THE EFFECT OF BANK RESTRUCTURING ON THE ISSUANCE OF PREFERRED SHARES IN SPAIN

Marta TOLENTINO[1]
Department of Economics and Finance, Castilla-La Mancha University
School of Law and Social Sciences, Ciudad Real (Spain),Marta.Tolentino@uclm.es
Francisco JAREÑO
Department of Economics and Finance, Castilla-La Mancha University
School of Economic and Business Sciences, Albacete (Spain), Francisco.Jareno@uclm.es
Rocío Rubio
Castilla-La Mancha University, School of Law and Social Sciences, Ciudad Real (Spain)

ABSTRACT
Since 2007, when the real estate bubble burst, we was immersed in a global economic crisis. During this period, the Spanish financial system has experienced a process of economic imbalance and downturn as a consequence of massive exposure to the construction sector. In this context, the banking institutions, aware of the need to recapitalize their balance sheets, offered their retail clients a complex and high-risk product: preferred shares. What at first was considered the ideal solution for recapitalizing the institutions has done nothing but worsen the economic situation, highlighting the vulnerability of the banking Spanish system. All of this gave rise to a process of bank restructuring that was unprecedented in Spain. The result has been the reduction of the number of banking institutions from 45 in 2009 to 12 today, with the consequent repercussions on the macroeconomic variables and the economies of families and businesses.

Keywords: preferred shares, bank restructuring, economic crisis, credit risk, Spanish Financial System
JEL Classification: G31, G21, G01, G24, G18

1. Introduction

Bank restructuring in Spain and the issuance of preferred shares are two topical issues that have been very present in the media in recent years due to their significance for the overall financial system. Not only has our traditional banking system based on a wide network of branches been modified, but, moreover, as a consequence of restructuring, a complex product (preferred shares) has emerged and has been marketed both among professional and unqualified investors as a result of excessive trust in our banking system.
Therefore, the main objective of this paper is to analyse (from a theoretical and practical perspective) the existing relationship between the process of bank restructuring that has taken place since 2009 and the issuance and marketing of preferred shares.
The paper has three sections following this introduction. The second section looks at the theoretical framework and addresses the causes and consequences of the crisis, as well as the solutions considered in order to try to mitigate the impact of major changes in the Spanish financial system. The third section focuses on the empirical analysis that, through different tables and figures on the issuance of preferred shares carried out by banking institutions during the years 2009 and 2010, attempts to explain the characteristics of

[1]Corresponding author Marta Tolentino. *Acknowledgement*: This research was funded by a grant from the Spanish Ministry of Economy and Competitive (ECO2014-59664-P) and from the Council of Communities of Castilla-La Mancha (PEII-2014-019-P).

these 'preferreds' and the weight or importance they have had in the AIAF fixed-income market over the years. To end, the fourth section presents the main conclusions reached in this paper.

2.1. The origin of the crisis: main causes and consequences

In order to understand Spanish bank restructuring and its relationship with the issuance of preferred shares, we must go back to the origin of the global economic crisis, which manifested itself in Spain for the first time in the summer of 2007.

The impact of this global crisis (originating in the United States) has been so great that it has extended across the entire international financial economy. We can summarize its main causes in four points (Aspe, 2009):

- The perpetuation on the part of the Federal Reserve of a misguided and lax monetary policy;
- The increase in the leverage of investment banking;
- Lower incentives to save as a consequence of tax cuts in 2001 for businesses and capital gains; and
- The use of a new system (known as 'stock options') to try to eliminate conflicts of interest between shareholders and executives, which became a new method for executives to manipulate results.

Since 2001, as a consequence of the terrorist attacks on 11 September and the bursting of the technology bubble, we have been living in a climate of international instability. Consequently, the Federal Reserve decided to lower the interest rates far below the average expectations for inflation and growth, going from 6.5% to 1% in 2003, with the aim of reactivating production and consumption through credit. This, together with the injection of liquidity (from China) into the North American economy, with the goal of maintaining its development model, as well as the greater availability of oil products from the Middle East, fostered the emergence of a huge real estate bubble.

The decrease in interest rates in international markets and the abundance of resources in the North American market caused the banks to see a reduction in their business. In this context, mortgages began to be granted en masse, many of which were 'subprime' and had excessively low interest rates during the first two years in order to attract a greater number of clients. However, in reality they were high-risk mortgages due to the lack of credit guarantees and solvency among many of their holders (Jareño and Tolentino, 2012).

As a result of this increase in demand for mortgage loans the price of housing began to rise, reaching its peak level in 2005. At that time the majority of these loans were 'securitized' and sold to private and institutional investors; i.e. the goal was to sell as many mortgages as possible. In this context, the banks tried to take advantage of the 'real estate boom' through the mechanism described next. Clients were advised by brokers that, supposedly, tried to find the best mortgage for each client; once the operation was finalized, the bank granted the loan and later sold it to other banks or to Wall Street as part of a structured product that would receive the maximum AAA rating and whose main characteristics were minimum risk and high returns.

All of this took place due to international financial institutions' ambitions to obtain greater profits (taking on increasing risk), but in order to achieve this they needed a way to turn high-risk mortgages into high-quality financial products. Thus, the so-called 'shadow banking system' developed; a system formed by a set of institutions created by the main banks, which issued increasingly risky mortgage debt to third parties. All of this was fostered by a process of 'financial engineering' and by the support of the rating agencies that assigned maximum credit quality to those loans.

For years, the system 'worked' and all of the economic agents profited: citizens that never imagined having their own home had achieved this; mortgage lenders, brokers, and Wall Street earned high commissions; investors had their 'safe' and highly profitable financial instruments; and, moreover, housing developers increased their activity.

The problem of this situation of unsustainable growth became clear in 2007 when the price of housing began to drop and, therefore, the appraisal of the financial products issued by the institutions changed since they were backed by mortgage loans on properties whose prices were decreasing. This is when the credit rating agencies reduced the score of these assets, rating them as high-risk. These circumstances led to what is known as the 'bursting of the real estate bubble', which meant, for the real economy, the beginning of a process of economic recession with significant consequences. Among them, we have the mistrust that developed towards our financial system and that gave rise to a standstill in international transactions and to serious difficulties in issuing securities beyond our borders.

2.2. Preferred shares

Despite the fact that the financial crisis reached Spain later, its effects have been no less significant. As a consequence of the bursting of the real estate bubble, the Spanish commercial banks and savings banks (*cajas de ahorro*) were under-capitalized, i.e. they did not have 'enough money' on their balance sheets, and so they needed to strengthen their equity capital. The solution envisaged was the restructuring of the banking system, but the public authorities did not see this as the best option because until then the Spanish banking system had been characterized by having a wide network of branches, which mitigated external competition, and therefore other alternative solutions were considered in order to be able to maintain this network.

Up until then, the issuance of fixed-term bank deposits was considered the main source of funding for banking institutions. The returns offered by these bank deposits were very low and, therefore, not very attractive to investors. Moreover, they did not count as Tier-1 capital, so that in a crisis context they were not considered the most appropriate option.

