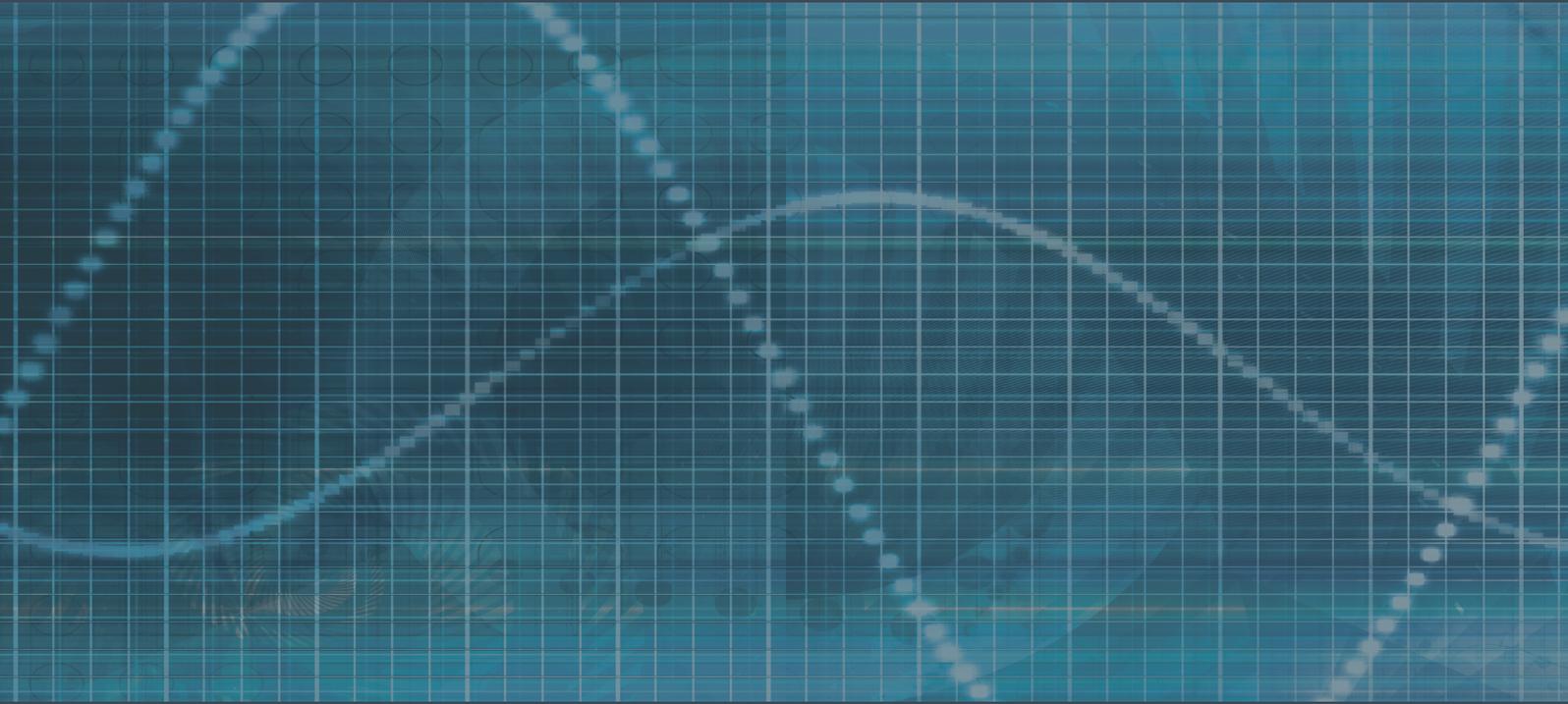


ANNUAL REPORT

2019

AMCESFI | Autoridad Macropudencial
Consejo de Estabilidad Financiera



ANNUAL REPORT

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About AMCESFI

AMCESFI is the macroprudential authority for the Spanish financial system. Set up in March 2019, its goal is to contribute to the stability of the financial system as a whole by identifying, preventing and mitigating any circumstances or actions that may give rise to systemic risk. In this connection, AMCESFI is empowered to issue opinions, warnings and recommendations on matters that could affect financial stability.

