Banking sector competition and prudential regulation

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Competition has been shown to increase risk-taking behavior within the banking sector. Prudential regulators must take this factor into account in the process of designing adequate financial sector competition policy with the aim of crisis prevention.

Evidence has shown a positive link between increased competition and increased risk taking behavior in the financial sector. Although this subject has been analyzed on many occasions, it generates renewed interest whenever a country, or group of countries, faces a banking crisis, given the large costs for economic growth and public accounts associated to such crises. As highlighted in a recent working paper published by the International Monetary Fund (IMF) this past May[2]*, prudential regulation is and should be and important element for banking sector competition policy. Several studies have quantified the costs of banking crises and the benefits of prudential regulation in preventing or reducing the financial burden, as well as the recurrence of crises themselves. In this context, we examine banking competition and prudential regulation in Spain - a country in the process of overcoming the most serious banking crisis in its recent history. Spain must address several of the traditional challenges related to banking competition, such as: i) an intense concentration process; ii) the role of the public sector in nationalized banks; and, iii) the desirability of placing limits on certain types of deposit remuneration, among other issues.*

Introduction

Macro prudential regulation has generally represented a large component of competition policy in the banking sector. Moreover, it is usually aligned with other prudential policies aimed at reducing the negative externalities of banking crises on society as a whole. When we mention negative externalities, we refer to the devastating effects of a banking crisis on wealth and employment in the broader economy. Accordingly, although any regulation has a cost, such as the moral hazard posed by the existence of deposit guarantee schemes – it is usually understood that the aggregate benefits to society of prudential banking regulation are greater than such costs.

The cost of banking crises on the economy and public accounts

Numerous studies have quantified both the costs of banking crises and the benefits of prudential regulation in preventing or reducing such costs,

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[2] Ratnovski, L. (2013): "Competition Policy for Modern Banks". IMF Working Paper 13/126.

as well as the recurrence of crises. The Basel Committee on Banking Supervision, in a report published in August 2010[3], summarized the most significant studies on the impact of banking crises – all in the second half of the twentieth century – on the gross domestic product (GDP) of the countries they affected. According to the report, the average banking crisis causes a loss of 9% of real GDP between the peak prior to the crisis and the lowest point during the crisis. This figure amounts to 19% of the real GDP prior to the crisis if we take into account the several years needed for the economy to reach pre-crisis output levels.

The current international banking crisis, which began in the summer of 2007, has a significant systemic component. In certain eurozone countries, such as Spain, the feedback loop of banking crisis-sovereign crisis is proving to be very difficult to break. If we apply the calculations made in the preceding paragraph to Spain, we will see that since the peak prior to the crisis, real GDP has fallen by 7%. Compared to real trend output (as calculated prior to the crisis), the real GDP loss in the last three years is nearly 13%, and the country has not yet entered a phase of economic recovery. The significance of these figures can be supplemented by employment data. In Spain, there are nearly 3.5 million more unemployed people than at the onset of the crisis.

Public sector intervention under such circumstances is widely accepted, as it generally reduces the negative effects of the crisis. In the case of Spain, public assistance has taken a number of forms directed at various areas:

a) **Bank recapitalizations**. First, through the Deposit Guarantee Fund (FGD in its Spanish initials) and then through the Fund for Orderly Bank Restructuring (FROB in its Spanish initials), which is partially funded by the European Stability Mechanism (ESM), Spanish deposit institutions have received aid in the form of capital for an amount that exceeds 7% of GDP. This amount includes asset protection schemes (guarantees backing buyers of banks undergoing a resolution process due to losses in the acquired loan portfolio).

b) **Liquidity support measures.** The European Central Bank has been the main source of financing for European banks facing credit constraints in financial markets. Net borrowing by Spanish banks from the Eurosystem reached levels above 35% of Spanish GDP in the summer of 2012. The Spanish government, in response to Spanish banks' difficulties funding themselves in wholesale markets, and to contain the spill-over effects on access to credit to enterprises and households, set up two programs aimed at providing funding to banks:

- *State guarantees for bank debt issuance:* in 2008, 2009 and 2012, the Spanish Treasury provided guarantees for senior debt issues, reaching an amount above 10% of GDP as of 2012.