Facing this situation, the public authorities could increase capital through ordinary shares or through the issuance of preferred shares. Increasing capital through the issuance of ordinary shares (a means that only the banks could use) was not considered the best option due to the enormous mistrust generated among investors, the low dividend yields expected, and the political rights they granted their holders. Therefore, the solution adopted was the recapitalization of the financial institutions through the issuance of preferred shares since they provided high returns, lacked political rights, and, at that time, counted as Tier-1 capital just like ordinary shares.

In this context, the Basel Committee on Banking Supervision can be considered the 'origin' of how preferred shares were adopted as the best solution for the necessary process of recapitalization. The first Accord was drawn up by this Committee under the name Basel I in 1988. It had the sole intention of advising or providing recommendations to maintain the solvency of the banking system, setting the minimum capital required by a banking institution to be able to cope with possible losses, as well as to provide protection against possible bankruptcies and reduce market risk, exchange-rate risk, and the risk associated with loans.

This minimum capital was structured in the following way:

- Tier 1: Paid-up share capital / common stock and disclosed reserves.

- Tier 2: Undisclosed reserves, asset revaluation reserves, general provisions/general loan-loss reserves, hybrid capital instruments, and subordinated debt. Overall Tier 2 Capital should not exceed 50% of share capital.
- Tier 3: According to the Banco de España's financial stability report from November 2009, in 1996 an additional category called 'Tier 3' was introduced, which included short-term subordinated debt that was subject to 'a "lock-in" provision which stipulates that neither interest nor principal may be paid if such payment means that the bank's overall capital would then amount to less than its minimum capital requirement,'[2] or another level set to cover part of the market risk.

The Basel I Accord established that the target standard ratio of capital to weighted risk assets (mainly credit risk) should be set at 8%. Although its implementation was not mandatory, the Accord came into force in more than 100 countries, since many of them considered it was important to establish standards that would set a minimum capital requirement for the absorption of losses.

In June 2004, a new Basel Accord was ratified under the name Basel II. Some deficiencies had been identified in the previous agreement, based primarily on the insufficient awareness of risk that could motivate financial institutions to take on overly risky projects, since additional capital was not demanded of them for this. Therefore, the main goal was to adapt the capital requirements for financial institutions to the risks they take on. And it hoped to do this through three pillars:

- Setting minimum capital requirements. New criteria were adopted to more appropriately determine each institution's risk. The minimum capital required was the same, but not the way of calculating it; in the new Basel agreement the risk of the operation was taken into account on the basis of the idea that 'the riskier the operation, the more capital required'.
- Supervisory review process. Banking supervision had to be carried out both by the banks themselves and the supervisors from the Basel Committee, who could apply corrective measures when they deemed this necessary. Therefore, the preservation of the capital-risk relationship had to be ensured in order to preserve the established capital standards.
- Market discipline. Based on transparency of information.

Another difference that it is important to highlight between the first Basel Accord and the one approved in June 2004 is that preferred shares came to be counted as 'Tier 1' capital together with ordinary shares and capital reserves, if and only if they fulfilled the following requirements: that they were subordinated to all creditors, that they were non-cumulative, and that they could be cancelled by the issuer after the fifth year. Therefore, they found themselves included in what is called Tier 1 capital, unlike in the first Accord where they were grouped under 'Tier 2' or supplementary capital.

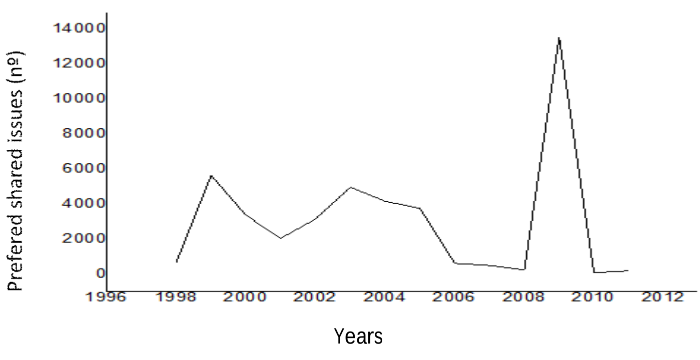
Although it was considered that the bulk of Tier 1 capital should be formed by ordinary shares and reserves, from this moment on it was considered that preferred shares fulfilled the conditions necessary to be grouped under Tier 1 regulatory capital. These conditions were expressed in the Banco de España's financial stability report released in November 2009. The criteria were established for the first time in 1990 by the Basel Committee and were reflected in the Sydney agreement in 1998. The Banco de España's rationale for the

---

[2] Basel Committee (1996) *Overview of the amendment to the capital accord to incorporate market risks*, 8.

adoption of this decision is summed up in the fact that the hope was for an increase in the competitiveness of Spanish institutions, so that they could access wholesale markets and institutional investor markets with greater ease.
Preferred shares are a financial product marketed in Spain since 1998 and intended, primarily, for institutional investors. As long as these investors were interested in the marketing of preferred shares, the instrument enjoyed liquidity. However, as soon as they stopped being interested in these financial instruments and their marketing, they were offered to retail clients, which led to several problems.
One of them was about trading, tooking place in the international markets or in the Spanish AIAF fixed-income market at a (in most cases) fixed interest rate. The lack of transparency and liquidity of this market made it inappropriate for retail clients and, therefore, the best thing would have been to trade them in an equity market such as the stock exchange, since their consideration as fixed-income securities has done nothing other than cause an erroneous appraisal of their risks.
As mentioned earlier, since 2007, institutional investors were not willing to purchase preferred shares or keep them in their portfolios, so they began to sell them in the secondary market during 2007 and 2008. The immediate consequence was that the prices of these instruments began to drop and this is when many financial institutions saw preferred shares as the solution for their recapitalization, purchasing them with significant discounts on their face value.
Until May 2010, the issuance of preferred shares through the bank branches worked satisfactorily and in the following way. The institutions bought them at very low prices in the secondary market and later sold them at higher prices to retail clients. When these clients wanted to sell them to recover their liquidity, the institutions then issued them to other clients that were interested in their purchase. This way, the client was satisfied given that they had received, at least, 100% of their investment back, despite the fact that this value was higher than its market value.
But this practice ended when, in June 2010, the CNMV (National Securities Market Commission) prohibited internal operations. At this point, the price of the preferred shares dropped drastically and what is known as the 'preferred shares scandal' erupted, owing to the fact that in the complex and illiquid AIAF market there were no transactions for the purchase of these instruments and even less so at the value at which the financial institutions had sold them to their clients.