AMCESFI is set up as a collegiate body attached to the Minister for Economic Affairs and Digital Transformation. Its members include the highest Spanish authorities with sectoral responsibilities for the regulation and prudential supervision of the Spanish financial system: the Banco de España, the National Securities Market Commission (CNMV) and the Directorate General of Insurance and Pension Funds.

This *Annual Report* is published in compliance with the accountability obligation envisaged in Article 19 of Royal Decree 102/2019. For more information about AMCESFI and its publications, visit www.amcesfi.es.

Introductory letter from the Third Deputy Prime Minister and Minister for Economic Affairs and Digital Transformation



Nadia Calviño
Santamaría,
AMCESFI
Chairperson.

Dear reader,

One of the first commitments undertaken by the Government in 2018 was to create a macroprudential authority. As concluded by the Parliamentary Committee on the past financial crisis, among the main lessons from the crisis was the need to have in place bodies and tools with a far-reaching view and the ability to take swift action aimed at preventing the build-up of systemic risks. Indeed, the existence of a macroprudential authority with a comprehensive view comprising regulators and sectoral supervisors is an important factor in being able to identify, prevent and mitigate macrofinancial risks, i.e. those that spread through the entire sector and can jeopardise economic stability.

In 2011, the European Systemic Risk Board (ESRB) issued a recommendation to Member States of the European Union (EU) to designate an authority responsible for this area. The International Monetary Fund (IMF), through the Financial Sector Assessment Programme for 2017, made a recommendation to Spain in the same vein.

In its initial months, the new Government made firm progress in this project, and the first informal meetings were held in October 2018. Thanks to the excellent collaboration of all the parties involved, the new macroprudential authority (AMCESFI) was created through Royal Decree 102/2019 in March 2019, comprising the various regulators and supervisors of the different sectors (banks, capital markets, insurance, etc.), with the aim of guaranteeing a sustainable contribution by the financial system to economic growth.

AMCESFI has been set up with the challenge of safeguarding the stability of our current complex and interconnected financial system, and of preventing systemic risks that might adversely affect the real economy. To fulfil its mission, AMCESFI carries out actions in two

directions: first, it monitors and analyses those factors that could affect systemic risk; and second, it issues the opinions, warnings and recommendations it deems appropriate, in light of its previous analysis. In addition, the national supervisors must inform AMCESFI of their intention to adopt the macroprudential tools available to them. At the international level, AMCESFI also coordinates with macroprudential authorities in other EU countries and with the ESRB.

Since its creation, there have been six meetings of its Board and twelve of its Financial Stability Technical Committee (FSTC). These meetings have strengthened cooperation between authorities and made it easier for supervisors to adopt specific measures to protect financial stability, such as those taken by the Banco de España on the maintenance of capital buffers and the restrictions imposed by the CNMV on short selling.

In view of the challenges facing us in 2020, the resolute drive by different institutions last year to strengthen macroprudential oversight was clearly a good decision. Thanks to the firm action from the different organisations, AMCESFI has become established as a centre for economic governance coordination and information, which is key for tackling situations such as the one we have experienced since the outbreak of the pandemic. Although the source of the crisis on this occasion was not financial, the health emergency and the necessary response (reducing mobility) are having profound consequences in the macrofinancial arena, which have focused AMCESFI's work priorities and efforts in recent months.

Given that this publication refers to 2019, activity related to the response to COVID-19 will be addressed in depth in the next *Annual Report*. However, in view of the events of recent months, one conclusion may already be drawn: the new macroprudential authority has become established as the cornerstone for maintaining the stability of the Spanish financial system. Let's continue working to strengthen it going forward.

