BBVA Research

Banking Outlook

March 2019

Creating Opportunities

Contents

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Summary

1. Developments of the Spanish banking industry

The quarterly earnings obtained in 3Q18 by the system (4,033 million euros) was the highest since the third quarter of 2009. In the first nine months of the year, earnings were 10,685 million euros versus losses of 4,961 million in the same period of 2017, a period in which the resolution of Banco Popular had an impact. In 2018, the drivers of the results were cost control and lower provisions. The Spanish banking system continued to improve NPLs, while the deleveraging of the private sector continued. Efficiency and returns improved with respect to 2017 levels.

2. Homogenisation of the framework of covered bonds in the European Union: analysis of the Spanish banking system

Europe is designing a legislative proposal to homogenise the bonds market within the Capital Markets Union. In an analysis of a sample of Spanish entities, several scenarios have been considered, changing the level of overcollateralization to three years. The results show that the capacity of Spanish entities to issue mortgage bonds is ample, regardless of the overcollateralization level that is finally determined. However, the national transposition will be key to maintaining a competitive instrument and that generates confidence in investors and the market.

3. EU banks' sovereign exposure. Recent trends

According to data obtained from the EBA as of June 2018, the European banking sector has reached its highest sovereign exposure of the last three years, measured in € bn. However, in relative terms (total sovereign exposure-to-Tier 1 ratio) the evolution is stable. In the period between June 2017 and June 2018, the increase in the total sovereign-to-Tier 1 ratio (+5pp for the whole sample) is explained by non-Euro area countries (+37pp yoy), whereas core countries (-11pp) and peripheral (-3pp) reduced their exposure. Home bias is particularly strong in Eurozone countries (135% of Tier 1 capital) with no material difference between peripheral and core countries. Non-EU countries have a significantly lower exposure to the domestic sovereign (55%).

4. EBA Risk Dashboard: the European banking industry improves its position in 2018

In January, the EBA published the results of the Risk Dashboard with data up to the third quarter of 2018. In general terms, European banks have improved their asset quality and solvency, though the volume of unproductive assets continued to be very high and there are some economic risks that may threaten this tendency. Profitability has also improved in recent quarters, though it remains weak and below the cost of equity in most cases. Efficiency also remained stable, even with a great dispersion among EU countries.

5. The (difficult) co-existence between e-commerce and traditional commerce: analysis with BBVA data

The weight of e-commerce has increased during recent years, approaching 20% of consumers' spending and 10% of revenue for Spanish companies as of late 2018, which showed the existence of a relationship of interchangeability between the digital and in-person channels. The activities that recorded a higher increase of online commerce were those where the maturity of the electronic channel was greater, such as booking travel. It has also been shown that the greater a company's revenue is, the greater their market share of online commerce grows. This suggests that SMEs will be stragglers on the road to digitalisation.

1. Developments in the Spanish banking industry[1]

Jaime Zurita

Industry results

- Controlling operating costs and the reduction of provisions were the keys of the system's results in the first nine months of 2018, in line with the previous quarters.

- Weakness in revenue continued, especially the margin of interests. The margin of interests fell by 1.6% with respect to the total reached in the first months of last year due to the continued fall of business volume and the environment of interest rates. However, bank charges grew by 2.4% and revenue for financial transactions and other concepts grew strongly (+16%). All that combined to generate a 3.5% growth in gross margin in the year's cumulative result, even if the increase was fundamentally due to volatile line entries.

- Operating costs fell by 2.5% in the first nine months of 2018 with respect to the same period of 2017. This was due to a decline in overhead (-5.0%), resulting from staff expenses remaining flat. As we mentioned in previous editions, the decline of overhead in 2018 was partially due to the effect of the integration of Banco Popular into Grupo Santander in the second quarter of 2017. The evolution of revenue and expenses allowed improving the system's efficiency ratio to 54.3%, while the net margin grew by 11.8% year-on-year in January-September 2018.

- The low part of the account was strongly affected in 2017 by the resolution of Banco Popular. In 2018, this effect was not seen. Thus, the provisions for credit insolvencies and "other results" declined by 70.4% and 83.5%, respectively. In 2017, these line entries were impacted by more than 10,300 million euros of write-offs and losses due to the Banco Popular transaction. Regardless of this effect, the allocations of provisions in the first nine months of 2018 were significantly lower, with a cost of the risk (provisions for insolvencies / average credit) and efforts made in recording provisions (provisions for insolvencies / net margin) of 0.19% and 13.5%, respectively, well below the previous periods and in line with the years prior to the crisis.

- Finally, the Spanish banking system has shown net earnings of 10,685 million euros in the first nine months of the year, versus losses of 4,961 million in the same period of last year. The net earnings in the third quarter of the year (4,033 million euros) were the highest quarterly earnings since the third quarter of 2009.

Activity

- The system continued to contract (table 1). The 2018 year-end data showed that total assets fell by 2.9%, remaining below €2,600bn, a similar volume to that of 2006. The total balance today represents 213% of the GDP (324% in 2012). In parallel, the staff and the number of banking offices reflected drops of 31% and 42% from the maximums in 2008, respectively. This was based on data from December 2017 for the number of employees and from September 2018 for the number of offices (table 3).

- Assets continued the trend of recent years. In addition to fixed income and variable income portfolios, the volume of lending to the resident private sector (ORS, Other Resident Sectors) contracted further, while loans to non-residents increased.

1: Tables and data can be found in the appendices to this document. The data used for the analysis of the Spanish banking system is in chapter 4 of the Statistical Bulletin of the Bank of Spain and the data used for international comparison is in the Risk Dashboard of the European Banking Authority (EBA). Analysis of the Spanish banking industry is confined to banking business in Spain. Throughout the document, "€ billion" (€ bn) refers to thousands of millions of euros.

- In the liabilities side, ORS deposits showed a slight increase and the Public Administration's deposits grew by 16.3%, while the deposits of non-residents declined by 3.9%. The volume of balance-sheet debt increased by 1.4% in 2018. The sight or fixed-term deposits increased by 1.7% overall in 2018 (table 6). The shift continued from fixed-term to sight deposits due to their low payouts. The appeal for liquidity from the ECB declined by 1.7% in 2018. The volume of accumulated capital on the balance sheet (capital plus reserves) was 23.3% greater than the one existing at the start of the crisis, though in 2018 it dropped by 4.2% due to losses from 2017 and the initial impact of the entrance into force of the IFRS 9 international accounting standards.

Spotlight on lending and NPLs

- The inventory of lending to the private sector continued to decline (table 4) and fell by 3.9% YoY as of December 2018. The volume of credit of the system represents 100% of the GDP versus 171% in late 2010 (table 3).

- During the year several domestic entities have reached agreements to sell portfolios of legacy assets and loans that will be completed during the coming months. The sales of these asset portfolios will extend the leveraging process, but will cause a notable improvement in the quality of assets of the system. During the first quarter of 2018, the assets and credit of Banco Santander were sold to Blackstone for a total gross amount of €30bn.

- Regarding portfolios, with data from September 2018, the volume of lending to households maintained practically the same level as September 2017, with a YoY decline in mortgage credit (-1.6%) and an increase of 7.2% of loans to households for purposes other than purchasing homes. As for loans to companies, the total fell by 6.4% due to a 15% decline in lending to real estate activities as a result of the aforementioned Banco Santander transaction. The other lending to companies dropped by 3.5%.

- Regarding the system’s NPLs, at 2018 year-end, the non-performing loan rate fell to 5.82%, with a 25.3% drop (197 basic points) in the year. The downward trend observed since December 2013 in non-performing loans was accentuated in 2018 due to the sale of Banco Popular’s asset portfolios, and fell by 28.2% YoY for the year (-€27.5bn from December 2017), marking a new annual maximum in the system’s effort to stabilise balance sheets. Since the NPL peaks reached in December 2013, the volume of doubtful debts has fallen by 64.4% (-€127bn). The non-performing loan volume fell continuously since January 2014.

- With data accumulated at December 2018, the new credit production maintained an upward trend (+9.0%) with growth in all portfolios. Despite that, the new annual production is approximately 40% of the production generated during the years prior to the crisis.

Key ratios

- In the first nine months of 2018, the efficiency and returns of the system recovered their levels prior to the resolution of Banco Popular. Thus, the ratio of efficiency improved from 57.1% in all of 2017 to 54.3%, and the operating expenses weighed less than 1% of the Average Total Assets (figure 6 appendix 1). This improvement of efficiency is due to the system having reached new historical maximums in terms of productivity. The levels of business volume and earnings per office in September 2018 were the highest levels in history.

- The returns of the system returned to positive territory in 2018 (figure 5 appendix 1). The ROE was at 6.3% and the ROA at 0.63%. The indicators of effort in provisions (provisions / net margin) and cost of risk (provisions / average total credit) fell substantially in the year, as we already mentioned (figure 1, appendix 1).

- The system's solvency continued to be very loose. The volume of balance-sheet capital (paid-up capital and accumulated reserves) reached 8.6% of total assets as of December 2018 (figure 3 appendix 1) and the balance sheet-equity multiplied the system's volume of non-performing loans by 3.2 (figure 2 appendix 1).
- Liquidity continued to not represent any problem. The funding gap (figure 4, appendix 1) also dropped in 2018 until reaching a new historical minimum—1.7% of the total balance sheet. This level is quite far from the maximum reached in 2007 (24% of the balance sheet), with a decline of over €670 bn.

International comparison[2]

The main conclusions from the most recent quarters are as follows:

- Spanish banks have more balance sheet-equity (+33%) and are more efficient (-8.9 p.p.) than their European competitors (figures 1 and 5, appendix 2).
- However, the system's NPL ratio continues to be higher (figure 2, Appendix 2) despite the decline in the volume of non-performing loans that accelerated during 2018.
- Yields returned to positive levels after the impacts of the losses derived from the resolution of Banco Popular in 2017 (figure 4, Appendix 2).
- Regarding the stabilisation of the balance sheet, the impairment of the 2017 coverage ratio caused by increased recognition of NPLs with Banco Popular was a one-time event (figure 3, appendix 2).

[2] The comparison of the Spanish banking system with the average of EU banks (Appendix 2) was carried out with data from the "Risk Dashboard" from the European Banking Authority (EBA), which contains the average of 158 of the main banking entities in the EU at the consolidated level. The latest data available is from September 2018.

2. Homogenisation of the framework of covered bonds in the European Union: analysis of the Spanish banking industry

Virginia Marcos / Victoria Santillana / Javier García Tolonen

The Spanish covered bond market is one of the most developed in Europe

The covered bond (cédulas) market is considered to be among the main funding sources for Spanish banks. However, despite being considered a product mainly dominated by European banks, the development of this market in the European Union has been very unequal. While Spain has a very mature market, and has been among the five main bond issuers in the EU, today there are up to nine Member States where no covered bond market has been developed[3], and thus, have very different characteristics from the other national regimes.

Given the importance of this market in Europe and with the aim of advancing in the development of the Capital Markets Union, the European Commission launched a new legislative proposal that resulted in a recent political agreement. It will take shape through a European Directive that will define the common elements for all covered bonds of the Member States and an amendment to article 129 of the CRR about its preferential treatment in capital. Among the main aspects that the new directive may include are the new liquidity requirements, the possible extension of the maturity of the bonds ("soft bullet") and the new overcollateralization limit, which depending on how it is provisioned, could imply having two simultaneous programmes, each with its own pool of assets.

Though the new directive is expected to have a limited impact given the development of the market, national transposition will be key

Focusing on the overcollateralization limit, an analysis has been carried out on a sample of nine Spanish entities with a total amount of mortgage bonds of €180 billion as of September 2018, 45% of which are listed. Their weighted average overcollateralization level is 171% of the eligible portfolio (that is, the volume of mortgages that comply with the conditions[4] to be used as collateral of the bonds above the volume of bonds issued). This ratio amply exceeds the legal minimum in Spain, currently 125%. For this analysis, only listed bonds with a three-year tenor as provided by the credit estimates of BBVA Research will be considered.

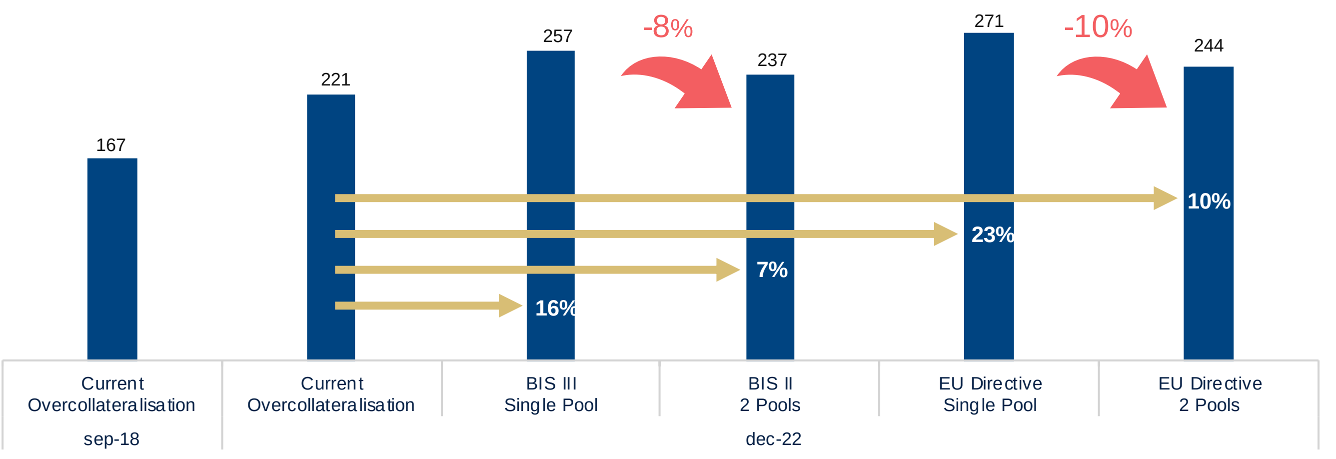
The objective of the analysis is to find out the impact on the capacity of issuance of a change in the level of overcollateralization, established at 125% in Spain, to the new level of 105% that will be set in the Directive, in accordance with the current drafts, or to the level recommended by the Basel III reform of December 2017 of 110%. In addition, for each one of the three scenarios of overcollateralization, there may be two options: a) one single pool of assets, and therefore, one single issuance programme; b) two pools of assets, each one with its own programme, one consisting of maintaining the current portfolio of collateral in *run-off* and another with the new production of collateral generated after the date of the new directive.

With an issuance capacity complying with the overcollateralization requirement of 125% of 167 billion (twice the total amount of covered bonds in the market), the different issuance capacities are calculated, taking into consideration the expected evolution of the portfolios and the maturity of the mortgage bonds. With just the natural

3: According to the working document of the European Commission of March 2018
4: One of the main conditions for eligibility is regarding the "loan to value" ratio, which must be lower than 80% in residential mortgages and up to 60% in commercial mortgages.

evolution of portfolios, an increase of 54 billion is expected in issuance capacity, *ceteris paribus*. This capacity would be expanded by an additional 36 billion by considering the minimum overcollateralization of 110% of Basel III, and by an additional 50 billion above the current outlook for December 2022 for a minimum overcollateralization of 105% forecast in the new directive. However, these issuance capacities under Basel III and the new Directive would be reduced by 8% and 10% (figure 1), respectively, when considering the option of two pools of assets, given that the run-off pool would maintain the initial overcollateralization (125%).

Figure 1 The Spanish banking industry's capacity to issue bonds under different scenarios (billion euros).



Source: BBVA Research based on data published by the companies and Bloomberg

That is, it seems that on a three-year time horizon, Spanish banks have ample room to issue mortgage bonds, even when the two programmes co-exist; and even more so in a regulatory environment where the MREL debt issuances are given priority over other financing sources. The proceeds of the new issuances of covered bonds may be used to repay the last TLTRO funding (with maturities starting in June 2020) or to build-up additional cash pools. The challenge for the future will be introduced at the national level when transposing the details of the future legal framework. For that reason, the characteristics that define that transposition will be key to maintaining a competitive instrument and that generates confidence in investors and the markt.

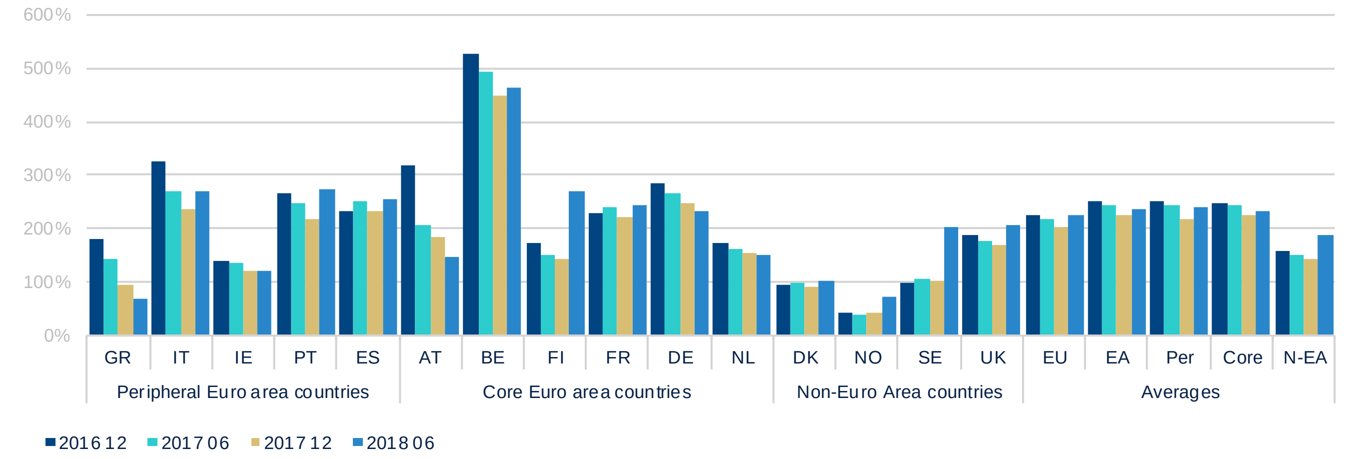
3. EU banks' sovereign exposure. Recent trends

María Rocamora

Evolution

According to data obtained from EBA[5], the European banking sector has reached its highest exposure to sovereign risk for the last three years, measured in absolute terms. However, in relative terms (measured as a percentage of Tier 1 capital) the evolution is stable, with a slight increase in the last semester (2017Q4-2018Q2). Data shows an increase in sovereign exposures over Tier 1 of 5pp in the latest 12-month period (2017Q2-2018Q2) for the total sample[6]. The increase is underpinned by non-Euro area countries[7] (+37pp yoy), because Core countries (-11pp) and Peripheral (-3pp) reduced the ratio. Although in aggregate total sovereign-to-Tier 1 ratio increases, the ratio decreases in seven financial systems. Five reduce the ratio due to a reduction of sovereign exposures (Greece, Ireland, Austria, Germany and Netherlands) and the other two (Italy and Belgium) due to an increase of Tier 1 in the period.

Figure 1 Total sovereign exposures, percentage points of Tier 1



Source: EBA and BBVA Research calculations

Is the bank-sovereign nexus as of June 2018 still alive?

In this section, we show the evolution in the period 2017Q2-2018Q2 of home sovereign exposures, measured in percentage points of Tier 1. The ratio of sovereign exposures over Tier 1 is a ratio currently used for the large exposures framework[8], of which sovereign exposures are now exempted but is being subject to policy debate in Europe[9].

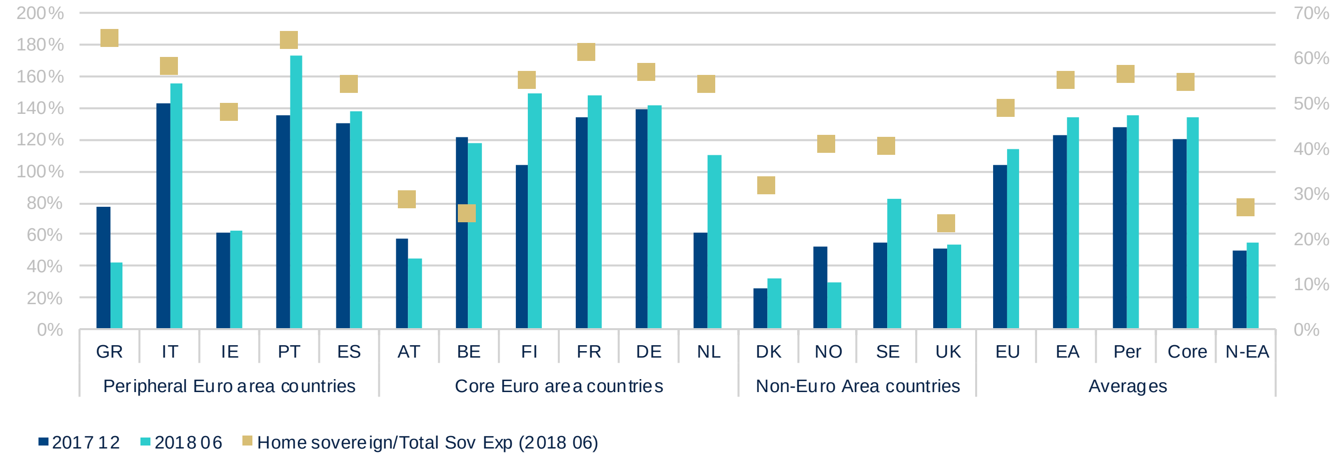
5: Scope: The information reported includes central governments, state or regional governments, and local governments, including administrative bodies and non-commercial undertakings. The information excludes public companies and private companies held by these administrations that have a commercial activity, social security funds and international organisations. Source: EBA Transparency Exercise Guidelines
6: Sample considered for evolution: 107 banks from 15 countries (Greece, Italy, Ireland, Portugal, Spain, Austria, Belgium, Finland, France, Germany, Netherlands, Denmark, Norway, Sweden, U.K.)
7: Non-Euro Area countries considered: Denmark, Norway, Sweden, United Kingdom.
8: Large exposure is defined as the sum of all exposures of a bank to a single counterparty, with an applicable limit of 25% of a banks' Tier 1 capital to any single counterparty.
9: In December 2017 the Basel Committee proposed the introduction of marginal risk weight add-ons for exposures above 100% of a banks' Tier 1. For additional information, see Nicolas Véron (2017): "Sovereign concentration charges: A new regime for banks'sovereign exposures" (Bruegel & Peterson Institute for International Economics).

The home sovereign-bank nexus was reinforced in the last semester. In the period 2017Q4-2018Q2, direct exposures to the local sovereign increased by 9% for the total sample, ranging from a rate of 2% in Peripheral countries to 13% in Core countries. With data as of June 2018, the home sovereign-to-Tier 1 ratio is above 100% for eight financial systems[10]. The home sovereign-to-Tier 1 ratio is 114% for the whole sample, with high heterogeneity between regions, ranging from 55% in non-Euro area countries and 136% in Peripheral countries to 135% in Core countries.

The feedback loop between banks and sovereigns has increased in most of the countries that have increased the exposures to home sovereign in the period 2017Q4-2018Q2, the exceptions being Greece, Austria and Norway. Finland, Netherlands and Sweden show the greatest increases, followed by Denmark and Portugal. The rest of countries show a more contained upward trend (less than 10%).

In the semester considered, exposures to home sovereign represent less than half of total sovereign exposures[11], a downward evolution from the level of December 2017, when home sovereign represented 50% of the total. Home sovereign still weights the most, representing 49% of total sovereign exposures as of June 2018 for the total sample, a figure ranging from 27% in non-Euro area countries, 54% in Core countries and 56% in Peripheral countries.

Figure 2 Home sovereign, percentage of Tier 1 (Breakdown by country) evolution



Source: EBA and BBVA Research calculations. For the purpose of interpreting the ratio of home sovereign-to-total sovereign exposures, note that banks are exempted from reporting sovereign exposures broken down by country of the counterparty when total non-domestic exposures are below 10% of the total exposures

10: Italy, Portugal, Spain, Belgium, Finland, France, Germany and Netherlands.
11: Note that banks are exempted from reporting sovereign exposures broken down by country of the counterparty when total non-domestic exposures are below 10% of the total exposures. Thus, if we could consider all exposures (including those with a weight below 10% in the total portfolio), home sovereign may represent less.

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4. EBA Risk Dashboard: the European banking industry improves its position in 2018

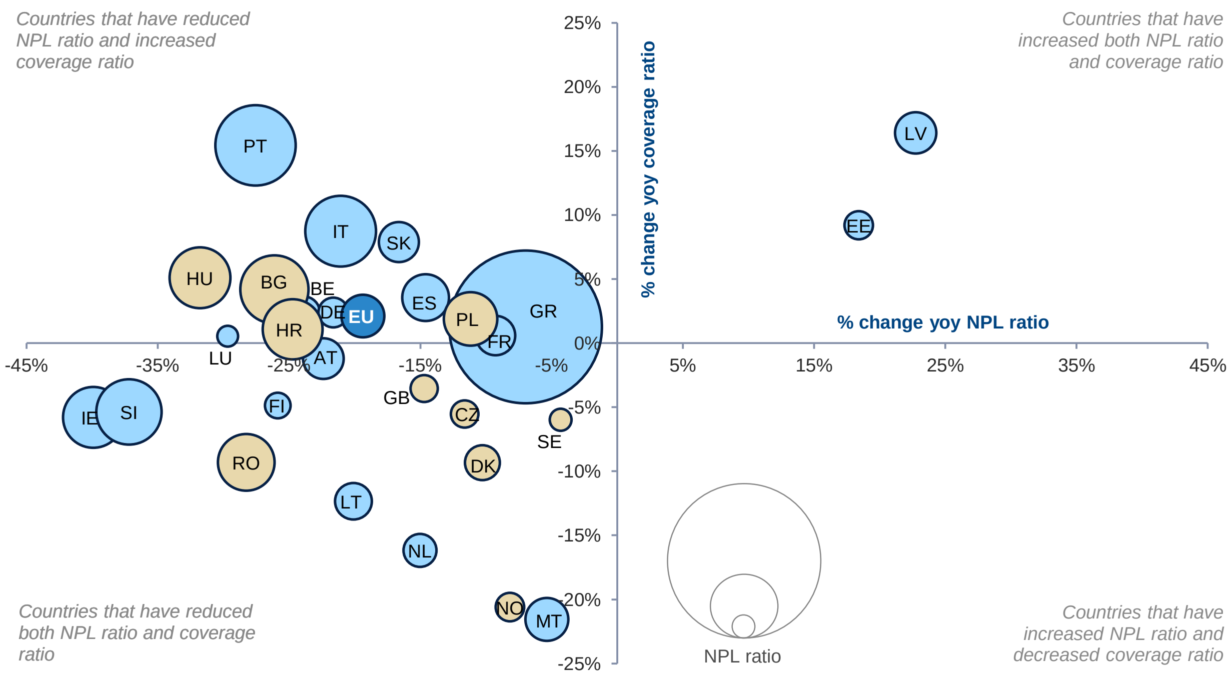
Adrián Santos

In January, the European Banking Authority (EBA) published its Risk Dashboard, with data up to the third quarter of 2018. In this publication, the EBA performed an analysis of the main risk factors and vulnerabilities of the European banking industry based on data provided by over 150 banking groups of the European Union that represent over approximately 80% of the EU banking system in terms of volume of assets with consolidated data.

Asset quality

European banks continue to significantly reduce their non-performing loan ratios, though at different speeds. Irish banks (-3.6 p.p. in the first nine months of 2018), Italian banks (-1.8 p.p.) and Greek banks (-1.6 p.p.) are the ones that have improved their asset quality the most, compared to an average decline of 0.6 p.p. for the EU banks as a whole, whose NPL ratio fell to 3.4% as of September 2018. This improvement has been accompanied by an increase in the coverage ratio of 1.1 p.p. on average for EU banks reaching 45.7%. However, some risks of economic nature (weak growth), politics (Brexit) and trade (protectionism), combined with a potential increase in interest rates, put this positive trend at risk in countries whose levels of unproductive assets are still very high.

Figure 1 Non-performing loan (NPL) ratio vs coverage ratio, Sep-18 vs Sep-17 (Eurozone countries in blue)



Size of the ball: NPL ratio
Source: European Banking Authority and BBVA Research

Solvency

The entering into force of IFRS9 in early 2018 has had a notable effect on the banks' capital ratios. At 2017 year-end, the European banking industry reported a fully loaded CET1 ratio of 14.6%, while it dropped to 14.4% at September 2018 due to the change in the accounting standards. Spanish banks were far from these levels, with an average ratio of 11.3%. However, if we measure solvency with the fully loaded leverage ratio, it was 5.4% for Spain, which is 0.3 p.p. higher that for the EU average. As a whole, all countries have improved their regulatory capital ratios in recent years due to a numerator effect (more capital), and especially, due to a denominator effect (lower risk-weighted assets).

Profitability and efficiency

Profitability, measured in terms of ROE, was 7.2% in September 2018, remaining stable in comparison to the previous quarter and with the data from one year ago. For its part, ROA reached 0.49%, versus 0.40% in 2017 and 0.21% in 2016. Nevertheless, despite the improvement, profitability levels remain below the cost of equity in most cases. In addition, the main driver of this improvement has been the reduction of the bank's cost of risk, translated into a fewer provisions. In fact, if we observe the net interest margin (net interest revenue over average total assets), this has gradually increased in recent quarters to 1.44%.

Among the larger EU countries, Spain banks' profitability is the highest as of September 2018, with ROE of 9.0%[12]. Compared to the other large European countries, it also has the most efficient banking system, with an efficiency ratio of 51.9%, compared to the 63.2% average of the EU. On the contrary, the cost-to-income ratio of German and French banks remained above 80% and 70%, respectively.

Table 1 Main indicators of EU banks

	Dec-14	Dec-15	Dec-16	Dec-17	Sep-18	qoq (bps)	yoy (bps)
Efficiency							
Cost-to-income ratio	62.9%	62.8%	65.3%	63.4%	63.2%	-56 bps	+149 bps
Profitability							
ROE	3.5%	4.5%	3.3%	6.0%	7.2%	+3 bps	+6 bps
ROA	0.20%	0.28%	0.21%	0.40%	0.49%	+1 bps	+1 bps
NIM	1.6%	1.6%	1.5%	1.47%	1.44%	+0 bps	-1 bps
Liquidity							
LCR	.	.	141%	148%	149%	+30 bps	+401 bps
Loan-to-deposits ratio	125%	122%	119%	117%	118%	+8 bps	+47 bps
Solvency							
CET 1 ratio (fl)	11.5%	12.9%	13.7%	14.6%	14.5%	+18 bps	+16 bps
Leverage ratio (fl)	.	.	5.1%	5.4%	5.1%	+1 bps	-3 bps
Asset quality							
NPL ratio	6.5%	5.7%	5.1%	4.1%	3.4%	-17 bps	-82 bps
Coverage ratio	43.4%	43.7%	44.8%	44.6%	45.7%	-28 bps	+95 bps

Source: European Banking Authority and BBVA Research

12: Average of the ROE of the main Spanish banking groups in consolidated terms.

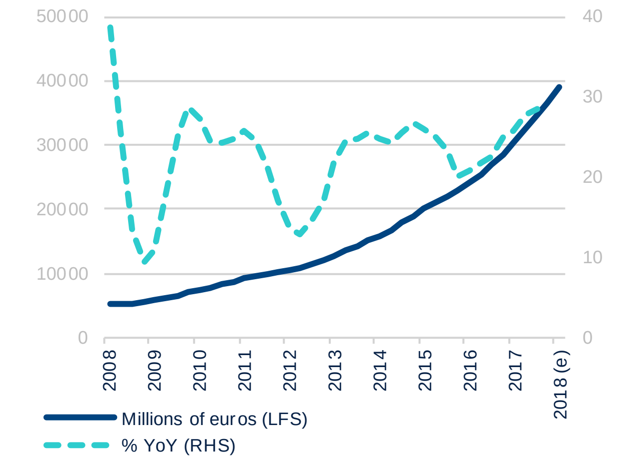
5. The (difficult) co-existence between e-commerce and traditional commerce: an analysis with BBVA data[13]

Javier Alonso / Hicham Ganga

In this section, we analysed the role that Business-to-Consumer (B2C) e-commerce plays as a complement to or replacement for physical (traditional) commerce.

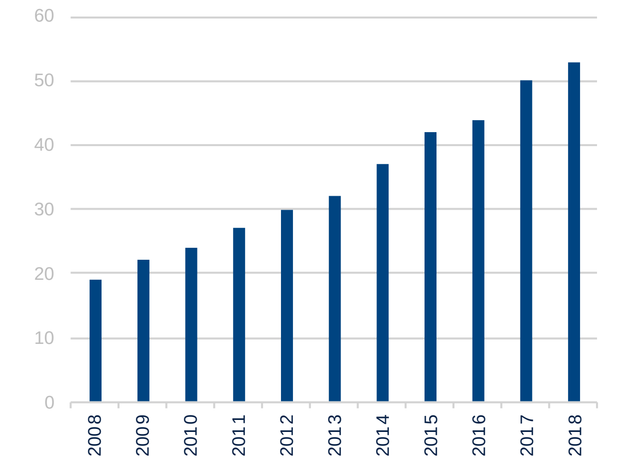
The weight of e-commerce in Spain has grown exponentially in the last decade. In mid-2018, revenue reached 35 billion euros, 7.5 times more than in 2008.[14] In addition, its penetration rate, estimated by the percentage of the population between 16 and 74 years that made at least one online purchase in the last twelve months, exceeded 53% in 2018, 35 percentage points more than in 2008 (figures 1 and 2).[15] This data contrasts with the evolution of revenue from traditional retail trade, which dropped by more than 4% in the same period, and the meagre growth of the population between 16 and 74 years (0.3%).

Figure 1. Spain: revenue from e-commerce
(Last 4 quarters)



(e) Estimate.
Source: BBVA Research through CNMC

Figure 2. Spain: penetration rate of e-commerce
(% of people between 16 and 74 years old who have purchased online in the last twelve months)



Source: BBVA Research based on INE (Spanish National Institute of Statistics) data

The results show that the weight of e-commerce has increased in recent years, reaching up to 20% of consumer spending and 10% of companies' revenue. This confirms the existence of a relationship of interchangeability between the digital and physical channels, and that a growing proportion of online demand in Spanish households is being satisfied by companies that operate abroad.[16] The volume of online purchases from foreign countries by

13: Given that there is no public information that compiles data on physical and electronic transactions carried out by the same agents, the more than 4 billion sales transactions with credit/debit cards made by BBVA customers since 2015 were used. Customers who have provided their consent for the anonymous processing of information. The results of this box are limited to the universe of BBVA customers (physical or legal persons) and not to the Spanish economy as a whole. Therefore, the terms "consumers", "population", "users", "companies", etc. refer to said universe.
14: Based on data synthesised by the Spanish Commission on Financial Markets and Competition (CNMC). See http://data.cnmc.es/datagraph/
15: Survey about the equipment and use of information technologies and communication in homes, prepared by the INE. See http://www.ine.es/dyngs/INEbase/es/operacion.htm?c=Estadistica_C&cid=1254736176741&menu=resultados&idp=1254735576692
16: As was shown in Table 1 of the magazine The Situation of Consumption corresponding to the second half of 2017, the sales aggregators, like Amazon and Aliexpress, and the music stores and applications, like App Store and Google Play Store, concentrate a growing volume of online expenses. See https://www.bbvaresearch.com/wp-content/uploads/2018/01/Situacion_Consumo_2S17.pdf

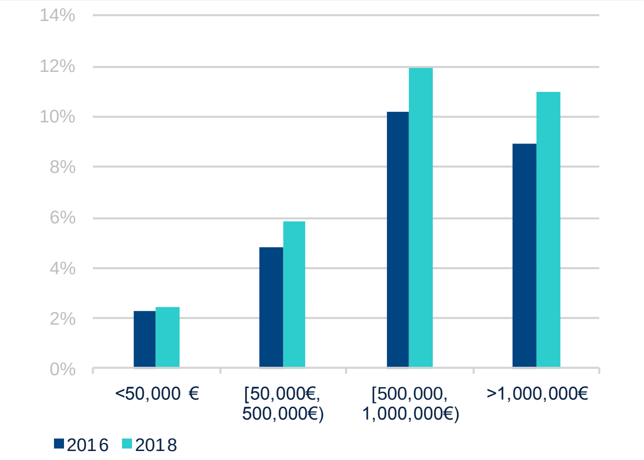
BBVA customers has increased by 160% since 2015, whereas it only doubled for Spanish companies. Therefore, imports represented close to 60% of online spending by Spanish consumers in 2018, 10 points above the figure in 2015.

Who is leading e-commerce?

Based on the data analysed, the activities that recorded the most growth in terms of online trade were those where the maturity of the electronic channel was greatest, and therefore, its market share was as well, such as travel booking, athletic clothing and toys, transport services, real estate services and books, press and magazines. However, excluding some exceptions, they were not among the sectors in which digitalisation advanced with the greatest speed (such as restaurants, accommodations, fashion and food). On the other hand, e-commerce has gained a presence in company's revenue, regardless of their volume of sales (Figure 3), even though size still is important. The weight of the digital channel exceeded 12% among companies that billed more than 500,000 euros in 2018, while it barely reached 2% in smaller companies.

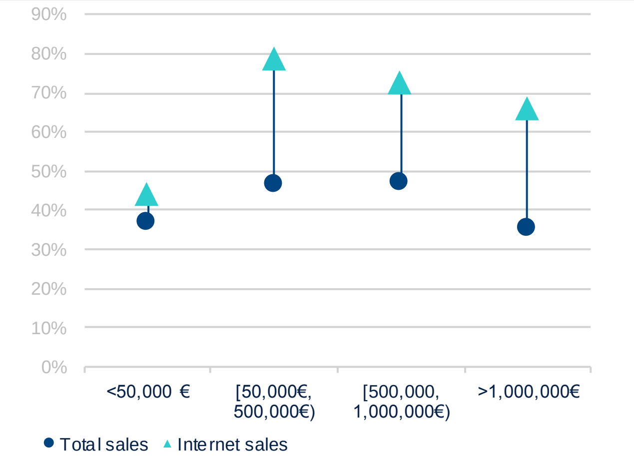
It has been shown that the increase of the market share of online commerce is greater the higher the volume of revenue is. The weight of online sales increased two points between 2016 and 2018 in companies that billed over 1,000,000 euros, and by just one-tenth of a point in companies that bill less than 50,000 euros. This fact, combined with the scarce growth of online sales in relation to in-person sales in smaller companies suggests that they are lagging behind in the race toward digitalisation (Figure 4).

Figure 3 Participation of e-commerce in sales with a card per billing group of the company* (%)



* BBVA customer companies.
Source: BBVA Research

Figure 4 Sales with card by channel and billing group of the company* (Variation 2016-2018, %)



* BBVA customer companies.
Source: BBVA Research

Finally, the available information not only reveals a notable heterogeneity of the penetration of e-commerce by sector and size of the company, but also by the geographic location. The participation of online sales is comparatively high in some of the most prosperous provinces, like Madrid, Barcelona, Zaragoza and the Balearic Islands, and in other smaller interior provinces, like Huesca, Burgos and Albacete. On the contrary, it does not reach 2.5% in Ceuta and Melilla, Segovia, Soria, Cádiz, Caceres and Guadalajara.

Appendix 1: Main indicators of the Spanish banking system

Table A.1 Summary of the banking system balance sheet (Billion euros and percentage change)

									Growth rate		
Assets	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Date**	**00-'08**	**08 - latest**	**y-on-y**
Total lending	1,951	1,716	1,651	1,603	1,556	1,532	1,512	Dec-18	217%	-30.5%	-1.3%
Public corporations	*114*	*87*	*101*	*90*	*88*	*78*	*69*	*Dec-18*	*69%*	*30.3%*	*-11.7%*
Domestic resident sector	*1,605*	*1,448*	*1,380*	*1,327*	*1,276*	*1,254*	*1,206*	*Dec-18*	*234%*	*-35.5%*	*-3.9%*
Non residents	*232*	*180*	*169*	*186*	*191*	*200*	*237*	*Dec-18*	*164%*	*-6.4%*	*18.7%*
Fixed income securities and equity stakes	766	773	754	662	610	589	564	Dec-18	132%	13.4%	-4.2%
Fixed income securities	*509*	*493*	*492*	*415*	*366*	*330*	*326*	*Dec-18*	*135%*	*0.1%*	*-1.1%*
Of which: sovereign debt	*247*	*264*	*288*	*251*	*225*	*206*	*200*	*Dec-18*	*6%*	*100%*	*-2.6%*
Equity	*258*	*280*	*262*	*246*	*244*	*260*	*238*	*Dec-18*	*128%*	*38.7%*	*-8.1%*
Interbank lending	279	211	155	164	163	235	212	Dec-18	81%	-19.5%	-9.7%
Other assets (net of interbank lending/deposits)	426	326	354	331	319	297	287	Dec-18	230%	0.0%	-3.4%
Total assets	**3,423**	**3,026**	**2,913**	**2,760**	**2,647**	**2,653**	**2,575**	**Dec-18**	**184%**	**-20.1%**	**-2.9%**
Liabilities and Shareholders' Equity											
Customer deposits	1,725	1,684	1,686	1,637	1,578	1,539	1,549	Dec-18	169%	-23.1%	0.6%
Public corporations	*69*	*63*	*76*	*77*	*54*	*62*	*72*	*Dec-18*	*263%*	*-5.6%*	*16.3%*
Domestic resident sector	*1,317*	*1,314*	*1,289*	*1,261*	*1,243*	*1,203*	*1,213*	*Dec-18*	*192%*	*-15.3%*	*0.8%*
Non residents	*339*	*306*	*320*	*299*	*281*	*275*	*264*	*Dec-18*	*113%*	*-47.7%*	*-3.9%*
Interbank deposits	573	381	312	303	288	327	285	Dec-18	95%	-9.4%	-12.9%
Pro memoria: net interbank position	*294*	*171*	*157*	*139*	*125*	*93*	*73*	*Dec-18*	*215%*	*41.6%*	*-20.8%*
Debt issued	394	297	249	225	201	222	225	Dec-18	625%	-42.9%	1.4%
Other liabilities	535	430	436	368	352	331	293	Dec-18	253%	-8.4%	-11.4%
Shareholders' equity	195	233	230	227	227	232	223	Dec-18	134%	23.3%	-4.2%
Pro memoria: ECB funding	*357*	*207*	*142*	*133*	*140*	*168*	*168*	*Dec-18*	*566%*	*80.6%*	*-1.7%*
Total Liabilities and Shareholders' Equity	**3,423**	**3,026**	**2,913**	**2,760**	**2,647**	**2,653**	**2,575**	**Dec-18**	**184%**	**-20.1%**	**-2.9%**

Source: Banco de España Statistical Bulletin

Table A.2 Summarised banking system balance sheet. Cumulative annual earnings and percentage change (Millions of Euros)

	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate 00-'08	Growth rate 08-latest	Growth rate y-on-y
Net interest revenue	32,739	26,816	27,118	26,410	24,297	23,229	17,386	Sep-18	92%	-34.1%	-1.6%
Net fees and commissions	11,275	10,931	11,257	11,237	11,062	11,751	9,081	Sep-18	79%	-7.0%	2.4%
Trading gains and other revenue	15,493	17,797	17,043	13,885	13,070	11,758	9,269	Sep-18	276%	-32.1%	16.1%
Total revenue	**59,507**	**55,544**	**55,418**	**51,532**	**48,429**	**46,737**	**35,736**	**Sep-18**	**118%**	**-28.2%**	**3.5%**
Operating expenses	-26,951	-26,798	-26,116	-26,261	-26,388	-26,667	-19,395	Sep-18	54%	-12.4%	-2.5%
Personnel expenses	-15,587	-15,108	-14,329	-14,182	-13,943	-13,935	-10,199	Sep-18	54%	-24.0%	-0.2%
Other operating expenses	-11,364	-11,690	-11,787	-12,079	-12,445	-12,733	-9,196	Sep-18	54%	5.6%	-5.0%
Pre-provision profit	**32,556**	**28,746**	**29,302**	**25,271**	**22,041**	**20,070**	**16,340**	**Sep-18**	**226%**	**-40.9%**	**11.8%**
Loan-loss provisions	-82,547	-21,800	-14,500	-10,699	-8,344	-9,127	-2,209	Sep-18	620%	-80.7%	-70.4%
Other income, net	-37,142	-2,789	-1,739	-3,819	-7,006	-11,586	-1,694	Sep-18	-299%	82.1%	-83.5%
Profit before taxes	-87,133	4,156	13,063	10,753	6,691	-643	12,437	Sep-18	108%	-18.7%	-498.0%
Net attributable income	**-73,706**	**8,790**	**11,343**	**9,312**	**6,003**	**-3,916**	**10,685**	**Sep-18**	**122%**	**-22.7%**	**-315.4%**

Source: Banco de España Statistical Bulletin

Table A.3 Relative size and resources of the system (Percentage of GDP, number and percentage change)

	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate 00-'08	Growth rate 08-latest	Growth rate y-on-y
Lending to the private sector / GDP	152%	139%	133%	123%	114%	108%	100%	Dec-18	94%	-40.4%	-7.1%
Private sector deposits / GDP	125%	126%	124%	117%	111%	103%	100%	Dec-18	69%	-21.7%	-2.6%
Number of employees	236,504	217,878	208,291	202,961	194,283	192,626	n.d.	Dec-17	14%	-30.8%	-0.9%
Number of branches	38,237	33,786	32,073	31,155	28,959	27,623	26,775	Sep-18	17%	-42.0%	-4.0%

Source: Banco de España Statistical Bulletin

Table A.4 Breakdown of ORS lending, NPLs and NPL ratios by portfolio (Billion euros and percentage change)

Lending volume	2012	2012	2013	2014	2015	2016	2017	Date	Growth rate 00-'08	Growth rate 08 - latest	Growth rate y-on-y
Loans to households	**756**	**715**	**690**	**663**	**652**	**647**	**648**	**Sep-18**	**236%**	**-20.9%**	**0.3%**
Of w hich:											
Housing loans	605	581	558	531	517	503	499	Sep-18	270%	-20.4%	-1.6%
Other loans to households	151	134	132	132	136	144	149	Sep-18	159%	-22.5%	7.2%
Lending to corporates and SMEs	**830**	**719**	**674**	**644**	**605**	**592**	**550**	**Sep-18**	**237%**	**-45.9%**	**-6.4%**
Of w hich:											
Lending to real estate	300	237	200	179	161	145	125	Sep-18	517%	-73.3%	-15.1%
Other lending to corporates and SMEs	530	482	474	465	444	447	424	Sep-18	142%	-22.4%	-3.5%
Total lending to domestic private sector *	**1,605**	**1,448**	**1,380**	**1,327**	**1,276**	**1,254**	**1,206**	**Dec-18**	**234%**	**-35.5%**	**-3.9%**
Non-performing loans											
Loans to households	**37.0**	**49.4**	**46.8**	**37.0**	**35.7**	**35.0**	**33.1**	**Sep-18**	**1062%**	**36.1%**	**-6.8%**
Of w hich:											
Housing loans	24.0	34.6	32.6	25.5	24.1	23.6	21.2	Sep-18	1878%	43.2%	-10.1%
Other loans to households	13.0	14.8	14.1	11.4	11.6	11.4	11.9	Sep-18	607%	25.0%	-0.2%
Lending to corporates and SMEs	**128.4**	**146.1**	**124.6**	**94.2**	**79.2**	**60.7**	**40.6**	**Sep-18**	**818%**	**8.9%**	**-38.0%**
Of w hich:											
Lending to real estate	84.8	87.8	70.7	50.4	42.4	28.2	14.4	Sep-18	2790%	-46.4%	-53.9%
Other lending to corporates and SMEs	43.6	58.2	53.9	43.7	36.8	32.4	26.2	Sep-18	232%	151.5%	-23.5%
Total lending to domestic private sector *	**167.5**	**197.2**	**172.6**	**134.3**	**116.3**	**97.7**	**70.2**	**Dec-18**	**808%**	**11.3%**	**-28.2%**
NPL ratio											
Loans to households	**4.9%**	**6.9%**	**6.8%**	**5.6%**	**5.5%**	**5.4%**	**5.1%**	**Sep-18**	**246%**	**72.0%**	**-7.0%**
Of w hich:											
Housing loans	4.0%	6.0%	5.9%	4.8%	4.7%	4.7%	4.3%	Sep-18	434%	79.9%	-8.6%
Other loans to households	8.6%	11.1%	10.7%	8.7%	8.5%	7.9%	8.0%	Sep-18	173%	61.3%	-6.9%
Lending to corporates and SMEs	**15.5%**	**20.3%**	**18.5%**	**14.6%**	**13.1%**	**10.3%**	**7.4%**	**Sep-18**	**173%**	**101.4%**	**-33.7%**
Of w hich:											
Lending to real estate	28.2%	37.1%	35.3%	28.2%	26.4%	19.5%	11.5%	Sep-18	369%	100.9%	-45.7%
Other lending to corporates and SMEs	8.2%	12.1%	11.4%	9.4%	8.3%	7.3%	6.2%	Sep-18	37%	224.2%	-20.7%
Total lending to domestic private sector *	**10.4%**	**13.6%**	**12.5%**	**10.1%**	**9.1%**	**7.8%**	**5.8%**	**Dec-18**	**172%**	**72.6%**	**-25.3%**

(*) Total ORS lending includes total lending to households, total lending for productive activities, non-profit institutions serving households (NPISHs) and unclassified lending. As of January 2014 it includes lending to banking institutions.
Source: Banco de España Statistical Bulletin

Table A.5 New lending transactions. Cumulative annual volume (Billion euros and percentage change)

Lending volume	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate 03-'08	Growth rate 08-'18	Growth rate y-on-y
Loans to households	**63.3**	**51.2**	**60.5**	**75.7**	**80.6**	**87.6**	**99.4**	**Dec-18**	**0.7%**	**-46.5%**	**13.5%**
Of which:											
Housing loans	32.3	21.9	26.8	35.7	37.5	38.9	44.4	Dec-18	-15.6%	-49.0%	14.2%
Other loans to households	31.0	29.4	33.7	40.0	43.1	48.8	55.0	Dec-18	21.3%	-44.3%	12.9%
Lending to corporates and SMEs	**484.8**	**392.6**	**357.2**	**392.6**	**323.6**	**339.0**	**365.7**	**Dec-18**	**29.2%**	**-60.6%**	**7.9%**
Of which:											
Less than €250,000	114.4	106.1	112.3	128.7	133.6	143.4	149.4	Dec-18	n.d.	-9.0%	4.2%
Between €250,000 and €1million)	31.6	28.3	34.0	36.8	36.3	40.6	44.3	Dec-18	n.d.	-3.7%	9.2%
Corporates (loans > €1mill.)	338.9	258.2	210.3	227.2	152.6	155.1	172.0	Dec-18	43.5%	-62.2%	10.9%
Total new lending flows	**548**	**444**	**418**	**468**	**404**	**427**	**465.1**	**Dec-18**	**23%**	**-58.3%**	**9.0%**

Source: Banco de España

Table A.6 Information on resident deposits (Billion euros and percentage change)

	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate 00-'08	Growth rate 08 - latest	Growth rate y-on-y
Sight deposits	475	500	563	650	754	857	931	Dec-18	90%	111.3%	8.6%
Term deposits	693	677	597	509	404	286	231	Dec-18	272%	-68.8%	-19.2%
Total retail deposits	**1,168**	**1,177**	**1,160**	**1,159**	**1,157**	**1,143**	**1,163**	**Dec-18**	**163%**	**-1.7%**	**1.7%**
Other deposits											
Repurchase agreements	60	64	60	42	32	28	23	Dec-18	-23%	-73.1%	-17.9%
Funds from financial asset transfers	43	37	32	25	23	21	20	Dec-18	14%	-78.1%	-5.7%
Hybrid financial liabilities	20	16	22	17	14	10	7	Dec-18	33%	-75.2%	-30.1%
Subordinated deposits	26	20	16	18	16	1	0	Dec-18	n.m.	-99.2%	-27.1%
Pro-memoria: Deposits in foreign currency	*30*	*30*	*27*	*29*	*28*	*17*	*15*	*Dec-18*	*739%*	*-58.1%*	*-11.9%*
Total deposits of domestic resident sector	**1,317**	**1,314**	**1,289**	**1,261**	**1,243**	**1,203**	**1,213**	**Dec-18**	**159%**	**-15.3%**	**0.8%**

Source: Banco de España Statistical Bulletin

Table A.7 Interest rates on lending transactions (Percentages and change in basis points)

	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate (bps) 03-'08	08 - latest	y-on-y
Loans. Stock (NDER)											
Loans to households											
Housing loans	2.61	2.11	1.89	1.53	1.30	1.21	1.22	Dec-18	178	-443	1
Other loans to households	5.78	5.80	6.10	5.98	6.17	6.24	6.30	Dec-18	113	-77	6
Loans to corporates and SMEs	3.47	3.44	2.84	2.38	2.04	1.89	1.89	Dec-18	204	-367	-1
Loans. New lending transactions (APRC)											
Loans to households											
Housing loans	2.93	3.16	2.64	2.31	2.19	2.05	2.18	Dec-18	238	-365	13
Consumer loans	8.32	9.52	9.10	8.45	8.06	8.27	8.31	Dec-18	237	-269	4
Other	6.23	5.92	4.93	4.19	4.27	4.01	4.12	Dec-18	224	-292	11
Loans to corporates and SMEs (synthetic average)	3.66	3.57	2.73	2.58	2.29	2.12	2.01	Dec-18	112	-287	-11
Less than €250,000	5.67	5.54	4.53	3.59	3.28	2.93	2.71	Dec-18	n.a.	-184	-22
Between €250,000 and €1million)	4.27	4.03	2.91	2.20	1.91	1.80	1.74	Dec-18	n.a.	-214	-5
Corporates (loans > €1mill.)	3.00	2.83	2.10	2.07	1.63	1.56	1.64	Dec-18	n.a.	-106	8

NDER: Narrowly Defined Effective Rate (APRC excluding commissions).
APRC: Annual Percentage Rate of Charge.
Source: Banco de España Statistical Bulletin

Table A.8 Interest rate on deposits (Percentage terms and change in basis points)

	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate (bps) 03-'08	08 - latest	y-on-y
Deposits. Stock (NDER)											
Households deposits											
Sight deposits	0.21	0.22	0.17	0.12	0.06	0.04	0.04	Dec-18	6.5	-65	0
Term deposits	2.72	2.08	1.39	0.75	0.30	0.16	0.12	Dec-18	232	-429	-4
Corporates and SMEs deposits											
Sight deposits	0.37	0.35	0.31	0.24	0.15	0.10	0.10	Dec-18	111	-167	0
Term deposits	2.64	1.93	1.40	0.91	0.65	0.77	0.63	Dec-18	223	-375	-14
Deposits. New transactions (NDER)											
Households deposits											
Sight deposits	0.21	0.22	0.17	0.12	0.06	0.04	0.04	Dec-18	30	-65	0
Term deposits	2.83	1.50	0.66	0.39	0.11	0.08	0.05	Dec-18	225	-413	-3
Corporates and SMEs deposits											
Sight deposits	0.37	0.35	0.31	0.24	0.15	0.10	0.10	Dec-18	111	-167	0
Term deposits	2.08	1.31	0.51	0.31	0.13	0.16	0.37	Dec-18	146	-310	21

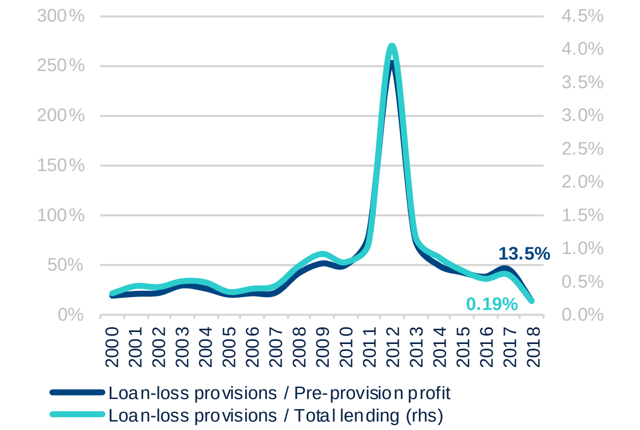
NDER: Narrowly Defined Effective Rate (APR ex commissions).
APR: Annual Percentage Rate.
Source: Banco de España Statistical Bulletin

Table A.9 Key ratios

	2012	2013	2014	2015	2016	2017	2018	Date	Growth rate 00-'08	08-latest	y-on-y
Productivity											
Business volume* per branch (€'000)	76,409	81,761	83,229	83,085	86,975	88,942	90,324	Dec-18	168.2%	26.3%	2.5%
Profit before tax per branch (€'000)	-2,279	123.0	407.3	345.2	231	-23.3	619.3	Sep-18	77.5%	40.2%	-514.4%
Efficiency											
Cost-to-Income ratio (Oper. expenses / Total revenue)	45.3%	48.2%	47.1%	51.0%	54.5%	57.1%	54.3%	Sep-18	-29.3%	22.1%	-5.8%
Operating expenses / ATA	0.79%	0.83%	0.88%	0.93%	0.98%	1.01%	0.99%	Sep-18	-43.4%	3.4%	5.9%
Profitability											
RoE	-35.5%	4.1%	4.9%	4.1%	2.6%	-1.7%	6.3%	Sep-18	-3.4%	-39.6%	-318.5%
RoA	-2.55%	0.13%	0.44%	0.38%	0.25%	-0.02%	0.63%	Sep-18	-23.6%	-4.0%	-511.3%
NIM (Net interest rev. / ATA)	0.96%	0.83%	0.91%	0.93%	0.90%	0.88%	0.89%	Sep-18	-29.6%	-22.2%	1.7%
Liquidity											
Loans-to-Deposits (resident sector)	137%	123%	119%	115%	110%	110%	104%	Dec-18	14.8%	-34.4%	-5.4%
Funding gap (Loans - Deposits, EUR bn)	436.8	270.9	220.1	168.3	118.9	110.4	42.9	Dec-18	349%	-93.8%	-61.2%
Funding gap / Total assets	12.8%	9.0%	7.6%	6.1%	4.5%	4.2%	1.7%	Dec-18	57.7%	-92.2%	-60.0%
Solvency and Asset Quality											
Leverage (Shareholders' equity / Total assets)	5.7%	7.7%	7.9%	8.2%	8.6%	8.8%	8.6%	Dec-18	-17.8%	54.3%	-1.3%
Shareholders' equity / NPLs	117%	118%	133%	169%	196%	238%	317%	Dec-18	-74.3%	10.8%	33.4%
Provisioning effort (Loan-loss prov. / Pre-provision profit)	253.6%	75.8%	49.5%	42.3%	37.9%	45.5%	13.5%	Sep-18	121%	-67.3%	-73.5%
Cost of Risk (Loan-loss provisions / total lending)	4.07%	1.19%	0.86%	0.66%	0.53%	0.59%	0.19%	Sep-18	134%	-73.1%	-7.1%
NPL ratio (resident sector)	10.4%	13.6%	12.5%	10.1%	9.1%	7.8%	5.82%	Dec-18	172%	73%	-25.3%
NPL coverage ratio (total)	73.8%	58.0%	58.1%	58.9%	58.9%	60.0%	60.9%	Dec-18	-58.2%	-13.9%	1.6%
NPL coverage ratio (specific provisions)	44.7%	46.9%	46.7%	47.0%	46.2%	42.1%	45.2%	Sep-18	-39.0%	51.2%	21.8%

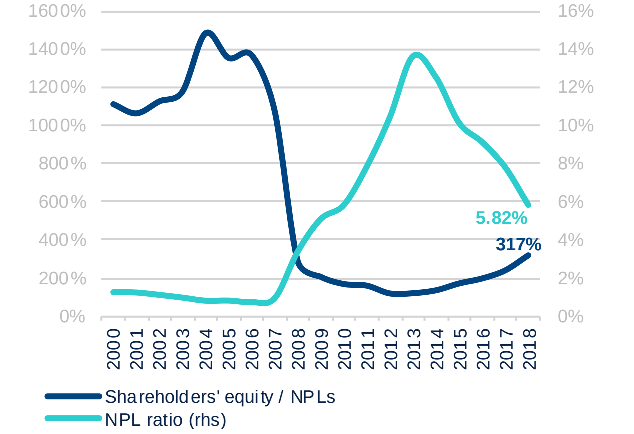
(*) ORS Credit plus ORS Deposits.
Source: Banco de España Statistical Bulletin

Figure A1.1 Provisioning burden



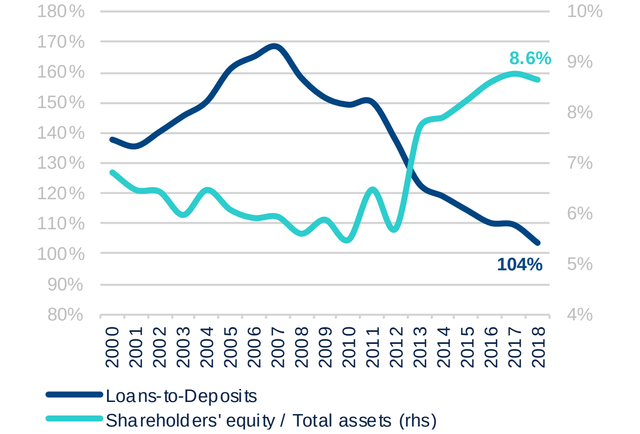
Source: BBVA Research

Figure A1.2 NPLs and Capital as a percentage of NPLs



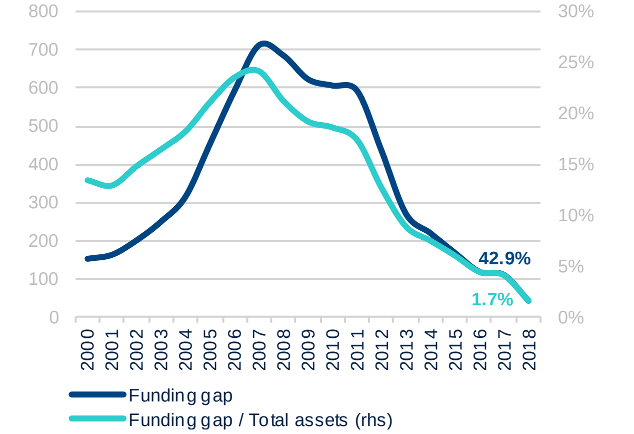
Source: BBVA Research

Figure A1.3 Liquidity and leverage



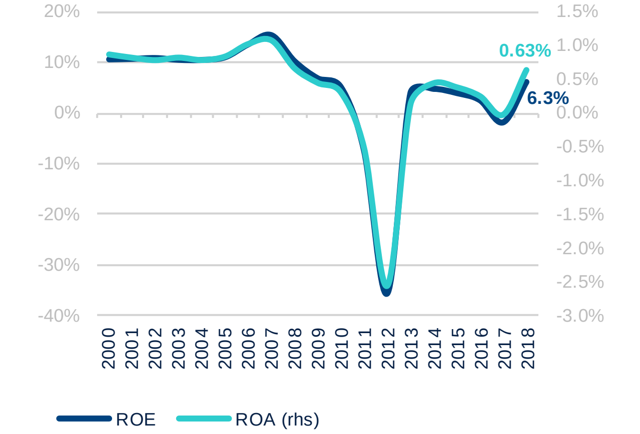
Source: BBVA Research

Figure A1.4 Funding gap (loans less deposits)



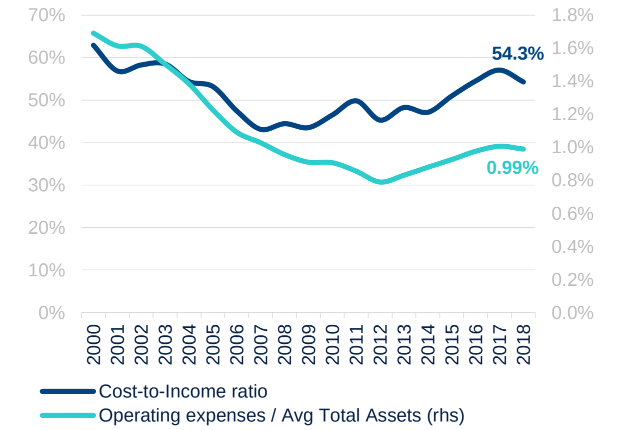
Source: BBVA Research

Figure A1.5 Profitability



Source: BBVA Research

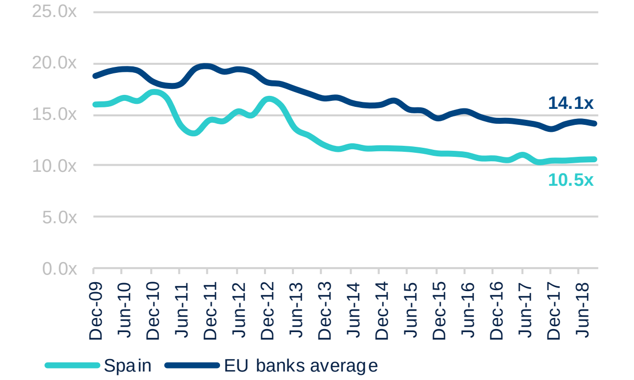
Figure A1.6 Efficiency



Source: BBVA Research

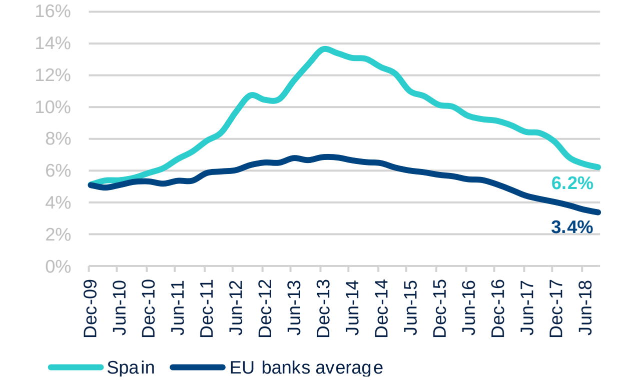
Appendix 2: Trends and developments in the Spanish banking sector

Figure A2.1 Total liabilities / Balance sheet capital



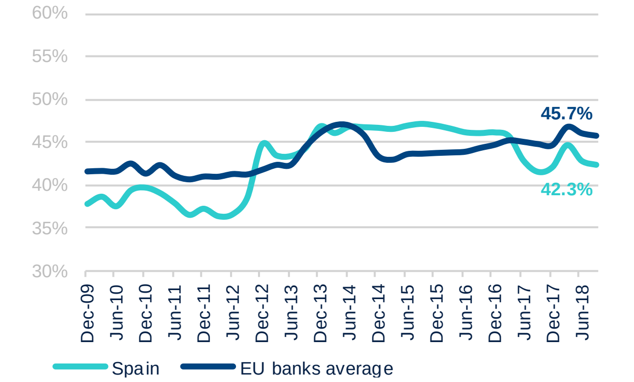
Source: EBA, Banco de España, BBVA Research

Figure A2.2 NPL ratio



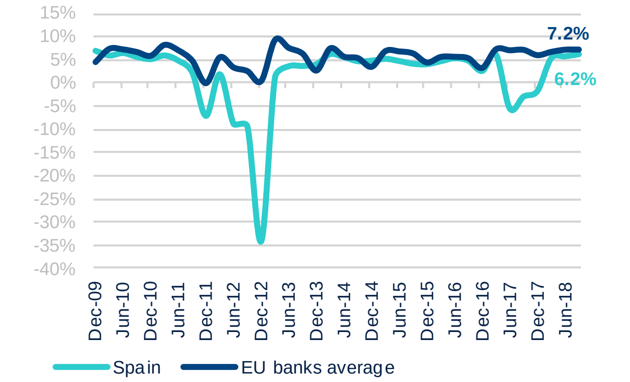
Source: EBA, Banco de España, BBVA Research

Figure A2.3 Coverage ratio
(specific provisions only).



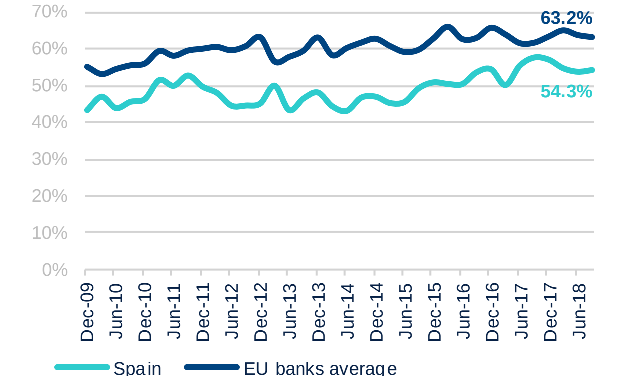
Source: EBA, Banco de España, BBVA Research

Figure A2.4 ROE



Source: EBA, Banco de España, BBVA Research

Figure A2.5 Efficiency ratio



Source: EBA, Banco de España , BBVA Research

Note: the data for European banks on average comes from the EBA's Risk Dashboard, which comprises a panel of 158 major EU banks.

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