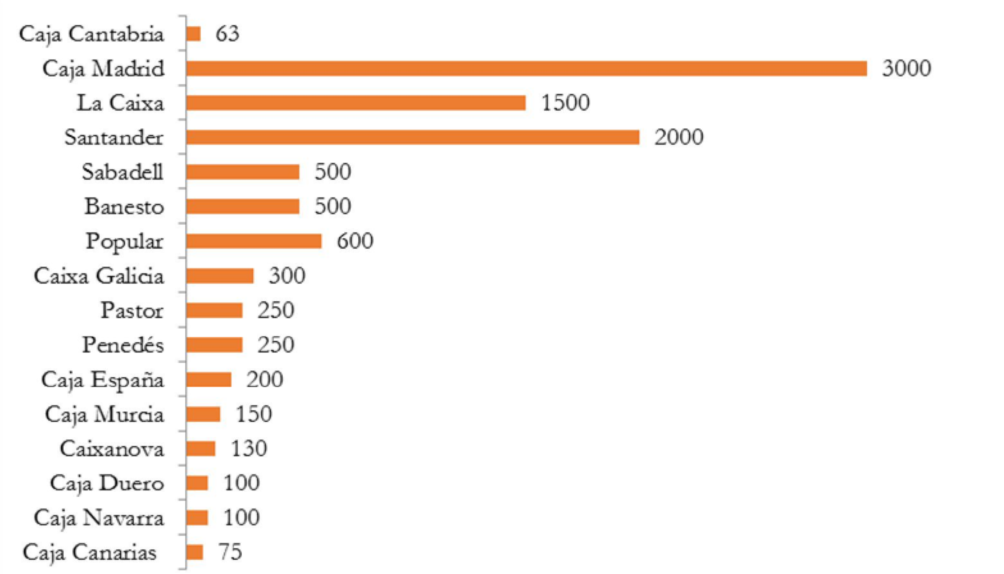
Figure 1. Number of Preferred shares issues in Spain (1998-2011)



Source: Lamothe, P. and Pérez, M. (2013)

Therefore, the problem was not that the savings banks and other institutions had issued preferred shares, but rather that they were offered to retail clients; that is, clients who did not have sufficient knowledge to understand the risks they were facing by procuring a complex instrument such as preferred shares.
According to the MiFID[3] regulations imposed by the Banco de España, every savings and commercial bank had to carry out a study on clients interested in this product in order to see if they were truly aware that they were purchasing a complex financial product.
In Figure 2, we can see which financial institutions contributed to the mass issuance of preferred shares in 2009. Thus, we observe that Caja Madrid issued the most (3000) and Caja Cantabria issued the least (63).

Figure 2. Preferred shares issues in Spain (June 2009). Data in thousands of Euros



Source: Lamothe, P. and Pérez, M. (2013)

At that time, preferred shares were the star product of the financial institutions. Fixed-term deposits, which did not count as equity capital, fell behind, as did capital issues, since the savings banks could not carry them out and it was not a good idea for commercial banks to do so given the situation of financial instability in which Spain was immersed.
However, what at first glance seemed to be the perfect solution for strengthening the equity of the institutions and thus avoiding more drastic measures, such as the restructuring of the savings banks, only served to worsen the economy. When the investors turned to the institutions with the intention of recovering their money and placing an order to sell, there were no buyers for the preferred shares.
Moreover, behind the problem of liquidity brought to light in this analysis, we find the problem of solvency, which became visible in Spain after the Banco de España's

[3] Directive adopted in November 2007 under the name of Marketing in Financial Instruments Directive, more widely known as MiFID.

intervention in Caja Castilla–La Mancha in 2009. This constitutes the origin of the process of bank restructuring, which finds its basis in the creation of a new institution, the Fund for Orderly Bank Restructuring (FROB), whose purpose was to manage the process of restructuring of lending institutions and to strengthen their equity capital. With the creation of the FROB, four options were opened up for Spanish institutions (Fernández de Lis et al., 2009):

- Any institution that could demonstrate that it was solvent could establish its own action policy.
- When an institution could not demonstrate solvency, it had to develop a viability plan and present it within 30 days, and it should also be approved by the supervisory body. In general, these viability plans were based on acquisitions and mergers. Moreover, they included disciplinary measures if the conditions imposed were not met.
- In the case of serious doubts around the viability of the solvency plan, the Banco de España itself would intervene in the institution and the FROB would take it over. Therefore, restructuring would be based on a merger or acquisition or the total or partial transfer of the business.
- Even the institutions that did not have viability issues but wanted to merge could ask for help from the FROB.

The first intervention by the FROB lasted for several months, from July 2010 until the beginning of 2011 (see Table 1). The Fund contributed, through convertible preferred shares, 9,674 million euros to the mergers of some savings banks. However, the Banco de España, together with other investment banks, had to develop an intervention protocol due to the lack of agility in the process.

Table 1. FROB: First round of interventions. Data in millions of Euros

Company	Value	Date
Banco Financiero y de Ahorros	4.465	28/12/2010
CatalunyaCaixa	1.250	28/07/2010
Novacaixagalicia	1.162	30/12/2010
Banca Cívica	977	11/02/2011[5]
Banco Mare Nostrum	915	31/12/2010
Caja España-Duero	525	29/11/2010
BBK Bank Cajasur	392	16/07/2010
Unnim	380	28/07/2010

The second round of interventions in the banking sector consisted of the contribution of money, but this time in the form of capital (10,000 million euros). Therefore, a condition was imposed on the savings banks to be able to participate, and this was based on the need to previously transfer their business to a newly created bank (see Table 2).

Table 2. FROB: Second round of interventions. Data in millions of Euros

Company	Value	Ownership percentage of the FROB
Banco CAM (*)	5.249	100%
Catalunya Caixa	1.718	90%
Novacaixagalicia	2.465	93%
Unnim(**)	568	100%

(*) This institution was considered unviable and was taken over by the FROB. Once its process of restructuring was complete, it was sold to Banco Sabadell. (**) This institution was considered unviable and it was taken over by the FROB. Once its process of restructuring was complete, it was sold to BBVA. Source: Compiled by authors on the basis of Maroto, R. Mulas-Granados, C. and Fernández, J. (2012).

In this context, Basel III emerged, the last Basel Accord. Its first proposals were published on 16 December 2010 and it has been key to establishing a solution to the mass issuance of preferred shares among retail investors.

With the implementation of Basel III, the aim was to provide the economy with a set of measures and tools with which to improve the banking system as a whole, but above all to prepare it for the emergence of possible crises. The new Basel Accord entered into force on 1 January 2013, giving the banking system until 1 January 2019 for its adaptation and implementation.

Next we present the novelties of Basel III in relation to the two previous Accords:

- Greater quality, consistency, and transparency of the capital base. The minimum capital requirement remains at 8%, but the requirements increase for ordinary capital and Tier 1 capital. Ordinary capital goes from 2% to 4.5%, while Tier 1 capital goes from a capital requirement of 4% to 6%. Moreover, with the implementation of this new agreement, innovative hybrid capital instruments with incentives to early repayment will be phased out of the Tier 1 capital base; up until then they were limited to 15%. Lastly, Tier 3 capital instruments, which were only available to cover market risks, are to be eliminated.
- Capital conservation buffer. With this new measure the intention is for banks to accumulate capital at times when the economy is in expansion so that they can make use of this capital when the economy is in recession. It is established that the capital conservation buffer will be at least 2.5% and if it is lower the bank should restrict the distribution of dividends.
- Countercyclical capital buffer. The goal of the implementation of this 'buffer' is to avoid the generation of a new 'real estate bubble'; that is, it is established to manage credit and thus protect the banking system during periods of expansion. The countercyclical buffer can vary between 0%–2.5%, depending on the needs of the banking system.