CHAPTER 1

Creation and activities of AMCESFI in 2019

Creation

The new macroprudential authority (AMCESFI) is a collegiate body attached to the Minister for Economic Affairs and Digital Transformation.¹ AMCESFI regularly brings together the top representatives of the Ministry and of the three authorities with sectoral responsibilities for the regulation and prudential supervision of the Spanish financial system: the Banco de España, the National Securities Market Commission (CNMV) and the Directorate General of Insurance and Pension Funds (DGSFP). AMCESFI's activity is underpinned by the technical support that it receives from its member institutions, which provide the human and physical resources needed for its operations, with a charge to their budgets.

AMCESFI was created in March 2019 with the aim of strengthening macroprudential oversight in Spain.² A macroprudential authority for the financial system as a whole in Spain had been needed since the last financial crisis, which highlighted the limitations of the existing traditional economic policy and financial supervision tools available to authorities for preventing and mitigating systemic risks that could affect the stability of the financial system.

Macroprudential policy is aimed at enhancing financial stability by preventing and mitigating systemic risks and vulnerabilities. A systemic risk is one that could trigger a shock in the financial services markets with a potential adverse impact on the real economy. Given their nature, systemic risks may be cyclical (based on the position in the financial cycle) or structural (permanently affecting the financial system as a whole, or a subset of it). The macroprudential policy tools available for addressing this type of risk vary among sectors of the financial system (as explained below in Chapter 2 of this Report). Macroprudential policy complements traditional microprudential supervision, which is focused on guaranteeing the soundness and solvency of financial institutions on an individual, but not necessarily collective, basis.

Macroprudential responsibility for the financial system lies with the authorities that make up AMCESFI. The designated authority

¹ Royal Decree 102/2019 of 1 March 2019 creating the Spanish macroprudential authority (AMCESFI), establishing its legal regime and implementing certain aspects on macroprudential tools

² "El Gobierno aprueba la creación de la Autoridad Macroprudencial Consejo de Estabilidad Financiera", press release from the Ministry of the Economy and Business, 1 March 2019.

is the Banco de España, for the credit institutions sector, and the CNMV, in the case of investment firms and collective investment vehicle management companies; the DGSFP is similarly tasked with such functions in relation to the entities within its supervisory remit. These three sectoral authorities have a number of macroprudential tools envisaged under current legislation to be used for financial stability purposes. The Ministry of Economic Affairs and Digital Transformation has legislative powers as regards the financial system, the design of the institutional architecture and the development of new macroprudential policy tools for use in Spain.

The growing complexity of the financial system and the presence of interconnections reinforce the need to have appropriate institutional cooperation mechanisms. In recent years, the exchange of information and analysis on financial stability among different authorities has become more important at the national, European and global level. Against this backdrop, AMCESFI seeks to address, in a coordinated and comprehensive manner, the response at the national level to possible sources of systemic risk to the stability of the Spanish financial system.

The creation of AMCESFI is part of the reform of the institutional architecture of financial and macroeconomic supervision at the European level. In the aftermath of the global financial crisis, the European Commission entrusted a high-level expert group, following an analysis of the causes of the crisis, to study the regulatory and supervisory frameworks in place, so as to make specific recommendations for improvement. As a result of this request, the “de Larosière Report”³ was published on 25 February 2009. It proposed strengthening European supervisory arrangements and recommended the creation of a European body entrusted with supervising the risks in the financial system as a whole. Thus, the European Systemic Risk Board (ESRB) was created in December 2010.

During its first year of activity, the ESRB issued a recommendation⁴ calling on Member States to designate an authority entrusted with macroprudential oversight. The objective of this recommendation was to strengthen and enhance the coordination of macroprudential

³ Report by the High-Level Group on Financial Supervision in the EU, of 25 February 2009.

