BBVA | RESEARCH

Banking Outlook

JUNE 2016 | FINANCIAL SYSTEMS UNIT

Index

Summary

1. Trends and developments in the Spanish banking sector

Despite the continued reduction in loans outstanding, the volume of new lending to households and SMEs grew in 2016, and NPLs maintained their downward trend. Banks have bolstered their equity, but profitability remains weak due to the interest rate environment and the reduced volumes, despite provisioning having returned to normal. In the first quarter of 2016 the sector posted net profit of €2,679 million, 12% less than in the same period last year. In comparison with the average for the largest European banks, Spanish banks are more efficient and better capitalised, but their level of NPLs is higher.

2. New Circular on analysis and coverage of credit risk

The recent Circular of Banco de España sets out the general framework of credit risk management, based on two criteria for classifying transactions: country risk and credit risk attributable to the borrower. For the latter, the following categories apply: (i) normal risk, (ii) normal on special watch, (iii) doubtful debt by reason of the borrower’s being in arrears, (iv) doubtful debt for other reasons, and (v) bad debt. It established the requirements for the internal models for calculating coverage (provisions). If banks do not comply, or do not have these models, the central bank’s alternative solutions will be applied.

3. Globalisation and the impact of regulation on global banks

Although not all global banks are in retrenchment, there is currently a certain tendency to withdraw from some geographical regions and business lines. The presence of foreign banks, which had been growing considerably until the financial crisis, has hardly changed since 2009, and in fact has even diminished slightly, and international banking flows have decreased in some parts of the world. The retreat is due to several factors, such as changes of strategy, business model, profitability, efficient allocation of scarce resources, political or social instability or new technologies. But in our view there is one determining factor: regulation.

4. Update on MREL and TLAC

Banks in the EU will soon have to comply with the minimum requirement for own funds and eligible liabilities (MREL), whose definitive configuration is still unknown. Clarity on this topic is crucial as banks need to start issuing bail-in-able debt and need to start changing the structure of their balance sheets. A consistent application throughout the EU is desirable to guarantee a level playing field. But most importantly, the final MREL features need to be sufficiently flexible to allow different business models to thrive and to avoid artificial changes in the nature of the entities or their resolution strategies.

5. Regulation of digital consumer credit

Digital lending could reach $100bn in loan origination by 2020 in the US and Europe, and consumer credit also follows this trend. Regulation in digital consumer credit (both in the EU and the US) is focused on customer protection but not on digital services. Despite several advances in this field, the authorities have the difficult task to balance consumer protection, financial stability and the benefits of innovation, which may improve credit processing or allow a better understanding of the customer.

1 Trends and developments in the Spanish banking sector

The tables and data are to be found in the appendices to this document. The majority of the data come from Chapter 4 of the Statistical Bulletin of Banco de España, Spain's central bank. The analysis of the Spanish banking sector is confined to banking business in Spain. The following are the main conclusions on the current situation and recent trends and developments in the Spanish banking system:

Activity

- The system continues to contract (Table 1). Since 2008 balance sheet totals have fallen by 15%, and compared with the peak of 2012 the decline is 20% or €688 billion. This decrease is less than that in lending, due to the portfolios of financial assets, both fixed income and equities, and in particular the sovereign debt portfolio, which increased slightly in 2016.
- The total volume of deposits fell by 19% during the crisis (Table 1), but the stablest components of deposits (current accounts and savings and term deposits) have held up much better since 2008 (Table 6), with a cumulative decline of 3%. The fall in total deposits has been concentrated in more volatile components such as deposits of non-residents, repos, subordinated deposits and hybrid instruments. Since the beginning of 2015 we have seen a notable shift away from term deposits (down 16% YoY as of April 2016) and into sight deposits (+16%) and savings accounts (+13%), as a result of expectations of very low interest rates for the next few quarters or years (Table 6).
- The volume of on-balance-sheet debt remains on the downward trend which started in 2012 (down by 46% since 2008 and by 8% since one year ago, Table 1), in line with the volume of lending and the consequent narrowing of the funding gap. The net amount of interbank lending (liabilities less assets) has moderated considerably in the past three years following a period of substantial liquidity requirements met by the ECB for the banks finding it hardest to raise funds on international markets. Since the August 2012 peak, recourse to ECB liquidity has fallen by 68%. However, this is compatible with institutions' taking advantage of the liquidity provided by the conditional auctions (TLTROs), as well as of that which they obtain in ordinary open market operations of the ECB. Liquidity is no longer a problem for Spanish institutions.
- Installed capacity (basically the number of branches) in the system continues to fall (Table 3) in line with the contraction in business volumes, the consolidation of the sector and the quest for greater operating efficiency and banking profitability.
- Apart from this, the solvency of the system has been strengthened over the past few years. Own funds (capital and retained earnings) have increased by 26% or €48 billion since 2008, despite after-tax losses of €94 billion in 2011 and 2012. The quality of the capital in the balance sheets has also improved.

Spotlight on lending and NPLs

- Lending to the private sector ("Other Resident Sectors" in the statistics, hereinafter referred to in the English translation as "domestic private sector") continues to contract in 2016. It has fallen by €38 billion YTD and is now down by 5% YoY. The cumulative reduction since 2008 is 31% (€586 billion, or 53% of GDP). Thus the process of deleveraging of the system continues (Table 1). The pace of decline has been moderating since the end of 2013. Lending to the domestic private sector has fallen across the board (Table 4), with notable declines in all portfolios, especially lending to businesses, with a cumulative reduction of 39% since 2008, and even more so in lending for construction and property development, which is down by 64%. Lending to households has fallen more moderately due to the greater duration of mortgage loans and the security normally associated with this type of lending.

- The proportion of non-performing loans (NPLs) in the system continues to improve steadily (Table 4) despite the sharp contraction in lending to the domestic private sector, going below 10% for the first time since July 2012 to reach 9.91% in April 2016. The volume of doubtful debt has now declined for 28 months in a row, falling by €69.5 billion or 37% from its peak in December 2013. The major part (€38 billion) of this reduction came about in 2015 thanks to the start of the economic recovery. NPLs to construction and real estate companies continue to represent 40% of the total.
- New lending transactions (Table 5) have shown a clear change of trend since the end of 2013 when they started to grow for the first time since 2007. In 2015 all lending portfolios showed notable growth. This trend held in the first four months of 2016, except for new lending to major corporates, approximated by transactions of more than €1 million. These companies are able to turn to other, non-bank sources of financing such as the markets or intra-group financing. In the first four months of 2016 the total volume of new lending fell by 8% compared with the same period of 2015, precisely because of the decline in new lending to major corporates. All the other portfolios maintained positive rates of growth, especially new lending to households, which showed cumulative growth of 21% YoY to April. Since the end of 2013, therefore, the deleveraging of existing lending to the private sector has been compatible with the flow of new credit.

Results of the sector

- The interest rate environment continues to depress the profitability of the system. The prices of new transactions and of existing lending continue to fall (Table 7). Interest rates on new transactions recorded in April 2016 show falls in all portfolios, especially loans of less than €0.25 million and €1 million to businesses (SMEs). These reductions cannot be offset by cheaper deposits (Table 8), the cost of which also falls in line with EURIBOR, but to a lesser extent than lending rates, as a result of which the customer spread also narrows.
- The sector's results (Table 2) continue to be depressed by the lower business volumes, all-time low interest rates and increasing regulatory demands. Since the end of 2008 the system as a whole has carried out balance sheet clean-up operations (basically bad debts, restructuring costs and value impairment of foreclosed assets) to the tune of €308 billion. In the first quarter of 2016 the gross margin fell by 10% due to the decline in gains on financial transactions (-27% year-on-year). This downward trend in trading gains could not be offset by net interest revenue (which fell by 10% year-on-year in Q1'16) and fee and commission income, despite the latter's good performance in the quarter (+19%).
- Despite the sector's continuing priority attention to cost control, the net margin for the first quarter of 2016 was down by 18% year-on-year due to the fall in revenues. Additions to provisions continued to moderate in 2016, in line with the improving NPL situation and the volume of clean-up already carried out. Pre-tax profit and net profit for the first quarter of 2016 were down by 15% and 12% respectively year-on year.
- As regards the main ratios (Table 9):
  - The productivity of the system (volumes and pre-tax profit per office) remained at acceptable levels, so that the cost-to-income ratio was maintained at an excellent level of 50.5%, thanks also to cost control. Operating costs as a percentage of Average Total Assets have been held below 1% since 2008 (Figure 6, Appendix 1).
  - Additional improvements to the sector's solvency. The volume of own funds (capital and reserves) reached 8.3% of the balance sheet total in April 2016, with the system's gearing also falling to 12.1x, compared with 18.3x in 2008. The volume of capital in the balance sheet has held steady throughout

the crisis at above 100% of the volume of doubtful debt (Figure 2, Appendix 1), and since 2012 has increased to 178% as of April 2016.

