Measuring the resilience of the Spanish banking sector: the impact of the crisis

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Despite their initial resilience to the crisis, banks must make further efforts to maintain a viable business model

The crisis has had a severe impact on the international and Spanish financial sector. Although the Spanish financial sector has been initially more resilient to the crisis than its European counterparts, additional challenges are growing. One of the variables most adversely affected by the crisis has been bank profitability. Reduced profitability has mostly been a consequence of the large amount of provisions that had to be dedicated to cleaning up balance sheets as a result of impaired assets related to the real estate sector, but also because of an increase in financial costs, a consequence of more restrictive capital markets conditions. Looking forward, we should expect further pressure on profitability ratios due to the expected economic contraction in 2012, the continuing process of private deleveraging and the likely adherence of the ECB to loose monetary policies. A further cceleration of the financial restructuring process and integration is needed for Spanish banks to reap the full benefits of economies of scale. Also, banks must continue implementing cost containment strategies to improve efficiency and make further advances to reduce spare capacity.

Banks' profitability: a main casualty of the crisis

The severe impact of the current crisis on the banking sector has forced the adoption of a wide range of measures aimed at strengthening the resilience of the financial system and making it more efficient. Measures have been implemented at both the national[2] and international[3] level. As a result, the Spanish banking sector has undergone profound changes over the past two years. Two illustrative examples of such changes are the savings banks restructuring process and their subsequent conversion into commercial banks.

One of the variables most adversely affected by the crisis has been bank profitability. This is largely a consequence of write downs that had to be made to provision for troubled assets, particularly in the case of the real estate sector. Specifically, from 2008 to September 2011, Spanish credit institutions devoted an amount equivalent to 10% of Spanish GDP (€105bn) to cover deterioration of impaired assets. In addition, profitability also suffered as interest margins were reduced as a result of increased financing costs associated with the sovereign debt crisis and the closure of wholesale funding markets.

Against this backdrop, this article aims to analyze the impact of the crisis on the profitability of the Spanish banking sector as compared to

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[2] Reform of savings banks legislation, the Fund for the Orderly Restructuring of the Banking Sector (FROB), increased solvency and recapitalization requirements, increase in transparency, new measures to clean-up institutions' problematic exposures to construction and real estate developers, etc.

[3] New Basel III accords, extraordinary measures of the European Central Bank, stress tests, etc.

the rest of the European banking sectors. The analysis focuses primarily on the evolution of the components of the profit and loss account using European Central Bank data from 2007 through December 2010. In the case of Spanish deposit institutions, additional data has been obtained from the Bank of Spain through September 2011.