⁴ Recommendation ESRB/2011/3 of 22 December 2011 on the macro-prudential mandate of national authorities. “Member States are recommended to designate in the national legislation an authority entrusted with the conduct of macro-prudential policy, generally either as a single institution or as a board composed of the authorities whose actions have a material impact on financial stability.”

oversight, which was commonly carried out by different sectoral authorities within one country (such as in the case of Spain).

In the absence of the creation of a specific authority in Spain, these functions lay with the Banco de España, as stipulated in the first transitional provision of Royal Decree 84/2015 of 13 February 2015 implementing Law 10/2014 of 2016 2014 on the regulation, supervision and solvency of credit institutions. Moreover, Law 10/2014 of 26 June 2014 called on the Government to report to Parliament on the measures that were advisable in Spain for strengthening the supervision of financial stability, macroprudential analysis, coordination and exchange of information to prevent financial crises and, in general, cooperation between competent authorities in the preservation of financial stability.

The Financial Stability Committee (CESFI), the forerunner of AMCESFI, was created in 2006. This Committee comprised the then Ministry of Economic Affairs and Finance, the Banco de España, the CNMV and the DGSFP, under a cooperation agreement aimed at fostering collaboration in the field of financial stability and the prevention and management of crises with potentially systemic effects.

In 2017, the IMF recommended that a macroprudential authority be created in Spain. As part of the conclusions of the Financial Sector Assessment Programme⁵ (FSAP), the IMF proposed that a Systemic Risk Council be established to coordinate the different authorities and recommend system-wide financial sector policies.

In the second half of 2018, the first steps were taken towards creating a new authority in Spain. Further to the first preliminary meetings, under Royal Decree-Law 22/2018 of 14 December 2018, additional powers were assigned to the Banco de España, the CNMV and the DGSFP in their respective areas, and the way was opened for the national macroprudential authority to take on a more prominent role.

Through Royal Decree 102/2019 of 1 March 2019, AMCESFI was created as the authority entrusted with macroprudential oversight, succeeding CESFI. Royal Decree 102/2019 creating AMCESFI (Spain's new macroprudential authority), establishing its legal regime and implementing certain aspects on macroprudential tools was approved on 1 March 2019. AMCESFI was established

⁵ See the IMF paper *Spain. Financial System Stability Assessment* of 25 August 2017. "The FSAP's proposed establishment of a "Systemic Risk Council" (SRC) would considerably enhance Spain's capacity for systemic risk oversight and policy coordination. (...) The SRC would be well placed to monitor and act on financial system activities relevant to Spain in an integrated manner."

as a collegiate body, pursuant to the provisions of Law 40/2015 of 1 October 2015 on the Legal Regime of the Public Sector, attached to the then Ministry of the Economy and Business.⁶ The authority adopted the regime of the collegiate bodies of the different tiers of government, with the specific features established in the royal decree regulating its creation.

The establishment of AMCESFI was preceded by the allocation of a new set of macroprudential tools to the sectoral authorities.

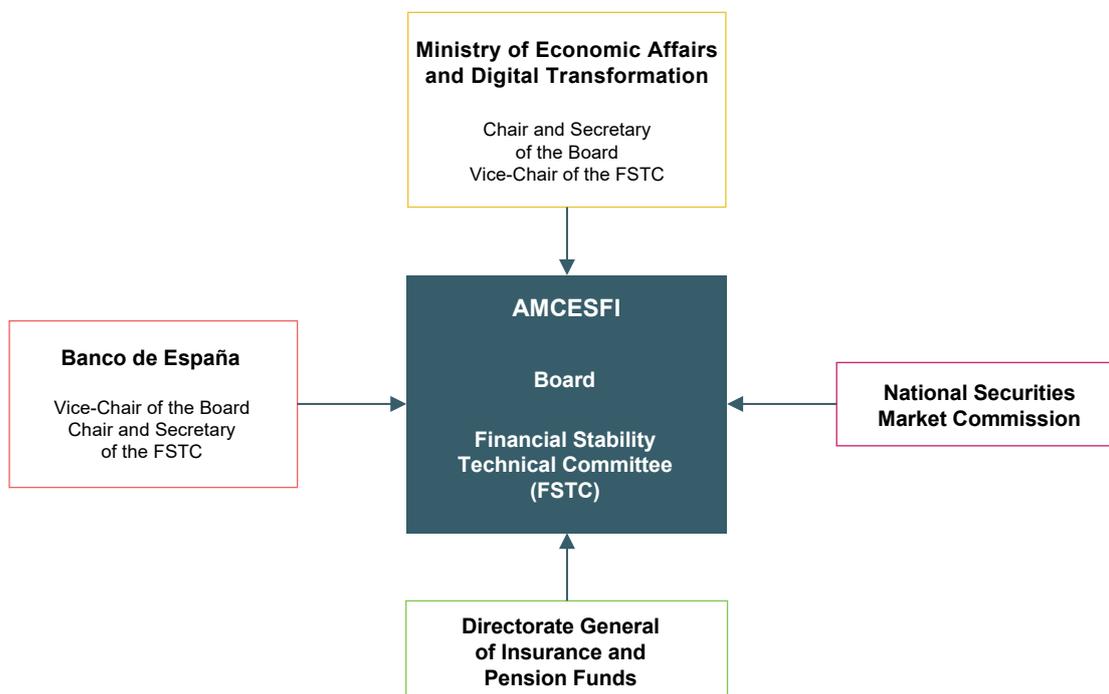
Royal Decree-Law 22/2018 of 14 December 2018 empowered the Banco de España to set, on a sectoral basis, countercyclical capital buffer (CCyB) rates, concentration limits and conditions on lending and other operations, thereby introducing such power into the prevailing legislation on the regulation, supervision and solvency of the financial system. The CNMV was empowered to reinforce the liquidity level of the portfolios of entities within its supervisory remit and to introduce limits and conditions on their activity in order to avoid excessive private sector indebtedness that could affect financial stability. The DGSFP was empowered to set exposure limits on certain sectors of economic activity or categories of assets when the aggregate exposure of insurance and reinsurance undertakings, or of some of them, to a certain sector of economic activity or category of assets reaches a level that could represent an element of systemic risk. It was also empowered to set limits and conditions on operations involving the transfer of risks and insurance portfolios. This set of tools adds to those already available under Community law transposed into Spanish legislation.

AMCESFI comprises a Board, a Financial Stability Technical Committee as a supporting body, and the subcommittees that the Board resolves to set up. These bodies comprise representatives of the Ministry of Economic Affairs and Digital Transformation, the Banco de España, the CNMV and the DGSFP (see Figure 1.1). The possibility of inviting other public authorities is envisaged, such as the Fund for the Orderly Restructuring of the Banking Sector, the Deposit Guarantee Scheme for Credit Institutions, the National Commission on Markets and Competition and the Independent Authority for Fiscal Responsibility, along with representatives from European and international institutions.

AMCESFI's mission is to identify, prevent and mitigate systemic risks in the financial system and, in this connection, it may issue opinions, warnings and recommendations on matters that could affect financial stability. Through the recommendations, AMCESFI

⁶ Now the Ministry of Economic Affairs and Digital Transformation (Office of the Third Deputy Prime Minister).

Figure 1.1 Structure of AMCESFI



SOURCE: AMCESFI.

may foster the use of the macroprudential tools assigned to the sectoral supervisors. These include applying greater risk weightings for real estate exposures, establishing limits on the aggregate exposure of insurance and reinsurance undertakings, setting limits and conditions on transfers of risks and insurance portfolios by these entities, and suspending redemptions of shares in collective investment schemes. AMCESFI's recommendations are subject to a "comply or explain" mechanism applicable to their addressees. To help reinforce financial stability within the EU, AMCESFI cooperates with the ESRB and macroprudential authorities in other Member States.

Activities in 2019

The Board of AMCESFI held its first meeting on 1 April 2019. This inaugural meeting⁷ served to discuss the national and international economic and financial situation, focusing on developments in the financial sector. The Board unanimously resolved to continue analysing and monitoring, through AMCESFI, the risks to the macroeconomic situation, such as the slowdown in Europe and the deteriorating economic and financial situation of emerging market economies. The main credit indicators were also analysed, and the changes to the financial system resulting from the latest rules and regulations approved, aimed at improving solvency and efficiency in the sector, were discussed. The decision to hold the CCyB at 0% was also justified. Moreover, the meeting covered financial market conditions, paying particular attention to the implications of Brexit, which at the time was uncertain, and it was unanimously resolved that each institution would monitor this matter in its respective field of competence.

The Board held its second meeting on 17 September 2019, where it addressed the latest macroeconomic developments and their economic policy implications, with particular reference to the uncertainties deriving from the international environment. Several risks to the stability of the financial system were also analysed. These included the challenges posed by the low interest rate environment, digitalisation and the need to achieve a level playing field, taking into account the possible entry of new financial actors, such as FinTech and BigTech. Furthermore, the situation of investment funds, the mortgage sector and payment services was monitored, as were the new Brexit-related developments.

The Board of AMCESFI held a third, virtual meeting on 19 November 2019. The main purpose of this meeting was to discuss procedural matters related to the first year of operations of the recently established macroprudential authority.

Through the FSTC, AMCESFI was informed of the proposed macroprudential policy measures considered by the sectoral supervisory authorities. In compliance with the duty of communication stipulated in Article 16 of Royal Decree 102/2019, AMCESFI was

⁷ “La Autoridad Macropudencial celebra su primera reunión”, press release from the Ministry of the Economy and Business, 1 April 2019.



The Board of AMCESFI at its 17 September 2019 meeting.

notified in advance of the Banco de España's quarterly decisions on the setting of the CCyB rate applicable to credit exposures in Spain and of its annual decisions on identifying and setting capital buffers for Spanish systemically important credit institutions (see Section 2.2).

In its first year, AMCESFI dealt with various governance, procedural and communication matters arising from the start of its activity. Specifically, work was carried out to prepare internal rules on working procedures and to develop a website for AMCESFI (www.amcesfi.es) (see Figure 1.2), which has been launched upon publication of this *Annual Report*. In 2019, AMCESFI did not consider it necessary to issue opinions, warnings or recommendations.

In the short and medium term, AMCESFI's work priorities are focused on monitoring the macrofinancial situation and identifying systemic risk factors derived from the impact of COVID-19 in Spain. The financial stability implications from the public support measures introduced in response to COVID-19 will also be analysed, in accordance with Recommendation ESRB/2020/8 of the European Systemic Risk Board.⁸ Another matter that will foreseeably be on AMCESFI's work agenda is the impact of climate change on the financial system.⁹

⁸ Recommendation ESRB/2020/8, of 27 May 2020, on monitoring the financial stability implications of debt moratoria, and public guarantee schemes and other measures of a fiscal nature taken to protect the real economy in response to the COVID-19 pandemic.

⁹ Article 29 of the draft *Climate Change and Energy Transition* bill envisages that "the Banco de España, the National Securities Market Commission and the Directorate General of Insurance and Pension Funds, in their respective fields of competence, shall jointly draw up, every two years, a report on the risk assessment for the Spanish financial system derived from climate change and the policies to combat it, which shall be coordinated within the Spanish macroprudential authority (AMCESFI)".

Table 1.1 Composition of the AMCESFI Board at 31 December 2019

Organisation	Position	Name	Position on the Board
Ministry of the Economy and Enterprise	Minister	Nadía María Calviño Santamaría	Chair
Banco de España	Governor	Pablo Hernández de Cos	Vice-Chair
National Securities Market Commission	President	Sebastián Albella Amigo	Member
Banco de España	Deputy Governor	Margarita Delgado Tejero	Member
National Securities Market Commission	Vice-President	Ana Martínez-Pina García	Member
Ministry of the Economy and Enterprise	State Secretary for Economic Affairs and Support to Enterprise	Ana de la Cueva Fernández	Member
Directorate General of Insurance and Pension Funds	Director General	Sergio Álvarez Camiña	Member
Ministry of the Economy and Enterprise	Central Government Lawyer at the General Secretariat for the Treasury and International Financing	José Luis Gómara Hernández	Secretary

SOURCE: AMCESFI.

Table 1.2 Composition of the AMCESFI FSTC at 31 December 2019

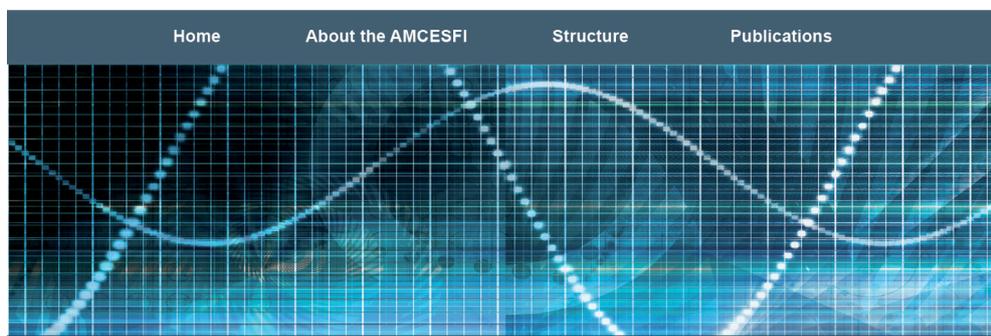
Organisation	Position	Name	Position on the Committee
Banco de España	Deputy Governor	Margarita Delgado Tejero	Chair
Ministry of the Economy and Enterprise	General Secretary for the Treasury and International Financing	Carlos San Basilio Pardo	Vice-Chair
National Securities Market Commission	Vice-President	Ana Martínez-Pina García	Member
Ministry of the Economy and Enterprise	Director General for the Treasury and Financial Policy	Elena Aparici Vázquez de Parga	Member
Directorate General of Insurance and Pension Funds	Director General	Sergio Álvarez Camiña	Member
Banco de España	Director General Financial Stability, Regulation and Resolution	Jesús Saurina Salas	Member and Secretary
Banco de España	Director General Banking Supervision	Mercedes Olano Librán	Member
National Securities Market Commission	Director General of Policy and International Affairs	Víctor Rodríguez Quejido	Member
National Securities Market Commission	Director General of Markets	Rodrigo Buenaventura Canino	Member
National Securities Market Commission	Director General of Institutions	José María Marcos Bermejo	Member

SOURCE: AMCESFI.

Figure 1.2 The new AMCESFI website

Español | English | CA | EU | GA | VA

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Welcome to the website of the Spanish Macroprudential Authority Financial Stability Council (AMCESFI)

The AMCESFI is Spain's national authority responsible for identifying, preventing and mitigating the development of systemic risk and, thereby, ensuring the sustainable contribution of the financial system to economic growth. Since its creation in March 2019, the AMCESFI regularly brings together high-level representatives from the Ministry of Economic Affairs and Digital Transformation, the Banco de España and the National Securities Market Commission (CNMV) for the purpose of engaging in monitoring and coordinated analysis of sources of systemic risk affecting the stability of the Spanish financial system. The AMCESFI is entrusted with powers to issue opinions, warnings and recommendations in the area of macroprudential analysis and policy.

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de 1 de marzo, por el que se crea
la Autoridad Macroprudencial
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CHAPTER 2

Financial and risk environment in 2019

2.1 General macrofinancial developments

Main macro-aggregates

The world economy experienced a synchronised slowdown in 2019. This slowdown came about amid trade tensions, macroeconomic uncertainty in various emerging countries and deepening structural changes in advanced economies, such as scant productivity gains and population ageing.

Global GDP grew by 2.9% in 2019, one of the slowest rates since the 2008 financial crisis. This growth was lower than that posted in 2018 (3.6%) and 2017 (3.8%). However, at the end of the year, there were some signs of stabilisation in the growth rate and of a reduction in some of the main risks, such as the easing of US-China trade tensions and the greater certainty as to the outcome of Brexit, against a backdrop of significant support for demand from macroeconomic policies.

The euro area, after posting a rate of 1.9% in 2018, saw GDP growth slip to 1.2% in 2019. Developments in Spain were similar, albeit with a slower deceleration, and growth remaining at significantly higher levels: 2% in 2019 and 2.4% in 2018.

The unemployment rate continued to decline. In Spain, unemployment stood at 13.8% at end-2019, its lowest level since end-2008. However, employment growth was more moderate in 2019 H2. As in recent years, productivity growth was virtually zero or negative during 2019. Inflation held at low levels in 2019 (with the CPI in Spain standing at 0.8%, slightly down on previous years), but below that recorded in the euro area in the same period.

Spain's lending position stood at 2.3% of GDP in 2019, the eighth year running with a net lending position. This has allowed a slight easing of one of the main vulnerabilities of the Spanish economy: the negative net international investment position, which fell to -74% of GDP at end-2019, compared with -80.2% in the prior year.

In December 2019, the budget deficit stood at 2.8% of GDP. This reflects a slight increase on the prior year. Government debt continued to decline, from 97.6% in 2018 to 95.5% at end-2019, in both cases

higher than the European average. In June 2019, the Council of the European Union closed the excessive deficit procedure for Spain to which it had been subject since 2009.

Equity markets

Stock market growth in 2019. In contrast to the falls posted in 2018 as a result of trade and political uncertainties, the resolution of some of these focal points of risk enabled stock markets to experience significant double-digit growth in 2019.

Even though 2019 was the best year for the Ibex-35 since 2013, Spain's principal stock exchange trailed behind the major European indices, which achieved growth close to that of the Dow Jones. 2019 was the best year for the Ibex-35 since 2013, with a rise of 11.8%, closing at 9,549.2 points. However, this rise was smaller than that seen in other European stock markets, with the EUROSTOXX-50 growing by nearly 25%. The best results were on the Borsa Italiana (28.3%). The other European stock markets were between Spain (minimum) and Italy (maximum). This difference is basically explained by the varying compositions of the indices, although certain internal uncertainties derived from the electoral cycle could also have had an influence. V2X, which measures volatility in the EUROSTOXX-50, stood at 13.95%, compared with 23.9% in 2018. As in other international markets, volatility was low in the Spanish stock market, ending 2019 at a record low of close to 10%, with an average annual volatility of 13.7%.

Trading of Spanish equities totalled €805 billion for 2019 as a whole, its lowest amount since 2013, reflecting a further shift in trading towards competing venues. Driven by positive economic data and by corporate profits, US stock markets ended 2019 at their highest ever: the S&P 500 closed at 3,230 points (+29%), the Dow Jones at 28,538 (+22%) and the Nasdaq 100 at 8,972 (+35%). These reflected the biggest annual rises for the Nasdaq 100 and the S&P 500 since 2013, and for the Dow Jones since 2017. In late December, the Nasdaq 100 crossed the 9,000 points mark for the first time in its history. These levels were slightly above fundamentals, according to certain indicators.

Fixed income markets

Yields on sovereign bonds in the euro area decreased in 2019. The yield on the 10-year German Bund fell 43 basis points (bp),

closing December at -0.19%. At end-2019, the 10-year Spanish bond stood at 0.45% (-95 bp), and the Italian 10-year bond at 1.43% (-135 bp). However, two different periods can be distinguished during the year. From January to August, there was a significant reduction in yields, with all German, