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RISKS TO THE FINANCIAL SECTOR AND ITS RESILIENCE

2 RISKS TO THE FINANCIAL SECTOR AND ITS RESILIENCE

Chapter 2 of this FSR analyses the Spanish banking sector's response to the severe adverse shocks triggered by the COVID-19 pandemic, and their transmission through interconnections within the financial system. In 2019, the Spanish banking sector continued the process of deleveraging and improving credit quality, and slightly increased its solvency. Its profitability fell, due in part to extraordinary factors, and held at lows levels below the cost of capital. Against this backdrop, the outbreak of the COVID-19 pandemic and the necessary containment measures adopted have adversely affected the outlook for the banking sector, as they are expected to have a negative impact on NPLs, driving additional profitability downwards. In this connection, it should be considered that income statements have less headroom than at the beginning of the century and that the NPL ratio is higher than that which existed prior to the global financial crisis. Moreover, there is significant disparity among institutions. The sector has substantial capital buffers to absorb the unexpected losses associated with this crisis, although not all institutions are in the same position. Furthermore, the early action taken by national and international authorities is expected to soften their impact. In any event, the sector's performance and the interactions between the financial system's different sub-sectors will need to be monitored closely, given the significant interconnections among segments and the growth of non-bank financial intermediation in recent years.

2.1 Deposit institutions

2.1.1 Balance sheet structure, risks and vulnerabilities

Credit risk

In 2019, Spanish deposit institutions continued to reduce the volume of lending on their balance sheets. The outstanding balance decreased by 1.3% year-on-year in 2019 Q4, a more moderate rate of decline than in previous quarters (see Chart 2.1). In turn, the rate of change in new loans to households and non-financial corporations in the 12 months to December 2019 was 1.9%, compared with 15.5% to December 2018. Despite the lower growth of new loans, the fall in the stock of bank loans to households moderated, as the number of existing loans removed from the balance sheet was reduced.

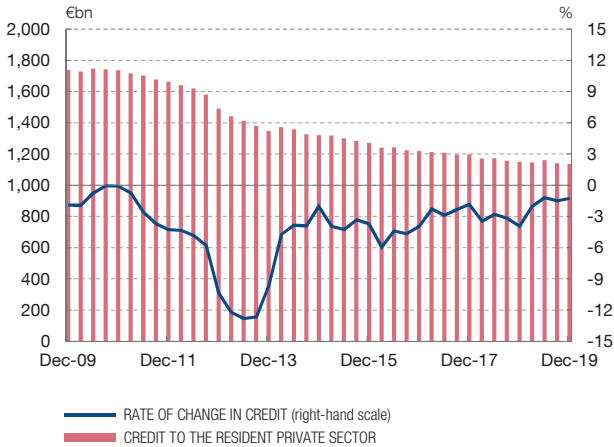
The guarantee programme for firms approved in March 2020 to mitigate the impact of the coronavirus crisis should help sustain the flow of credit to the productive sector. The guarantee programme is expected to enable the granting of

Chart 2.1

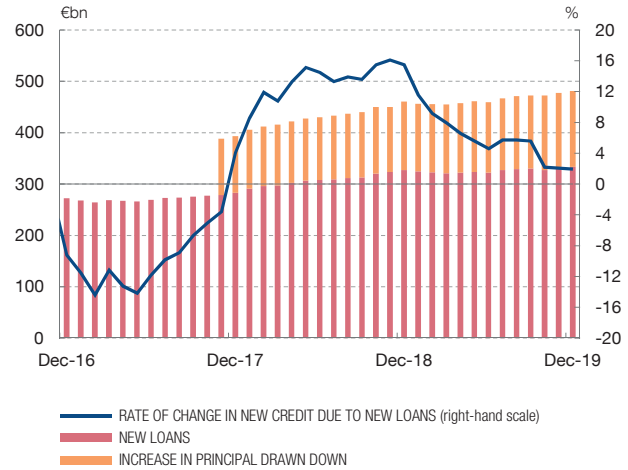
THE CORONAVIRUS CRISIS MAY REINFORCE THE DOWNWARD TREND IN CREDIT OBSERVED IN 2019, ALTHOUGH THE SUPPORT PROGRAMMES MITIGATE THE CONTRACTIVE EFFECT

Total credit granted by deposit institutions to the resident private sector continued to fall in 2019, albeit at lower rates than those observed in prior quarters. New credit to households and non-financial corporations also grew at lower rates in 2019 than in 2018. The coronavirus crisis may trigger adverse shocks in the supply of credit that reinforce the downward trend, but measures have already been adopted (Royal Decree-Law 8/2020) to mitigate this effect.

1 CREDIT VOLUME AND YEAR-ON-YEAR RATE OF CHANGE
Business in Spain, ID



2 VOLUME OF NEW CREDIT IN THE PAST 12 MONTHS AND YEAR-ON-YEAR RATE OF CHANGE. HOUSEHOLDS AND NON-FINANCIAL CORPORATIONS (a)
Business in Spain, ID



SOURCE: Banco de España.

a Prior to 2017 information was not available on the increase in the principal drawn down against existing loans. Consequently, the first data item for this series, accumulated over twelve months, is represented in December 2017. The rate of change shown only refers to new loans.

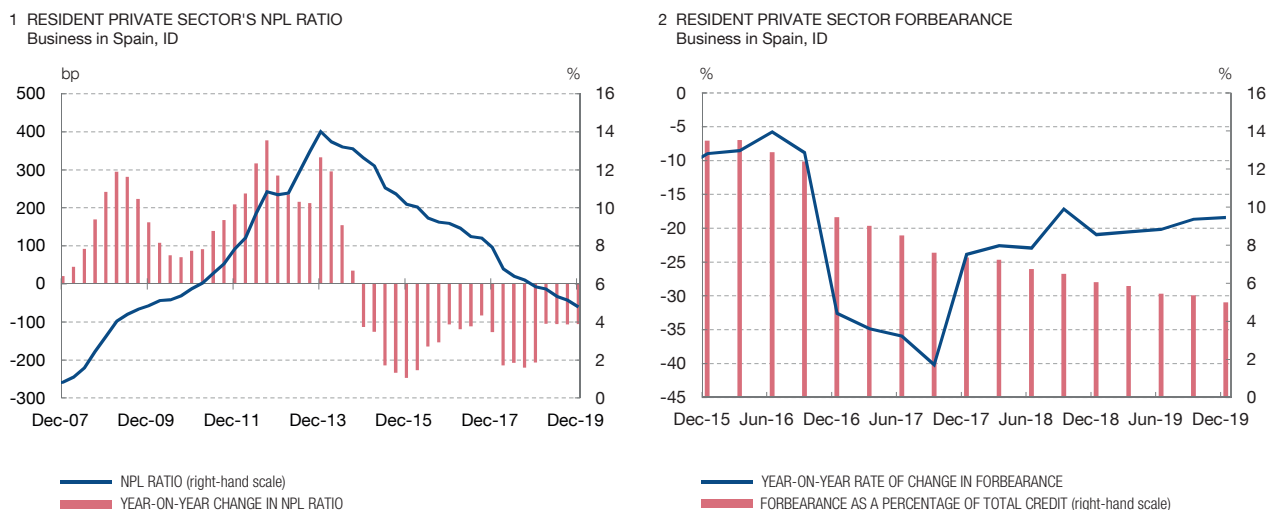
short-term loans, allowing firms to finance the costs incurred in the immediate months of business closures, and avoiding the non-renewal of the maturities of business loans, which would lead to a sharp fall in lending, compounding the macro impact of the coronavirus crisis. An appropriate use of the guarantee programme should ensure that the volume of lending to non-financial corporations relatively stable in the short term, curbing the number of business closures due to a lack of liquidity and preparing the productive system for a swift recovery when the confinement measures are withdrawn. The banking sector should also contribute to the role played by public policy in stabilising the economy by using the capital buffers available (see Chart 2.13) to absorb unexpected losses and by providing the necessary funding flows to ensure that this shock does not have lasting effects.

Although the NPL ratio and the volume of forbearance loans continued to fall in 2019, the spread of the pandemic will foreseeably cause increases in these ratios, which will be heterogeneous across banks. The NPL ratio in operations in Spain has fallen by 9.2 pp since its 2014 H1 high, and stood at 4.8% in December 2019 (see Chart 2.2). In terms of the NPL ratio, there are significant differences among portfolios; in December 2019, the ratio was relatively higher in the non-financial

Chart 2.2

THE NPL RATIO AND FORBEARANCE, WHICH CONTINUED TO FALL IN 2019, WILL INCREASE AS A RESULT OF THE COVID-19 PANDEMIC

The NPL ratio's decline continued, dropping to 4.8% in December 2019. Forbearance also continued to fall and accounted for 5% of total credit to the resident private sector in December 2019. However, the adverse pressure on economic activity triggered by the coronavirus crisis will foreseeably reverse this trend, leading to an increase in the NPL ratio and the forbearance ratio, while the economic support measures and accounting measures will moderate this adverse impact.



SOURCE: Banco de España.

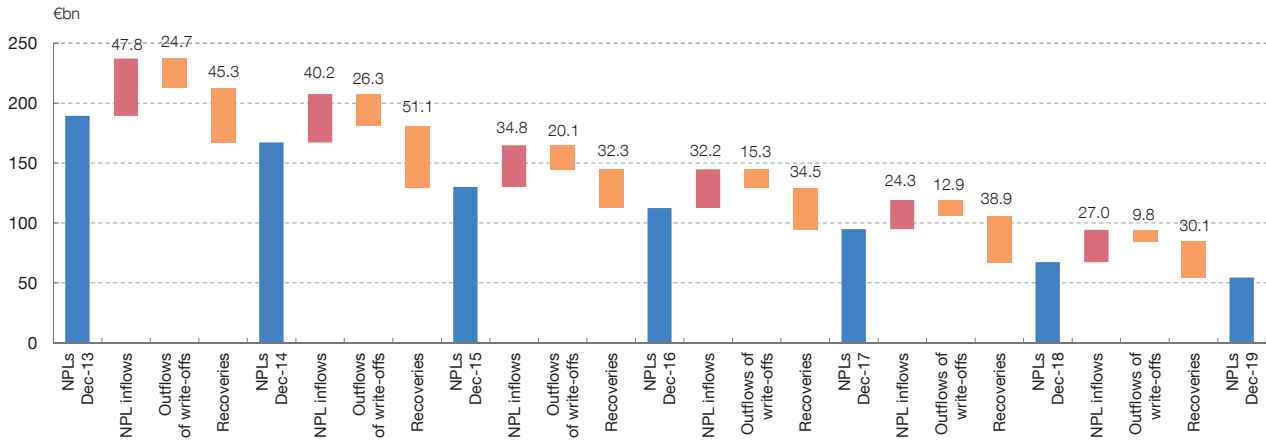
corporations portfolio (6.3%) than in the households portfolio (4.1%). In the case of households, the NPL ratio is expected to rise faster in consumer lending as a result of the current crisis, given the high level of growth this portfolio recorded in recent years and the behaviour traditionally observed following this kind of shock (see Box 1.2). Forbearance accounted for 5% of total lending at December 2019, down 9 pp since the end of 2014. The coronavirus crisis will change the trend in these ratios. However, this should only be temporary provided appropriate credit standards are kept in place. In this connection, it is very important that automatic rules not be used to classify this type of loan for accounting purposes (see the accountancy-related prudential response in Section 3.2.3). In any event, the crisis will impact institutions differently depending on their initial position in terms of credit quality and their degree of exposure to the most affected sectors and geographical areas. Foreclosed assets were also reduced by more than €12 billion in 2019 and amount to approximately €30 billion.

Since 2013 annual flows of new non-performing loans have been outstripped by NPL recoveries and outflows of write-offs. However, the current crisis will reverse this clean-up process. Classifications as non-performing already rose slightly in 2019 (see Chart 2.3), but the pandemic crisis will lead to a further increase. In this connection, it is critical that institutions keep appropriate credit standards in place. In 2019 NPL recoveries and outflows of write-offs continued to offset the

Chart 2.3

SINCE 2013 RECOVERIES AND OUTFLOWS OF WRITE-OFFS HAVE CONSISTENTLY EXCEEDED THE FLOW OF NEW NPLs, BUT THE CURRENT CRISIS WILL REVERT THIS TREND (a)

The inflows of resident private sector loans to the NPL category increased in 2019 (€27 billion as opposed to €24.3 billion in 2018). However, like in previous years, recoveries and outflows of write-offs more than offset this increase, thereby reducing the NPL balance. The coronavirus crisis will reverse this trend, as it will contribute significantly to increases in defaults by households and firms, and hinder recoveries and sales of written-off assets.



SOURCE: Banco de España.

a The bars are presented together with the amount, in billions of euro, of each NPL inflow or outflow. The NPL recoveries include NPLs reclassified as performing, and foreclosed assets or potential sales of NPL portfolios to third parties.

increase in new NPLs, but the crisis will also hinder maintaining this positive difference and settling non-performing loans through foreclosed and written-off asset sales.