Spanish banking profitability within the European context

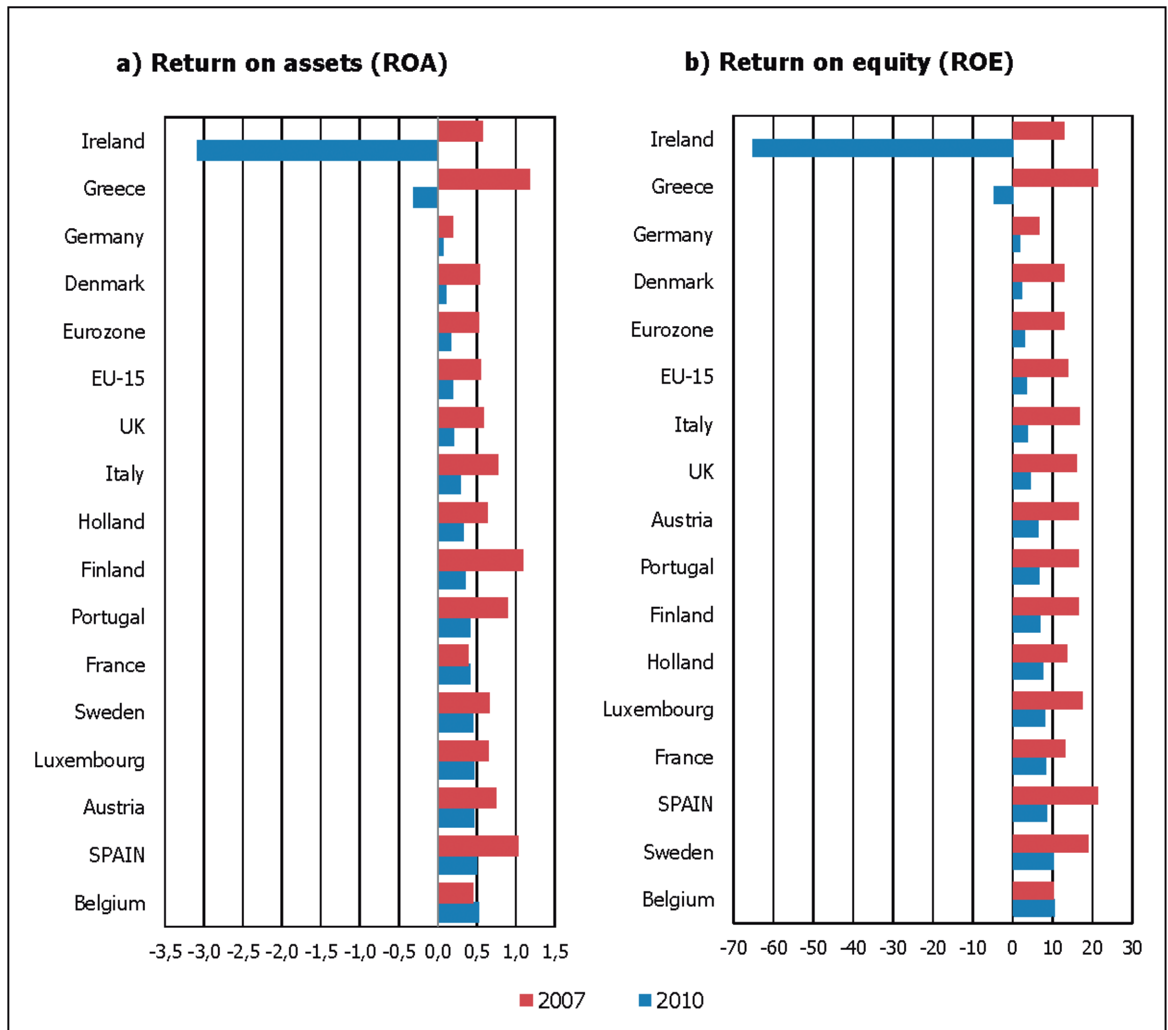
Bank profitability has been adversely affected by a series of factors, such as: the slowdown of banking activity since the onset of the crisis, global financial markets uncertainty, increased risk, and more restrictive wholesale funding market conditions.

The decline of the Spanish banking sector's profitability in the crisis period 2007-2010 is due fundamentally to the steep increase in the cost of risk, the fall in other operating income and to the increase in operating costs.

The Spanish banking sector has always stood out at the international level for its high level of profitability, as measured by return on assets (ROA) as well as return on equity (ROE). Prior

Exhibit 1: Profitability of the European credit institutions

Percentage Rank ordered from lowest to highest profitability in 2010



Source: European Central Bank.

to the crisis, Spanish ROA and ROE levels were twice the European average. With the onset of the crisis in mid-2007, the profitability of the Spanish banking sector fell sharply, but to a lesser degree than that of the European banking sector as a whole. As shown by Exhibit 1, which ranks European banking sectors in increasing order by ROA, in 2010, the Spanish banking sector was the second most profitable within the EU-15 (outperformed only by Belgium) with a value of 0.5%, more than twice the average profitability of the European banking sector (0.19%). The negative levels of profitability in Ireland (-3.09%) and Greece (-0.31%), as well as the low level in Germany (0.07%) reflect the severity with which the crisis impacted their banking sectors. The graph shows that in practically all European countries, the profitability of credit institutions was reduced from 2007 to 2010, with the banking sectors of Ireland and Greece experiencing the greatest fall. Specifically, in these two countries, ROA fell 632% (from 0.58% in 2007 to -3.1% in 2010) and 126% (from 1.18% in 2007 to -0.31% in 2010), respectively. In Spain, the decline was 51.5%, below the mean for both the EU-15 (65.9%) and the Eurozone (68.1%), reflecting a slightly less pronounced impact of the crisis relative to other European countries.