– Liquidity in the system is also improving. The loan to deposit ratio has fallen to 112% as of April 2016, 46 pp less than in 2008 (Figure 3, Appendix 1). The sector's funding gap (lending to, less deposits from, the domestic private sector) continues to narrow, due to the notable deleveraging of the system and the stability of deposits, and is now at a similar level to that of 1999, and at an all-time low as a percentage of the balance sheet total.

– Requirements for additions to provisions are normalising, as reflected in the provisioning "effort" (additions to provisions / net income) and cost of risk (additions to provisions / total lending) indicators, which are back at pre-crisis levels (Figure 1, Appendix 1), which contributes to profitability's consolidating its position in positive territory following the losses of 2011 and 2012 (Figure 5, Appendix 1).

International comparison

Comparing developments in the Spanish banking system with the average of EU banks (Appendix 2), the following are the main conclusions of the analysis of the data from the “Risk Dashboard” of the European Banking Authority (EBA), which show the average of 57 of the main EU banking institutions that took part in the 2014 stress tests. The latest data available are as at year-end 2015.

- The strengths of the Spanish banking system since the end of 2009 (the date from which EBA data are available) have been a greater volume of capital in the balance sheet and a better cost/income ration than the average for European banks (Figures 1 and 5, Appendix 2).
- The most negative aspect is the trend in NPLs, which are much higher in Spain and with faster growth (Figure 2, Appendix 2). Nonetheless, as has already been remarked, Spain's NPL rate has now been falling for 27 consecutive months.
- In 2011 and 2012 the Spanish banking system posted heavily negative ROE due to the increase in the NPL rate and the additions to provisions required to clean up the system (Figure 4, Appendix 2). Since 2013 the profitability of the system has been similar to the average of European institutions, although slightly lower, as seems logical in a system with more capital in the balance sheet than the European average. These clean-ups were necessary in the Spanish banking system, as can be seen in Figure 3 in Appendix 2, which shows how the clean-up exercises brought coverage of NPLs by specific provisions to a level similar to the European average, where they subsequently remained, and which they have exceeded since mid-2014.

2 New Banco de España Circular on analysis and provisioning of credit risk

Banco de España Circular 4/2016 of 27 April amends, *inter alia*, Annex IX of Circular 4/2004 of 22 December on public and confidential information standards and financial statement formats, coming into force on 1 October 2016. In broad terms it deals with policies for granting, modifying, evaluating, monitoring and controlling lending transactions, their accounting classification and estimates of loan loss provisioning requirements (credit risk). In this article we summarise the main changes:

I. General framework for credit risk management

To be approved and reviewed by the Board of Directors in accordance with institution's risk appetite, with policies documented and the reasoning behind them explained.

A) Credit approval. The criteria must be based on the borrower's ability to repay, without relying on third parties, and with a pricing policy that at least covers the funding, structural and credit risk costs for each transaction.

B) Changes to terms and conditions. The Circular distinguishes among (i) the refinancing transaction, which replaces another transaction when the borrower is in actual or foreseeable financial difficulty, (ii) the refinanced transaction, where the existing transaction is brought up to date with the proceeds of a new loan, and (iii) the restructured transaction, where the financial terms and conditions are amended for a borrower in actual or foreseeable financial difficulty. Where there is no such financial difficulty, then transactions are referred to as either renewals (the new transaction replaces the old one) or renegotiated transactions (the financial terms and conditions are amended).

C) Assessment, monitoring and control of credit risk. The policies must be in writing and known to and approved by the Board of Directors. Coverage (provisions) may be: (i) Generic to cover potential losses on loans with similar risks. Banks may either develop in-house methods of calculation or use Banco de España's alternative solutions. (ii) Specific, for particular transactions.

Generic provisions are to be estimated collectively, while specific provisions may be estimated either collectively or individually. Estimates must be based on quantitative factors and be consistent, comprehensible and replicable by users. Furthermore, the level of coverage calculated, whether individually or collectively, for a particular transaction must be higher than that which would apply if the transaction were classified in another category with lower credit risk.

Effective security may be personal (guarantee) or *in rem* (collateral) providing it can be shown that it mitigates the credit risk. Types: 1) Property: buildings, land and other real estate assets; 2) Lien or pledge on financial instruments; 3) Other collateral; y 4) Personal guarantees.

II. Classification of transactions by credit risk (risk of insolvency)

There are two criteria: credit risk attributable to the borrower, and the country risk to which the lending is exposed. If both co-exist, the more demanding one must be chosen. The categories are:

1) **Normal risk:** transactions not falling into any of the other categories on the basis of the criteria set out. This includes category 2).
2) **Normal risk on special watch:** transactions with weak points, which may lead to bigger losses being sustained than in the case of those classified in category 1). Three basic indications are: (i) a high level of indebtedness, (ii) a fall in revenues or recurring cash flows, and (iii) a decline in operating margin.

3) **Doubtful risk by reason of borrower's being in arrears:** transactions with amounts more than 90 days overdue, if not classified as bad debts. As soon as the total amount of a borrower's transactions with amounts more than 90 days overdue exceeds 20% of that borrower's total loan outstandings (including transactions with no overdues), those total outstandings must be classified in this category.
4) **Doubtful risk for reasons other than borrower's being in arrears:** transactions, due or not, where there is no reason to classify them as bad or doubtful debts by reason of arrears but there are reasonable doubts as to their being repaid in full on the agreed terms. This includes, among others, transactions with borrowers whose solvency has deteriorated, refinancing, refinanced or restructured transactions with amounts overdue by more than 30 days, those of category 3) where the 20% threshold is not exceeded, etc.
5) **Bad debts:** transactions, due or not, where following individual analysis the chances of recovery are considered remote in view of a significant deterioration in the solvency of the transaction or of the borrower. The gross amount must be fully written off and the asset removed from the balance sheet. Examples are transactions included in 3) that are more than four years old.
   They will continue to be classified in this category until all the bank's rights are extinguished (by prescription, condonation (forgiveness) or other causes), or until they are recovered.

III. Coverage of loan losses due to insolvency

The basis of the calculation of the specific and generic provisions will be the excess of the amount of risk over the amount to be recovered from the effective security. Transactions will be classified according to the sector of the counterparty and the ageing of the past due amounts.

a) Specific provisions for doubtful debts:

If the reason is the borrower's being in arrears, the provision must be at least equal to the amount of the generic provision that would apply to the transaction if it were classified as a normal risk on special watch.
The assumed recoverable amount of property guarantees (mortgages) will be the reference value less potential falls in value until sale and execution, maintenance and selling costs. If the bank does not develop in-house models for collective estimates, Banco de España's alternative solutions will be applied.
If the reason is other than arrears, in general the individual estimate will be used.

b) Generic provision for normal risk:

This is the amount to be recovered from effective security held, less such deductions as may be considered appropriate, estimated in a similar manner to those mentioned in point a). The provision for normal risks on special watch must be bigger than that for normal risk. Transaction classified as without appreciable risk will have a provisioned at 0%, and there are also alternative solutions.

IV. Credit risk by reason of country risk (no change)

V. Real estate assets foreclosed or received in payment of debts

These will initially recognised at the lesser of: (i) the carrying amount of the financial assets in respect of which they were repossessed; and (ii) the fair value of the real estate asset at the time of foreclosure or dation less selling costs. They will initially be valued at market value obtained from complete individual appraisals, which will be updated at least once a year by different appraisal companies and experts from those of the previous year.

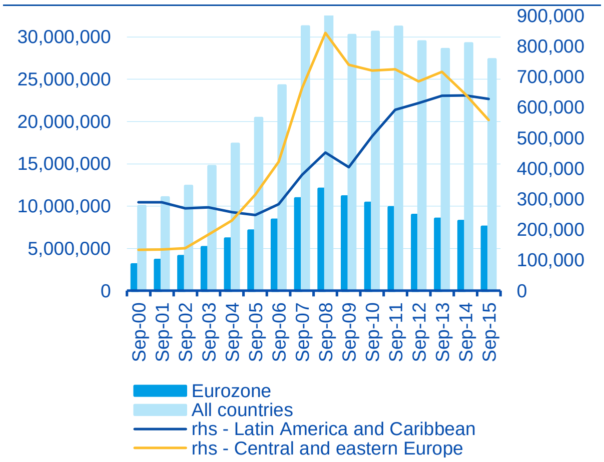
Banks may use in-house methods based on collective estimates of provisions to calculate the deductions from the reference price and the selling cots of assets received or repossessed. Otherwise Banco de España's alternative solutions will be used.