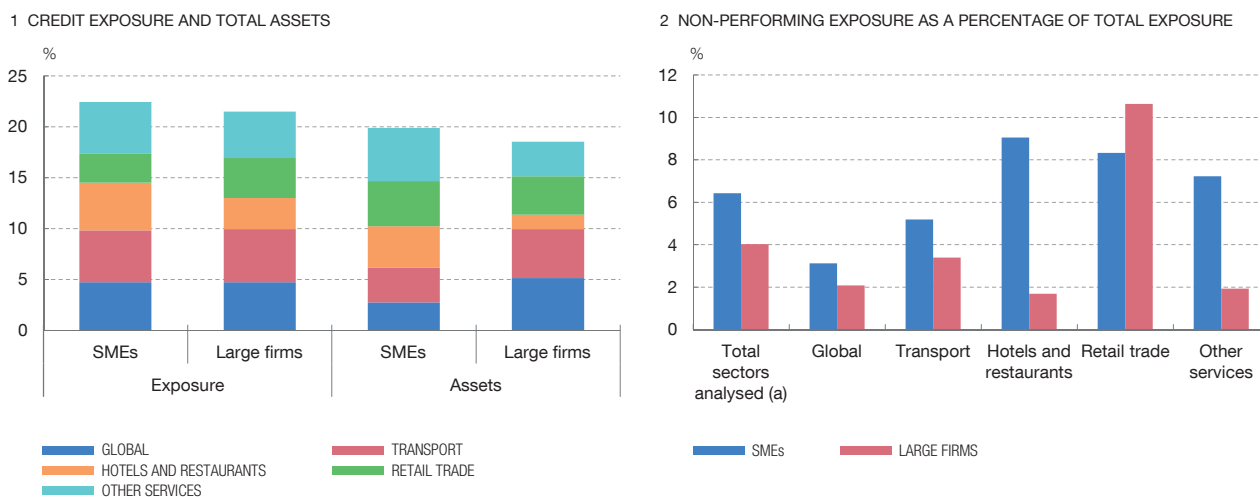
In December 2019 deposit institutions’ exposure to sectors particularly sensitive to the coronavirus crisis accounted for around 20% of lending to non-financial corporations. The manufacturing sectors most dependent on global value chains (with imports accounting for more than 25% of their intermediate consumption) and that, therefore, may be most affected by the effects of the pandemic represent approximately 5% of bank lending to non-financial corporations, while the segments of the services sector most affected by the physical disruptions triggered by the measures to curb the contagion (e.g. tourism, transport) account for more than 15% (see Chart 2.4).¹ Broadly speaking, the NPL ratios of these sectors appeared to be contained in 2019; however, the ratios were relatively high in lending to some SME segments, such as retail trade and hotels and restaurants. Different degrees of exposure to these sectors are one reason why the impact of the COVID-19 crisis on deposit institutions’ lending and credit quality will vary.

¹ This pattern is comparable in SMEs and large firms, as well as when using these firms’ total assets in the Banco de España’s Central Balance Sheet Data Office (CBSO) rather than bank lending.

Chart 2.4

THE SERVICES SECTOR ACCOUNTS FOR MOST OF THE EXPOSURES OF THE SECTORS THAT ARE MORE SENSITIVE TO THE INITIAL IMPACT OF THE CRISIS

For both large firms and SMEs, in December 2019 the exposures of the sectors that are a priori most sensitive to the initial impact of the coronavirus crisis stood at 20% (of bank lending and of total assets), with the services sector accounting for most of the exposures (weight of 15%). The distribution among sectors of the NPL ratio in December 2019 shows that hotels and restaurants and retail trade are in a worse relative position, and that SMEs are in a worse position than large firms.



SOURCE: Banco de España.

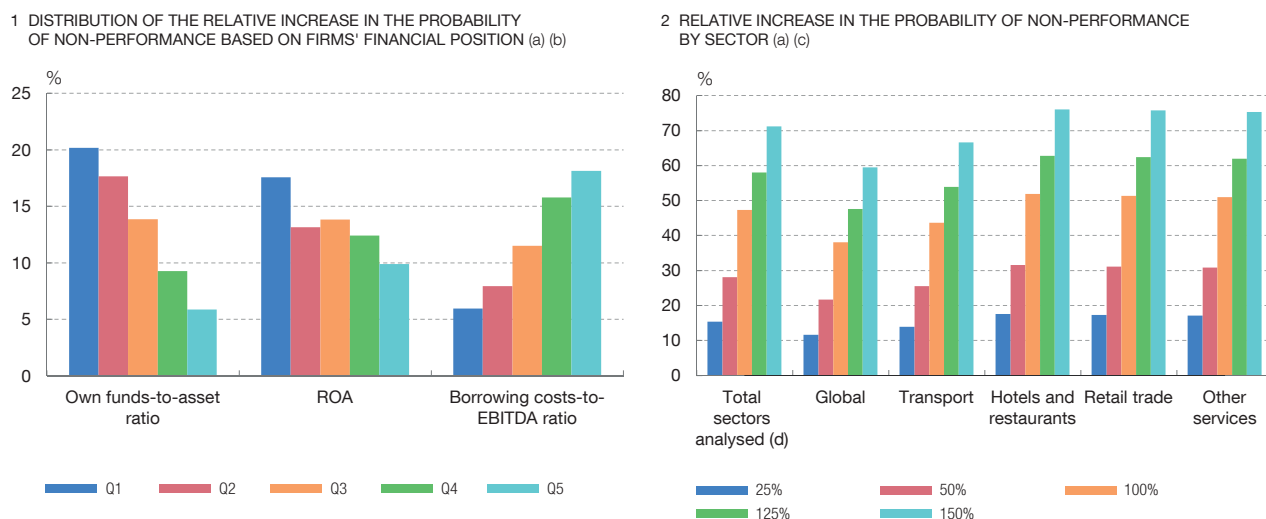
a Total sectors analysed in this chart includes manufacturing sectors sensitive to global value chains (imports accounting for more than 25% of their intermediate consumption) and important segments of the services sector.

The adverse impact of the coronavirus crisis on the non-performance of loans to firms will vary among sectors and among firms, and will hinge on their initial financial position. Using a statistical model for calculating the probability of loans becoming non-performing, it is possible to simulate the future trend in this variable for non-financial corporations in the event of a deterioration of the macrofinancial environment. Differences in non-financial corporations’ profitability, solvency and debt burden mean that when macrofinancial risks materialise, their effect on the probability of loans becoming non-performing differs (see Chart 2.5). Consequently, the sectoral impact of the crisis will vary depending not only on the disruption to activity it causes in each sector, but also on the initial financial position of each sector’s firms (see Chart 2.5). Due to the uncertainty surrounding the ultimate consequences of the pandemic for the macrofinancial environment, shocks of between 25% and 150% of the downturn witnessed between 2007 and 2012 during the global financial crisis have been simulated; however, it is not currently possible to estimate with sufficient accuracy the most likely scenario. The revised growth estimates for Spain presented in Chapter 1 point to the shocks being closer to 100% for 2020. This would entail a very pronounced deterioration in the macro variables and the financial ratios of firms, which would result in a robust rise in the probabilities of loans becoming non-performing, particularly in certain segments of the services sector.

Chart 2.5

THE CORONAVIRUS CRISIS WILL INCREASE THE RATE OF FIRMS DEFAULTING. THIS INCREASE WILL VARY DEPENDING ON THE PRIOR FINANCIAL POSITION AND SECTOR OF EACH FIRM, AND THE DEGREE OF MACROECONOMIC DOWNTURN

Applying statistical models to the experience of the global financial crisis shows that deteriorating macrofinancial conditions have a very inconsistent impact on firms with varying levels of profitability, solvency and debt burden. Economic measures helping to support the financial position of firms may thus contribute to limiting the deterioration of their creditworthiness. The measures may also contain the downturn in the wider macroeconomic conditions, surrounding which this is a high level of uncertainty. In any event, it is expected to be very significant in 2020. This would lead to a significant increase in the probabilities of non-performance in the various sectors.



SOURCE: Banco de España.

- a Probability of non-performance is defined in a given year as the probability of being reclassified as non-performing (objective past due or nonperforming for subjective reasons) for those firms classified as performing over the prior 12 months.
- b The distribution of quintiles of firms based on the relative increase in the probability of non-performance (defined as the change in probability as a percentage of average probability in unstressed conditions) in the event of a worsening of the macro conditions and of the individual financial position for a shock equal to 25% of the historical downturn between 2007 and 2012 is shown for each variable. The distributions are constructed in terms of initial position in the corresponding financial ratio. In other words, the first quintile of each variable corresponds to those firms with the lowest own funds-to-asset ratio, lowest rate of return on assets and lowest borrowing costs-to-EBITDA ratio, respectively.
- c The relative increase (defined as the change in probability as a percentage of average probability in unstressed conditions) in the probability of non-performance in the event of downturns in the macro conditions and in the individual financial position for shocks ranging from 25% to 150% of the historical downturn between 2007 and 2012 is presented for the sectors of interest analysed.
- d Total sectors analysed in this chart includes manufacturing sectors sensitive to global value chains (imports accounting for more than 25% of their intermediate consumption) and important segments of the services sector.

The economic measures to support the private sector will lessen the pandemic's impact on the non-performance of loans to businesses, by directly supporting firms' financial position and through the macroeconomic stimulus.

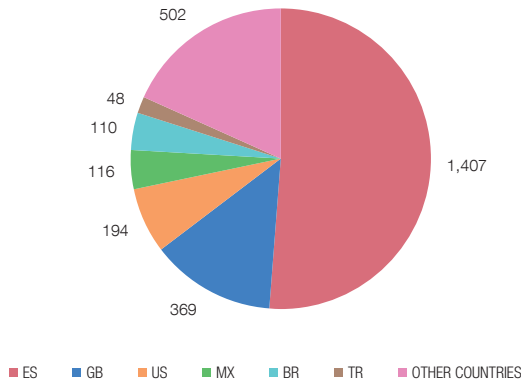
As mentioned above, the Spanish government's guarantee programme and the moratorium on tax payments to tax authorities will help firms cover their liquidity needs. Furthermore, the possibility of temporarily laying off employees will also help to prevent further deterioration in profitability and solvency in these sectors. Moratoria on household lending, unemployment benefits, the programme to support vulnerable families and the soon-to-be-implemented subsidy for families with practically no income announced by the government will also shore up household income. These programmes will not only limit the non-performance of loans granted to firms and households, but should also enable a swifter economic recovery when the confinement measures can be lifted.

Chart 2.6

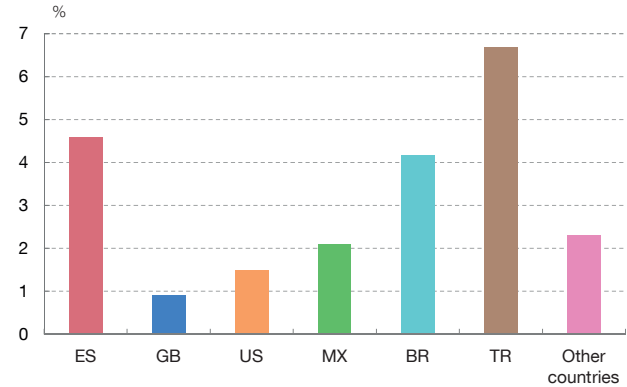
HALF OF THE VOLUME OF BANK LOANS IN 2019 RELATED TO OPERATIONS ABROAD, WITH THE UNITED KINGDOM, UNITED STATES AND LATIN AMERICA HAVING A PREDOMINANT WEIGHT

Loans in Mexico (4%), Brazil (4%), the United States (7%) and the United Kingdom (14%) accounted for nearly one third of the total lending by Spanish deposit institutions in December 2019. Operations in Spain, with a volume of €1,407 billion, represented approximately half of this total. Exposures abroad were concentrated in large institutions. With the exception of Turkey with a ratio of 6.7%, the NPL ratio abroad was lower than that of operations in Spain.

1 LOANS IN SPAIN AND ABROAD (a)
Consolidated data. December 2019



2 NPL RATIO IN SPAIN AND ABROAD
Consolidated data. December 2019



SOURCE: Banco de España.

a Volume of loans in € billion.

In order to fully assess the impact of the COVID-19 pandemic on Spanish deposit institutions' credit exposure, their significant activity abroad must be considered. In 2019 financial assets abroad (mainly loans) grew year-on-year by 9.3%, and accounted for more than 50% of consolidated financial assets. Conversely, the financial assets of operations in Spain shrank by 1.8%. Loans in Mexico and Brazil each represented 4% of the total at December 2019, while loans in the United States and the United Kingdom accounted for 7% and 14%, respectively. There has been a widespread drop in the NPL ratio abroad in recent years, except in Turkey (see Chart 2.6). The geographical expansion of the pandemic in jurisdictions where Spanish deposit institutions have a significant presence is an additional source of impact for them. Many of these countries are also implementing policies to support their business sectors. As in Spain, this should limit the impact of the crisis on credit risk attributable to insolvency.

Liquidity and financing conditions

The ECB has taken one-off measures geared towards mitigating the impact of the pandemic. As detailed in Chapter 1, the Eurosystem has substantially increased its ability to inject liquidity directly into the financial system by bolstering its asset purchase programme through the creation of a new emergency programme.

Furthermore, it has also increased the liquidity provided to institutions by easing the conditions for TLTRO III and through additional longer-term refinancing operations (LTROs), consisting of a fixed rate tender procedure with full allotment, with an interest rate equal to the average rate on the deposit facility.

Further, the ECB has expanded its US dollar swap lines in a coordinated action with other central banks. The pricing of these lines has been lowered² and the frequency of operations has been increased in order to satisfy greater global demand for funding in this currency. This programme has been coordinated with the Bank of Canada, the Bank of England, the Bank of Japan, the Federal Reserve, and the Swiss National Bank.

