, même si ces trois questions sont évidemment liées.

## **5. La relation entre concurrence et stabilité**

Le Président aborde ensuite la question de savoir si la concurrence nuit à la stabilité du secteur bancaire. Il note que la contribution de l'Égypte affirme que "la concurrence en l'absence de réglementation est un désastre", et il demande à la délégation de l'Égypte comment elle est arrivée à cette conclusion.

Une déléguée de l'Égypte explique que cette conclusion se dégage de l'expérience enregistrée par son pays. Elle se réfère en particulier aux causes de la crise financière qu'a traversée l'Égypte en 1997-1999 et aux mesures prises par le gouvernement pour y remédier.

Elle décrit ensuite les changements qui se sont produits dans le secteur financier depuis les années 90. Au début de cette décennie, la plupart des restrictions en matière de commissions et de taux ont été levées,

déclenchant une forte intensification de la concurrence. De plus, les banques étrangères ont commencé à obtenir des licences locales. La concurrence avec les banques étrangères a incité les banques locales à prendre plus de risques pour conserver leurs parts de marché. Ce processus de libéralisation ne s'est pas accompagné de changements dans le cadre réglementaire et, de 1997 à 1999, l'Égypte a connu une grave crise financière.

En 2001, des modifications ont été apportées à la direction de la banque centrale d'Égypte. Les nouveaux dirigeants ont commencé à réformer le secteur financier : les banques publiques ont été réformées et le cadre réglementaire a été amélioré. Cette réforme a sensiblement contribué à la résilience du secteur financier pendant la récente crise financière. Elle a amélioré considérablement le cadre réglementaire sans nuire à la concurrence.

Le Président se réfère ensuite à la contribution de la Corée, qui semble indiquer un lien de cause à effet entre la concurrence et les perturbations financières. Pendant la crise financière de 1997, une vive concurrence a conduit les banques à développer leurs opérations plutôt qu'à rechercher des activités prudentes et rentables. Pourtant, on ne peut pas s'appuyer sur cette constatation pour en déduire que la concurrence mène à l'instabilité. Le Président demande à la Corée d'expliquer cette conclusion.

Un délégué de la Corée décrit tout d'abord la situation qui prévalait avant la crise. Avant la crise asiatique de 1997, la réglementation de l'entrée dans le secteur bancaire coréen avait été assouplie. De plus, le gouvernement avait adopté des politiques qui avaient pour effet de minimiser les possibilités de fusion entre banques et de sortie des banques inefficaces du marché. Le résultat global de ces politiques a été une augmentation du nombre de banques actives, ce qui a incité les banques à se concentrer sur leur développement, tablant sur l'idée que le gouvernement ne laisserait pas faire faillite les grands établissements. De plus, les dispositions réglementaires nationales étaient, en fait, peu efficaces. L'ensemble de ces facteurs a contribué à rendre le système financier plus vulnérable aux difficultés financières.

Le délégué insiste sur le fait que, en 1997, l'instabilité du secteur financier était principalement due à la multiplication des acteurs sur le marché, en l'absence de toute menace sérieuse d'éviction des banques non rentables, mais aussi de dispositions réglementaires efficaces.

La bonne tenue du système financier pendant la récente crise financière prouve que ce sont des facteurs autres que la concurrence qui ont provoqué l'instabilité financière. De fait, après la crise de 1997, le gouvernement coréen a procédé activement à la restructuration du secteur bancaire, laquelle a obligé les banques peu performantes à fusionner ou à quitter le marché. La menace d'éviction du marché a incité les banques à se livrer une concurrence farouche pour obtenir une meilleure rentabilité. De plus, les changements apportés au cadre réglementaire (application du ratio d'adéquation des fonds propres de la BRI) ont empêché les banques de prendre des risques excessifs.

Le Président note qu'un lien clair entre concurrence, concentration et stabilité semble se dégager de plusieurs contributions, mais que les pays hésitent fortement à tirer des conclusions fondées sur leurs propres observations.

Il passe ensuite à la contribution de la Turquie, notant qu'elle offre un résumé des recherches menées sur la relation entre concurrence et stabilité et qu'elle examine les estimations de cette relation sur la période 1990-2008 en se fondant sur un ensemble de données original. Il demande à la Turquie d'illustrer la méthodologie et les résultats obtenus.