- *Financial assets acquisition fund:* The Ministry of Finance and Treasury set up this fund to acquire assets with a high credit rating from financial institutions. The total amount was equal to nearly 2% of the 2012 GDP.

c) **Asset transfers.** Transfer of assets to the Company for Management of Assets Proceeding from Bank Restructuring (SAREB in its Spanish initials). The transfer was a crucial prerequisite for banks to receive State aid from the FROB (i.e., recapitalization), funded by the ESM. The total amount transferred was equal to nearly 5% of 2012 GDP, providing **liquidity injection and a reduction in minimum capital requirements.**

[3] Basel Committee on Banking Supervision (2010). "An assessment of the long-term economic impact of stronger capital and liquidity requirements".

In short, State and European-level support for Spanish bank recapitalization has amounted to nearly 7% of GDP, liquidity support, including borrowing from the ECB, totaled nearly 50% of Spanish 2012 GDP. To all this we must add the aid referenced above related to the transfer of assets to the SAREB. These figures are sufficiently illustrative of both the cost of the current banking crisis for Spain and of the importance of the role the public sector is playing in recapitalizing the financial sector.

Banking competition prior to the crisis: Correlation to increased risk appetite

We have seen that competition –as measured by the degree of concentration in the banking sector– decreases after a banking crisis. Indeed, evidence exists that an “excess of competition” in the banking sector incentivizes institutions to take risks. Therefore, control of the level of competition is a tool that can reduce the number of crises and limit their effects when they do occur.

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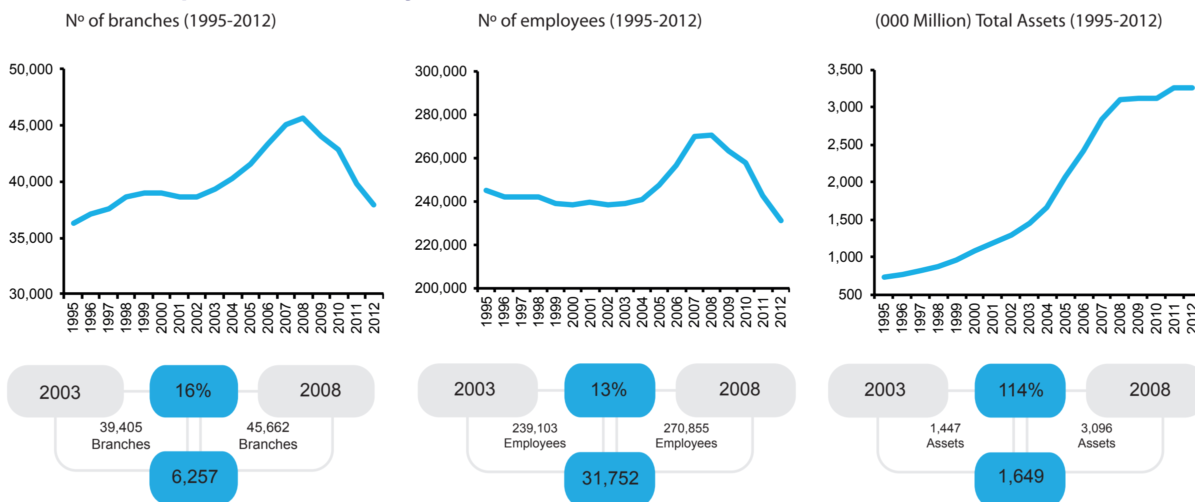
In a recent working paper published this past May by the IMF, the Fund accepted the aforementioned hypothesis that the level of competition in the banking sector affects risk-taking by credit institutions. Thus, the greater the competition, the greater the pressure on margins, and this is compensated for with more risk. In addition, efforts to secure market shares (in assets or in liabilities), which are inherent to situations of strong competition, are usually linked to the taking of greater risks. The Fund’s work yields two main conclusions. First, that competition and banking authorities must cooperate to ensure that competition policy includes a macro-prudential component. Regulations governing

Exhibit 1

Evolution of Spanish financial system indicators



Source: Bank of Spain.

bank resolution are an example of this necessary coordination in the field of prudential policy. Furthermore, they allow for treatment that is separate from regulations governing insolvencies, and they also establishes conditions under which State aid to the banking sector is permissible.