The expansion of the purchase programmes and the volumes allotted in the refinancing operations have led to a substantial increase in the liquidity provided by the Eurosystem. The expanded purchase programme (see Box 1.1 for a description of the changes in the ECB's monetary policy) has led to significant increases in the Eurosystem's balance sheet since March. The total change in these programmes is €138 billion, and they amount to €2,809 billion at the cut-off date of this FSR, representing 53% of its balance sheet total. The same has occurred in connection with the net funding provided to European banks through the refinancing operations denominated in euro. The balance sheet total has increased by €230 billion³ to €893 billion. Lastly, since the expansion of the US dollar swap lines on 18 March,⁴ US dollar funding through these lines has increased substantially. The cumulative outstanding amount at the cut-off date of this FSR totals \$133 billion in operations with 84-day maturity and \$6 billion in 1-week operations for the Eurosystem institutions as a whole (see Chart 2.7).

Dollar funding costs, reflected in the cross-currency basis swap (CCBS) spread,⁵ rose considerably during March due to greater demand for liquidity in this currency. Investor response to the pandemic has been a large-scale withdrawal from risky assets and a flight to more liquid assets and safer currencies, in particular the dollar (see also Section 1.2 on this development in the financial

2 Specifically, the interest rate on these operations has been lowered to the USD OIS (US Dollar Overnight Index Swap) rate plus 25 bp.

3 This is the result of the €257 billion obtained through new LTRO tenders and the €213 billion through TLTRO III (€98 billion in December 2019 and €115 billion in March 2020, the increase being explained by the easing of the related conditions), and simultaneous early repayments of a substantial portion of their obligations under TLTRO II (€147 billion in December 2019 and €93 billion in March 2020).

4 On that date, \$76 billion were allotted in operations with 84-day maturity and \$36 billion were allotted in 1-week operations.

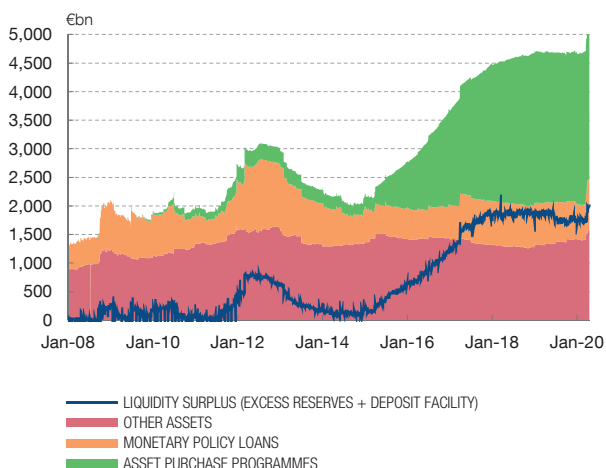
5 The EUR/USD cross-currency basis swap (CCBS) spread, which measures the additional premium paid to the lender by the counterparty receiving dollars, is used as a reference. In this type of operation, there is an agreement between two parties: the party obtaining dollars in exchange for the same amount translated to euro, who must pay interest based on the euro reference rate (generally EURIBOR), and the party providing dollars in exchange for interest payments (USD LIBOR). The CCBS spread represents the (positive or negative) premium required by the counterparty offering dollars.

Chart 2.7

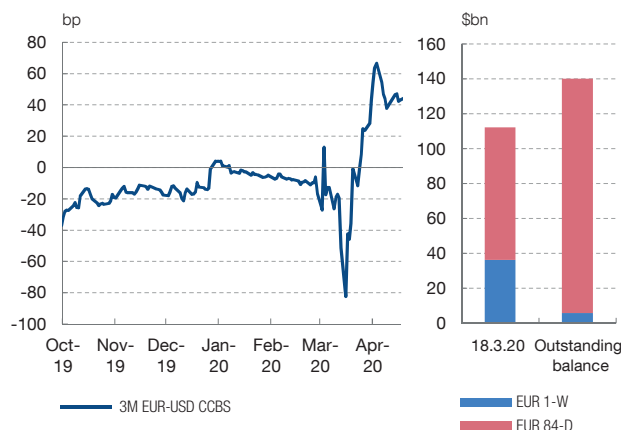
THE CENTRAL BANKS' REACTION TO THE CORONAVIRUS CRISIS HAS MANAGED TO STABILISE THE MONEY MARKETS. IN PARTICULAR, THE ECB HAS INCREASED THE LIQUIDITY PROVIDED TO CREDIT INSTITUTIONS AND EXPANDED ITS ASSET PURCHASE PROGRAMME (a)

The expansion of the ECB's balance sheet accelerated as a result of the new liquidity-provision measures. The increase in the demand for US dollars has generated a slight scarcity, resulting in the swap rate rallying, which induced coordinated intervention by the central banks to mitigate this development. A decrease in volume is observed in the secured segment of the money market as a result of the central banks' intervention. Conversely, an increase in the volume of institutional deposits at banks is observed in the unsecured segment. The initial reaction to the COVID-19 crisis led to a positive spread between the €STR and the secured rate, but this has disappeared as both rates returned to their pre-crisis levels. The rise in the Euribor rate has held over the most recent weeks, despite the measures adopted, indicating some worsening of the conditions in the interbank market.

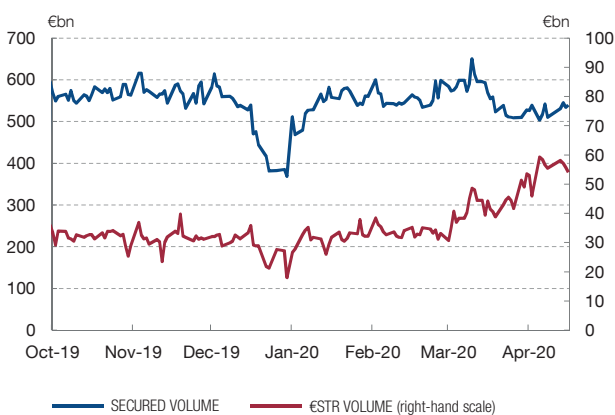
1 EUROSYSTEM BALANCE SHEET AND EXCESS LIQUIDITY



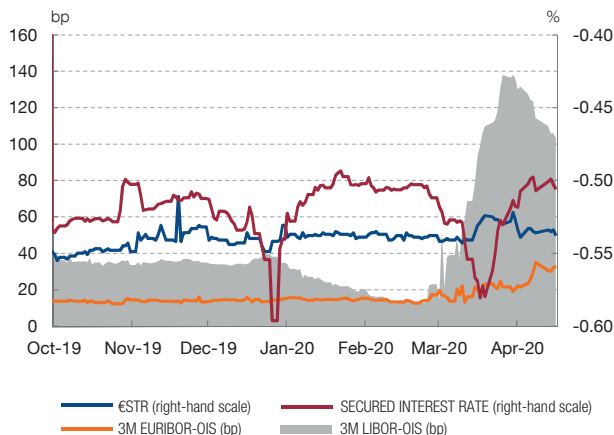
2 CROSS-CURRENCY BASIS SWAP AND AMOUNTS REQUESTED ON USD SWAP LINES (b)



3 TURNOVER (SECURED AND UNSECURED SEGMENTS) (c)



4 INTEREST RATES IN THE SECURED AND UNSECURED SEGMENTS



SOURCES: BCE, Bloomberg, Money Market Statistical Reporting (MMSR) and Banco de España.

- a Data up to 17 April 2020
- b This chart shows the 3M cross currency basis swap (CCBS) spread and the amounts requested through the USD swap lines maturing at one week (1-w) and at 84 days (84-d).
- c The turnover in the secured market includes all the overnight transactions banks report to the MMSR with the other counterparties.

markets). Thus, the substantial increase in the amounts requested has been accommodated by a greater supply of dollars provided by central banks, thereby contributing to calming the dollar funding market. These swap lines already existed, but banks made limited use of them. Moreover, although the EURIBOR-OIS spread

in Europe has risen,⁶ it has remained well below the LIBOR-OIS spread⁷ in the United States, which suggests less tightness in the money market in Europe (see Chart 2.7).

Thanks to the measures adopted by the Eurosystem, the uncertainty surrounding coronavirus has had a moderate impact on money markets in Europe. There has been a pick-up in the volume of unsecured transactions (€STR)⁸ in March. Specifically, the daily volume is currently at a historical high of around €58 billion, well above the mean of €30 billion recorded since publication of the €STR began. In turn, the €STR rose and the secured rate fell, resulting in a positive spread between the two rates, which would have since been corrected. It should be noted that the new measures introduced by the Eurosystem to provide liquidity in collateralised transactions and the expansion of the asset purchase programmes could reduce the trading volume in the secured markets. The rise in the Euribor rate, from historical minima, has held over the most recent weeks, despite the measures adopted. This indicates some worsening of the conditions in the interbank market.

In early 2020, the cost of the different liability instruments was at very low levels for Spanish deposit institutions, but the COVID-19 crisis is also adversely affecting the wholesale segment. At the European level, the cost of covered bonds and senior debt decreased in 2019, whereas that of subordinated debt eligible as additional Tier 1 capital remained flat, and that of subordinated debt eligible as Tier 2 capital rose (see Chart 2.8). In the case of Spanish deposit institutions, the environment of low interest rates was conducive to a reduction in the cost of both deposits and debt issuances between 2014 and 2019. The greater risk aversion could hamper the wholesale issuance of liability instruments, particularly subordinated debt, and increase the related cost. Indeed, information from the secondary market (see Chart 1.6) points to a clear rise in the cost of such funding. Higher issuance costs for this type of instrument could impede achievement of MREL targets, although the Single Resolution Mechanism (SRM) has already clarified that it will take a forward-looking approach when assessing fulfilment of those targets. Furthermore, the intervention by the ECB to provide liquidity and expand its purchase programme should serve to cushion these adverse effects, specifically in respect of debt instruments.

6 An increase in the EURIBOR-OIS spread has been observed since 3 April that does not appear to be linked to a rise in banks' credit risk.

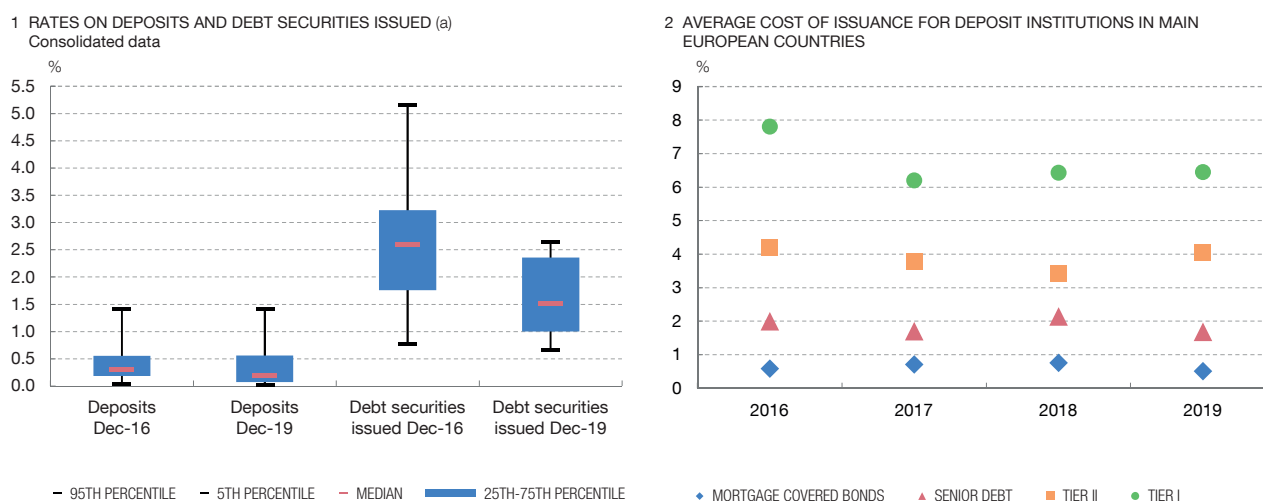
7 The 3M EURIBOR-OIS spread (calculated on the basis of the €STR) and 3M LIBOR-OIS spread (calculated on the basis of the Effective Federal Funds Rate (EFFR)). These interest rates (EURIBOR and LIBOR) are typically used as risk indicators in the interbank market and represent the reference rate for the cash flows performed in a swap transaction.

8 This refers to the transactions used to calculate the €STR, which reflects the wholesale euro unsecured overnight borrowing costs of banks located in the euro area. The €STR and trading volume are calculated and published each TARGET2 business day by the ECB based on the information provided by the 52 euro area banks that report to MMSR. In addition to transactions conducted and settled with other banks, those performed with other financial institutions (such as investment funds, insurance companies and money market funds, among others, located both in and outside the euro area) are included. For further information, see: [ECB Overview of the euro short-term rate](#).

Chart 2.8

THE COSTS OF LIABILITIES WERE VERY MODERATE IN EARLY 2020, BUT THE COVID-19 CRISIS IS ADVERSELY AFFECTING THE WHOLESALE SEGMENT. HOWEVER CENTRAL BANKS' POLICIES LIMIT FUNDING TENSIONS

Deposit institutions face the COVID-19 crisis with deposit rates initially at levels close to zero and median rates on debt securities of 1.5%, albeit with certain heterogeneity among institutions in this latter metric. The cost of subordinated debt eligible as Tier 1 or Tier 2 capital presented a slight upward trend in 2019 and these products are more sensitive to the financial stress triggered by the coronavirus pandemic, which could increase their cost and even hinder their issuance in the coming quarters. Intervention by central banks has to date prevented severe funding tensions.



SOURCE: Banco de España.

a The chart shows the dispersion in interest rates on deposits for Spanish deposit institutions and in interest rates on debt securities issued.

Deposits taken by Spanish institutions continued to grow in 2019 and the COVID-19 crisis, with the foreseeable increase in the saving rate of households and the pursuit of liquid and low-risk assets, is expected to support growth therein. Stock of deposits rose by 2.6% in 2019 (well above the growth of 0.9% in 2018); this increase was widespread among institutions. Deposits taken continue to be Spanish banks' main source of funding (78.2% of total liabilities in December 2019). The weight of private sector deposits is also noteworthy (approximately 78% of total deposits at December 2019), with growth of 4.8% in the last year (compared with 1.1% in 2018). The weight of sight deposits has increased in recent years and at December 2019 accounted for nearly 65% of the total (well above the level of approximately 50% they represented in December 2015), probably owing to the interest rates on time deposits of practically zero as a result of the low-interest-rate scenario. This situation will foreseeably continue following the outbreak of the COVID-19 crisis, insofar as the pursuit of liquidity associated with the pandemic encourages economic agents to withdraw funds from riskier financial instruments and to increase bank deposits, thereby maintaining their volume and limiting their profitability. The effect of the expected increase in the saving rate of households under these circumstances can be compensated by the use of liquidity by non-financial corporations to cover part of the differences between income and

expenses that can take place. Nevertheless, the uncertainty surrounding the spread of the virus compels to monitoring closely the evolution in institutions' liquidity.

2.1.2 Profitability and solvency

Profitability

In 2019 consolidated net profit of the Spanish banking system as a whole amounted to around €19 billion, down 13.1% on 2018. This drop resulted in falls in the return on assets (ROA) and return on equity (ROE),⁹ which, in turn, were amplified by the growth, of around 2%, in average total assets (ATA) and average equity. The ROA decreased by 9 basis points (bp) from 0.61% in 2018 to 0.52% in 2019, while the ROE fell by 1.2 pp from 8.3% to 7.1% (see Box 2.1). The main factors behind this fall were: the decrease in net gains on financial assets and liabilities; the increase in operating expenses, largely attributable to extraordinary expenses to reduce staff at certain institutions; adjustments resulting from the impairment of goodwill of the two most internationally active institutions, also of a non-recurring nature; and, for the first time since 2012, the increase in impairment losses (see Annex 2 and Chart 2.9).

The coronavirus pandemic will have an adverse impact on institutions' already modest ability to generate profits. As analysed above, the coronavirus crisis will adversely impact the volume of economic activity and, therefore, of credit. Moreover, impairment losses will rise and net interest income will worsen due to the lower volume of performing assets. These effects on banks' profitability will not impact institutions uniformly; the impact will instead depend on their exposure to the sectors and geographical areas most affected by the pandemic. Net gains on financial assets and liabilities and goodwill may also be subject to significant adjustments. Lastly, the context of low or even negative interest rates will persist over time, thus limiting institutions' ability to increase their net interest income.

However, the economic measures adopted to palliate the coronavirus crisis will mitigate, to some extent, its adverse impact on deposit institutions' profitability. This mitigating effect will work maintaining macroeconomic activity, as mentioned in Section 2.1.1, and having a direct effect on the profit and loss account. The guarantees provided to firms will directly limit impairment losses on the loans guaranteed in the event of default, and will reduce the probability of default. Interest rates remaining low and the moratoria on mortgages may have some temporary adverse impacts on interest income. These would be offset, at least partially, by contained liability costs, limits on households' loan losses and extensions of loan terms. The microprudential

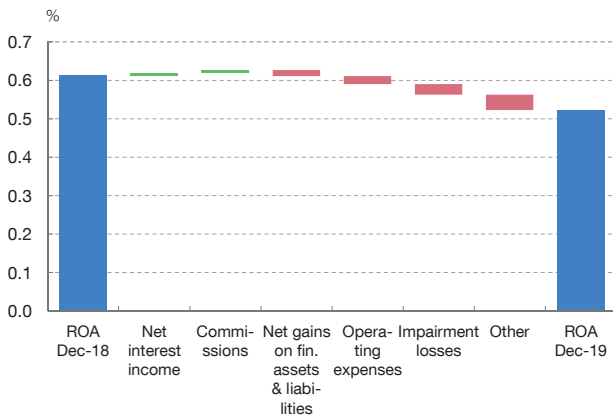
⁹ Future FSRs will use the definitions of ROA and ROE contained in the EBA risk indicators methodological guide: *Revised EBA Methodological Guide - Risk Indicators and Detailed Risk Analysis Tools*. The explanation of these definitions and the differences with respect to those previously used in the FSR are analysed in detail in Box 2.1.

Chart 2.9

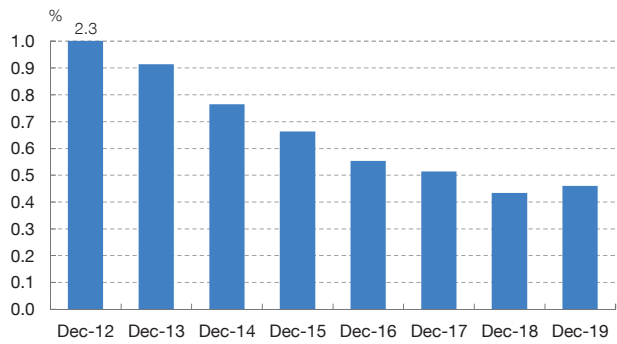
THE PROFITABILITY OF THE BANKING SECTOR FELL IN 2019 AND THE CRISIS ASSOCIATED WITH COVID-19 WILL DRIVE IT DOWN FURTHER, IN PARTICULAR BY REDUCING VARIOUS CATEGORIES OF INCOME AND INCREASING IMPAIRMENT LOSSES

Despite the slight increase in net interest income and commissions, the decrease in net gains on financial assets and liabilities, the increase in operating expenses (affected, to a certain extent, by workforce restructuring) and impairment losses, and the adjustment to goodwill at two significant institutions led to a 9 bp fall in ROA in 2019. Impairment losses on financial assets increased in 2019 for the first time after six consecutive years of decreases. The severe impact of the COVID-19 crisis on global economic activity will foreseeably result in adverse impacts on income, affected by the reduction in performing assets, and impairment losses due to the increased cost of credit risk.

1 BREAKDOWN OF THE CHANGE IN PROFIT
Consolidated profit as a percentage of ATA (a)



2 FINANCIAL ASSET IMPAIRMENT LOSSES (as a % of ATA)
Consolidated data



SOURCE: Banco de España.

a The red (green) colour of the bars indicates a negative (positive) contribution of the corresponding item to the change in consolidated profit in December 2019 with respect to December 2018.

measures and the prudential response regarding accounting rules (see Section 3.2) will also contribute to partially moderating the adverse effect on profitability.

Spanish banks' favourable cost/income ratio and profitability compared with other European banks represent a head start for coping with the coronavirus crisis; however the profitability level is historically low for both Spanish and other European banks. The profitability of the main Spanish deposit institutions in 2019 remained above the European average, and their cost/income ratio continued to be among the lowest (best) among European banks (see Chart 2.10). Spanish banks' return on equity ratio is higher than that of banks from the main European countries according to the data published by the EBA in its most recent risk dashboard featuring data at December 2019.¹⁰ However, the drop in Spanish banks' rate of return has been sharper than the European average in the last year. In any event, it is also necessary to take into account that the profitability of the Spanish banking sector and of other European banks was low in 2019, and still far from pre-crisis levels and the estimated cost of capital. This limits the ability to organically generate capital.

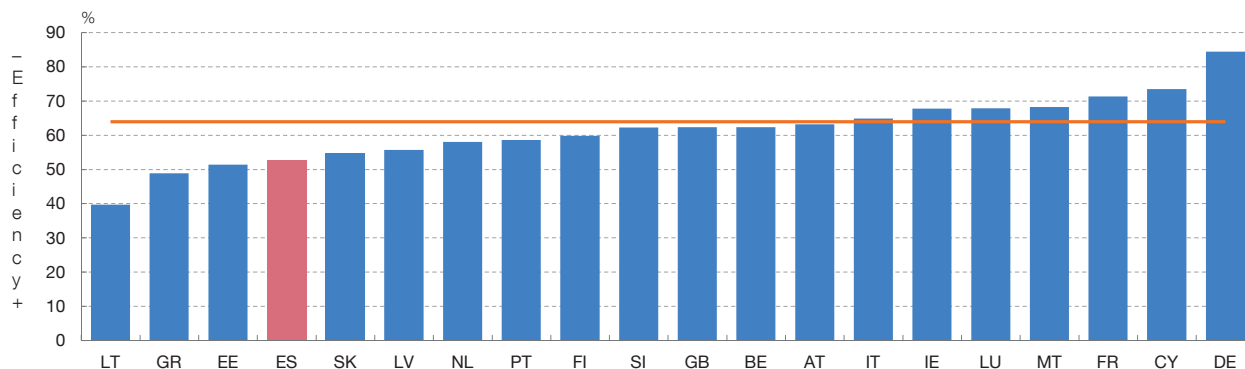
¹⁰ See EBA Risk Dashboard December 2019.

Chart 2.10

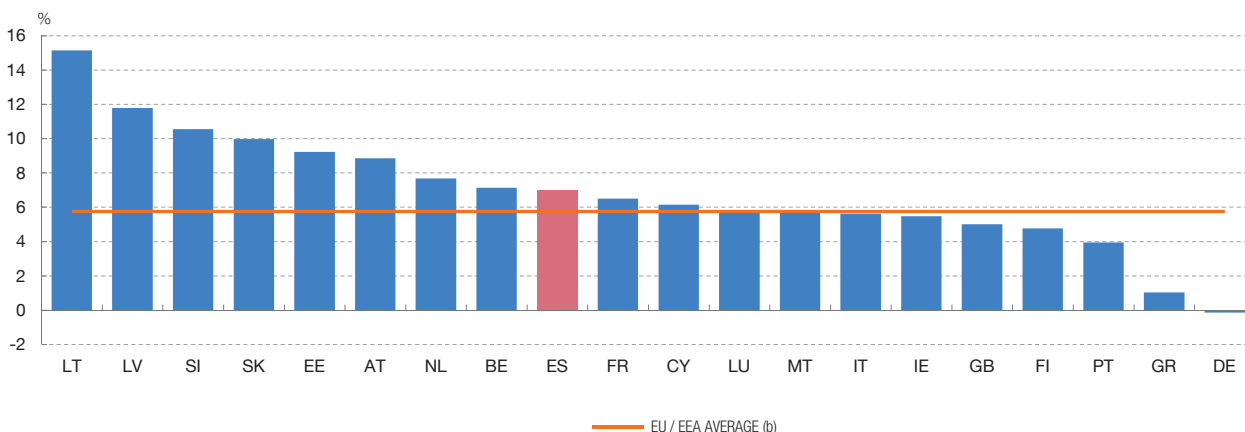
SPANISH BANKS ARE MORE EFFICIENT AND PROFITABLE THAN THE EUROPEAN AVERAGE, ALTHOUGH THE TREND IN THE VOLUME OF ACTIVITY AND LOAN LOSSES WILL BE KEY TO THE DYNAMICS OF THESE VARIABLES IN 2020

The ROE ratio of the main Spanish deposit institutions at December 2019 is above the European average (5.8%) and the main EU economies. The cost/income ratio of Spain is one of the lowest (best) in the EU, standing slightly above 50%. The COVID-19 crisis will adversely affect the profitability of both Spanish and other European banks.

1 COST/INCOME RATIO (a)
Consolidated data



2 ROE
Consolidated data



SOURCE: EBA.

- a The cost/income ratio is defined as the ratio of administrative expenses and depreciation to net operating income.
- b EBA data include Iceland.

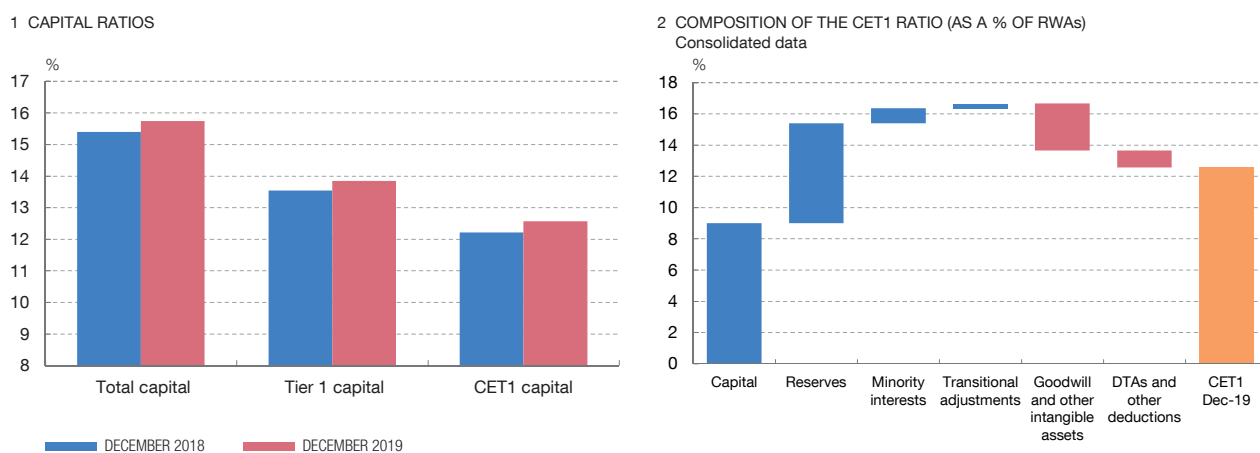
Solvency

At end-2019 the CET1 ratio stood at 12.6%, above the Pillar 1 minimum capital requirements. The CET1 ratio rose by 35 basis points in 2019. Along the same lines, the Tier 1 capital ratio and total capital ratio also increased over the last year, by 30 and 35 basis points, respectively, to stand at 13.8% and 15.7% in December 2019 (see Chart 2.11). This increase in capital ratios was widespread among institutions. Capital instruments and reserves together account for more than 90% of the CET1 ratio. Indeed, the growth in reserves is the main reason behind the ratio's increase.

Chart 2.11

BANK SOLVENCY HAS INCREASED SIGNIFICANTLY SINCE THE END OF THE FINANCIAL CRISIS, WITH THE CET1 RATIO STANDING AT 12.6% AT DECEMBER 2019, AFTER A RISE IN 35 BP IN THE LAST YEAR

Along the same lines, the Tier 1 capital ratio and total capital ratio increased by similar magnitudes to 13.8% and 15.7%, respectively. Capital instruments and reserves are the main components of the CET1 ratio, together accounting for more than 90% of its eligible items.



SOURCE: Banco de España.

Most of the deductions relate to goodwill and other intangible assets, a category which decreased in 2019, thereby contributing to the increase in the ratio.

Despite the growth in the CET1 ratio in 2019, the average ratio of Spanish institutions remained below that of other European countries. However, their relative position in terms of the leverage ratio is better than the European average. Based on the latest data published by the EBA in its risk dashboard at December 2019,¹¹ Spanish institutions had the lowest CET1 ratio, 2.7 pp below the European average (see Chart 2.12). Spanish banks' leverage ratio was above that of banks from the main European countries, excluding Italy, and was slightly above the European average. One factor behind Spanish institutions' relative position in the CET1 ranking is their wider use of the standardised approach. Moreover, virtually no use is made of agencies' credit ratings in the case of corporate portfolios under this approach. Such methodological decisions result in average weightings that are higher but which are less sensitive to increases in risk and to changes in these external agencies' ratings. This is expected to contribute to a lesser relative worsening in Spanish institutions' solvency during the pandemic.

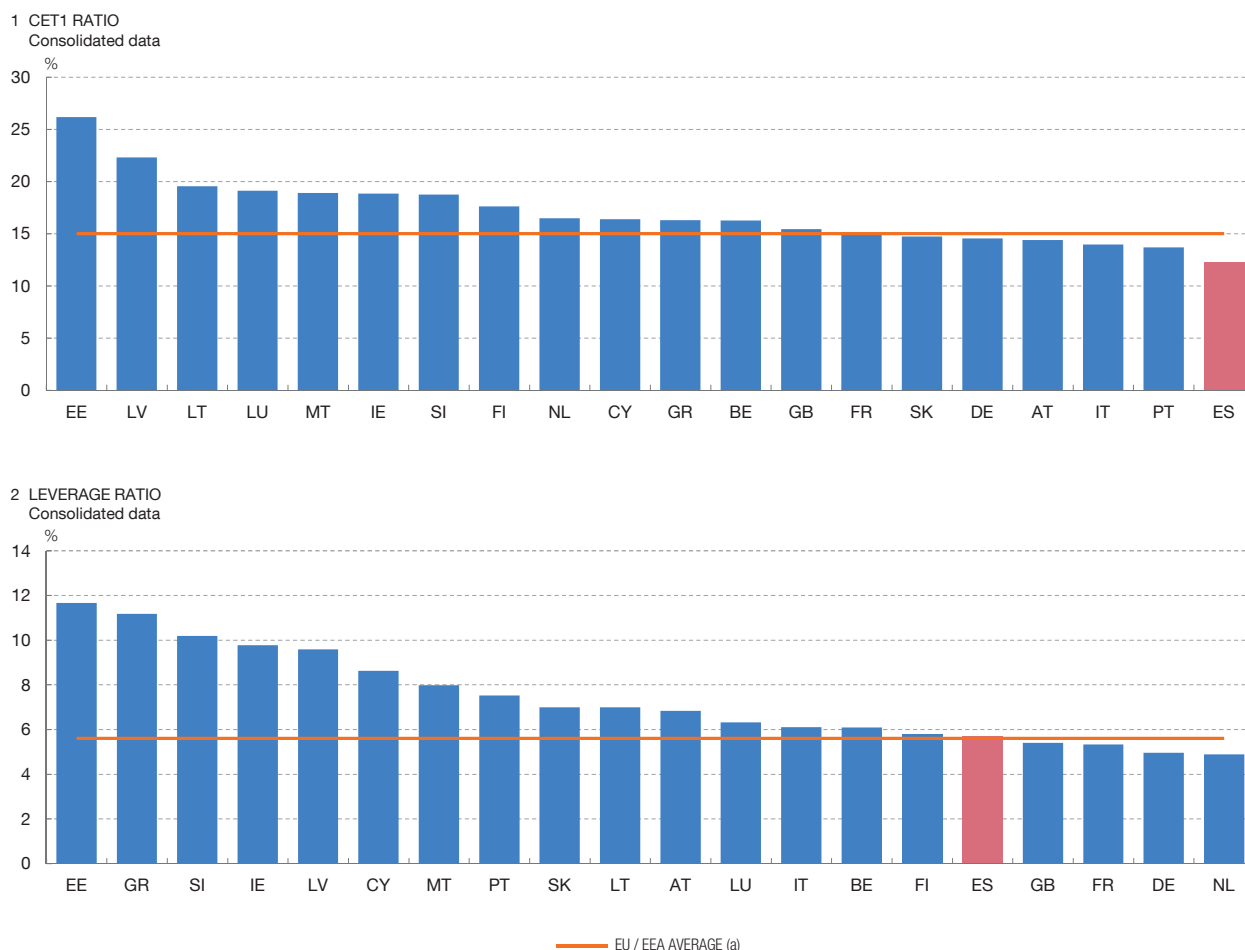
The voluntary buffer of CET1 of the Spanish banking system as a whole stood at €28 billion in December 2019. In December 2019, Spanish deposit institutions had €194.5 billion in CET1. The voluntary buffer of CET1 (see Chart 2.13) can be

11 EBA Risk Dashboard December 2019.

Chart 2.12

THE SOLVENCY RATIOS OF SPANISH DEPOSIT INSTITUTIONS ARE THE LOWEST IN THE EUROPEAN UNION, WHILE THEIR LEVERAGE RATIO IS HIGHER THAN THAT OF THE MAIN EUROPEAN COUNTRIES

According to data at December 2019 (the most recent data available), the main Spanish deposit institutions' CET1 ratio is at the bottom of the European ranking, while the leverage ratio is slightly higher than the European average and is better than that of the main EU countries. This difference in the ranking of the two ratios is due to the fact that the risk weights of Spanish Institutions are higher, basically as consequence of the more intensive use of the standard method. The advantage in this type of situations is that the standard method is much less sensitive to increases (and reductions) in risk than the IRB method.



SOURCE: EBA.

a EBA data include Iceland.

calculated on the basis of this total. This buffer could be used to absorb unexpected losses associated, for example, with the coronavirus crisis. To calculate it, the Pillar 1 requirements, amounting to €77 billion in December 2019, must first be deducted from total CET1. Then the macroprudential buffers must be deducted: the capital conservation buffer (CCB) (€38.7 billion); the countercyclical capital buffer (CCyB) (€1.4 billion); and the buffers for systemically important institutions (€9.5 billion).¹²

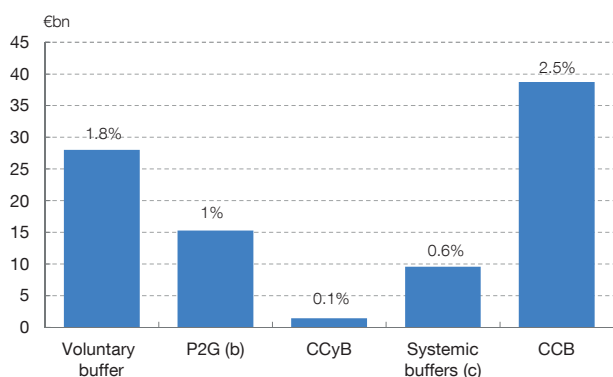
¹² The systemic risk buffers include the global systemically important institution (G-SII) buffer, amounting to €6 billion for the only Spanish institution in that category, and the other systemically important institution (O-SII) buffer, totalling €3.5 billion for the other four Spanish institutions included in that category.

Chart 2.13

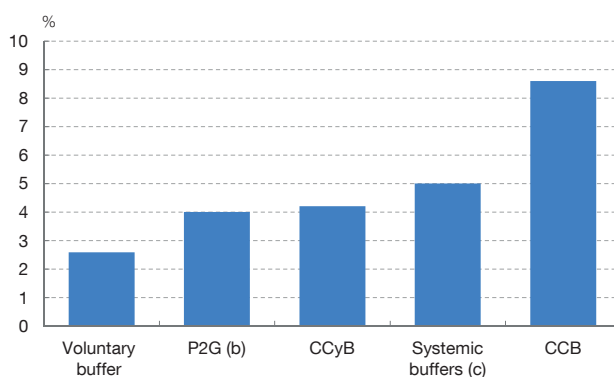
THE RELEASE OF BUFFERS AND CAPITAL LINKED TO THE PILLAR 2 GUIDANCE PROVIDES A SIGNIFICANT VOLUME OF CAPITAL WITH WHICH TO COPE WITH THE UNEXPECTED LOSSES ASSOCIATED WITH COVID-19

The capital conservation buffer is by far the most important of the capital buffers, while the countercyclical buffer represents a minimal percentage of RWAs. The release of the capital conservation and macroprudential buffers, together with the P2G, which is possible after the prudential measures adopted in the euro area, would be sufficient to cover an increase in the NPL ratio of nearly 8.2 pp. The effect of the moratoria and of the guarantee programme approved by the Spanish government would significantly increase the non-performance that could be absorbed by these buffers.

1 VOLUME OF BUFFERS AND THEIR RELATIVE WEIGHT AS A % OF RISK-WEIGHTED ASSETS (a) OF RISK-WEIGHTED ASSETS (a) December 2019



2 CUMULATIVE PERCENTAGE OF POTENTIAL NPLs THAT EACH BUFFER COULD ABSORB (d) December 2019



SOURCE: Banco de España.

- a Above each bar is the percentage of total risk-weighted assets that it represents.
- b P2G refers to Pillar 2 Guidance.
- c This item includes both the buffer for global systemically important institutions and the buffer for other systemically important institutions.
- d Each bar represents the cumulative percentage of credit at December 2019 whose classification as non-performing could be covered by the various buffers. Under the current supervisory guidance of the ECB and the national authorities, the voluntary buffer, the countercyclical capital buffer, the systemic buffers, the capital conservation buffer and the capital linked to P2G can be released to absorb losses, whereas the Pillar 2 Requirements are maintained, although the related rules on the composition thereof are relaxed, with a lower weight of CET1 required.

Lastly, the amounts under the Pillar 2 requirement (P2R) (€24.5 billion) and the Pillar 2 guidance (P2G) (€15.3 billion) must be deducted.

The buffers whose release is permitted as part of the prudential response to the crisis are estimated to be sufficient to cover an increase in the NPL ratio of around 8.2 pp. This rises significantly when combined with the positive impact of the moratoria and the guarantee programme for firms announced by the government, which also contribute to reducing RWAs. Chart 2.13 shows the percentage of risk-weighted assets and potential non-performing assets covered by each of the buffers that may be used in accordance with the supervisory response to the COVID-19 crisis (see Section 3.2 for a description of the prudential response to the spread of the pandemic). The CCB (2.5%) and the voluntary buffer (1.8%) cover the largest percentage of risk-weighted assets.¹³ The sum of all this capital

13 The Pillar 2 requirements represent additional loss-absorbing capital equal to 1.6% of RWAs. Although the microprudential response to COVID-19 does not envisage a reduction in capital in respect of these requirements, it does relax the rules on its composition and allows a reduction in the weight of CET1 capital.

could cover losses equal to nearly twice the current stock of non-performing loans in the system, i.e. approximately 8.2% of existing bank loans. If the loan moratoria and the government's guarantee programme are also taken into consideration, the banking system's capacity to absorb default increases significantly. The 0% risk weight for Spain's sovereign exposures would also be applied to the guaranteed portion of the loans benefitting from this programme, as the State, acting as the collateral provider, would replace the obligor in the measurement of credit risk. This would result in a decrease in RWAs, which would automatically increase solvency ratios. This additional headroom may also be necessary to deal with unexpected losses on other types of assets, such as foreclosed assets.

Prior experience shows that using buffers during times of crisis can have a significant impact on sustaining the flow of credit. The so-called dynamic provisioning in force in Spain between 2000 and 2016 is not legally equivalent to the capital buffers, since they have different rules and targets. Yet it represents a benchmark that informs of the effect of the availability of loss absorption resources in times of crisis. The impact of dynamic provisions has been studied from their introduction up to their release in the 2008 financial crisis.¹⁴ During the 2008 financial crisis, deposit institutions that had built up a bigger buffer of provisions reduced the flow of credit less than other institutions. This had real positive effects among their borrowers, such as the fact that far fewer companies closed (up to 50% fewer closures) than among firms financed by institutions without the buffer.¹⁵ Chapter 3 also analyses the macroeconomic impact of building up and releasing capital buffers.

The analysis of the banking sector's resilience in adverse macrofinancial scenarios also shows that loss-absorbing items limit a rapid deterioration in solvency. However the trends therein will need to be monitored if this downturn persists over time. There is a high level of uncertainty over the macroeconomic scenario, with a very large impact on GDP, which is concentrated in 2020 with a slight recovery expected in 2021. This uncertainty and data availability at the cut-off date for this FSR hamper an exact quantification of the impact of the COVID-19 crisis. Nonetheless, prior experience in several stress tests and preliminary analyses provide a useful guide, even though the scale of the shock admittedly has no close precedent. Balance sheet repairs and the build-up of capital in recent years have gradually increased resilience to more severe scenarios. Furthermore, experience with stress scenarios shows that periods of stress followed by swift recoveries do not entail very pronounced deteriorations in the banking system's aggregate solvency. The consequences of adverse macrofinancial scenarios lasting several years can

14 See Jiménez *et al.* (2017).

15 The introduction of dynamic provisioning in 2000 led the banks most affected by this new requirement to reduce their credit supply, above all among firms with better risk profiles. However, this did not have an aggregate contractive effect since the initially restricted firms were able to find new lenders given the favourable economic situation in which dynamic provisioning was introduced. The circumstances surrounding its introduction are less relevant to the current crisis than the release.

significantly undermine aggregate solvency, but loss-absorbing items prevent immediate erosion and provide the necessary reaction time for the economic policy response, which must, in any event, be swift and unequivocal.

In any event, it should also be borne in mind that heterogeneous trends in solvency are expected for different institutions. Besides, banks whose solvency and credit quality are initially worse could reach significantly lower solvency levels. Moreover, in the current crisis, the geographical and sectoral dimensions are more important than in previous years' stress tests, and solvency is expected to deteriorate to a greater extent for institutions that are more exposed to the economic sectors and areas most affected by the pandemic.

2.1.3 Changes in operational risks

The coronavirus crisis has significantly increased operational risks due to the establishment of urgent business-continuity measures. The disruptive nature of the coronavirus pandemic and the necessary containment measures applied have required the implementation of emergency measures, such as widespread teleworking. These measures were not necessarily envisaged in existing contingency plans and pose risks to the functioning of individual institutions and financial markets. So far the solutions applied have been effective and both credit institutions and financial markets have continued to operate smoothly, particularly in the case of central counterparties (CCPs). However, the scope of the contingency plans must be increased in light of the extreme operational risk events that this crisis may pose. Specifically, the implementation of urgent technological solutions may have increased the technology infrastructure's vulnerability to malware attacks. It is necessary to be extremely alert to cyber risks.¹⁶ The growing complexity of the information systems used by financial institutions may heighten vulnerability in this context.

Spanish credit institutions have implemented specific operating procedures in order to adapt to the new situation posed by the health crisis and ensure the continuity of their business. All institutions have made significant efforts, although the complexity of the measures adopted has varied depending on their size, business type and specific characteristics. Institutions have implemented working from home for most staff at head offices (figures approaching 100%) and critical services and important operational units have been identified and staff have been separated at different locations. Institutions have kept their branches open, although the number of branch employees working from home has increased to around 50%. In any event, sufficient numbers of staff continue to provide services to customers at branches. The online service capacity and loading of automated

¹⁶ Section 2.1.4 of the 2019 Autumn FSR outlines financial system-related cyber risks.

teller machines have been bolstered, while security systems have been reviewed to minimise potential cyber attacks.

In the weeks leading up to the spread of the pandemic, important court decisions were issued affecting the projected legal costs of Spanish deposit institutions. First, on 3 March 2020, the Court of Justice of the European Union (CJEU) issued its judgment concerning a request for a preliminary ruling on the use of the mortgage loan reference index (IRPH) in mortgage loan agreements. Subsequently, the Spanish Supreme Court (SC) issued its judgment on the usuriousness of some revolving credit card agreements.

The CJEU's judgment of 3 March 2020 concerning the request for a preliminary ruling on the potential unfairness of a mortgage loan agreement's contractual term governing the variable interest rate tied to the IRPH provided helpful criteria for clarifying the situation of litigation over these contractual terms.

The CJEU held that the IRPH term falls within the scope of Directive 93/13/EEC; consequently, the potential unfairness of such a contractual term may be analysed by national courts. To conduct this analysis, the judgment considers that national courts should verify not only whether the contractual term is intelligible, but also whether an average consumer is in a position to understand the specific functioning of the method used for calculating that rate and thus evaluate its economic consequences. The CJEU provided clear guidance to Spanish courts by stating that information that is particularly relevant to this assessment includes (i) the fact that essential information relating to the calculation of the IRPH is published in the Official State Gazette, thus enabling a reasonably well-informed customer to assess the contractual term, and (ii) the fact that, under the national legislation in force at the time, institutions were required to inform consumers of the fluctuations in the IRPH over the two calendar years prior to the conclusion of the agreement.

It should be noted that the CJEU stated that EU law does not preclude the use of a supplementary index provided for by law to replace the IRPH. The CJEU concluded that, where a national court declares the IRPH term null and void and considers that the mortgage loan agreement in question is not capable of continuing in existence without such unfair term and that annulment of that agreement in its entirety would expose the consumer to particularly unfavourable consequences, it could, in the absence of an agreement between the parties, replace the IRPH under the annulled term with a supplementary index provided for in Spanish law (the CJEU expressly mentions the index provided for in the fifteenth additional provision of Law 14/2013 of 27 September 2013). This is an important guideline for assessing the projected potential costs for institutions, since it would largely limit their amount should the aforementioned IRPH contractual terms be declared null and void. These points reduce the uncertainty surrounding this event, since they decrease the likelihood of the most adverse scenarios – in cost terms – for deposit institutions associated with litigation concerning IRPH contractual terms.

Supreme Court Judgment 149/2020 of 4 March 2020, on the nullity of a revolving credit agreement due to the usuriousness of the interest under the loan, increases the likelihood of a number of lawsuits being brought in connection with these agreements and may force some institutions to review their business models. However, it must be taken into account that the credit exposure potentially affected by these lawsuits is significantly lower than that affected by the IRPH contractual terms. In December 2019, Spanish deposit institutions' exposure to credit card products totalled around €14 billion, and revolving credit cards only account for a subset of this total. It should be noted that the criterion applied in the Supreme Court's judgment to determine the usuriousness of the agreement at issue was based on a comparison of the rate applied under the agreement (27.2%) with the average rate in the system for credit card products (20%), since this will serve as a benchmark for future litigation.

2.2 Non-banking financial sector and systemic interconnections

2.2.1 Non-banking financial sector

An exhaustive assessment of the financial implications of the spread of the coronavirus pandemic must also consider the non-banking financial sector, which represented 34% of the total assets of financial intermediaries at December 2019. Chart 2.14 shows that other non-bank financial intermediaries (13.9%) in Spain, which include specialised lending institutions, outweigh insurance companies (8.3%), investment funds (8.3%) and pension funds (3.8%). These three sectors, however, have witnessed the sharpest growth since 2014 in an environment of low interest rates. Specifically, investment funds are the only sub-sector whose cumulative growth exceeds that of nominal GDP. At the other end of the scale, the assets of the banking sub-sector (-10%) and of other financial intermediaries (-20%) as a percentage of the total have continued to decline. Indeed, the significant global development of the non-banking financial sector over the last decade has led national and international regulatory bodies to incorporate various aspects of this area of the financial system into their analyses¹⁷ (Box 2.2 summarises the latest Financial Stability Board (FSB) report on this matter).

Specialised lending institutions

Lending by specialised lending institutions (SLIs) continued to rise in 2019, underpinned by the consumer credit expansion. As such their growth model is

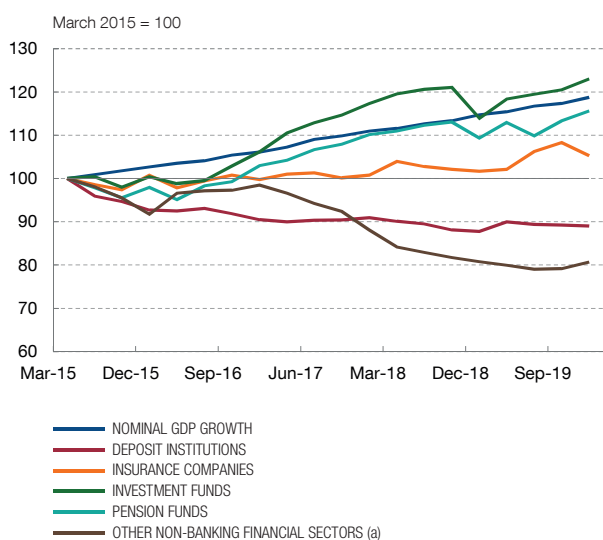
¹⁷ See, for example, IMF (2016). *Monetary Policy and the Rise of Nonbank Finance. Global Financial Stability Report*, October 2016, Chapter 2. See the 2019 *Spring* and *Autumn* FSRs for insights into the performance of the various resident financial sectors in recent decades and their direct and indirect interconnections.

Chart 2.14

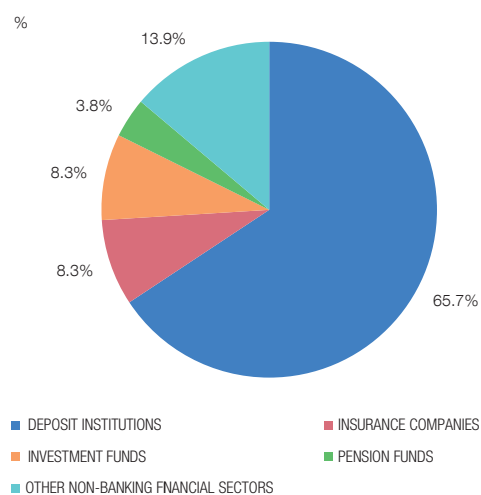
OWING TO THEIR GROWTH AND RELATIVE WEIGHT, NON-BANK INTERMEDIARIES MUST BE CONSIDERED TO ENSURE A FULL ANALYSIS OF THE EFFECTS OF THE CORONAVIRUS CRISIS

Since 2014, the cumulative growth of the main non-banking financial sectors (insurance companies, investment funds, pensions funds) has been comparable with that of nominal GDP, while deposit institutions (-10%) and other financial sectors (-20%) have seen their financial assets significantly reduced. Consequently, the relative weight of the non-banking financial sector has increased moderately, with the relative weight of investment funds within this sector growing.

1 RELATIVE GROWTH OF FINANCIAL SUB-SECTORS. 2014-2019



2 RELATIVE WEIGHT OF FINANCIAL SUB-SECTORS. DECEMBER 2019 (b)



SOURCE: Financial accounts of the Spanish economy (Banco de España).

- a Other non-banking financial sectors include: financial auxiliaries, captive financial institutions and money lenders, specialised lending institutions and other financial intermediaries.
- b As a percentage of total financial assets excluding central banks.

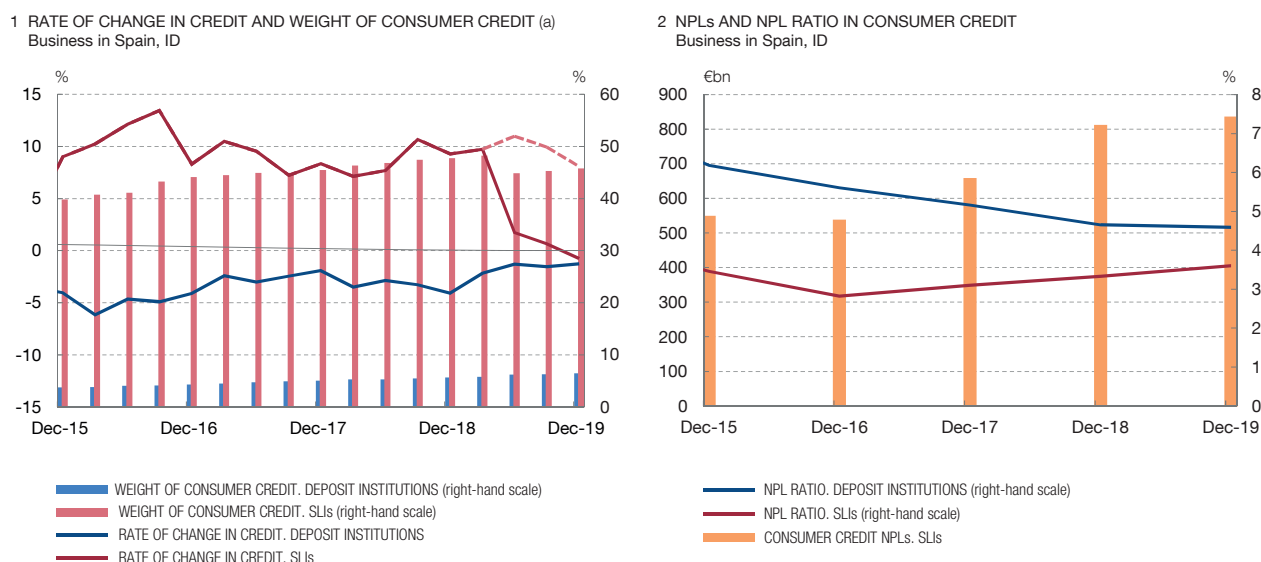
vulnerable to the shock from coronavirus. In contrast with the decline in lending by deposit institutions, loans granted by specialised lending institutions have shown high rates of change since 2015 (see Chart 2.15). Specifically, taking account solely of the set of entities classified as SLIs in December 2019, credit rose by 8.1% on the prior year. Since 2015, the weight of the consumer credit segment has remained above 40% of the total for this sector, compared with around 6% for deposit institutions in Spain.

The robust growth in lending has enabled SLIs to maintain a lower NPL ratio for consumer credit than that of deposit institutions, but the coronavirus crisis is expected to drive this ratio up. Non-performing consumer credit of SLIs has increased in recent years, bringing their NPL ratios closer to those of deposit institutions. If, as appears likely, the coronavirus crisis curbs growth in the denominator, an increase in this ratio can be expected. It should also be noted that, as a business segment, consumer credit generally presents higher levels of non-performance, particularly in periods of worsening financial conditions. In any event, the extension of the moratorium by the government to include non-mortgage loans

Chart 2.15

CREDIT FROM SLIs CONTINUED TO GROW IN 2019, UNDERPINNED BY THE CONSUMER SEGMENT, INCREASING THE VULNERABILITY OF THESE FINANCIAL INTERMEDIARIES TO THE COVID-19 CRISIS

Credit from SLIs sustained growth at rates in excess of 8% during the last year. Consumer credit continued to account for more than 40% of the portfolios of these institutions. The COVID-19 crisis will adversely affect the credit quality of these institutions' balance sheets, with greater growth in NPLs expected.



SOURCE: Banco de España.

a The dashed line shows the change in credit from SLIs that existed in December 2019. In June 2019 an SLI of considerable size became a deposit institution, causing the notable decline in the rate of change in credit as of that date (continuous red line).

for the most vulnerable cohorts will help contain this potential rise in non-performance during the ongoing crisis.

Insurance companies

The COVID-19 pandemic will adversely affect insurance companies' balance sheets and income statements. The impact will likely be more intense in terms of financial investment valuations than in terms of direct compensation. Over the coming months, these companies are expected to see rising expenses in respect of health care, payments for death benefits, cancellations of events and travel, business interruption, etc., which will only be partially offset by a reduction in claims in other segments. Revenues associated with activities that, like travel, are often insured are also expected to decrease. However, market estimates suggest that the impact of these expenses on the balance sheet, income statement and solvency ratio will be more moderate than the potentially very significant impact stemming from the protracted scenario of low interest rates and the reductions in value of their financial asset investments, as most such exposures are not protected.

The impact of the crisis on the returns of insurance companies may be very significant, both in the life segment, which at the outset has very low returns, and the non-life segment, where greater risks are concentrated. The non-life segment's investments, in which equity securities and property have a larger share, present a riskier profile and may therefore be more sensitive to the coronavirus crisis. However, this segment represents a small percentage of the investment portfolio. The weights represented by non-fixed income securities (loans, property, equities, etc.) in the Spanish life and non-life insurance sector's portfolios have been approximately 20% and 60%, respectively, since 2016. The distribution of investments between the life (80%) and non-life (20%) segments has remained stable in recent years, with the aggregate downturn in yields explained by the greater proportion of the life segment with investments linked to fixed-income securities, which have offered decreasing and even negative returns. Insurance companies are therefore especially sensitive to negative adjustments caused by the COVID-19 crisis to the values and credit ratings of the fixed-income securities concentrated in the life segment.

Investment funds

The coronavirus crisis may drive returns to negative levels in virtually all investment fund categories, although those with a greater fixed-income exposure could maintain a more neutral behaviour. Investment funds' assets recovered in 2019, driven by positive returns which have admittedly shown marked volatility in recent periods (see Chart 2.16). Specifically, their assets rose by 7.4% year-on-year, compared with a 2.1% decrease in 2018. Other than in 2019 Q4, where a positive contribution was more notable, net subscriptions made practically no contribution to the increase in investment funds' assets. A reduction can already be seen in assets of investment funds in 2020 Q1, mainly as a result of both negative returns, reversing the upward trend of previous years, and a very significant volume of fund withdrawals.

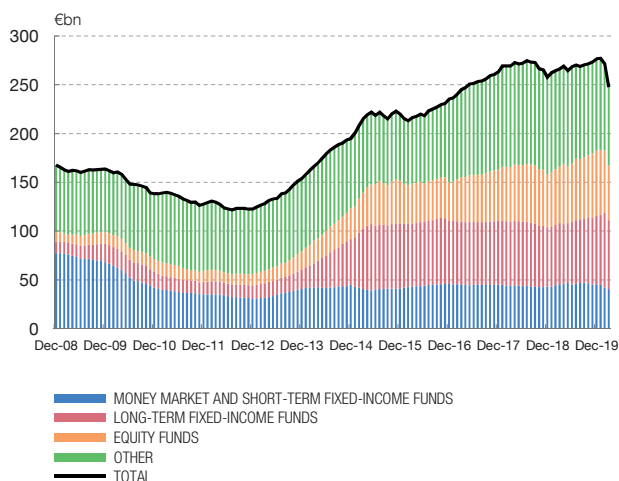
Investment funds with illiquid or unlisted investments would be most affected in liquidity stress events. Tensions could affect funds with investments in corporate debt with higher credit risk, as the related credit ratings could also be revised by rating agencies, thereby increasing the risk in the profile of their portfolios. This risk could be exacerbated by significant redemptions by their unit holders. Indeed, the pandemic crisis appears to have prompted a significant increase in such fund withdrawals. Both factors, which entail putting part of their assets up for sale on the market, may have implications for the other financial sub-sectors, as they could potentially drive down the price of such securities also on their balance sheets. The stabilisation measures from central banks have to date prevented more adverse scenarios from materialising in this segment, and the relevant supervisors have tools to tackle short-term scenarios of increased stress, such as the possibility of temporarily suspending redemptions and fostering consistent sales of funds' assets.

Chart 2.16

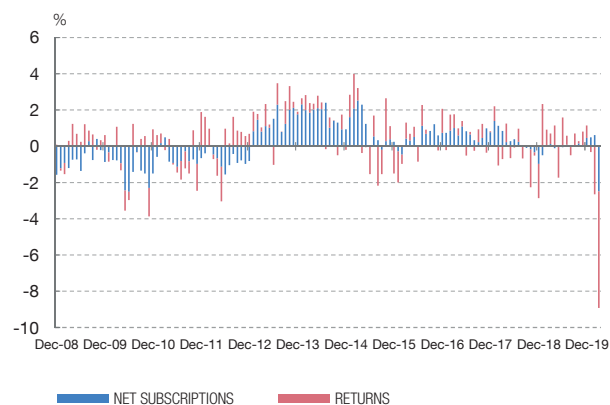
THE ASSETS OF INVESTMENT FUNDS HAVE GROWN STRONGLY SINCE 2014, BUT THE COVID-19 CRISIS IS REVERSING THE TREND IN 2020, BOTH DUE TO THE WITHDRAWAL OF FUNDS AND LOWER RETURNS

In the last five years the assets of money market funds and fixed-income funds have held relatively stable, while the weight of equity funds has increased. In 2019, growth in the assets of investment funds was driven mainly by positive returns and, to a lesser degree, net subscriptions registered in the last quarter. The latest data available (March 2020) already show a strong impact on assets of investment funds, due to both net redemptions and, especially, negative returns.

1 ASSETS OF INVESTMENT FUNDS
Breakdown by category (a)



2 CONTRIBUTION OF RETURNS AND NET SUBSCRIPTIONS TO CHANGE IN ASSETS OF INVESTMENT FUNDS



SOURCE: Inverco.

a The "long-term fixed-income funds" category includes long-term fixed-income investment funds, mixed fixed-income funds, international fixed-income funds and international mixed fixed-income funds. The "equity funds" category includes equity investment funds, mixed equity funds, international equity funds and international mixed equity funds. The "other" category includes hedge funds, passive management funds, absolute return funds, global funds and collateralised investment funds.

Pension funds

As with the investment funds sector, the negative outlook for returns will spill over to pension funds' assets in 2020. Positive returns were key to the pick-up in pension funds' assets in 2019, as they were for investment funds. Net contributions showed negative values, continuing the trend initiated in 2018, and the contribution from profitability was a record high for the time series (8.8%), resulting in a year-on-year increase of 8.9% in their assets. To provide liquidity to these assets, the government will temporarily allow the individuals most affected by the crisis to obtain partial redemptions of their units.

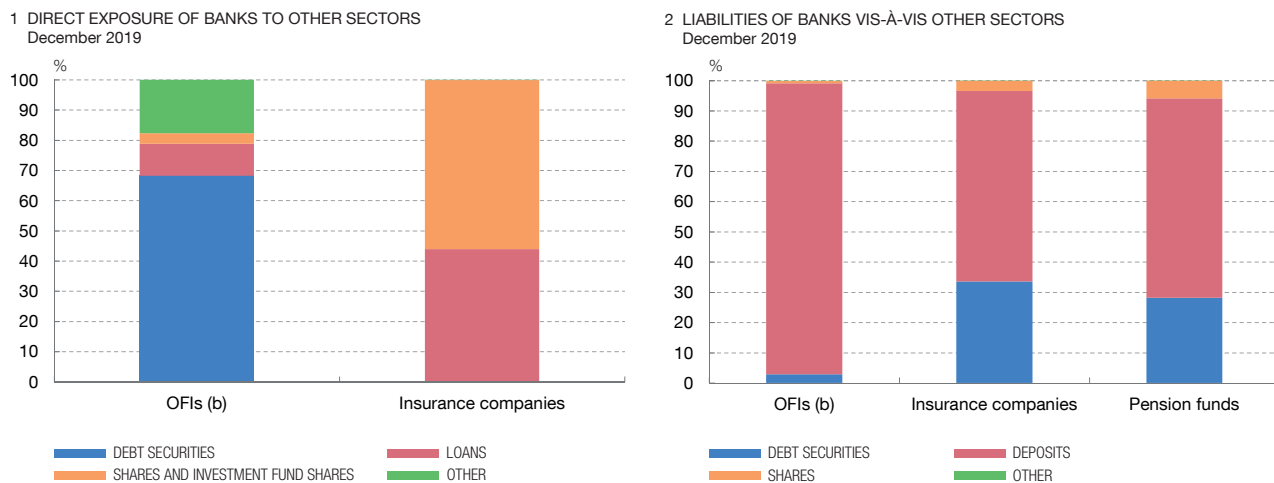
2.2.2 Systemic interconnections

The banking sector has significant exposures to certain financial sub-sectors. As shown in the analysis in the 2019 Spring FSR, through the assets on its balance sheet the banking sector has significant exposures to insurance companies, in the

Chart 2.17

THE BANKING SECTOR'S CENTRAL POSITION IN THE SPANISH FINANCIAL SYSTEM IS UNDERPINNED BY SIGNIFICANT DIRECT INTERCONNECTIONS WITH THE NON-BANKING FINANCIAL SUB-SECTORS (a)

The banking sector's exposure to other financial institutions (OFIs) via assets and liabilities is very significant, mainly as holder of debt securities and deposit-taker. The insurance sector likewise accounts for a high volume of loans and equity holdings among bank assets. Insurance companies and pension funds also hold a significant volume of deposits in the banking sector.



SOURCE: Banco de España.

- a The stacked bars indicate the weight of each instrument relative to the banking sector's total exposure, whether via asset or liability positions, to the corresponding non-banking financial sub-sector.
- b As a whole, other financial institutions (OFIs) include money market and non-money market investment funds, specialised lending institutions and other financial intermediaries (broker-dealers, securitisation special purpose vehicles, venture capital firms, bank asset funds, central counterparties and asset management companies, including Sareb, and other entities).

form of shareholdings and loans, and to other financial intermediaries, chiefly through fixed-income securities (see Chart 2.17). Logically, a downturn in those sub-sectors during this crisis would, through these channels, have a knock-on impact on deposit institutions.

The deposits of other financial intermediaries with the banking sector represent the main direct interconnection in terms of liabilities, which to date have not experienced significant tension. The other financial sub-sectors have significant volumes of deposits in the banking sector, and a material percentage of the exposure of insurance companies and pension funds to the banking sector (37% and 27.4%, respectively) is through fixed-income securities. As indicated in the section on financing and liquidity risk, some evidence indicates a rise in such deposits and the related remuneration in response to the shock triggered by coronavirus, and the stabilisation of money markets by central banks would help mitigate tensions through this channel.

Financial intermediaries also have significant interconnections through CCPs, whose operations have remained stable despite the pressure triggered by COVID-19 crisis. The current crisis has led to a major change in how both CCPs

and clearing members work. This, coupled with a strong surge in transactions, is putting the operating capacity of their systems to the test. Although in some cases there have been delays in certain members complying with their obligations, the CCPs have proven to be robust and resilient. BME Clearing, the Spanish CCP, is not an exception to this general pattern, and it has not experienced any operational incidents, significant delays, or instances of non-compliance by members in settling their financial obligations. Similarly, the latest data suggest that the intraday margin requirements could be returning to normal following the increases at the outset of this crisis.

Despite the across-the-board rise in the number and amount of margin calls by CCPs, the situation in this market segment has remained under control and no instances of non-compliance by members have been identified. The sharp price drops in the global financial markets have led to greater contributions required by CCPs from their members. It is still too early to determine whether CCPs' decisions regarding changes in the models for calculating margins have helped mitigate the procyclical movements detected in previous crises. However, the experience of this crisis may be useful in analysing the effectiveness of the measures previously implemented by CCPs in accordance with EMIR.

The indirect interconnections as a result of similarities between portfolios of marketable securities may also be a channel for magnifying the shock. Prior to the impact of the coronavirus crisis, the effect of the environment of low or even negative interest rates on risk-taking by financial intermediaries was a focal point for supervisors. Greater risk-taking could manifest in changes in the characteristics (term, rate of return, credit rating, etc.) of the marketable securities in these intermediaries' portfolios, and this could now represent a vulnerability to the financial shocks associated with coronavirus. It is important to bear in mind that marketable securities represent 80% of the total assets of the non-banking financial sector (NBFS) analysed in this sub-section (insurance companies, investment funds and pension funds), but only account for around 25% of total domestic assets of deposit institutions,¹⁸ given the preponderance of loans.