Un délégué de la Turquie souligne que les autorités turques de la concurrence ont tenté de trouver des preuves empiriques de la relation entre concurrence et stabilité au sein du système bancaire turc pendant la



période 1990-2008. Elles ont utilisé plusieurs critères de mesure différents tant pour la concurrence que pour la stabilité, et comparé les résultats.

Pour mesurer la concurrence, elles ont utilisé des paramètres structurels et non structurels (CC3, CC5, HHI, indice H de Panzar et Rosse). Les données indiquaient un degré de concentration stable entre 1990 et 2001. Depuis 2001, c'est-à-dire après la crise financière qui a touché le système financier en Turquie, la concentration a augmenté par suite de la disparition de banques en difficulté et sous l'effet aussi de fusions et d'acquisitions.

Dans l'analyse empirique, on a mesuré la stabilité financière en utilisant les ratios de prêts non performants. Les résultats ont montré un effet positif de la concurrence sur la stabilité : elle atténue les risques que prennent les banques dans leurs opérations. Cependant, les résultats paraissent très sensibles aux critères (structurels ou non structurels) utilisés pour mesurer la concurrence, qui ont des effets opposés sur la stabilité. Il n'a donc pas été possible de définir une relation claire entre concurrence et stabilité.

Le Président se réfère ensuite à la contribution de la Hongrie, qui présente une analyse empirique de la relation entre concurrence et stabilité, mais considère aussi que les résultats ne sont pas très convaincants. Un élément intéressant de cette étude réside dans le fait que la structure de propriété pourrait influencer sur la stabilité. Le Président demande à la Hongrie d'expliquer pourquoi les résultats ne sont pas convaincants et de commenter plus en détail la relation entre stabilité et structure de propriété.

Un délégué de la Hongrie explique que plusieurs études ont été menées pour estimer le degré de concurrence dans le secteur bancaire. Néanmoins, comme les données n'étaient pas spécialement destinées à mesurer la concurrence, elles ont produit des résultats peu concluants quant à l'intensité de la concurrence dans le secteur financier.

La première de ces études, réalisée par des chercheurs indépendants en 1999, se concentrait sur les dépôts ; elle a constaté que l'inélasticité des prix diminuait considérablement en cas de plus faible concentration. Les banques avaient tendance à répercuter très lentement la baisse des taux d'intérêt sur leurs clients, mais après l'entrée de concurrents sur le marché de la banque de détail, cette répercussion s'opérait plus rapidement.

La deuxième étude, menée à la demande de la Banque nationale de Hongrie en 2004-2005, était centrée sur le marché des prêts et utilisait le modèle dit "rationnel" pour estimer le pouvoir de marché. Elle a conclu que le marché hongrois se caractérisait par un comportement oligopolistique.

La troisième étude, commandée par le GvH (autorité hongroise de la concurrence), a constaté l'existence de marges très élevées sur les prêts. En se fondant sur les résultats de cette étude, l'autorité de la concurrence a proposé plusieurs actions pour réduire les coûts de changement de banque et pour apporter des changements au cadre législatif.

En ce qui concerne la relation entre structure de propriété et stabilité, le délégué considère qu'une plus grande diversité des structures de propriété rend le secteur bancaire moins vulnérable au risque systémique parce qu'elle se traduit par une diversification des moyens de traiter les risques et par différents types de décisions de gestion.

Le Président présente ensuite la contribution de la Grèce, selon laquelle la structure oligopolistique du système bancaire grec a pu contribuer à la résilience du système durant la crise actuelle. De plus, elle évoque des études demandées par la Banque de Grèce pour évaluer la résistance du système aux chocs exogènes. Le Président demande à la Grèce de commenter ces études.

Un délégué de la Grèce commence par décrire les caractéristiques du secteur bancaire grec : il est très concentré et dominé par six banques qui se comportent de manière oligopolistique. Cette forte concentration résulte d'une vague de fusions qui a débuté en 2002.

Les études menées par la Banque de Grèce semblent confirmer la résilience du système bancaire grec aux chocs exogènes, mais il faudra des recherches supplémentaires pour vérifier si les données réelles confirment ces résultats.

Le Président passe à la contribution de l'Irlande. Ce pays, dont le secteur bancaire est très concentré, a gravement souffert de la crise. Selon le document présenté par l'Irlande, cette instabilité n'est imputable ni à la concurrence ni à la concentration. Elle estime que ce sont plutôt les mauvaises pratiques, ou les "violations des pratiques de bonne gouvernance", qui doivent être considérées comme principalement responsables de l'instabilité. Le Président indique que, d'après cette contribution, l'instabilité semble résulter de déficiences réglementaires, et il demande à l'Irlande de commenter cette affirmation et de définir le rôle de l'autorité de la concurrence dans la restauration des bonnes pratiques au sein du secteur bancaire.

Au sujet des violations de certaines règles et du caractère inapproprié d'autres dispositions législatives, un délégué de l'Irlande annonce que plusieurs enquêtes sont en cours – enquêtes parlementaires menées par des instances de régulation et investigations policières.

En ce qui concerne les aides d'État, le délégué indique que l'Irlande a notifié à la Commission les aides versées à un certain nombre de banques. La principale préoccupation de la Commission concerne les distorsions éventuellement introduites sur le marché et les moyens de restaurer la concurrence. Pendant la crise, une agence nationale de gestion des actifs (*National Asset Management Agency, NAMA*) a été créée dans le but d'acheter, à leur valeur comptable, 88 milliards EUR d'actifs toxiques auprès des banques irlandaises. L'acquisition de ces actifs par la NAMA n'est pas soumise aux règles applicables aux fusions. Cependant, dès que la période d'urgence sera passée, les opérations de la NAMA devront être conformes à toutes les règles de la concurrence.

Du côté des fusions bancaires, deux des six banques irlandaises opérant à l'échelle nationale ont annoncé qu'elles entamaient des négociations en vue d'une fusion. Cette fusion sera évaluée par l'autorité irlandaise de la concurrence selon les critères normaux d'analyse (cherchant à déterminer le risque d'une diminution substantielle de la concurrence), à moins qu'elle ne pose des problèmes de stabilité financière. Dans ce cas, comme prévu par la loi de 2008 sur le soutien financier aux établissements de crédit, c'est le ministère des Finances qui assume le rôle d'autorité de la concurrence pour évaluer la fusion.

## **6. La réglementation financière est-elle cruciale pour la stabilité du secteur bancaire ?**

Le Président invite M. White à commenter ce qui a été dit jusqu'à maintenant. M. White précise tout d'abord que la taille des banques n'est pas nécessairement un bon indicateur de leur pouvoir de marché : sur un grand marché, il se peut qu'un établissement, même très grand, n'ait pas de pouvoir de marché, alors que sur les petits marchés, même les petites banques peuvent exercer un pouvoir de marché.

M. White aborde ensuite trois thèmes : pouvoir de marché et stabilité ; capital et endettement ; conséquences pour la réglementation prudentielle. Sur le premier point, M. White partage l'opinion selon laquelle le pouvoir de marché conduit à la stabilité financière. L'avis inverse, tel qu'exposé dans l'analyse de Boyd et De Nicolò<sup>2</sup>, ne semble pas reposer sur des preuves concluantes. Cependant, il note aussi qu'il

<sup>2</sup> Selon l'analyse de Boyd et De Nicolò, plus le pouvoir de marché est grand, plus les taux d'intérêt sont élevés ; en raison du niveau élevé des taux, les emprunteurs prennent plus de risques, ce qui entraîne une augmentation du nombre de prêts irrécouvrables.

n'est pas impossible d'avoir simultanément concurrence et stabilité, mais cela demande une bonne réglementation prudentielle et de solides exigences en matière de fonds propres.

Sur le deuxième point – capital et coefficient d'endettement –, M. White donne plusieurs exemples de banques et d'entreprises solvables ou non pour expliquer ces deux concepts. Le capital est la valeur nette de l'entreprise, ou la valeur de ses fonds propres. Le coefficient d'endettement désigne le pourcentage de variation des fonds propres qui est dû à la variation de l'actif, à engagements constants. Cette notion s'applique à une augmentation comme à une diminution. Dans le cas d'une banque, les actifs sont les prêts et les engagements sont les dépôts. La différence entre actifs et dépôts est le capital. M. White fait remarquer que, juste avant la crise, les grandes banques d'affaires américaines avaient un coefficient d'endettement très élevé (33/1).

Le capital et l'endettement sont des dimensions cruciales pour la réglementation prudentielle. Il est donc fondamental de mesurer correctement le capital. Selon M. White, le capital devrait toujours être mesuré à sa valeur de marché.

La réglementation prudentielle porte sur la limitation des activités, les exigences en matière de compétences des dirigeants, un suivi étroit des flux entre les institutions financières et leurs actionnaires, les fonds propres pondérés en fonction du risque, un niveau de fonds propres suffisant pour les très grands établissements et même le capital-risque actionnarial, qui peut servir de "matelas" et d'incitation à limiter la prise de risque. La seule façon dont on peut corriger l'incidence négative de la concurrence sur la stabilité financière, c'est d'exiger un niveau de fonds propres suffisant, de mettre en place une réglementation prudentielle et de comprendre parfaitement les processus en jeu dans le capital et l'endettement.

Le Président signale ensuite que le document soumis par l'Australie affirme que "le gouvernement australien est d'avis qu'une vive concurrence dans le secteur des services financiers est d'une importance critique pour que les consommateurs accèdent aux services qu'ils recherchent au prix le plus bas possible" et qu'"il est possible de concevoir des dispositifs réglementaires et des politiques gouvernementales qui favorisent en même temps la concurrence et la stabilité". Le Président demande à Ross Jones et à la délégation australienne de présenter, respectivement, les aspects réglementaires et la situation de la concurrence au sein du système australien.

M. Jones indique que le système bancaire australien a très bien résisté à la crise, grâce à une bonne réglementation prudentielle associée à des conditions macroéconomiques favorables. Il souligne que c'est la réglementation prudentielle, plutôt que la structure du marché, qui est responsable de la bonne santé du système financier en Australie.

En Australie, où le système financier est très concentré, quatre grandes banques disposent d'une très forte part de marché. Le secteur est néanmoins très concurrentiel, comme l'a montré l'évaluation réalisée par l'ACCC à l'occasion de la fusion de l'un de ces établissements avec la cinquième banque du pays.

L'approche australienne de la réglementation prudentielle résulte d'une importante réforme menée en 2003, après la plus grave crise ayant frappé les entreprises australiennes et la plus grande faillite jamais enregistrée (2001). Depuis lors, l'approche de la réglementation prudentielle est devenue plus active, plus interventionniste, grâce à quoi l'Australie ne connaît pas de phénomènes tels que les prêts "NINJA" (*no income no job* – prêts accordés à des personnes sans revenus ni emploi), par exemple, et il n'y a pas eu de relâchement des critères de prêt.

M. Jones poursuit en faisant remarquer que d'autres facteurs ont pu contribuer à la résilience du système financier : i) le fait que les banques australiennes desservent essentiellement le marché intérieur ; ii) la structure de collecte des ressources ; et iii) le code du crédit à la consommation.

S'agissant du premier facteur, le bilan des banques australiennes est très fortement orienté vers les ménages australiens à faible risque. Les banques australiennes ne sont que très peu incitées à rechercher des actifs à haut rendement et à risque élevé, puisqu'elles ont la possibilité d'obtenir de bons rendements auprès des emprunteurs nationaux. Cela signifie qu'elles n'ont que très peu de revenus de transactions et qu'elles ne sont donc guère exposées aux titres toxiques. De plus, le code du crédit à la consommation, très strict, empêche les banques australiennes d'accorder des prêts "toxiques".

En ce qui concerne la structure de financement des banques, M. Jones indique que l'Australie enregistre depuis longtemps un déficit d'épargne nationale ainsi que des taux de croissance élevés. Les banques doivent donc avoir recours aux marchés de gros pour collecter des ressources. De plus, pour avoir accès aux marchés financiers étrangers, elles doivent se prévaloir de notes de crédit très élevées, ce qui impose une stricte discipline de marché.

M. Jones mentionne aussi l'importance du soutien politique : depuis 2003, la nouvelle approche réglementaire bénéficie d'un solide soutien du gouvernement australien. Il fait par ailleurs observer qu'en Australie, contrairement à d'autres pays comme le Royaume-Uni, il existe une séparation claire entre la réglementation prudentielle, d'une part, et la réglementation de la gouvernance des entreprises et des marchés financiers d'autre part. La commission australienne des valeurs mobilières (*Australian Securities Investment Commission*) et l'autorité australienne de réglementation prudentielle (*Australian Prudential Regulation Authority*) sont chargées, respectivement, de la réglementation des marchés financiers et de la réglementation prudentielle. Le fait qu'elles sont responsables d'un seul domaine améliore l'efficacité et l'efficience de ces deux instances.

Un délégué de l'Australie souligne le rôle important que jouent l'autorité de réglementation prudentielle et la banque centrale, au travers de leur approche interventionniste de la réglementation, dans le maintien de la résilience du système financier australien. Le délégué se dit toutefois préoccupé par le recul de la concurrence au sein du secteur financier dans le sillage de la récente crise financière. Le principal problème concerne les petits acteurs, les établissements financiers non bancaires, qui ont dû faire face au tarissement de leurs sources de financement par suite de l'effondrement du marché de la titrisation.

Le délégué décrit ensuite la "politique des quatre piliers". L'évaluation des fusions porte sur deux aspects et repose sur un critère de concurrence normale et un critère d'intérêt national. Le premier est similaire aux contrôles réalisés dans d'autres secteurs et vise à déterminer si une fusion risque d'entraîner une diminution substantielle de la concurrence. Le deuxième est en rapport avec la "politique des quatre piliers", aux termes de laquelle le gouvernement n'autorisera pas une fusion entre les quatre grandes banques commerciales. Cela est possible avec les lois applicables – la loi sur les participations dans le secteur financier et la loi bancaire –, en vertu desquelles le directeur du Trésor a le pouvoir d'empêcher des fusions pour des raisons d'intérêt national, lesquelles recouvrent différents facteurs, tels que la concurrence, la stabilité du système et les considérations relatives au problème des établissements trop grands pour faire faillite.

## **7. Les mesures prises pour remédier à la crise peuvent influencer sur la concurrence et la stabilité dans le secteur financier**

Le Président lit un extrait de la contribution britannique et invite le Royaume-Uni à formuler des commentaires : "Bien qu'on ne puisse pas affirmer clairement que la concurrence ou la concentration aient une incidence sur la stabilité à long terme, les mesures prises pour préserver la stabilité financière peuvent influencer sur le degré de concurrence." Elle reconnaît que "si la concurrence garantit à long terme le bien-être économique, il est possible qu'une limitation de la concurrence soit à même de réduire l'instabilité à court terme."

Un délégué du Royaume-Uni établit une distinction entre ce que les autorités de la concurrence devraient faire dans l'immédiat, à titre de mesures d'urgence, et ce qui est leur rôle à plus long terme, lorsque le système commencera à revenir à des conditions plus normales.

Dans le premier cas, comme pour la fusion Lloyds-HBOS, les autorités devraient être en mesure d'exprimer des préoccupations au sujet de la concurrence.

À plus long terme, le délégué estime que le problème des établissements trop grands pour faire faillite relève de la réglementation financière mais concerne aussi, indirectement, le domaine de la concurrence : si une banque est trop grande pour qu'on la laisse faire faillite, l'État intervient pour la renflouer ou pour autoriser une fusion, ou il prend d'autres dispositions. Ce sont autant d'actions qui peuvent porter atteinte à la concurrence.

Le Président donne ensuite la parole à un délégué du BIAC, qui estime que la manière dont la politique de la concurrence et la législation ont été appliquées dans le secteur bancaire au cours des dernières années ne peut pas être considérée comme un facteur ayant contribué à la crise. La politique de la concurrence n'étant pas suffisante pour assurer la stabilité financière, la plupart des pays ont adopté une forme ou une autre de réglementation prudentielle pour le secteur bancaire. Si l'on en croit l'expérience de plusieurs pays, la réglementation prudentielle semble avoir joué un rôle très important : les pays qui en étaient dépourvus ont en effet été durement touchés par la crise. Une réglementation appropriée et un environnement institutionnel solide peuvent corriger les effets négatifs de la concurrence et, partant, renforcer ses effets positifs, tels que des prix plus bas, de meilleurs services et un plus large choix pour les consommateurs.

La politique de la concurrence peut aussi contribuer à maintenir l'ouverture des marchés, à favoriser l'intégration et à éliminer les obstacles artificiels, autant de facteurs favorables à la stabilité du secteur bancaire. De plus, elle peut aider à limiter les distorsions potentiellement introduites par les plans de sauvetage.

Le délégué estime par ailleurs qu'il ne faut pas limiter la concentration du secteur bancaire en adoptant des règles qui imposent une taille précise ou une séparation des activités. Il exprime ses réserves face à une séparation pure et simple des activités de banque commerciale et de banque d'affaires, car il se pourrait que ce type d'intervention, destinée à prévenir une prise de risque excessive, produise en fait le résultat opposé. L'Australie, par exemple, considère, comme l'OCDE l'a déjà indiqué, qu'une totale séparation de ces deux types d'activité pourrait être menée à bien au sein des établissements sans être nécessairement accompagnée d'une cession complète. On pourrait atteindre ce but en utilisant des structures de holding interne.

Le Président donne ensuite la parole à M. Stephanou, du Conseil de stabilité financière, pour la dernière intervention. M. Stephanou indique que, le CSF ayant un mandat centré sur la stabilité financière, il s'intéresse certes à la concurrence, mais dans une optique moins large que ce qui a été discuté autour de cette table. Par exemple, le mandat n'inclut pas les effets négatifs que peut avoir, sur les consommateurs et les concurrents, un accroissement du pouvoir de marché de certains établissements financiers.

Le renforcement du pouvoir de marché d'institutions opérant sur certains segments peut entraîner une hausse des coûts pour les consommateurs en général et augmenter les risques de comportement abusif.

Par ailleurs, une intervention statique de l'État dans le secteur financier, notamment en ce qui concerne la détention de participations au capital d'établissements financiers, peut fausser les incitations sur le marché et rendre ainsi inévitables les conditions de la concurrence vis-à-vis des acteurs privés.

Si, de plus, pour faire face à la crise, les pays mettent en œuvre des réformes réglementaires au coup par coup et sans coordination, ils risquent de renforcer les barrières à l'entrée sur le marché et, partant, de réduire la concurrence existant effectivement dans les différents secteurs.

M. Stephanou évoque également le problème des établissements trop grands pour faire faillite. On peut considérer – ou les faits ont montré – que certaines institutions deviennent interconnectées ou trop grandes pour qu'on les laisse faire faillite. Elles peuvent être en mesure de collecter des ressources à un coût plus faible que leurs concurrents et elles profitent donc d'un avantage indu qui peut les amener à prendre des risques excessifs.

En outre, M. Stephanou mentionne certaines questions pour lesquelles les travaux menés par l'OCDE pourraient compléter utilement ceux du CSF : i) les comportements anticoncurrentiels, en particulier sur les marchés de gros ; ii) la possibilité que la tendance à long terme vers une concentration accrue sorte renforcée de cette crise ; iii) les conséquences pour la concurrence des structures qui émergent à l'échelle de la planète ; iv) la question de savoir si, et à quel point, les autorités de la concurrence devraient prendre part à la réforme de la réglementation financière.

Le Président résume brièvement les principaux points qui se sont dégagés de la discussion : i) un degré excessif de concentration et de concurrence peut conduire à l'instabilité financière, mais une bonne politique de la concurrence peut atténuer ces éventuels effets négatifs ; ii) l'activité bancaire constitue une catégorie très vaste, qu'il serait utile de fractionner en différents types d'activité ; iii) les autorités de la concurrence peuvent jouer un rôle extrêmement important, notamment en établissant un dialogue avec les autorités de régulation en vue de préserver l'équilibre entre concurrence et réglementation prudentielle.