Second, that modern banking is ever more dependent on financial markets in both its investments and its sources of funding. This fact allows institutions to grow quickly and take risks of a different nature from traditional banks. In such a setting, competition policy in the banking sector should tackle matters such as the "too big to fail" problem and even place limits on certain activities. The latter is the aim of a number of regulatory initiatives, such as the Volker Rule in the Dodd-Frank Act in the U.S., the Vickers proposal in the UK and the Liikanen proposal for the EC, and even of proposals for activity differentiation between banks that can be bailed out and those that cannot.

Let us examine the case of Spain, and see how well the above assumptions apply. Exhibit 1 shows the evolution of assets, branch offices and employees in the Spanish banking sector in recent years. The three factors underwent steep growth in the period prior to the crisis, which we would interpret as a sign of strong competition. Growth in the volume of assets, moreover, led to an accumulation of risks on sector balance sheets.

First, we will seek evidence in the P&L structure of the Spanish banking sector of a period of intense competition prior to the banking crisis. Then, we will analyze the accumulation of risks by the sector in that period.

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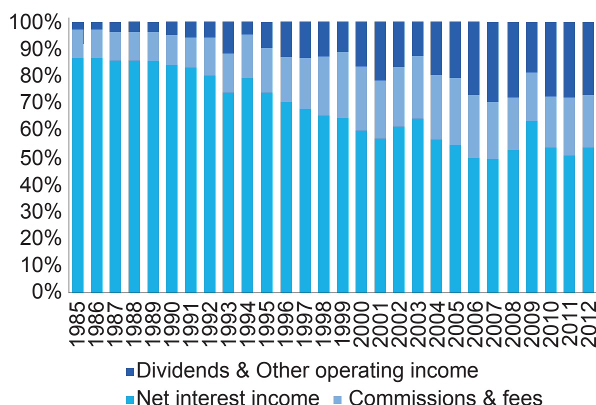
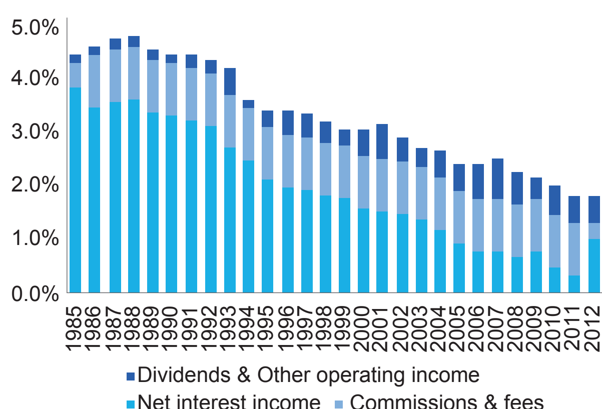
In Exhibit 2, left, it can be seen that in the 1980s, the interest margin accounted for somewhat

Exhibit 2

Component weights in banking sector gross value added



Component weights in banking sector gross value added as % total assets



Sources: Afi, BoS.

more than 85% of the gross value added (GVA). By 2007, just before the crisis, only 50% of GVA came from that item. The rest was generated through fees, dividends and proceeds from financial transactions, which indicates a clear shift of banking business towards more market-related activities and a higher level of risk.

Exhibit 2, right, supports this conclusion by showing the same components of gross value added in relation to total assets managed. The interest margin in the mid-1980s represented 4.5% of total assets. By 2007, just before the crisis, this percentage had decreased to approximately 2.5%. Such a significant reduction may have been the result of many factors, but other variables, such as strong growth in total assets, in credit investment and of capacity of the banking sector, suggest that strong competitive pressures in the sector were the decisive element.