Return on equity exhibits provide further evidence of the Spanish banking sector's high level of profitability and slightly greater resilience to the crisis. In 2010, the profitability of the Spanish banking sector (8.52%) was more than twice the mean of the EU-15 (3.48%), making it the third most profitable of the EU-15. Furthermore, as previously demonstrated with ROA data, ROE exhibits indicate that the impact of the crisis was less pronounced in Spain, where ROE fell by 60% from 2007 to 2010, versus a 75% fall for the average of the banking sectors of the EU-15.

Table 1 helps to further analyze which components of the profit and loss account had the greatest impact on the reduction in profitability, presenting the variation of ROA in the Spanish and Eurozone banking sectors over the crisis period 2007-2010. To measure the contribution of each profit and loss account item, we consider not only the rate of variation of each item, but also its relative importance to total profitability in the initial year. As in the previous exhibit, the table shows, in greater detail, that the ROA of the Spanish banking sector decreased by 51.5% in the crisis period, below that of the average of the European banking sector (68.1%). Specifically, the net interest margin contributed positively to the growth of profitability, by 22.3 percentage points (pp.). However, this positive contribution was more than offset by the 31.1 pp. fall of other operating income, and by the 38.8 pp. negative contribution of provisions, extraordinary items and taxes. The increase in operating costs also contributed negatively, but by a smaller amount, reducing the variation of ROA by only 3.9 pp. Relative to the fall in the gross margin from 2.84% in 2007 to 2.75% in 2010, average operating costs increased from 1.28% to 1.32%. This explains why the cost to income ratio (percentage of operating cost over gross income) increased by 2.6 pp. Nevertheless, despite this deterioration of efficiency, at the end of 2010, the cost to income ratio of the Spanish banks was 14 pp. lower than the average for the European banking sector, the Spanish banking sector thus being the most efficient of the EU-15.

In short, the decline of the Spanish banking sector's profitability in the crisis period 2007-2010 is due fundamentally to the steep increase in the cost of risk, the fall in other operating income and to the increase in operating costs. Specifically, net operating income was reduced by 8%, while profit (ROA) was reduced by 51.5%,

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due to increased provisions by Spanish banks to account for write downs of deteriorated assets. Therefore, 75% of the fall in profitability of the Spanish banking sector is explained by the provisions that had to be made in order to allow for the cost of risk.

A similar pattern can be observed in the Eurozone banking sector as a whole, where net interest income is the only item that contributed positively to the evolution of profitability (36.4 pp.). Other operating income contributed negatively (-25.2 pp.), though to a lesser degree than in Spain. Moreover, the overall contribution of net interest

income and other operating income is positive in the Eurozone, as shown by the increase in gross margin (with a contribution of 5.8 pp.). In Spain, on the other hand, gross margin has a negative contribution of 8.7 pp. Nevertheless, the positive contribution of gross margin within the Eurozone banking sector is for the most part counteracted by operating costs (-4.2 pp.). In conclusion, the 68.1% fall in European ROA is essentially driven by the increased provisions (-68.4 pp.) necessary to clean-up balance sheets.