The securities holdings of banks and insurance companies are highly concentrated in fixed income and present greater resilience to the volatility stemming from coronavirus, especially following the expansion of the ECB's purchase programme. Chart 2.18 shows that the percentage of fixed-income securities held by banks has increased slightly since 2014 (these instruments represent more than 90% of their total securities portfolios in 2019). Conversely, the

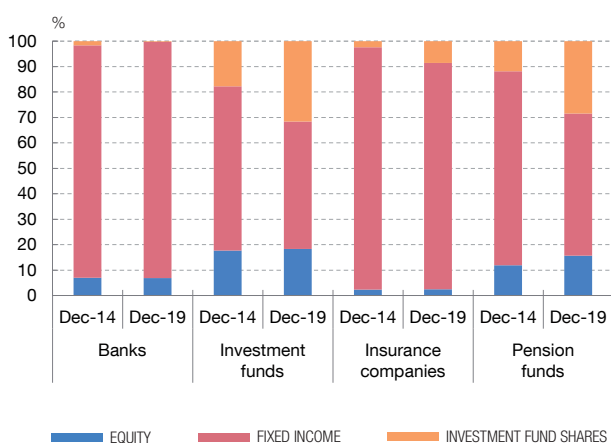
18 The information on marketable securities portfolios of financial intermediaries comes from the ECB's Securities Holdings Statistics by Sector (SHSS) database, which identifies the country of residence of the various holders. The assets of the various financial intermediaries are obtained from the Financial Accounts of the Spanish Economy (FASE) of the Banco de España. The weight of the securities holdings is obtained by combining the two sources, which are prepared on an individual basis, rather than on a consolidated basis at financial group level.

Chart 2.18

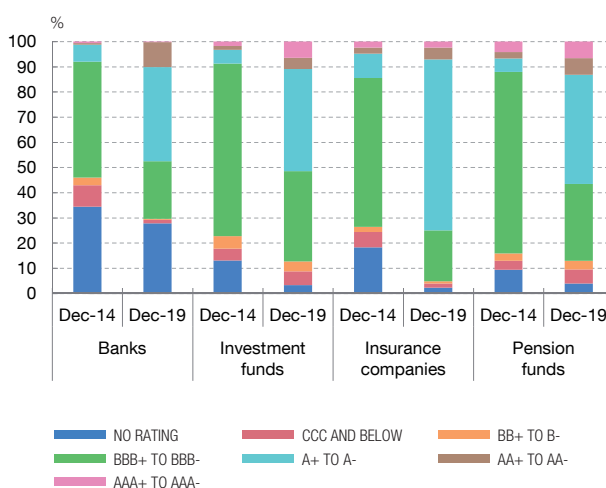
BANKS AND INSURANCE COMPANIES HAVE A HIGHER WEIGHT OF FIXED-INCOME SECURITIES THAN INVESTMENT FUNDS AND PENSION FUNDS. THE CREDIT RATINGS OF THESE SECURITIES HAVE IMPROVED SINCE 2014, BUT THE CORONAVIRUS CRISIS IS SET TO ALTER THIS TREND

Relative to 2014, the securities holdings of banks and insurance companies have remained concentrated in fixed income, while investment funds and pension funds, which already held larger equity positions, have increased their holdings of investment fund shares (proliferation of funds from funds). The credit ratings of the financial sectors' fixed-income holdings have improved relative to 2014, but it should be borne in mind that ratings may be adjusted procyclically in view of the coronavirus crisis, and that securities on the edge of investment-grade rating (from BBB+ to BBB-) may be especially sensitive.

1 COMPOSITION OF SECURITIES PORTFOLIOS BY INSTRUMENT TYPE
% of the total portfolio



2 CREDIT RATING (a)
% of total fixed-income portfolio



SOURCES: SHSS and Eikon.

a The most recent credit rating is shown, regardless of the rating agency.

weight of fixed-income securities held by insurance companies has declined since 2014 and the proportion of their investment fund shares has increased; nevertheless, their portfolios remain highly concentrated in fixed income.

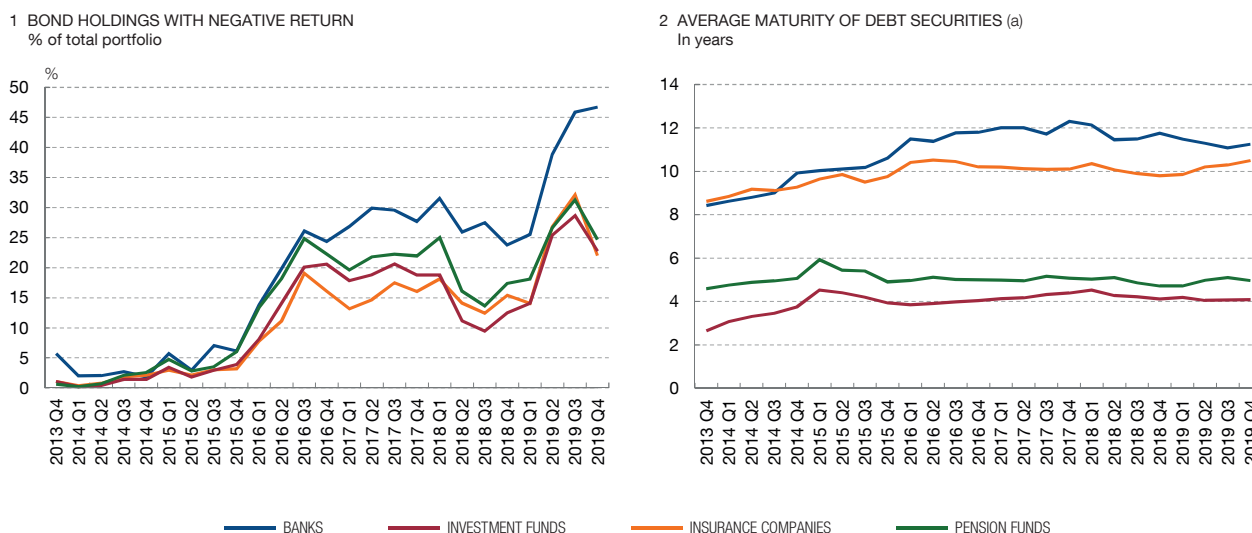
Compared to banks and insurance companies, investment funds and pension funds are more exposed to equity securities and shares in other funds. The proportion of equity securities held by investment funds has remained flat, but shares in other funds have risen at the expense of fixed-income securities (see Chart 2.18). There has been greater change in the three types of instruments at pension funds since 2014, with increases in the weight of equity securities (from 11.8% to 15.6%) and investment fund shares (from 12% to 28.5%), and a drop in that of fixed-income securities (from 76.2% to 55.9%).

The credit ratings of the investments of all sectors improved between 2014 and 2019. However, given the current circumstances, ratings may be adjusted, with securities on the edge of investment-grade rating being the most sensitive. At end-2019, investment-grade debt instruments prevail across all sectors (see Chart 2.18) and account for approximately 70% of the banking sector's total

Chart 2.19

SINCE 2014, ALL SUB-SECTORS, IN PARTICULAR BANKING, HAVE INCREASED THE WEIGHT OF DEBT INSTRUMENTS WITH NEGATIVE RATES OF RETURN IN THEIR PORTFOLIOS AND ASSUMED LONGER AVERAGE MATURITIES

Since 2014, the weight of debt instruments with negative rates of return in marketable securities portfolios has increased at various financial intermediaries, in particular for banks, where they represented around 45% of their portfolio in December 2019 compared with 30% in other sub-sectors. In 2019 Q4 a decline in this share can be observed for non-banking sectors. In addition, an increase can be seen in the average maturity of portfolios, especially for banks and insurance companies. Debt securities with longer maturities are more sensitive to valuation changes, and holdings with negative returns reduce income generation capacity.



SOURCE: SHSS.

a Maturity calculated as the weighted average of residual maturities of debt instruments (excluding irredeemable bonds).

holdings and around 90% in the case of non-banking sectors.¹⁹ As little use is made of external ratings in Spanish banks' capital models for exposures to corporates, such valuation adjustments would not also result in a sharp increase in RWAs. The portfolios of insurance companies (31.7%) and pension funds (26.1%) have the highest proportions of securities rated between BBB- and BBB+, which are particularly susceptible to downgrade in the event of a worsening in macrofinancial conditions prompting agencies to review their ratings.

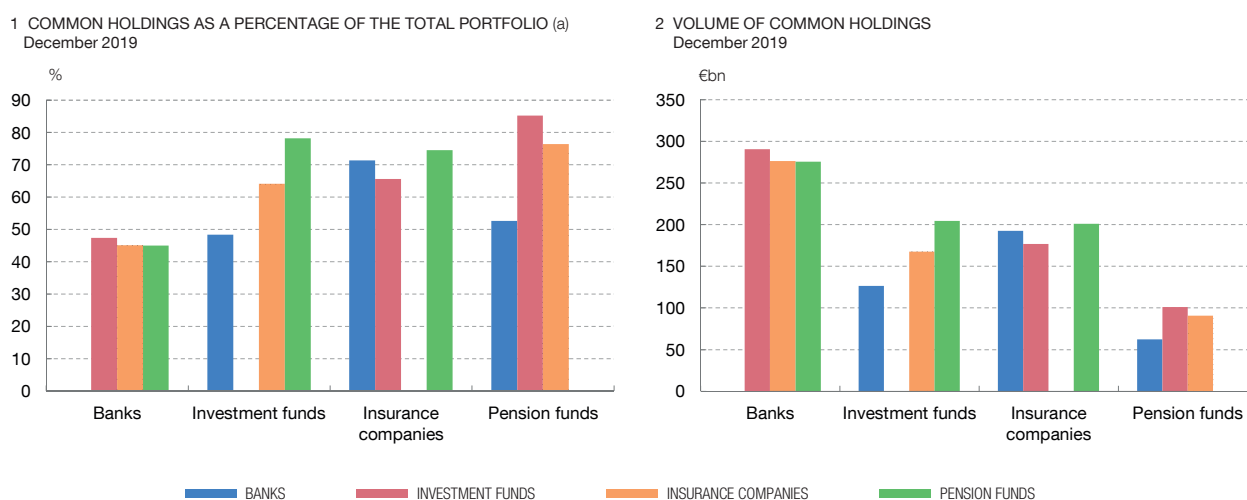
Debt securities with negative returns in the portfolios of all sectors, in particular banking, reduce the aggregate returns for their holders. However, it also makes them more resilient in reviews of risk premia. Moreover, the expansionary monetary policy response eliminates the interest rate risk that could otherwise affect them to a greater extent. The environment of low or even negative interest rates and the need to maintain a reserve of liquid assets has driven up the percentage of holdings of debt securities with negative interest rates from below 2% in 2014 to between 22% and 47% in 2019. This rise is especially significant for banks, where

¹⁹ The increase in the AA category is largely the result of the upgrade of Spain's credit rating in 2019.

Chart 2.20

EXPOSURES TO COMMON ISSUERS OF MARKETABLE SECURITIES ARE MATERIAL BOTH FOR THE BANKING SECTOR AND THE OTHER FINANCIAL INTERMEDIARIES, REPRESENTING A POTENTIAL CHANNEL OF CONTAGION OF THE SHOCKS TRIGGERED BY COVID-19

The banking sector has the largest volume of common holdings of marketable securities with the other sub-sectors (between €250 billion and €300 billion with each of them), but these holdings make up a smaller percentage of the total than that observed in other sub-sectors. The highest figures are for pension funds (76% common holdings with insurance companies and 85% with investment funds) and investment funds (78% common holdings with pension funds).



SOURCE: ECB (Securities Holding Statistics by Sector).

a The chart shows common holdings of marketable securities, understood as ownership of identical securities issued by the same issuer, considering the market value of the holdings reported by the institutions (or, where appropriate, fair value). For example, of the common holdings between banks and investment funds, banks hold around €300 billion, which is 49% of their total portfolio. For their part, investment funds hold around €130 billion, which is 51% of their total portfolio.

these securities already account for 47% of their portfolio in 2019 (see Chart 2.19). In the current climate, with central banks providing a high amount of liquidity, the rate of return may shift towards more negative levels in the case of securities that could be considered safe assets, such as certain sovereign bonds, whereas greater risk aversion could increase the returns required for other securities.

The average maturity of the debt securities portfolio of the various sectors has gradually risen over the last five years, heightening sensitivity to possible adjustments to required returns. The increase in average maturity has been more significant for banks and insurance companies, whose portfolios primarily comprise debt instruments. As shown in the right-hand panel of Chart 2.19, the average maturity of funds' portfolios has increased to a lesser extent, remaining at lower levels throughout the period. This trend may also be attributable to the environment of low interest rates and abundant liquidity in previous years.

The presence of significant indirect interconnections through exposures to the same issuers means that the various sub-sectors are exposed to common shocks in the face of valuation adjustments. It may also mean that a sale of

assets by one sector could prompt a downward adjustment in their prices, which would logically also affect the other sectors holding such assets. In relative terms, exposures to common issuers are especially high for investment funds and pension funds (see Chart 2.20). At end-2019, more than 45% of every marketable securities portfolio of each sub-sector related to common issuers whose securities also formed part of the portfolios of another sub-sector. This proportion was particularly high, above 75%, for pension funds vis-à-vis investment funds and insurance companies. In absolute terms, the banking sector held the greatest volume of securities of common issuers, with more than €275 billion vis-à-vis each of the other sub-sectors (see Chart 2.20). The common exposure to certain sovereign bonds is one of the main factors determining the high degree of portfolio overlap.