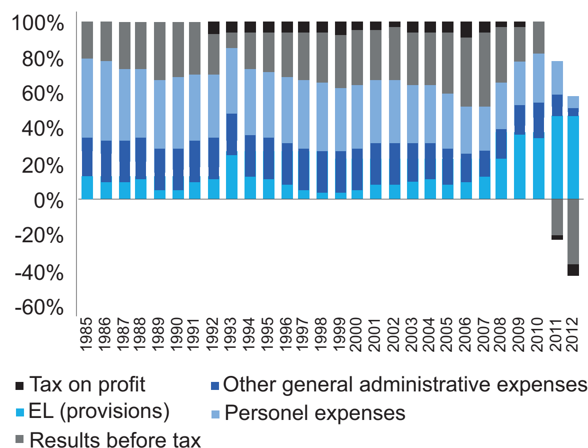
Having found evidence of a period of strong competition in the sector in the years prior to the crisis, we should seek to determine its effects on risk-taking. Exhibit 3, left, shows the evolution over time of the weight of gross value added generated by the Spanish banking sector within each item. Here too, Exhibit 3, right, complements the information on the allocation of gross value added in relation to total sector assets.

It can be seen that there are two periods of crisis associated with an increase in impairment provisions: 1992-1994 and 2008-2012. The volume of provisions in the current crisis, especially in the last two years, reveals a sharp accumulation of risk in the previous years (already shown in the growth of assets). Hence, evidence of a strong degree of competition and of a large accumulation of risks correlate in time.

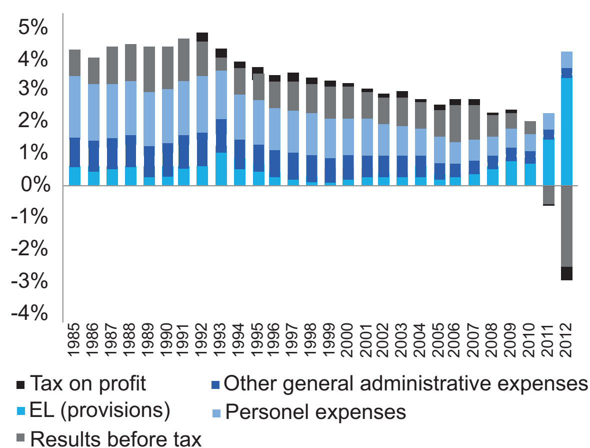
To conclude this brief analysis of the relationship between competition, risks and regulation in the Spanish banking sector, we must discuss the attempts by the Spanish authorities to prevent the so-called “deposit war” (of a highly competitive nature) in the midst of the recapitalization of institutions, and with financial

Exhibit 3

Component weights in banking sector gross value added destination



Component of banking sector gross value added destination as % of total assets



Sources: Afi, BoS.

markets still closed to many Spanish financial institutions.

In June 2011, the Ministry of Economy instituted a requirement of larger contributions to the deposit guarantee fund for high-yield deposits. The measure had little effect, as banks stopped marketing high-yield deposits and began marketing high-yield commercial paper, which was not covered by the guarantee fund, and the measure was rescinded in August 2012. More recently, the press has reported a recommendation made by the Bank of Spain to banks to protect their financial margins, with a special emphasis on high-yield deposits. It would appear that this recommendation has had an effect, at least temporarily, as shown in Exhibit 4. Remuneration of households' new time deposits has noticeably fallen since the start of 2013, and this cannot be explained by a drop in market rates. Indeed, the spread between the deposit and the Euribor (the average between 3 months and 12 months) has narrowed by more than 100 bp since the start of the year.

Banking crisis and competition: Post crisis consolidation

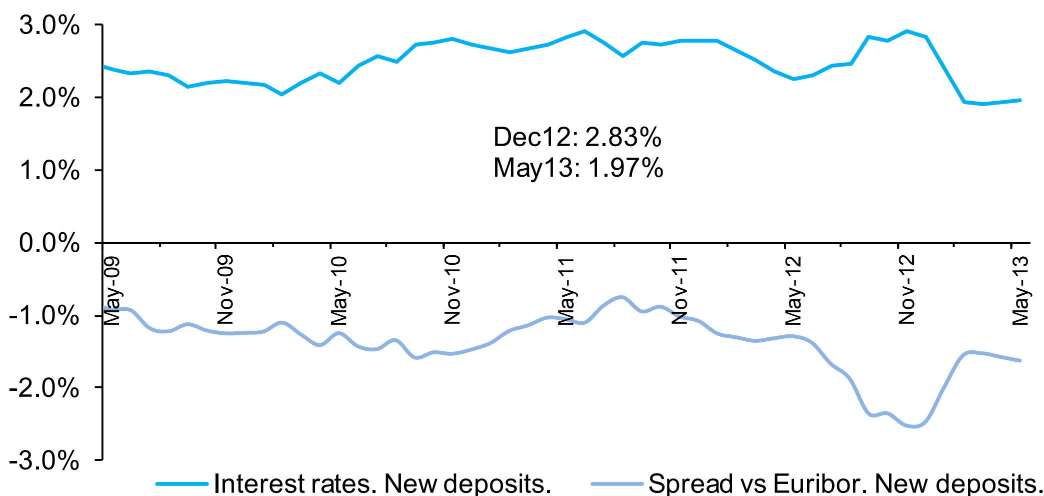
The rationale for making prudential regulation an important element of competition policy in the banking sector is based on empirical evidence that the greater the competition within the sector, the greater the incentives for risk taking. Thus, a conflict may arise between the objectives of maximum efficiency through competition, on the one hand, and financial stability sought by prudential regulation on the other.

Hence, one common way of affecting the degree of banking competition is for national regulators to make it more or less easy for foreign banks to enter the national market. At the same time, national authorities have either fostered or dissuaded mergers of domestic institutions, thereby affecting the degree of concentration and, consequently, of competition in the sector.

Concentration tends to be a natural outcome of a banking crisis, resulting from the necessary

Exhibit 4

Remuneration of households´new time deposits



Sources: Afi, BoS.

market correction –i.e., the disappearance of less efficient players– and a prudential approach taken by national authorities to prevent further negative effects. In other words, competition decreases following a banking crisis.

The greater the competition, the greater the incentives for risk taking in the banking sector. This empirical evidence would justify the prudential nature of banking sector competition policy.

In the case of Spain, public intervention has laid the groundwork for a more stable financial sector, but at the cost of reducing competition. Around the onset of the financial crisis, Spain had 36 financial institutions. With State support from the FROB and the FGD, 14 reorganized resulting deposit institutions were recapitalized during the crisis with commitments for nearly 8.5% of these institutions' assets.

In three of the 14 recapitalized institutions (BFA-Bankia, NCG Banco and Catalunya Banc), which represent 12 of the original 36 institutions, the FROB holds a majority stake in the capital. These institutions have received 58% of the total State aid in the form of capital, a percentage that is slightly higher than their 53% share of the total assets of all institutions receiving such aid. Only in the case of Bankia is State presence intended to be permanent, at least until a suitable opportunity to exit should arise. In the other two cases, FROB intends to sell the institution within a relatively short period of time, but no more than five years after the entry of the public sector into the banks' capital.

Table 1

Spanish financial sector restructuring and recapitalization

Recipient of public aid	Ownership	Number of original entities	FROB & FGD aid amount (x000 euros)	Public aid as % assets
BFA-Bankia	67% FROB	7	22,424	7.0%
BMN	64% FROB	4	1,645	2.4%
Liberbank	Private	3	124	0.2%
Catalunya Banc	FROB. To be sold	3	12,052	14.7%
NCG Banco	FROB. To be sold	2	9,052	12.9%
Banco CEISS	Integration in other Group	2	1,129	2.7%
CCM	Integration in other Group	1	4,168	16.0%
Banco Caja 3	Integration in other Group	3	407	1.9%
Unimm	Integration in other Group	3	3,822	12.6%
Banca Cívica	Integration in other Group	4	977	1.9%
Banco de Valencia	Integration in other Group	1	6,000	23.5%
CAM	Integration in other Group	1	12,949	19.4%
Banco Gallego	Integration in other Group	1	245	5.2%
CajaSur	Integration in other Group	1	358	2.2%
	TOTAL	36	75,352	

Sources: Afi, AEB.

Another two institutions (BMN and Liberbank), which represent seven of the original 36 institutions, have also received financial aid and are looking forward to the entrance of private capital to replace the Government's stake.

The nine other institutions, representing 17 of the original entities, have received nearly 40% of State capital aid, although with broad dispersion. All these institutions have been integrated into, or are in the process of integrating into banking groups that have not received capital injections.

Conclusion

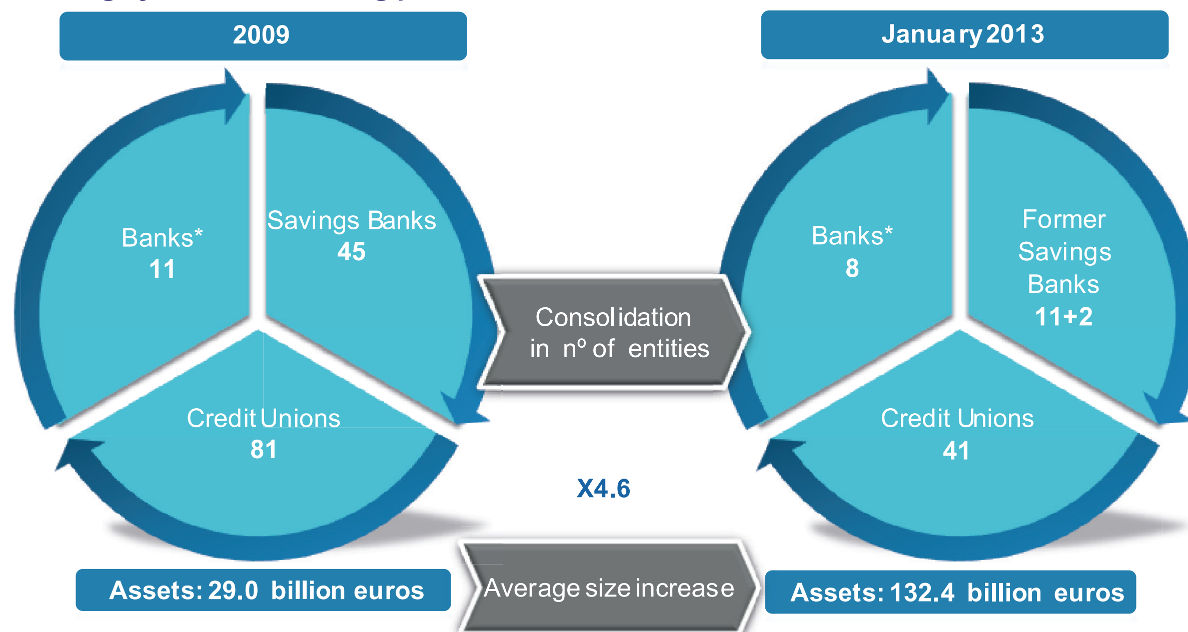
In sum, of the 36 institutions in existence at the start of the crisis, comprising banking groups that have received State aid, only three –BFA-Bankia, BMN and Liberbank– presently look forward to resuming independent operations. Therefore, recapitalization with State aid, although with a few exceptions, has ultimately fostered a reorganization of the Spanish banking sector that should prevent or reduce the incidence of future crises. Although, this has come at the price of intense concentration and a resulting loss of competition.

As is the case for financial crises on average, the Spanish banking crisis is having a very high cost in terms of employment, public debt and economic growth. As a way of limiting the damage, the Spanish state has injected very large amounts of aid, both in the form of recapitalization of institutions, and liquidity facilities.

As would be expected, the banking crisis has also had an impact on the competitive framework of the sector. It has led to sharp concentration, reducing to less than half the number of institutions operating in the retail business with a significant volume, while the average bank

Exhibit 5

Banking system restructuring process



** Only Banks with significant retail business*
Source: Afi.

size, measured by total assets, is now 4.6 times higher than at the onset of the crisis. In addition, public intervention in the form of nationalization of financial institutions –i.e., a controlling interest of the State in the capital– also alters the competitive panorama, even if only temporarily.

The data and balance sheet trends, the number of branch offices and employees, and income statements in the sector in the years prior to the crisis, reveal an accumulation of risk that, at least in part, may have been fed by a highly competitive environment. Some regulations and proposals currently being discussed in international forums precisely seek to limit deposit institutions' ability to engage in certain types of activities –i.e., limit competition– as a way of preventing banking crises.

As an recent example, in the case of Spain, authorities have sought to rein in the so-called "deposit war", which had led to gradual increases in the remuneration of customer deposits. Contrary to the norms of competition, the measure would be one of a number of prudential measures for a sector in search of margins, with a competitive panorama distorted by the presence of the public sector in the capital of several financial institutions, and a very large bill to be footed by taxpayers.