Table 1: Variation of ROA of credit institutions over the period 2007-2010

	Spain	Eurozone
ROA (%)	**-51.5**	**-68.1**
Contribution (percentage points)		
Net interest income	22.3	36.4
Other operating income	-31.1	-25.2
Gross margin	-8.7	5.8
Operating costs	-3.9	-4.2
Net operating income	-12.6	0.0
Provisions, extraordinary items and taxes	-38.8	-68.4

Source: European Central Bank and own elaboration

Spanish Deposit Institutions' Profitability in 2010-2011

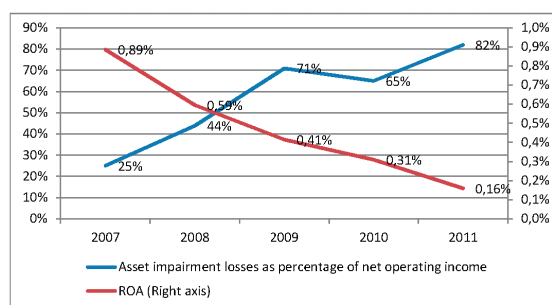
For Spanish deposit taking institutions[4] , it is possible to get an even more up to date picture of the impact of the crisis on profitability, using data from the Bank of Spain through September 2011. It is worth noting that the ECB data analyzed previously includes credit institutions other than just deposit taking institutions (such as specialized credit institutions).

As shown in Exhibit 2, Spanish banking sector provisions represent a high percentage of net operating income. Provisions increased significantly from 25% of the margin in 2007 to 65% in 2010, reaching 82% in September 2011[5] . At the same time, ROA fell steadily, reaching 0.17% in September 2011.

The latest available data (table 2) shows that from September 2010 to September 2011, the ROA (profit after tax as a percentage of total assets) of Spanish deposit institutions decreased by 27.03%, reaching 0.17%. This fall is explained mainly by two factors: i) a reduction of 21.89% in the net interest income; and, ii) the substantial amount of financial asset impairment losses (specific provisions and provisions for foreclosed assets) which absorbed around three quarters of the net operating income.

In sum, the fall in net interest income in 2011 was due primarily to the steep increase in financial costs (21.77%), which greatly surpassed the increase in financial revenues (1.29%).

Exhibit 2: Asset impairment losses as percentage of net operating income and ROA. Spanish deposit institutions



Source: Bank of Spain.

Table 2: Individual income statement for Spanish deposit institutions

Percentage of total assets

	sep-10	sep-11	% Change Sep-10-Sep-11
Financial revenues	2.51%	2.55%	1.29%
-Financial costs	1.33%	1.62%	21.77%
=Net interest income	1.18%	0.92%	-21.89%
+Other operating income	0.88%	0.85%	-3.62%
=Gross income	2.06%	1.77%	-14.10%
-Operating expenses	0.94%	0.91%	-2.69%
=Net operating income	1.12%	0.85%	-23.65%
-Asset impairment losses	0.88%	0.65%	-25.65%
-Provisioning expenses	0.06%	0.13%	124.65%
+Extraordinary items	0.05%	0.04%	-19.69%
=Profit before tax	0.23%	0.11%	-51.57%
Profit for the period	0.24%	0.17%	-27.03%

Source: Bank of Spain.

The steep rise in the average cost of liabilities was due to the closing of the wholesale funding markets, forcing banks to raise the remuneration on their liabilities to allow for maturity of debt. Banks found themselves competing aggressively to capture deposits through higher remunerations, despite the reform of the Deposit Guarantee

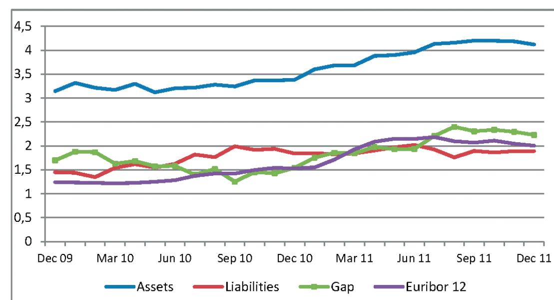
[4] Commercial banks, savings banks and cooperative banks. Data for individual entities, or non consolidated groups only, not taking into consideration foreign subsidiaries of Spanish Banks.

[5] The data for 2011 has been annualized using the information available from the first three quarters.

Fund, which introduced a penalty for banks for offering depositates above a certain threshold relative to the Euribor[6] .

Exhibit 3: Marginal (new business) interest rates of Spanish deposit institutions

Percentage



Source: Bank of Spain.

Although there has been a reduction in the net interest spread for new business, the spread between the marginal interest rate on assets and liabilities almost doubled from September 2010

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to August 2011, increasing by 1.15 percentage point (see Exhibit 3). This rise shows that deposit institutions have established more restrictive pricing policies, increasing interest rates applied to loans and the spread on new operations. It is worth pointing out that in the last months of 2011, the spread remained relatively stable.

Table 3 (data for December 2011) shows that the Spanish banking sector sets loan interest rates slightly above the average for the Eurozone banking sectors, in particular with respect to credit to consumption (where the rate of interest in Spain was 30% higher than the European average) and to non-financial corporations between €0.25mn and €1mn (the interest rate in Spain was 16% higher than the Eurozone average). On the other hand, for credit towards home purchases, Spanish interest rates were in line with those of the Eurozone, while Spanish deposit rates remained below the European average, with the exception of deposits from non-financial corporations with agreed maturity of up to 1 year.

Table 3: Bank interest rates (new business) of credit institutions

Percentage

	Spain	Eurozone	Spain / Eurozone
Deposits			
From Households			
Overnight	0.28	0.54	0.52
With agreed maturity up	2.73	2.78	0.98
From non-financial corporations			
Overnight	0.61	0.65	0.94
With agreed maturity up	2.10	1.50	1.40
Loans			
To Households			
Revolving loans and	5.34	8.38	0.64
Extended credit card	20.45	17.08	1.20
For consumption floating	6.86	5.27	1.30
For house purchase at	3.47	3.48	1.00
To non-financial corporations			
Revolving loans and	4.13	4.66	0.89
Up to €0.25mn and up to	5.45	5.17	1.05
Over €0.25mn and up to	5.11	4.58	1.16
Over €1mn and up to 1	3.86	3.76	1.03
Up to €1mn at floating	5.06	4.47	1.13
Over €1mn at floating	3.29	3.15	1.04

Source: European Central Bank.

Although the increased spread on new operations could work to improve the net interest margin, other factors, such as the loss of income related to the increase in doubtful and foreclosed assets are having a stronger negative effect. Moreover, the high volume of outstanding variable rate mortgages loans (€656bn in September 2011), with a very narrow spread relative to the Euribor, generates an insufficient volume of interest revenues compared to the current cost of financing[7] . In fact, in many cases, the current interest rate differential on such loans is very small or even negative.

In addition to falling net interest income, there was also a fall of 3.62% in the percentage that other operating income (commissions and gains/losses on financial assets and liabilities) represents in total assets, which further explains

[6] Since June 2011, the penalty consists of multiplying by five the base on which the contribution to the Deposit Guarantee Fund is applied. The thresholds at which the penalty applies are: for deposits up to 3 months, if the interest rate exceeds 3-months Euribor by 150 basis points (bp); for deposits between 3 and 12 months, if the interest rate exceeds 6-months Euribor by 150 bp; for time deposits of more than 12 months if the interest rate exceeds 12-months Euribor by 100 bp; and for sight deposits, if the interest rate exceeds 1-month Euribor by 100 bp.

[7] See in a more detailed analysis in Maudos, J. (2011). "El sector bancario español en el contexto internacional: el impacto de la crisis", Spanish Savings Banks Foundation (FUNCAS).

the fall in gross income. A breakdown of the data reveals that reduced gains, and in some cases losses, on financial assets and liabilities explains the reduction in other operating income, even while commissions increased.

Operating expenses decreased by 2.69% from September 2010 to September 2011, which means deposit institutions were making an effort to reduce costs and that the ongoing process of savings banks' restructuring was beginning to bear fruit. In fact, the savings banks involved in restructuring processes recorded a 5.5% fall in operating expenses between June 2010 and June 2011, largely achieved through the correction of excess installed capacity. Thus, since the onset of the restructuring process of the Spanish banking system in September 2008 through September 2011, 5,461 branches have been closed and employment in deposit institutions has fallen (with a cumulative fall of 5% up to the end of 2010). This correction has brought the number of branches in line with end-2004 levels and the number of employees in line with 2006 levels.