But these are not the only changes that have taken place with the arrival of the new Basel Accord. It is also important to mention the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR).

The liquidity coverage ratio aims to help banks tackle the liquidity crisis in the short-term (30 days). With this the banks' balance sheets will have sufficient unencumbered, high-quality liquid assets to offset large cash outflows, like what happened in the financial crisis that Spain has been struggling with since 2007.

Liquidity coverage ratio (LCR)

$$\frac{High-quality\ liquid\ asset\ buffer}{Total\ net\ cash\ outflows\ in\ 30\ calendar\ days} \geq 100\% \tag{1}$$

The high-quality liquid assets kept in the portfolio should be unencumbered, liquid in markets during a time of stress, and, ideally, be central bank eligible.[4]
The aim of the net stable funding ratio is to limit over-reliance on short-term wholesale funding during times of buoyant market liquidity. For this, it demands that the banks maintain a minimum amount of stable sources of funding relative to the liquidity profile of the assets and of the institutions during one year.

Net stable funding ratio (NSFR)

$$\frac{\textit{Amount of stable funding available}}{\textit{Amount of stable funding required}} \geq 100\% \quad (2)$$

Due to the greater stringency in the minimum capital requirements and the fact that preferred shares no longer count as Tier 1 capital according to the last Basel Accord, the banking institutions were prompted to make exchange offers on preferred shares for stocks, deposits, bonds, and convertible debentures.

2.3. The memorandum of understanding and the "bad bank"

The bursting of the real estate bubble and the economic recession have caused Spanish banks to accumulate large quantities of troubled assets on their balance sheets, thus calling their economic viability into question. Although the Spanish authorities have carried out measures such as the clean-up of the balance sheets, increases in minimum capital requirements, restructuring of the institutions, and significant increases in the provisioning requirements for loans related to real estate developments and foreclosed assets, these have not been enough to return stability to the Spanish financial system (Ojeda and Jareño, 2013).
Bearing all of this in mind, on 20 July 2012, the *Memorandum of Understanding on Financial-Sector Policy Conditionality* was signed, with the following key objectives:

- Determination of the capital needs of every bank through stress tests and an assessment in which the quality of each banks' assets is analysed;
- Recapitalization, restructuring, and resolution of weak banks; and
- Segregation of impaired assets through the creation of the SAREB (Company for the Management of Assets proceeding from Restructuring of the Banking System) or the 'Bad Bank'.

In order to be able to accomplish its objectives, a calendar of actions was established starting in July 2012 with the first capital injection of 30,000 million euros for the most immediate needs. This amount was pre-financed and held in reserve by the European Financial Stability Facility (EFSF) and before its use approval was needed from the European Commission and the European Central Bank (ECB).
In September of that same year, a stress test was carried out on a total of 14 financial groups, representing 90% of the Spanish banking system, in order to discover the capital

[4] Basel Committee on Banking Supervision (2010; rev June 2011) *Basel III: A global regulatory framework for more resilient banks and banking systems*, 9.

needs of each institution and thus pave the way towards restructuring and recapitalization. This process was supervised by the European Commission, the European Central Bank, the European Banking Authority and the International Monetary Fund.

Following the stress test carried out by the consulting firm Oliver Wyman, the capital needs after tax impacts are reflected in Table 3.

Table 3. Capital needs after tax impacts according to Oliver Wyman, September 2012. Data in millions of Euros

Company	Base scenario	Adverse scenario
Grupo Santander	+ 19.181	+ 25.297
BBVA	+10.945	+11.183
Caixabank + Cívica	+9.421	+5.720
Kutxabank	+3.132	+2.188
Sabadell + CAM	+ 3.321	+ 915
Bankinter	+393	+399
Unicaja+CEISS	+1.300	+128
Ibercaja+Caja3+ Liberbank	+ 492	- 2.108
BMN	- 368	- 2.208
Popular	+ 677	-3.223
Banco de Valencia	- 1.846	- 3.462
NCG Banco	- 3.966	- 7.176
Cataluyabank	-6.488	- 10.825
Bankia-BFA	- 13.230	- 24.743
Total	- 25.898	- 53.745

Table 3 shows us the capital needs of each of the banks analysed considering two scenarios: a base scenario and an adverse scenario, which is unlikely to occur.

Focusing on the base scenario, whose characteristics were a minimum capital requirement of 9% for the institutions and a cumulative fall of real GDP of -1.7% until 2014, we can conclude that nine of the fourteen banking groups analysed have sufficient capital to cope with the characteristics marked by the base scenario. Therefore, in general, we could say that the banking system has sufficient solvency to face the possible macroeconomic changes. The aggregate need for capital in the base scenario would be 25,900 million euros, required by institutions mainly owned by the FROB.

If we consider an adverse scenario where the minimum capital requirement would be 6% and the cumulative fall of GDP would be -6.5% until 2014, the Spanish banking system would not have sufficient solvency to cope with the macroeconomic changes, since now only seven and not nine of the banking groups would exceed the minimum capital required. These seven groups are Santander, BBVA, CaixaBank, Kutxabank, Banco Sabadell, Bankinter, and Unicaja-CEISS. For their part, Banco Popular, BMN, and the merger planned between Ibercaja, Liberbank, and Caja 3 would require additional capital, and they therefore developed recapitalization plans in order to determine the amount of state aid needed. Lastly, the greatest capital needs are found in the banking groups that are owned mainly by the FROB, such as BFA-Bankia, Catalunya Banc, NCG Banco, and Banco Valencia.

Based on the results of the stress tests and the recapitalization plans to be carried out, the banks were classified into four different groups: [5]

- Group 0: banks in which a capital shortfall was not detected and which therefore did not require the adoption of further measures.
- Group 1: banks that are owned by the FROB, such as BFA-Bankia, Catalunya Caixa, NCG Banco, and Banco Valencia.
- Group 2: banks with a capital shortfall, according to the stress test, and which cannot cope with it privately without state aid.
- Group 3: banks that need additional capital, but that do not require public aid to obtain it.

Once the banks were classified, decisions were made based on recapitalization, restructuring, or liquidation measures, all supervised by the European Commission. In the month of October, and in order to put an end to their deficit, the banks in groups 1, 2, and 3 presented recapitalization plans where capital could be raised through internal measures, assets disposals, liability management exercises, increase of equity, or by turning to state aid.

For the banks in Group 1, the Spanish authorities and the European Commission started to draw up restructuring plans in July 2012 in order to prepare for the granting of state aid and the implementation of the plans themselves.

For the banks in Group 2, the Spanish authorities had to present restructuring or resolution plans before the European Commission. These plans had to cover the steps to be taken in order to segregate the impaired assets and transfer them to an external asset management agency before October 2012.

Until the European Commission approved the different restructuring or resolution plans presented by the banks in Groups 1 and 2, these were not granted aid, except in the case that it was necessary to use funds from the first tranche.

Lastly, before October 2012, the banks from Group 3 were required to present recapitalization plans in which they had to demonstrate that they did not need public aid in order to increase their capital. As a precaution, those that needed to increase their capital by more than 2% were required to issue contingent convertible securities that would be subscribed for by the FROB as a recapitalization measure in order to satisfy their capital needs before December 2012. The institutions had until June 2013 to return that money. If they did not do so, they would be recapitalized through the total or partial conversion of the securities into ordinary shares.

The banks from Group 3 that needed an increase of capital lower than 2% had until 30 June 2013 to raise the necessary money. Otherwise, they would be recapitalized through state aid and had to present restructuring plans.

The restructuring and resolution plans were based on the principles of viability, burden sharing, and the limitation of the distortions of competition to achieve financial stability and flexibility in the banking sector. The main goal was for all banks to have a core capital of at least 9% by the end of 2012 and that until 2014 they would not reduce their core capital without prior authorization from the Banco de España.

In this scenario, a new institution known as the 'Bad Bank' emerged. It was created with the goal of eliminating the troubled assets from the balance sheets of the banks that requested help. Its main manager was the FROB and its operation was planned to last

[5] *Memorandum of Understanding on Financial-Sector Policy Conditionality.* Available from http://www.bde.es/f/webbde/GAP/Secciones/SalaPrensa/InformacionInteres/ReestructuracionSectorFinanciero/Ficheros/en/mou_en.pdf

between ten and fifteen years. This measure mainly affected loans for real estate development and foreclosed assets. The transfer of the assets to this external management agency was carried out at the real economic value of the assets, which was determined through a review of their quality and the individual assessments of each institution used in the stress tests. The losses that came about as a consequence of valuing those assets at their real price would materialize in the banks at the time of segregation. The asset management agency bought toxic assets from the Spanish commercial and savings banks and in exchange they received cash or high-quality securities such as subordinated debt from the FROB, which they could then use as a guarantee before the European Central Bank to achieve liquidity.
The creation of this asset management company also had the goal of improving the protection of retail clients, discouraging the sale of complex financial products among unqualified investors. These complex products are preferred shares, convertible debentures, bonds, and subordinated debentures. The FROB would offer the owners of these financial products an exchange for deposits, stock, cash, or the reduction of the face value of the debt. Said exchange would be carried out at market price plus a 10% margin.

2.4. Results of the financial system restructuring process

As a consequence of the decisions described above, the map of the Spanish financial system has undergone significant changes since the year 2008. Royal Decree-Law 11/2010 of 9 July on the governing bodies and other aspects of the legal regime of savings banks (*Real Decreto-ley 11/2010, de 9 de julio, de órganos de gobierno y otros aspectos del régimen jurídico de las Cajas de Ahorros*) establishes that savings banks must carry out their banking business in an indirect way through a commercial banking institution, so that they in turn become foundations taking on charitable and social work.
Subsequently, Law 26/2013 of 27 December on savings banks and banking foundations (*Ley 26/2013, de 27 de diciembre, de cajas de ahorros y fundaciones bancarias*) provided continuity to the previous law in terms of indirect banking activity. With this, the hope is to return to the traditional savings banks model, where they undertake their activity in their local area, losing their banking license if they exceed the permitted size limits and being mandatorily transformed into banking foundations. As a consequence of this, we have gone from having 45 financial institutions to just 14. The number of bank branches in operation has also been affected, as well as employment in the financial sector, which has experienced a spectacular reduction. According to data from different digital newspapers, the number of offices decreased by 7,925 branches from 2008 to 2013; and if we look at employment, 42,205 jobs have been eliminated.
This whole restructuring process has been carried out through mergers, acquisitions, and the 'Institutional protection system' (IPS) or 'cold mergers', which was the option most used by Spanish savings banks since it allowed them share risks and maintain (though only in the short-term) their legal personality and their branches. Their financial, solvency, and risk policies had to be centralized and one of the institutions had to direct the process of integration, with each of the participating institutions contributing funds at a percentage equal to or higher than 40% of their equity capital. Through this process of change and adjustment, the Spanish financial system appears as presented in Table 4.

Table 4. Financial Spanish System after the restructuring process

2009	2010	2011	2012	2013	2014	
Banco Santander			Banco Santander Banco Banesto Banif	Banco Santander	Banco Santander	Merger through absorption
BBVA Caixa Sabadell Caixa Terrasa Caixa Manlleu	BBVA Unnim	BBVA Unnim	BBVA	BBVA	BBVA	Merger through absorption
La Caixa Caixa Girona Cajasol Guadalajara Caja Navarra Caja Burgos Caja Canarias	La Caixa Cajasol-Guadalajara Banca Cívica	Caixabank Banca Cívica	Caixabank	Caixabank Banco Valencia	Caixabank	Merger through absorption
	Caja Madrid Bancaja Caja Canarias Caixa Laietana Caja de Ávila Caja de Segovia Caja Rioja	BFA-Bankia			BFA-Bankia	IPS
CaixaCatalunya CaixaTarragona Caixa Manresa Caixa Galicia Caixanova	Catalunya-Caixa Nova-Caixa Galicia		Catalunya-Caixa Nova-Caixa Galicia			Merger
Caja Murcia Caixa Penedés Caja Granada Sa Nostra	Banco Mare Nostrum				Banco Mare Nostrum	IPS
Banco Sabadell Banco Guipuzcoana CAM	Banco Sabadell CAM (3)	Banco Sabadell	Banco Sabadell	Banco Sabadell Banco Gallego	Banco Sabadell	Merger through absorption
Banco Popular Banco Pastor	Banco Popular Banco Pastor	Banco Popular Banco Pastor	Banco Popular	Banco Popular Banco Pastor	Banco Popular Banco Pastor	Merger through absorption
Unicaja Caja Jaén Caja Duero Caja España	Unicaja Caja España-Duero	Unicaja Banco Caja España-Duero	Unicaja Banco		Unicaja Banco	Merger through absorption
BBK Cajasur(5) Caja Vital Kutxa	BBK Caja Vital Kutxa	BBK Caja Vital Kutxa	Kutxabank		Kutxabank	IPS
Ibercaja CAI Caja Círculo	Ibercaja CAI Caja Círculo	Ibercaja Caja 3	Ibercaja banco	Ibercaja Banco		Merger through absorption

Caja Badajoz	Caja Badajoz					
Bankinter					Bankinter	Without process
Cajastur CCM(8) Caja Extremadura Caja Cantabria	Cajastur Caja Extremadura Caja Cantabria	Liberbank			Liberbank	IPS
Caixa Pollensa					Caixa Pollensa	Without process
Caixa Ontinyent					Caixa Ontinyent	Without process

3. Issuance and marketing of preferred shares

In this section we analyse the characteristics of preferred share issues in 2009, focusing on the study of the conditions and characteristics of the different issues carried out among retail investors. For this, we consider a total of 16 financial institutions (commercial and savings banks).

In Table 5 we can see the main characteristics of preferred share issues during 2009, the peak year. All of them had a common goal which was to strengthen the equity capital of the institutions that issued them. We can see here that all of the issues, except from Caja Duero[6], are marketed among retail investors. It is also worth highlighting that the savings banks were the ones that put the greatest volume of preferred shares into circulation.

With regard to the characteristics of the preferred share issues, we can see that Caja Madrid carried out the greatest issuance of preferred shares (€3,000,000,000) while Caja Cantabria issued the least (€63,000,000).

We can also see that the face value of the shares varies between €25 and €1000 and, moreover, that the minimum amount required in order to subscribe for them depends on each institution.

Table 5. Characteristics of preferred share issues in 2009

Issuer	**Data**	**Total face value**	**Unit face value (UFV) Minimun suscription amount (MSA)**	**Issue Premium (IP) Term to Maturity (TtM)**	**Profitability (1)**	**Market**
Caja Navarra	10/29/2009	100.000.000€	UFV 1000€. Minimun amount: 1000€	At par. Perpetual (2)	-From 10/29/2009 hasta el 10/28/2014 annual nominal interest rate 8 % -From 10/28/2014 quarterly Euribor+5 % (minimun 6,5%)	AIAF
Caja Duero	05/25/2009	100.000.000€	UFV 100€ Minimun amount: 3000€ (3)	At par. Perpetual (2)	-Quarterly Euribor + spread between 6,5% and 8%.	AIAF
Caixanova	06/17/2009	130.000.000€	UFV 100€	At par.	- Quarterly	AIAF

			Minimun amount:10 preferred shares	Perpetual (2)	Euribor + 6,35%(minimun 7,4%)	
Caja Murcia	04/15/2009	From 100.000.000€ to 150.000.000€	UFV 500€ Minimun amount:1 preferred share	At par. Perpetual (2)	-First quarter annual nominal interest rate 6,20% -Quarterly Euribor + 4,45% (minimun 5,50%)	AIAF
Caja Canarias	05/22/2009	From 50.000.000€ to 75.000.000€	UFV 1000€ Minimun amount:1 preferred share	At par. Perpetual (2)	-Two years annual nominal interest rate 7% -After quarterly Euribor +5,85% (minimun 6%)	AIAF
Caja España	05/19/2009	From 10.000.000€ to 200.000.000€	UFV 1000€ Minimun amount:1 preferred share	At par. Perpetual (2)	-Four years annual nominal interest rate 8,25% e -After quarterly +7,25%	AIAF
Caixapenedés	09/30/2009	From 150.000.000€ to 250.000.000 €	UFV 1000€ Minimun amount: 1 preferred share	At par. Perpetual (2)	-One year annual nominal interest rate 7,25% -After quarterly Euribor +5,95%(minimun 7%)	AIAF
Banco Pastor	04/01/2009	From 100.000.000€ to 250.000.000€	UFV 100€ Minimun amount:10 preferred shares	At par. Perpetual (2)	- Three years annual nominal interest rate 7,25% -After quarterly Euribor +4,60% (minimun 6,80%)	AIAF
Caixa Galicia	05/18/2009	From 150.000.000€ to 300.000.000€	UFV 1000€ Minimun amount: 1 preferred share	At par. Perpetual (2)	-From 05/18/2009 to 05/18/2012 annual nominal interest rate 7,50% - After quarterly Euribor + 5,15% (minimun 6,15%)	AIAF
Caixa Galicia	10/15/2009	Up to 1350.000.000€	UFV 1000€ Minimun amount: 1 preferred share	At par. Perpetual (2)	-From 10/15/2009 to 10/15/2011 annual nominal interest rate 7,50% -From 10/15/2011 quarterly Euribor +6,50 (minimun 7,50%)	AIAF
Banesto	06/29/2009	From 250.000.000€ to 500.000.000€	UFV 1000€ Minimun amount: 3 preferred share	At par. Perpetual (2)	-From 06/29/2009 to 29/06/2010 annual nominal interest rate 6% -From	AIAF

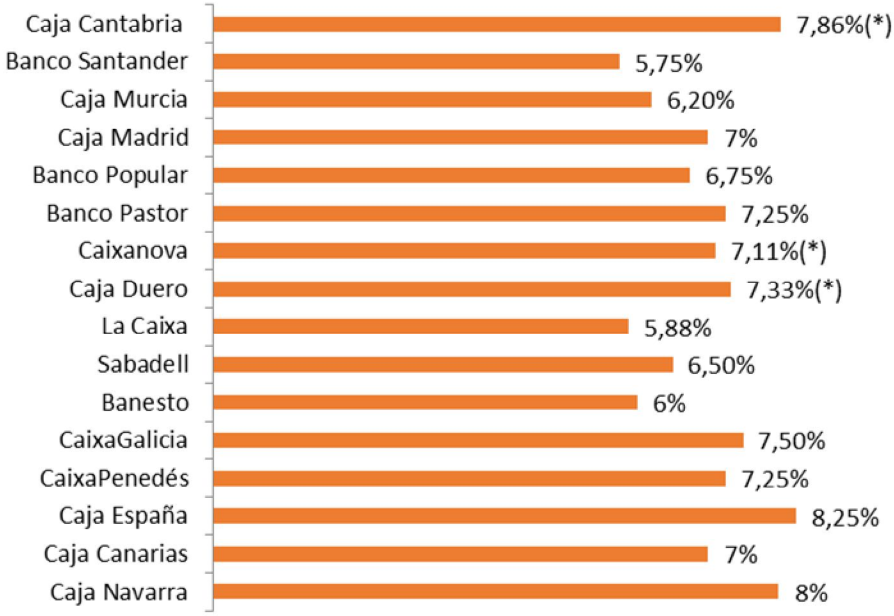
					06/29/2010 to 06/29/2011 annual nominal interest rate 5% -From 06/29/2011 quarterly Euribor trimestral+2,30% (minimun 4%)	
Banco Popular	03/30/2009	From 300.000.000€ to 600.000.000€	UFV 100€ Minimun amount: 10 preferred shares	At par. Perpetual (2)	- Five years annual nominal interest rate 6,75% -From the 5th year quarterly Euribor +1,50%(minimun 4%)	AIAF
Banco Sabadell	02/02/2009	From 300.000.000€ to 500.000.000€	UFV 1000€ Minimun amount: 3 preferred shares	At par. Perpetual (2)	-Two years annual nominal interest rate 6,50 % -After quarterly Euribor +2,50% (minimun 4,50%)	AIAF
Banco Santander	06/25/2009	2000.000.000€	UFV 25€ Minimun amount:100 preferred shares	At par. Perpetual (2)	-From 06/30/2009 to 06/30/2010 annual nominal interest rate 5,75% -From 06/30/2010 to 06/30/2011 annual nominal interest rate 4,75% -From 06/30/2011 quarterly Euribor +2,20%	AIAF
La Caixa	05/21/2009	From 1500.000.000 to 2000.000.000€	UFV 1000€ Minimun amount:30.000€	At par. Perpetual (2)	- Two years annual nominal interest rate 5,88% -After quarterly Euribor + 3,50%	AIAF
Caja Madrid	05/21/2009	From 1500.000.000 to 3000.000.000€	UFV 100€ Minimun amount: 1 preferred share	At par. Perpetual (2)	- Five years annual nominal interest rate 7% -After quarterly Euribor + 4,75%	AIAF
Caja Cantabria	06/10/2009	63.000.000€	UFV 1000€ Minimun amount: 1 preferred share	At par. Perpetual (2)	-Quarterly Euribor +6,75%	AIAF

(1) Interest payments are made quarterly, except for Caja Murcia, in which the first payment is made after 61 days of the issue date. The rest of the payments are quarterly.
(2) Perpetual, with the possibility of early amortization from the 5th year

One thing the different issues have in common is that they are all issued at par; that is, their share premium is zero, and thus their face value coincides with their issue value. But

this is not the only shared aspect, since the term is another. The character of all preferred share issues is perpetual. This means that the issue does not have a maturity date and that the issuer is not obliged to reimburse the principal, which thus becomes one of the main problems of this type of issue.
If we focus on payment and its regularity we can see how the majority of the savings and commercial banks offered a fixed yearly nominal interest rate during the first year or the first years of the preferred share issue. This is one of the reasons why retail investors saw the issuance of preferred shares as similar to a fixed-term deposit, but granting them higher returns. While the returns offered by a fixed-term deposit were around a 3%–4% fixed yearly nominal interest rate, we can see how, for example, Caja Navarra offered a fixed yearly nominal rate at 8% during the first five years of the issue, payable on a quarterly basis. This made it much more attractive to invest in preferred shares than in fixed-term deposits, but it was overlooked that after this time passed our investment would end up in the hands of the Euribor, plus a spread.
If we analyse the evolution of the Euribor during the years 2009 and 2013. The interest rate drops from 2.86% in January 2009 to 0.72% in December 2009. And if we observe the figure for the year 2013, though it appears that there is a slight upward trend, we should note that the values are in fact very low, from 0.19% in January 2013 to 0.24% in December 2013. This situation remains the same in 2014.
Therefore, although at first the returns offered to us by the commercial and savings banks appeared very attractive, we can see how they get lower and lower since we depend on the Euribor, which at times like the present has a downward trend. It becomes clear, thus, that the main problem of this type of issuance is the relationship between profitability and risk. When the Euribor has an upward trend, the preferred shares will provide returns that are appropriate given the risk taken, but when the economy is experiencing a serious crisis, they will not provide us with adequate returns.
Although in Table 5 we can see the returns offered by each institution, we focus our analysis on those offered in the period of payment of the first coupon, as illustrated in Figure 3. We can see how Caja España, with an 8.25% interest rate, offered the highest returns, while La Caixa and Banesto, with a 5.88% and 6% interest rate, respectively, offered the lowest.
When it comes to assessing an investment we must not only take into account the returns it might offer us, but also the credit quality assigned to the issue. Therefore, Table 6 shows the classification that the credit rating agency FITCH RATING assigned, provisionally, both to preferred share issuers and issues in 2008 and 2009. In this table, we can see how there are different credit ratings assigned to each of the financial institutions analysed. Banco Popular, Banesto, and Santander have the best assessment, with an AA and AA+ rating for issuer and issue, respectively. On the other hand, Caixa Penedés, Caja Canarias, Caja Cantabria, Caixanova, and Caja España, with an A− and BBB rating for issuer and issue, respectively, are the ones with the worst ratings.
As well as the profitability and solvency of the issue, when it comes to deciding to make an investment another factor to bear in mind is the instrument's liquidity. In this sense, the trading of this type of financial asset in the secondary market takes place in the AIAF market. In the Spanish fixed-income market different financial products are traded, such as promissory notes, bonds, corporate bonds, covered bonds, asset-backed securities, and preferred shares. The main problem with this market is that it has not had sufficient transparency or liquidity in the period of economic crisis that we are analysing.

Figure 3. Preferred shares returns for the first coupon payment



(*) Euribor rate plus the spread
Source: Compiled by authors using the CNMV's issue prospectus.

Table 6. FITCH RATING credit rating 2008/2009

Company	Rating issuer	Rating issue
Banco Sabadell	A+	A-
Banco Popular	AA	A+
Caja Murcia	A+	A-
Banco Pastor	A	BBB+
Caja Navarra	A	BBB+
CaixaGalicia	A	BBB+
Caja Duero	A	BBB+
CaixaPenedés	A-	BBB
Caja Canarias	A-	BBB
Caja Cantabria	A-	BBB
Caja Madrid	A+	A-
Caixanova	A-	BBB
Caja España	A-	BBB
Banesto	AA	A+
Banco Santander	AA	A+
La Caixa	AA-	A

Source: Compiled by authors using the CNMV's issue prospectus.

According to data provided by the AIAF since 1999, we can see that in most of the years analysed preferred shares have had more weight in the overall market than the rest of the financial instruments. In 2008, the number of transactions carried out with preferred shares was 290,760, and just one year later they rose to 406,662. From this moment on, trading begins to decrease slightly. Thus, during the years 2010 and 2011 the volume of transactions is somewhat lower than in previous years, while they increase again in 2012 when they reach their peak with 725,712 transactions issued for trading.
In Table 7, we can see how transactions in 2009 reached the greatest volume in euros since 1999. This year also had the greatest number of admissions to trading, given that the institutional investors sold their preferred shares and the banking institutions purchased them, seeing them as the ideal product to recapitalize their balance sheets.
In 2012, the volume of transactions in euros reached its peak, as mentioned above, but the number of admissions to trading was zero; that is, there were many investors interested in selling preferred shares but none interested in buying them.

Table 7. Volume of transactions issued and admissions to trading in the AIAF market

Year	Volume of transactions issued to trading (*)	Volume of admissions to trading (€)
1999	702,50	5.651,35
2000	928,00	3.380,00
2001	1.458,97	2.060,00
2002	2.222,07	3.166,49
2003	3.447,74	4.974,35
2004	4.130,23	4.174,31
2005	4.045,85	3.781,49
2006	4.643,69	629,00
2007	4.488,60	507,00
2008	4.013,86	246,00
2009	5.627,07	13.552,93
2010	4.250,43	100,00
2011	5.810,26	200
2012	28.064,19	0,00
2013	19.724,37	0,00

(*) Data in millions of euros
Source: Compiled by authors using the AIAF's statistics.

4. Concluding remarks

Since 2007, when the real estate bubble burst, we have been immersed in a global economic crisis originating in the United States. During this period, the Spanish financial system has experienced a process of economic imbalance and downturn as a consequence of massive exposure to the construction sector, a process which worsened due to the trust our own financial system had in the North American system. In this context, the banking institutions, aware of the need to recapitalize their balance sheets, offered their retail clients a complex and high-risk product: preferred shares. Here they took advantage of the traditional banking model that existed at the time in Spain, which was based on personal contact with the client. They were also motivated by the creation of the Basel II Accord, where preferred shares counted as Tier 1 capital. Although this was considered the fastest and easiest solution for the recapitalization of the financial institutions, the process was cut short when in 2010 the CNMV prohibited the direct sale of preferred shares between branches, and with that, mistrust towards the banking institutions began to emerge among retail clients who would now have to sell the shares in the AIAF secondary market, which was a predominantly wholesale market. The approval of the third Basel Accord, which entered into force in 2013, and where it was made clear that preferred shares would cease to be counted as Tier 1 capital, worsened the problem for investors. It is at that time that the 'preferred shares chaos' erupted. Retail clients wanted to recuperate the money invested in those shares as a consequence of the situation of economic instability in Spain, but the institutions that sold them were not willing to repurchase them.

In this situation, the solutions proposed were the following. On the one hand, the client could try to sell their preferred shares in the AIAF market, something which was practically impossible at that time because since 2012 the admission to trading of these complex products had been null. The alternative consisted in the exchange offered by the banking institutions; in this case, the client could recuperate part of their investment.

What at first was considered the perfect solution for recapitalizing the institutions has done nothing but worsen the economic situation of our banking system. Among other issues, what has been made clear is the vulnerability of many of the Spanish savings banks and some of the commercial banks, which were unable to survive the economic crisis that took place between 2007 and 2013. These institutions did not have the necessary capacity to raise capital and improve their solvency. All of this gave rise to a process of bank restructuring that was unprecedented in our country and that necessitated the emergence of new institutions, such as the FROB, and the investment on the part of the state of 61,000 million euros (as well as government guarantees for issues from credit institutions and private aid for the restructuring process).

The result of this process has been the reduction of the number of banking institutions operating in Spain (from 45 institutions in 2009 to 12 today), with the consequent repercussions on the macroeconomic variables (increase in the unemployment rate) and the economies of families and businesses. In this sense, it is also worth highlighting that the banking sector was one of the sectors that offered the most employment in our country before the emergence of the crisis in 2007.

5. References

ASPE, P. (2009). Los Orígenes de la Crisis. *Este país*, 215, pp. 8-12.

ELORRIAGA, E. R. (2010). Las nuevas medidas de Basilea III en materia de capital. Estabilidad financiera, 19, pp. 9-20.

FERNÁNDEZ, P. L., and PÉREZ, M. (2013). Las participaciones preferentes. La génesis del corralito español. *Estrategia Financiera*, 303, pp. 18-35.

FRANCIA, L. (2011): Salgado convoca una rueda de prensa para detallar las medidas para reforzar lascajas// *http://www.rtve.es/noticias/20110124/salgado-convoca-una-rueda-prensa-para-detallar-las-medidas-para-reforzar-las-cajas/397817.shtml*

GARCÍA, C. V. and CRUZ, S. (2012). Participaciones preferentes: un análisis desde la perspectiva del partícipe. *Análisis Financiero*, 120, pp. 6-17.

GONZÁLES, J. and HITA, E. (2012) El Gobierno crea el 'banco malo' que absorberá activos 'no tan malos' en un horizonte de hasta 15 años//
http://www.elmundo.es/elmundo/2012/08/31/economia/1346413149.html.

JAREÑO, F. and TOLENTINO, M. (2012). A brief review of the US financial crisis origin. *American Journal of Scientific Research*, 74, pp. 51-57.

MARTÍN, P. (2012). ¿Interesa acudir al canje de preferentes por acciones de Sabadell y Santander? , Cinco Días.//
http://cincodias.com/cincodias/2011/12/13/merca.

MARTÍN, P. and ABRIL, I. (2012). Las claves del canje de preferentes de Bankia. Cinco Días.// *http://cincodias.com/cincodias/2012/03/20/mercados/1332462414_850215.html*.

MARTÍNEZ, J. M. (2012). Las participaciones preferentes: ascenso, auge y declive. *Cuadernos de información económica*, 231, pp. 87-100.

MAUDOS, J. (2009). La Banca Española ante la Crisis Financiera. *Clm.Economía*, 14, pp. 31-54.

MERCADO AIAF DE RENTA FIJA (2009). Revista de finanzas y Banca. Instituto superior de técnicas y revistasbancarias.// *http://www.finanzasybanca.com/iberfinanzas/index.php/M/mercado-AIAF-de-Renta-Fija.html*.

OJEDA, A. and JAREÑO, F. (2013). Los efectos de la crisis económica en el sistema financiero español, Estudios Financieros. *Revista de Contabilidad y Tributación*, 360, pp. 261-276.

PÉREZ, P. (2012). Cómo salir del callejón de las participaciones preferentes, Inversión y Finanzas.com.// *http://www.finanzas.com/noticias/economia/2012-02-13/655929_como-salir-callejon-participaciones-preferentes.html*.

POPULAR, B. (2012). Banco Popular culmina con éxito su oferta de recompra y canje de participaciones preferentes por bonos convertibles en acciones, El Economista.es. //*http://www.eleconomista.es/empresas-finanzas/noticias/3872181/04/12/Banco-Popular-culmina-con-exito-su-oferta-de-recompra-y-canje-de-participaciones-preferentes-por-bonos-convertibles-en-acciones.html#.Kku8EnoFenCfZbT.*

ROMANI, M. (2012). La consolidación de la banca española: de 50 a 12 entidades en tres años y bajando, Diario Expansión. // *http://www.expansion.com/2012/06/18/empresas/banca/1340020056.html Artículo Expansión.*

SANTIAGO, S., MANZANO, D., ONTIVEROS, E. and VALERO, F. J. (2009). Rescates y reestructuración bancaria: el caso español, *Working Paper 152/2009*.

SEVILLANO, J. M., and SANCHÍS, A. (2010). Los instrumentos híbridos en los recursos propios de las entidades financieras: naturaleza y cambios tras la crisis financiera. *Estabilidad Financiera*, 215, pp. 55-72.

ORTEGA, R. (coord.) (2011). *Mecanismos de gestión y prevención de futuras crisis financieras.* Madrid: Fundación de Estudios Financieros.

VALVERDE, S. C. and MAUDOS, J. (2010). Diez interrogantes del sistema bancario español. *Cuadernos de información económica*, 215, pp. 89-105.

Note about the authors:

Marta Tolentino is a professor of finance at Universidad de Castilla-La Mancha, Ciudad Real, Spain. He received a Ph.D in Economics from UCLM, Spain, and she is interested in term structure of interest rates and risk management. He has been published in high quality international journals.

Francisco Jareño is a professor of finance at Universidad de Castilla-La Mancha, Albacete, Spain. He received a Ph.D in Economics from UCLM, Spain, and he is interested in term structure of interest rates, term structure of volatilities and risk management. He has been published in high quality international journals.

Rocío Rubio Moreno has a graduate degree in Business Administration from Universidad de Castilla-La Mancha.