3 The globalisation of banking and the impact of regulation on global banks

The globalisation of banking: development over time and geographically

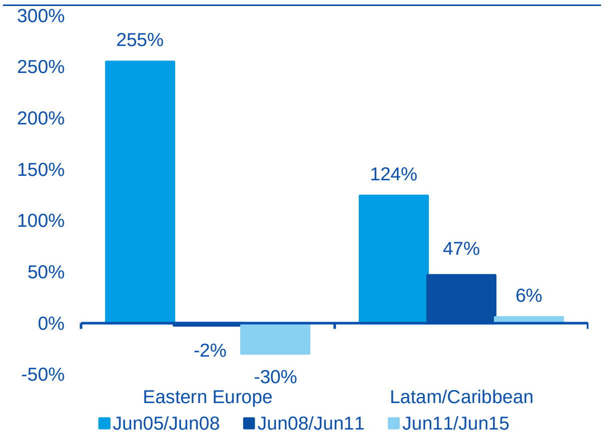
The presence of foreign banks internationally, which had grown considerably up until the financial crisis, levelled off and even declined slightly after 2009. Even so, the financial systems of some regions (Central and Eastern Europe, Latin America, and certain parts of Africa) continue to have significant percentages of foreign banks. This shift in trend can also be looked at from an additional perspective. Figure 1 shows the significant reduction in cross-border lending to all economic sectors globally with the crisis. However there are disparities among geographical regions. While the fall in Eastern Europe (where branches are the norm) was quite pronounced, in Latin America and the Caribbean (where foreign banks established subsidiaries) we see significant growth after a slight fall in the early stages of the crisis. In Figure 2 we see large flows of cross-border financing to banks in Eastern Europe, largely from their respective parents. But after the crisis there was a much sharper fall compared with financing of banks in Latin America and the Caribbean, which showed a much more balanced performance and proved better placed to withstand adverse conditions. Consequently, the business model and the legal structure chosen when implementing the process of banking internationalisation are important. And not just for the banks, but for the financial stability of the host countries.

Figure 1
Cross-border lending (US$ millions) to all sectors by geographical region



Source: BBVA Research based on BIS statistics (Table A6)

Figure 2
Change (%) in cross-border lending to banks by geographical region



Source: BBVA Research based on BIS statistics (Table A6)

Strategies pursued in banking internationalisation and explanatory factors

Expansion took place in two main ways: cross-border lending from the country of origin and the establishment of physical branches and/or subsidiaries. Opting for one or the other or a combination of both is determined by factors such as: (i) regulations; (ii) business strategy and penetration in the host country; (iii) tax on profits; (iv) country risk and (v) the development of new technologies and their effect on institutions' physical presence. However, the choice between branch and subsidiary is no trifling matter, and in practice bank structures are complex, combining branches and subsidiaries.

Possible effect of regulation on global banks' withdrawal

There has recently been a tendency for global banks to leave certain countries and abandon certain business lines. The reasons given are many and varied: efficiency and profitability, institutional changes, organisational simplicity, etc., but above all, regulation. This is or will become palpable in aspects such as: 1) Stricter capital and liquidity requirements. For example, the introduction of the leverage ratio makes certain banking activities and service less attractive; 2) The new resolution framework. In Europe, the SRB (Single Resolution Board) can oblige institutions to make changes to their structures in order to facilitate a hypothetical resolution; 3) The ring-fencing of wholesale and investment banking from retail banking, which becomes an operating challenge for banks; 4) Supervisory authorities' preference for operating with a particular legal structure, as is the case in the US for example, where banks with assets of over US$50 billion are forced to establish a US holding company[1]; and 5) Countries' differing levels and speeds of implementation of regulatory reforms, which leads global banks to consider whether the legal structure with which they operate is ideal and whether it is worth their while to be in certain geographical regions or countries and business areas.

Recent evidence of global banks' withdrawal

The withdrawal from certain geographical regions of banks from the US, Canada, UK, Sweden, Germany, Austria, the Netherlands, France, Italy, Spain and China highlights the impact that regulation is having on the international presence of these institutions. Other salient points are: (i) More than half of these banks cite regulation as the reason for pulling out of certain countries; (ii) Banks that received state assistance in the crisis are by no means the only ones withdrawing; (iii) While in Europe we see a slight tendency towards "branchification", in Latin America it is more usual to operate through subsidiaries and in Asia-Pacific through branches and (iv) Restructuring has affected investment banking most, mainly in Europe.

Challenges: greater regulatory uniformity and impartiality towards business models

At present, and even more so in the next few years, regulatory harmonisation on a worldwide scale is crucial if we are to avoid banks having comparative advantages depending on their country of origin and in order to ensure freedom of establishment without one business model being favoured over another, irrespective of banks' organisation and legal structure.

[1] A commercial company whose sole function is to hold and administer the ownership of other companies and which does not usually have operating liabilities.

4 Update on MREL and TLAC

Some progress but uncertainty remains

As of today, banks and investors are still waiting for more clarity concerning the definitive configuration of MREL. The Commission and the EBA are working on the implementation of TLAC and on the MREL review. Meanwhile, several Member States have released their proposals to implement MREL and TLAC in their national legislative frameworks.

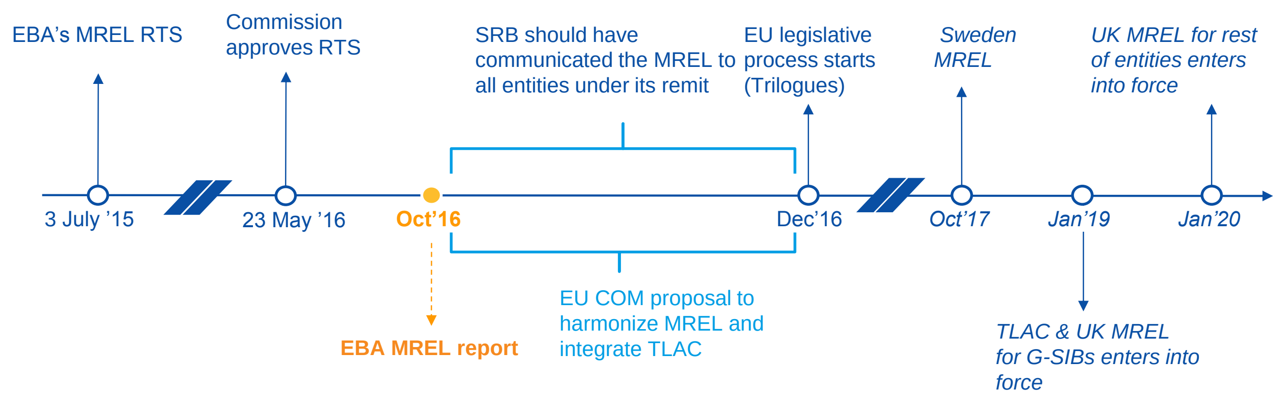
A new bank crisis management framework in Europe is now established and fully functional thanks to the Bank Recovery and Resolution Directive (BRRD) and the establishment of a Banking Union. Banks in the EU are now subject to bail-in rules and they will soon have to comply with a new loss absorption requirement: the minimum requirement for own funds and eligible liabilities (MREL). However, despite the tight schedule, the definitive configuration of this requirement is unknown. The Commission has recently adopted the EBA's Regulatory Technical Standards on MREL with two noticeable amendments: i) the transitional period is now reduced from the initial 48 months to a period "which is as short as possible" and ii) direct references to the 8% minimum bail-in (of total assets) are removed. Additionally, the EBA will review MREL in October and will most likely suggest several amendments. Furthermore, the Commission is working on how to implement the total loss-absorbing capacity (TLAC) standard in Europe. This will most likely be done by adapting its main characteristics to those of the MREL, at least for European global systemically important banks (G-SIBs). Indeed, an important concern shared by European banks is how TLAC and MREL will converge. Despite having the same purpose, they differ in several areas such as the scope of entities affected, the calibration, etc. TLAC is limited to G-SIBs, is based on a common minimum requirement, and will not apply before 2019. Conversely, MREL applies to all EU banks regardless of their systemic footprint, its calibration will be set on a case-by-case basis, and is already binding since the 1 January 2016 (as of today, however, no requirement has been imposed on banks).