Nevertheless, cost reduction efforts are clearly insufficient to counteract the decline of gross income. In fact, the cost to income ratio increased from 46% in September 2010 to 52% in September 2011, indicating deterioration in efficiency. For this reason, net operating income continued to fall, with a reduction of 23.65% over the period.

So the question that remains is whether or not deposit institutions can cover their operating costs with intermediation activity alone. The question raises a valid concern. In 2011, the interest margin (as a percentage of total assets) was only 1 basis point (bp) higher than operating expenses, while in 2010 the difference was 14 bp. Such a low interest margin, a consequence of the high cost of liabilities, compels banks to reduce their operating costs through the correction of excess installed capacity.

As demonstrated previously, in a context of a crisis characterized by reduced GDP growth and an increase in non-performing loan rates, deposit institutions have to dedicate a very large part of their net operating income to account for asset deterioration, which explains the fall in profitability levels. Although in 2011 there was a fall in financial asset impairment losses chargeable to the profit and loss account, such assets continue to represent a high percentage of total assets (0.65%). Nevertheless, given the fall in net operating income, the percentage of this margin that must be devoted to provisions remains high (76.48%).

Moving forward with restructuring and integration

On the basis of comparative data from 2007 through 2010, we can conclude that the Spanish banking sector was more resilient to the crisis - its pre-crisis profitability levels falling less than those of the Eurozone banking sectors on average.

Nevertheless, as was the case for the European banking sector overall, the high percentage of net operating income that had to be devoted to provisioning for troubled assets (non-performing loans, substandard loans and foreclosed assets) explains the steep fall in the profitability levels of the Spanish banking sector. Additional profitability declines that occurred in 2011 were also due to increased financial costs, a consequence of more restrictive international capital markets conditions, which resulted in a fall of 22% in net interest income.

In the future, the anticipated contraction of 2012 GDP (-1.5% according to the Bank of Spain and -1.7% according to the Spanish Government) and the likely adherence of the ECB to loose monetary policy, will continue to exert downward pressure on Spanish banking sector profitability.

In the context of a negative growth outlook, the non-performing loan ratio will likely continue to increase from its current level (7.6% in December 2011), which will force banks to continue to direct a large portion of their margins to balance sheet clean-up. On a related note, the necessary process of private sector deleveraging is expected to negatively affect credit demand, and thus the profitability of the banks, for the coming years. Finally, the recently approved regulation for an additional €52bn in real estate provisions to be set aside before 2012[8] will reduce profitability

[8] For banks that proceed with a merger, the time frame to have these provisions in place will be extended to the end of 2013.

levels, albeit necessary to restoring investors' trust.

In the case of a persistent low interest rate environment, the expected fall in reference interest rates will adversely affect net interest margins. In addition, the closure of wholesale funding markets and high debt maturities in 2012 (about € 131bn) will exert upward pressure on funding costs. A decline in the cost of liabilities will only be possible with the credible resolution of the sovereign debt crisis, a necessary condition to unlock wholesale funding markets.

In this context, banks must continue their cost containment strategies in an effort to improve efficiency, making even further advances to reduce spare capacity and rationalize structures. To be able to fully take advantage of economies of scale, further acceleration of the financial restructuring process and integration will be needed. Furthermore, banks will be forced to improve their interest margin by increasing the differentials charged on new operations, as well as increasing the relative weight of other revenue sources (such as fees and commissions), particularly given that the relative weight of non-interest revenues in Spain is below that of the European average (35% of total revenues in Spain vs. 42% in the EU-15). Nevertheless, despite the increase of margins on new operations, the growth of non-interest-earning problematic assets that will occur in the coming months as a consequence of the recession will likely lead to a contraction of the interest margin in 2012, yet again negatively impacting the profitability of the Spanish Banks.