Despite the fact that MREL's definition is not yet final, **the UK and Sweden have taken the lead as the first Member States to release proposals on how to adapt this requirement nationally** (the UK also includes TLAC-specific characteristics). Both approaches are based on the RTS but they incorporate several additional features. For example, both countries provide more details on how to calibrate the requirement by dividing banks into three categories depending on their size and resolution strategies. However, the Swedish proposal is tougher in terms of calibration (32% of RWAs on average) mainly because it does not take into account the possible reduction in RWAs post-resolution, and in terms of debt requirements (the second part of the MREL definition, the recapitalisation amount, must be met with debt instruments) compared to the UK version and the current European design. The Swedish proposal, together with the UK approach, may influence European authorities when reviewing MREL and implementing TLAC.

More clarity is needed on general aspects such as: i) calibration of MREL, ii) differences in treatment of G-SIBs and domestic ones (D-SIBs), iii) which liabilities will be accepted in bail-in, iv) their loss absorption order, v) how will this be made compatible with different banks' business models and vi) how will TLAC and MREL be reconciled. Also, a minimum level of harmonization throughout the EU regarding senior debt subordination is highly desirable. Other more technical aspects that should be clarified are: the level of consolidation at which authorities will ask banks to comply with MREL (this should be different for single point of entry, SPE, and multiple point of entry, MPE, banks), the treatment of capital buffers, the extent of legislative modifications needed, the possible interactions between MREL and Maximum Distributable Amount (MDA) restrictions, the and treatment of MREL breaches, among others.

The final design of the new TLAC/MREL ratio is one of the main uncertainties in the regulatory arena. Clarity on this topic is crucial as banks need to start issuing bail-in-able debt and need to start changing the structure of their balance sheets. **A consistent application throughout the EU is desirable** to guarantee a level playing field. But most importantly, **the final MREL features need to be sufficiently flexible to allow different business models** to thrive and to avoid artificial changes in the nature of the entities or their resolution strategies.

Figure 4.1
MREL and TLAC schedule



Source: BBVA Research

5 Regulation of digital consumer credit

The transition to the digital economy implies deep changes that affect people's daily lives and the economy as a whole. The financial services industry is no exception and new answers to consumer demands that threaten traditional players emerge, but also offer a whole new range of opportunities. In this context, consumers require ubiquitous financing services that meet their new habits. Digital lending is increasing and it could reach up to $100bn in loan origination by 2020 combining the United States (US) and Europe, according to Autonomous Research. Consumer credit also follows this trend, and traditional products like student loans, revolving credit cards, auto loans or POS credit are currently being challenged by the rise of digital alternatives.

New digital ecosystem

The rise of FinTech has brought technology-based companies with a reduced specialized portfolio of alternative financial products, and it has meant the introduction of several new lenders in the market. In most cases, these businesses take advantage of legal gaps that allow them to deliver new value propositions with fewer regulatory constraints. Combined with their expert use of digital technologies, **these companies improve processes where traditional players are inefficient and deliver services that are agile, flexible and simple**. Besides, many of them are attending consumers who were previously un- or underserved by traditional banking.

Consumer credit in the European Union (EU) is regulated by the Consumer Credit Directive, a rule focused on improving transparency and information disclosure in contracts. A similar rule is found in the US, the Consumer Credit and Protection Act, which dates back to 1969. However, some players have been able to avoid these regulations to provide lending services, potentially leading to confusion among consumers. In this regard, **crowdfunding and payday loans are of special interest**. Crowdfunding can finance a project by obtaining funds in exchange of a reward, pre-sale or by borrowing money from investors. Although most consumers do not fully understand the liabilities behind those websites, regulators are focusing on investor protection while borrowers are still underprotected. As an example, the International Organization of Securities Commissions (IOSCO) is pushing certain measures like the requirement of a license or a third party to hold the deposits in order to protect the investors. Meanwhile, payday lenders have recently been on the spotlight due to some over-indebtedness cases, as their business model implies higher interest rates in exchange for covering riskier operations. The best known cases are Wonga.com and Cash Genie, which led to regulatory changes in the United Kingdom (UK), including the establishment of the Financial Conduct Authority (FCA) to unify all regulatory efforts under its umbrella. In the US, the Consumer Financial Protection Bureau (CFPB) is currently proposing new rules to improve the practices of these lenders, like the determination of whether borrowers can afford their payment obligations or sending a written notice to the customer prior to attempting to debit their account to collect payments, in order to limit unsuccessful withdrawal attempts with additional fees or overdrafts.

Opportunities for the financial industry

The introduction of new digital technologies opens the door to new solutions that can improve customer experience and can also change how those deals are processed, while reducing potential risks.

The identification of the customer is a key step in this process that new technologies can enhance with biometrics, videoconferencing, documents scanning or automated verification. In spite of those innovations being available in the market, their use might be hindered by regulations that do not contemplate such procedures. The goal of this process is to determine the identity of the customer in order to avoid fraud, but also in order to meet the requirements of Anti-money Laundering (AML) and Anti-Terrorism Financing rules. Although the basic requirements are similar in all countries, there are different ways to approach this issue and digital identity is an important topic in the regulators' agendas. A renowned example is Adhaar Card in India, a service provided by the government that entitles its users to access financial services with biometric identification. In the EU, the Regulation on electronic identification and trust services for electronic transactions in the internal market (eIDAS) provides interoperability of electronic identification for public services. Although it cannot be used for private issues yet, it is a promising tool for future developments in the financial services industry.

Assessing credit risk is another area where new digital lenders are challenging the incumbents. The credit business is based on information, since scorings can only be as good as the data on which they are built. Scoring models must evolve to provide a holistic vision of the client. Traditional inputs required can be negative, like the absence of default payments track records; and positive, like information from credit institutions, payslips or credit bureaus. Those inputs establish debt capacity but not the willingness to repay the amount borrowed. In this situation, **alternative scoring emerges as yet another source of information to provide a holistic view of the customer in order to provide a better credit assessment**. This new type of scoring can come from different sources such as invoice payments, purchase habits or the use of social networks. Technologies like big data or improved algorithms provide new sources of behavioural profiling that allow a better understanding of the customer beyond traditional inputs or guarantees. There are currently several initiatives attempting to use those new data sources, especially in the US, where the use of independent credit scoring agencies is an important part of the assessment. Besides, those inputs can also be used in the identity validation process. In the EU, the deployment of those techniques is not as common and must fulfill strict requirements from norms such as the General Data Protection Regulation.

The final step of this process is **using systems that provide proof of an electronic signature being validated by a third party that acts as a notary**. The use of this technology improves the customer experience, as it removes the need to use printed documents that must be sent to the financial entity and also changes the relationship with the customer. In the EU, the Electronic Signatures Directive establishes a common framework to understand these services and the aforementioned eIDAS introduces the concept of Advanced Electronic Signature, capable of assessing if the data accompanying the message has been tampered with after being signed. In the US, the main legislation is the Uniform Electronic Transactions Act and the ESign Act that provide a common definition of what an electronic signature is.

Conclusion

Regulation in digital consumer credit is focused on customer protection but not necessarily on digital services. Although several advances in this field have been reached, there are issues that are still at stake. In the EU, the European Consumer Credit Directive aims at providing the highest consumer protection levels, financial stability and a responsible consumer behaviour. Those views are reflected in several initiatives like the Green Paper on Retail Financial Services, the Market in Financial Instruments Directive (MiFID) and the EU's consumer credit initiative. In the US, the main legislation on this matter is the Consumer Credit and Protection Act, an umbrella regulation that came into force in 1969. However, several regulations have been passed to update issues not covered in previous versions. EU and US authorities are aware of the rise of new types of digital lenders and are concerned by the need of protecting the customer and improving financial literacy, but legislations do not keep pace with the latest innovations in the market.

In this environment, the authorities have the difficult task to balance consumer protection, financial stability and the benefits of innovation. The expansion of digital lending should not result in worse credit assessments or lack of appropriate information for the customer. Nevertheless, regulations should not deter innovations like technologies that improve credit processing or that allow a better understanding of the customer.

Annex 1: principal monitoring indicators for the Spanish banking system

Table 1
Abridged balance sheet for the banking system. (EUR bn and % var.)

									Growth rate		
Assets	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Date**	**00-'08**	**08 - latest**	**y-on-y**
Total lending	2,153	2,106	1,951	1,716	1,651	1,603	1,564	Apr-16	217%	-28.1%	-3.6%
Public corporations	*79*	*90*	*114*	*87*	*101*	*90*	*99*	*Apr-16*	*69%*	*87.1%*	*0.4%*
Domestic resident sector	*1,844*	*1,783*	*1,605*	*1,448*	*1,380*	*1,327*	*1,289*	*Apr-16*	*234%*	*-31.1%*	*-4.7%*
Non residents	*230*	*234*	*232*	*180*	*169*	*186*	*177*	*Apr-16*	*164%*	*-30.2%*	*2.9%*
Fixed income securities and equity stakes	564	656	766	773	754	662	669	Apr-16	132%	34.5%	-5.8%
Fixed income securities	*384*	*406*	*509*	*493*	*492*	*416*	*423*	*Apr-16*	*135%*	*29.9%*	*-8.5%*
Of which: sovereign debt	*165*	*198*	*247*	*264*	*288*	*251*	*261*	*Apr-16*	*6%*	*160%*	*-1.0%*
Equity	*180*	*251*	*258*	*280*	*262*	*246*	*246*	*Apr-16*	*128%*	*43.2%*	*-0.6%*
Interbank lending	234	251	279	211	155	164	166	Apr-16	81%	-37.0%	6.9%
Other assets (net of interbank lending/deposits)	301	387	426	326	354	331	336	Apr-16	230%	17.2%	-8.1%
Total assets	**3,252**	**3,400**	**3,423**	**3,026**	**2,913**	**2,760**	**2,735**	**Apr-16**	**184%**	**-15.1%**	**-4.1%**
Liabilities and Shareholders' Equity											
Customer deposits	2,031	1,934	1,725	1,684	1,686	1,638	1,626	Apr-16	169%	-19.3%	-2.1%
Public corporations	*79*	*70*	*69*	*63*	*76*	*77*	*74*	*Apr-16*	*263%*	*-2.8%*	*-2.9%*
Domestic resident sector	*1,440*	*1,373*	*1,317*	*1,314*	*1,289*	*1,262*	*1,241*	*Apr-16*	*192%*	*-13.4%*	*-1.9%*
Non residents	*511*	*492*	*339*	*306*	*320*	*299*	*311*	*Apr-16*	*113%*	*-38.5%*	*-2.6%*
Interbank deposits	270	373	573	381	312	303	301	Apr-16	95%	-4.6%	-1.7%
Pro memoria: net interbank position	*36*	*122*	*294*	*171*	*157*	*139*	*135*	*Apr-16*	*215%*	*160%*	*-10.6%*
Debt issued	433	435	394	297	249	225	213	Apr-16	625%	-46.0%	-7.6%
Other liabilities	340	439	535	430	436	368	369	Apr-16	253%	15.4%	-13.2%
Shareholders' equity	178	220	195	233	230	227	227	Apr-16	134%	25.7%	-2.1%
Pro memoria: ECB funding	*70*	*132*	*357*	*207*	*142*	*133*	*130*	*May-16*	*566%*	*40%*	*-2.3%*
Total Liabilities and Shareholders' Equity	**3,252**	**3,400**	**3,423**	**3,026**	**2,913**	**2,760**	**2,735**	**Apr-16**	**184%**	**-15.1%**	**-4.1%**

Source: Bank of Spain statistics bulletin

Table 2
Abridged income statement for the banking system. Cumulative annual results (EUR mn and % var.)

	2010	2011	2012	2013	2014	2015	2016	Date	Growth rate 00-'08	08-latest	y-on-y
Net interest revenue	34,292	29,565	32,739	26,816	27,118	26,410	6,105	Mar-16	92%	-30.5%	-9.9%
Net fees and commissions	11,870	11,750	11,275	10,931	11,257	11,240	3,343	Mar-16	79%	2.7%	19.1%
Trading gains and other revenue	17,151	15,811	15,493	17,797	17,043	13,882	3,474	Mar-16	276%	-23.7%	-27.1%
Total revenue	**63,313**	**57,126**	**59,507**	**55,544**	**55,418**	**51,532**	**12,922**	**Mar-16**	**118%**	**-22.1%**	**-9.9%**
Operating expenses	-29,431	-28,464	-26,951	-26,798	-26,116	-26,261	-6,531	Mar-16	54%	-11.5%	0.3%
Personnel expenses	-17,643	-16,889	-15,587	-15,108	-14,329	-14,182	-3,495	Mar-16	54%	-21.9%	-1.1%
Other operating expenses	-11,789	-11,574	-11,364	-11,690	-11,787	-12,079	-3,036	Mar-16	54%	4.6%	1.9%
Pre-provision profit	**33,882**	**28,662**	**32,556**	**28,746**	**29,302**	**25,271**	**6,391**	**Mar-16**	**226%**	**-30.7%**	**-18.4%**
Loan-loss provisions	-16,719	-22,668	-82,547	-21,800	-14,500	-10,698	-1,851	Mar-16	620%	-51.4%	-45.3%
Other income, net	-7,326	-23,430	-37,142	-2,789	-1,739	-3,819	-1,388	Mar-16	-299%	347.6%	84.6%
Profit before taxes	9,837	-17,436	-87,133	4,156	13,063	10,754	3,153	Mar-16	108%	-38.2%	-14.6%
Net attributable income	**9,673**	**-14,717**	**-73,706**	**8,790**	**11,343**	**9,313**	**2,679**	**Mar-16**	**122%**	**-41.8%**	**-11.5%**

Source: Bank of Spain statistics bulletin

Table 3
Relative size, staff and installed capacity in the banking system (%, number and % var.)

	2010	2011	2012	2013	2014	2015	2016	Date	Growth rate 00-'08	08-latest	y-on-y
Lending to the private sector / GDP	171%	166%	152%	139%	133%	123%	119%	Apr-16	94%	-28.9%	-8.0%
Private sector deposits / GDP	114%	111%	111%	113%	111%	107%	106%	Apr-16	69%	0.2%	-4.2%
Number of employees	263,715	248,093	236,504	217,878	208,291	202,954	n.d.	Dec-15	14%	-27.1%	-2.6%
Number of branches	43,267	40,202	38,237	33,786	32,073	31,155	30,853	Mar-16	17%	-33.2%	-3.2%

Source: Bank of Spain statistics bulletin

Table 4
Breakdown of ORS loans, NPLs and NPL ratio by portfolio. (EUR bn, % and % var.)

									Growth rate		
Lending volume	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Date**	**00-'08**	**08 - latest**	**y-on-y**
Loans to households	**813**	**793**	**756**	**715**	**690**	**663**	**658**	**Mar-16**	**236%**	**-19.6%**	**-3.5%**
Of which:											
Housing loans	632	627	605	581	558	531	526	Mar-16	270%	-16.0%	-4.7%
Other loans to households	180	167	151	134	132	132	132	Mar-16	159%	-31.5%	1.7%
Lending to corporates and SMEs	**1,013**	**971**	**830**	**719**	**674**	**644**	**616**	**Mar-16**	**237%**	**-39.4%**	**-8.8%**
Of which:											
Lending to real estate	430	397	300	237	200	179	172	Mar-16	517%	-63.5%	-11.9%
Other lending to corporates and SMEs	583	574	530	482	474	465	445	Mar-16	142%	-18.7%	-7.5%
Total lending to domestic private sector *	**1,844**	**1,783**	**1,605**	**1,448**	**1,380**	**1,327**	**1,289**	**Apr-16**	**234%**	**-31.1%**	**-4.7%**
NPLs											
Loans to households	**26.0**	**28.7**	**37.0**	**49.4**	**46.8**	**37.0**	**36.2**	**Mar-16**	**1062%**	**48.6%**	**-20.6%**
Of which:											
Housing loans	15.2	18.2	24.0	34.6	32.6	25.5	25.1	Mar-16	1878%	69.5%	-21.8%
Other loans to households	10.8	10.5	13.0	14.8	14.1	11.4	11.0	Mar-16	607%	16.1%	-17.8%
Lending to corporates and SMEs	**79.7**	**109.9**	**128.4**	**146.1**	**124.6**	**94.2**	**90.2**	**Mar-16**	**818%**	**142%**	**-24.3%**
Of which:											
Lending to real estate	58.0	81.9	84.8	87.8	70.7	50.4	48.0	Mar-16	2790%	79%	-27.7%
Other lending to corporates and SMEs	21.7	28.0	43.6	58.2	53.9	43.7	42.2	Mar-16	232%	305%	-20.0%
Total lending to domestic private sector *	**107.2**	**139.8**	**167.5**	**197.2**	**172.6**	**134.3**	**127.7**	**Apr-16**	**808%**	**103%**	**-21.0%**
NPL ratio											
Loans to households	**3.2%**	**3.6%**	**4.9%**	**6.9%**	**6.8%**	**5.6%**	**n.d.**	**Mar-16**	**246%**	**85.0%**	**-17.8%**
Of which:											
Housing loans	2.4%	2.9%	4.0%	6.0%	5.9%	4.8%	4.8%	Mar-16	434%	101.7%	-18.0%
Other loans to households	6.0%	6.3%	8.6%	11.1%	10.7%	8.7%	8.4%	Mar-16	173%	69.6%	-19.1%
Lending to corporates and SMEs	**7.9%**	**11.3%**	**15.5%**	**20.3%**	**18.5%**	**14.6%**	**14.6%**	**Mar-16**	**173%**	**299%**	**-17.0%**
Of which:											
Lending to real estate	13.5%	20.6%	28.2%	37.1%	35.3%	28.2%	28.0%	Mar-16	369%	389%	-17.9%
Other lending to corporates and SMEs	3.7%	4.9%	8.2%	12.1%	11.4%	9.4%	9.5%	Mar-16	37%	398%	-13.4%
Total lending to domestic private sector *	**5.8%**	**7.8%**	**10.4%**	**13.6%**	**12.5%**	**10.1%**	**9.9%**	**Apr-16**	**172%**	**194%**	**-17.0%**

(*)Total ORS loans include household loans, total loans for productive activities, non-profit agencies serving households (ISFLSH in Spanish) and unclassified lending. Since January 2014 this has included loans to Financial Credit Institutions.
Source: Bank of Spain statistics bulletin

Table 5
Breakdown of new lending volume. Annual cumulative amount (EUR bn and % var.)

									Growth rate		
Lending volume	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Date**	**03-'08**	**08-'15**	**y-on-y**
Loans to households	**123.4**	**74.3**	**63.3**	**51.2**	**60.5**	**75.7**	**27.3**	**Apr-16**	**0.7%**	**-59.3%**	**20.8%**
Of which:											
Housing loans	69.5	37.5	32.3	21.9	26.8	35.7	13.3	Apr-16	-15.6%	-59.0%	34.5%
Other loans to households	53.9	36.8	31.0	29.4	33.7	40.0	13.9	Apr-16	21.3%	-59.5%	10.0%
Lending to corporates and SMEs	**665.0**	**527.5**	**484.8**	**392.6**	**357.2**	**392.6**	**105.6**	**Apr-16**	**29.2%**	**-57.7%**	**-13.3%**
Of which:											
SMEs (loans < €1million)	210.3	174.1	146.0	134.4	146.6	165.5	54.7	Apr-16	11.3%	-53.6%	6.6%
Corporates (loans > €1million)	454.7	353.4	338.9	258.2	150.5	128.7	43.0	Apr-16	43.5%	-77.5%	8.3%
Total new lending flows	**788.4**	**601.8**	**548.1**	**443.9**	**417.7**	**468.3**	**132.8**	**Apr-16**	**23.3%**	**-58.0%**	**-8.0%**

Source: Bank of Spain

Table 6
Breakdown of resident deposits (EUR bn and % var.)

									Growth rate		
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Date**	**00-'08**	**08 - latest**	**y-on-y**
Sight deposits	262	270	265	282	329	384	402	Apr-16	100%	64%	15.7%
Savings deposits	211	203	199	206	222	254	258	Apr-16	73%	43.7%	13.1%
Term deposits	744	698	684	668	588	499	466	Apr-16	270%	-36.1%	-16.3%
Foreign currency deposits	19	18	20	21	22	21	21	Apr-16	527%	-28.1%	-6.4%
Total deposits of domestic resident sector *	**1,236**	**1,188**	**1,168**	**1,177**	**1,160**	**1,159**	**1,148**	**Apr-16**	**163%**	**-3.0%**	**-0.7%**

(*)Total ORS deposits do not match up with the data in Table 1 because the latter includes Asset transfer liabilities, Subordinated deposits, Repos and Hybrid instruments.
Source: Bank of Spain statistics bulletin

Table 7
Interest rates on loans (rates in % and variation in bps)

	2010	2011	2012	2013	2014	2015	2016	Date	Growth rate (bps) 03-'08	08 - latest	y-on-y
Loans. Stock (NDER)											
Loans to households											
Housing loans	2.74	3.12	2.61	2.11	1.89	1.53	1.41	Apr-16	178	-424	-37.3
Other loans to households	5.36	5.73	5.78	5.80	6.10	5.98	6.00	Apr-16	113	-107	-5.3
Loans to corporates and SMEs	3.31	3.90	3.47	3.44	2.84	2.38	2.25	Apr-16	204	-330	-46.6
Loans. New lending transactions (APR)											
Loans to households											
Housing loans	2.66	3.66	2.93	3.16	2.64	2.31	2.31	Apr-16	238	-353	-16.8
Consumer loans	7.47	9.11	8.32	9.52	8.98	8.43	8.10	Apr-16	237	-289	-75.8
Other	5.64	6.29	6.23	5.92	4.91	4.28	4.72	Apr-16	224	-231	-31.9
Loans to corporates and SMEs (synthetic average)	3.24	4.03	3.66	3.57	2.73	2.58	2.77	Apr-16	112	-210	-25.8
Less than €250,000	4.55	5.57	5.67	5.54	4.56	3.61	3.68	Apr-16	n.a.	-87	-67.6
Between €250,000 and €1million)	3.89	4.79	4.27	4.03	2.91	2.20	2.16	Apr-16	n.a.	-173	-52.9
Corporates (loans > €1million)	2.71	3.53	3.00	2.83	2.10	2.07	1.88	Apr-16	n.a.	-83	-44.9

APR: Annual Percentage Rate; NDER: Narrowly Defined Effective Rate (APR excluding commissions)
Source: Bank of Spain statistic bulletin

Table 8
Interest rates on deposits (rates in % and variation in bps)

	2010	2011	2012	2013	2014	2015	2016	Date	Growth rate (bps) 03-'08	08 - latest	y-on-y
Deposits. Stock (NDER)											
Households deposits											
Sight deposits	0.27	0.28	0.21	0.22	0.17	0.12	0.09	Apr-16	6.5	-59	-5.8
Term deposits	2.54	2.76	2.72	2.08	1.39	0.75	0.57	Apr-16	232	-384	-61.0
Corporates and SMEs deposits											
Sight deposits	0.68	0.61	0.37	0.35	0.31	0.24	0.25	Apr-16	111	-152	3.4
Term deposits	2.56	2.68	2.64	1.93	1.40	0.91	0.79	Apr-16	223	-359	-38.5
Deposits. New transactions (NDER)											
Households deposits											
Sight deposits	0.27	0.28	0.21	0.22	0.17	0.12	0.09	Apr-16	30	-59	-5.8
Term deposits	2.74	2.79	2.83	1.50	0.66	0.39	0.25	Apr-16	225	-393	-22.3
Corporates and SMEs deposits											
Sight deposits	0.68	0.61	0.37	0.35	0.31	0.24	0.25	Apr-16	111	-152	3.4
Term deposits	1.98	2.13	2.08	1.31	0.51	0.31	0.27	Apr-16	146	-321	-12.5

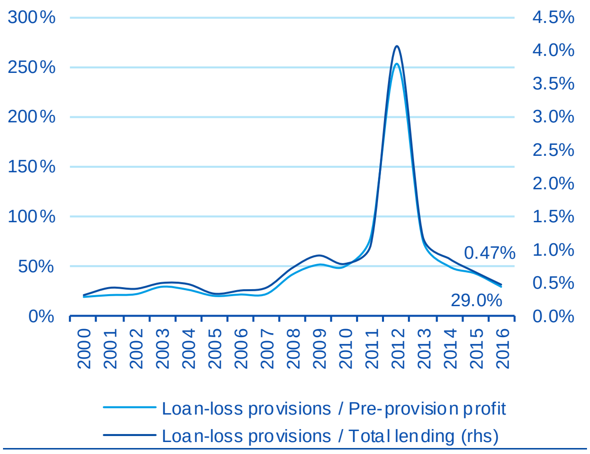
NDER: Narrowly Defined Effective Rate (APR excluding commissions)
Source: Bank of Spain statistics bulletin

Table 9
Key ratios

	2010	2011	2012	2013	2014	2015	2016	Date	Growth rate 00-'08	Growth rate 08-latest	Growth rate y-on-y
Productivity											
Business volume* per branch (€'000)	71,187	73,894	72,524	77,713	79,197	79,802	78,980	Mar-16	170%	19.4%	0.4%
Profit before tax per branch (€'000)	227.3	-433.7	-2,278.8	123.0	407.3	345.2	408.7	Mar-16	77.5%	-7.5%	-11.8%
Efficiency											
Cost-to-Income ratio (Oper. expenses / Total revenue)	46.5%	49.8%	45.3%	48.2%	47.1%	51.0%	50.5%	Mar-16	-29.3%	13.7%	11.3%
Operating expenses / ATA	0.91%	0.86%	0.79%	0.83%	0.88%	0.93%	0.95%	Mar-16	-43.4%	-0.6%	7.3%
Profitability											
RoE	5.2%	-7.4%	-35.5%	4.1%	4.9%	4.1%	4.7%	Mar-16	-3.4%	-54.5%	-9.7%
RoA	0.30%	-0.52%	-2.55%	0.13%	0.44%	0.38%	0.46%	Mar-16	-23.6%	-30.6%	-7.7%
NIM (Net interest rev. / ATA)	1.06%	0.89%	0.96%	0.83%	0.91%	0.93%	0.89%	Mar-16	-29.6%	-22.0%	-2.6%
Liquidity											
Loans-to-Deposits (resident sector)	149%	150%	137%	123%	119%	114%	112%	Apr-16	14.8%	-29.0%	-4.0%
Funding gap (Loans - Deposits EUR bn)	607.9	594.4	436.8	270.9	220.1	167.9	140.5	Apr-16	349%	-79.5%	-28.4%
Funding gap / Total assets	18.7%	17.5%	12.8%	9.0%	7.6%	6.1%	5.1%	Apr-16	57.7%	-75.9%	-25.3%
Solvency and Asset Quality											
Leverage (Shareholders' equity / Total assets)	5.5%	6.5%	5.7%	7.7%	7.9%	8.2%	8.3%	Apr-16	-17.8%	48.1%	2.2%
Shareholders' equity / NPLs	166%	158%	117%	118%	133%	169%	178%	Apr-16	-74.3%	-38.0%	23.9%
Provisioning effort (Loan-loss prov. / Pre-provision profit)	49.3%	79.1%	253.6%	75.8%	49.5%	42.3%	29.0%	Mar-16	121%	-30.0%	-33.0%
Cost of Risk (Loan-loss provisions / total lending)	0.78%	1.06%	4.07%	1.19%	0.86%	0.66%	0.47%	Mar-16	134%	-35.1%	-41.9%
NPL ratio (resident sector)	5.8%	7.8%	10.4%	13.6%	12.5%	10.1%	9.9%	Apr-16	172%	194%	-17.0%
NPL coverage ratio (total)	66.9%	59.6%	73.8%	58.0%	58.1%	59.2%	59.0%	Apr-16	-58.2%	-16.6%	0.5%
NPL coverage ratio (specific provisions)	39.6%	37.1%	44.7%	46.9%	46.7%	47.0%	47.1%	Mar-16	-39.0%	57.7%	-1.6%

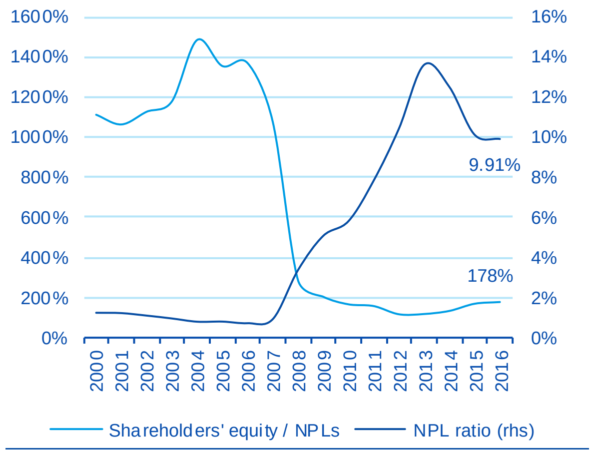
(*) ORS loans plus ORS deposits
Source: Bank of Spain statistics bulletin

Figure A1.1
Provisions



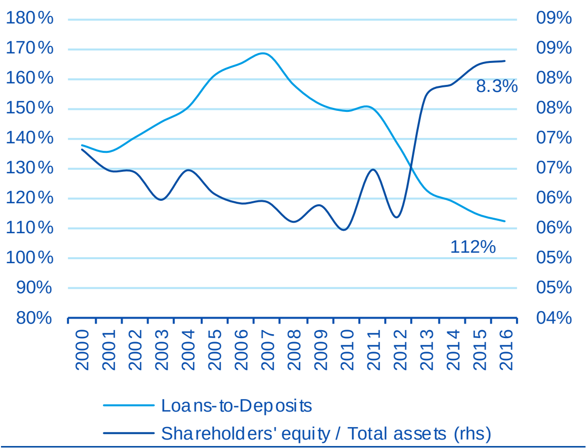
Source: BBVA Research

Figure A1.2
NPLs and Capital to NPLs



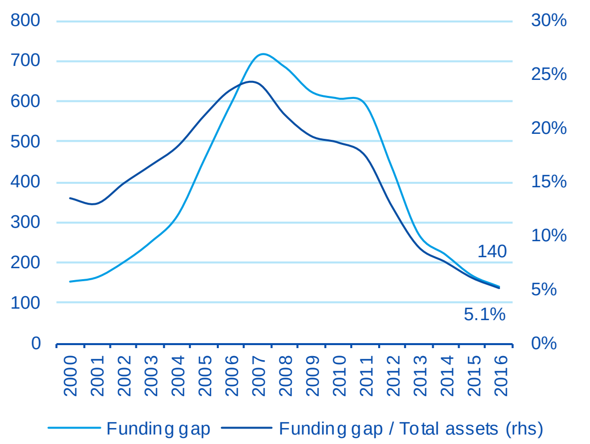
Source: BBVA Research

Figure A1.3
Liquidity and leverage



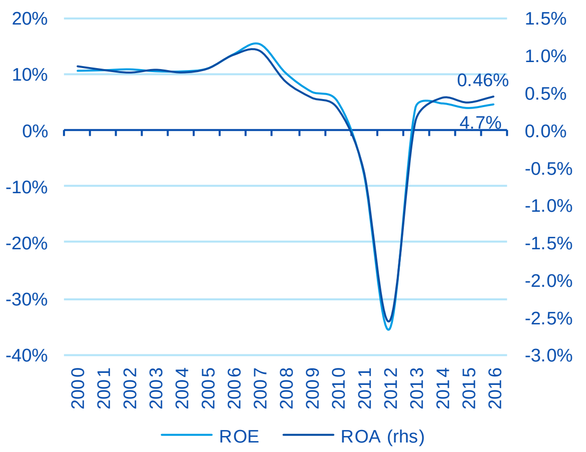
Source: BBVA Research

Figure A1.4
Funding gap (ORS loans – ORS deposits, EUR bn)



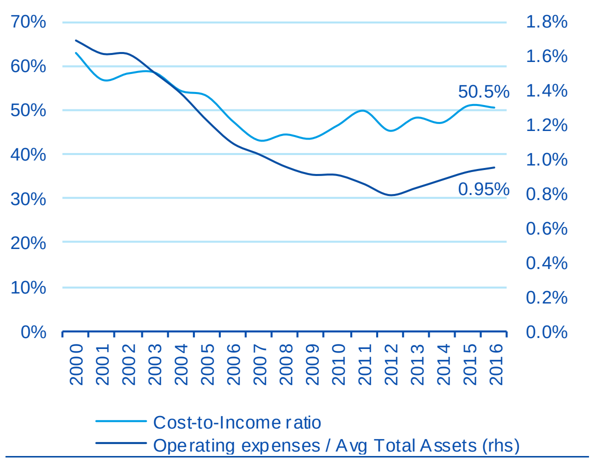
Source: BBVA Research

Figure A1.5
Profitability



Source: BBVA Research

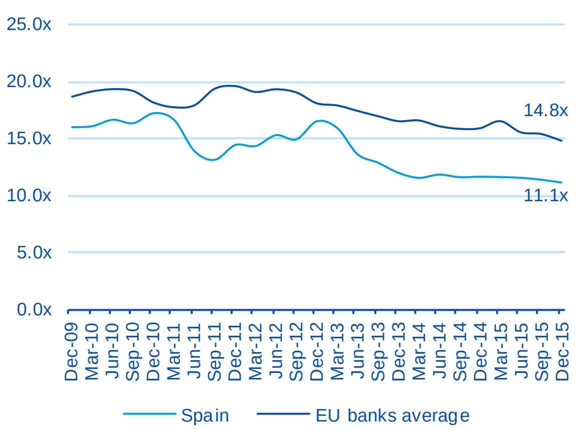
Figure A1.6
Efficiency



Source: BBVA Research

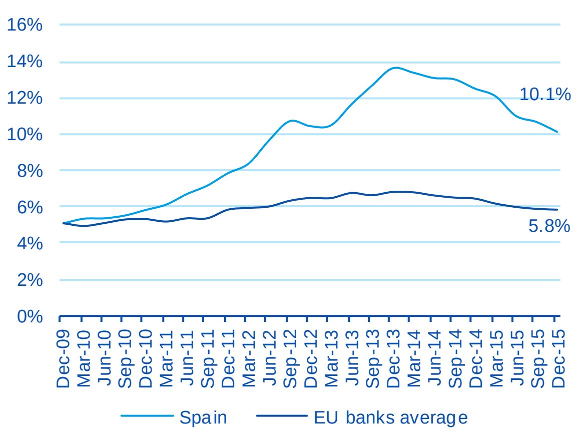
Annex 2: comparative analysis of the Spanish banking sector

Figure A2.1
Debt-to-Equity



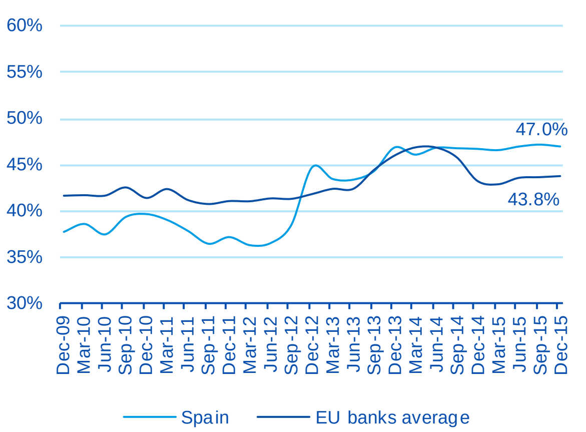
Source: EBA, BBVA Research

Figure A2.2
NPL ratio



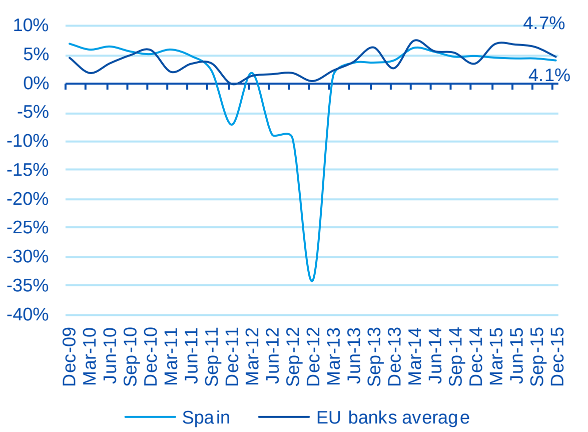
Source: EBA, BBVA Research

Figure A2.3
Coverage ratio



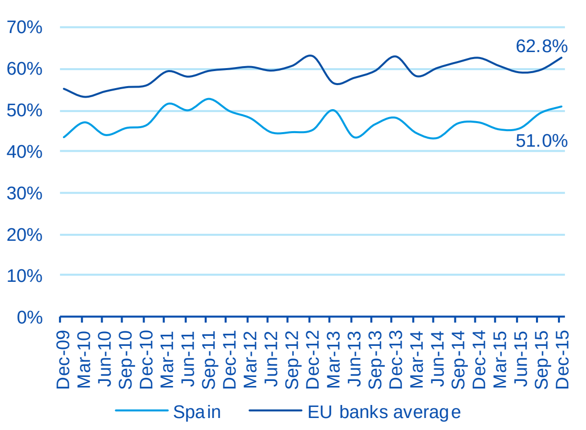
Source: EBA, BBVA Research

Figure A2.4
ROE



Source: EBA, BBVA Research

Figure A2.5
Cost-to-Income



Source: EBA, BBVA Research

DISCLAIMER

This document has been prepared by BBVA Research Department. it is provided for information purposes only and expresses data. opinions or estimations regarding the date of issue of the report. prepared by BBVA or obtained from or based on sources we consider to be reliable. and have not been independently verified by BBVA. Therefore. BBVA offers no warranty. either express or implicit. regarding its accuracy. integrity or correctness.

Estimations this document may contain have been undertaken according to generally accepted methodologies and should be considered as forecasts or projections. Results obtained in the past. either positive or negative. are no guarantee of future performance.

This document and its contents are subject to changes without prior notice depending on variables such as the economic context or market fluctuations. BBVA is not responsible for updating these contents or for giving notice of such changes.

BBVA accepts no liability for any loss. direct or indirect. that may result from the use of this document or its contents.

This document and its contents do not constitute an offer. invitation or solicitation to purchase. divest or enter into any interest in financial assets or instruments. Neither shall this document nor its contents form the basis of any contract. commitment or decision of any kind.

In regard to investment in financial assets related to economic variables this document may cover. readers should be aware that under no circumstances should they base their investment decisions in the information contained in this document. Those persons or entities offering investment products to these potential investors are legally required to provide the information needed for them to take an appropriate investment decision.

The content of this document is protected by intellectual property laws. It is forbidden its reproduction. transformation. distribution. public communication. making available. extraction. reuse. forwarding or use of any nature by any means or process. except in cases where it is legally permitted or expressly authorized by BBVA.

This report has been produced by the Financial Systems Unit:

Chief Economist for Financial Systems and Regulation
Santiago Fernández de Lis
sfernandezdelis@bbva.com

Financial Systems
Ana Rubio
arubiog@bbva.com

Jaime Zurita
jaime.zurita@bbva.com

Olga Gouveia
olga.gouveia@bbva.com

Macarena Ruesta
esperanza.ruesta@bbva.com

José Félix Izquierdo
jfelix.izquierd@bbva.com

José María Álvarez
josemaria.alvarez.ines@bbva.com

José Manuel Cebrián
josemanuel.cebrian@bbva.com

With the contribution of:
Vanesa Casadas
vanesa.casadas@bbva.com

Javier Pablo García
javierpablo.garcia@bbva.com

Victoria Santillana
mvictoria.santillana@bbva.com

BBVA Research

Group Chief Economist
Jorge Sicilia Serrano

Developed Economies Area
Rafael Doménech
r.domenech@bbva.com

Spain
Miguel Cardoso
miguel.cardoso@bbva.com

Europe
Miguel Jiménez
mjimenezg@bbva.com

US
Nathaniel Karp
Nathaniel.Karp@bbva.com

Emerging Markets Area

Cross-Country Emerging Markets Analysis
Alvaro Ortiz
alvaro.ortiz@bbva.com

Asia
Le Xia
le.xia@bbva.com

Mexico
Carlos Serrano
carlos.serranoh@bbva.com

Turkey
Alvaro Ortiz
alvaro.ortiz@bbva.com

LATAM Coordination
Juan Manuel Ruiz
juan.ruiz@bbva.com

Argentina
Gloria Sorensen
gsorensen@bbva.com

Chile
Jorge Selaive
jselaive@bbva.com

Colombia
Juana Téllez
juana.tellez@bbva.com

Peru
Hugo Perea
hperea@bbva.com

Venezuela
Julio Pineda
juliocesar.pineda@bbva.com

Financial Systems and Regulation Area
Santiago Fernández de Lis
sfernandezdelis@bbva.com

Financial Systems
Ana Rubio
arubiog@bbva.com

Financial Inclusion
David Tuesta
david.tuesta@bbva.com

Regulation and Public Policy
María Abascal
maria.abascal@bbva.com

Digital Regulation
Álvaro Martín
alvarojorge.martin@bbva.com

Global Areas

Economic Scenarios
Julián Cubero
juan.cubero@bbva.com

Financial Scenarios
Sonsoles Castillo
s.castillo@bbva.com

Innovation & Processes
Oscar de las Peñas
oscar.delaspenas@bbva.com

Contact details:

Azul Street, 4
La Vela Building - 4 and 5 floor
28050 Madrid (Spain)
Tel.: +34 91 374 60 00 and +34 91 537 70 00
Fax: +34 91 374 30 25
bbvaresearch@bbva.com
www.bbvaresearch.com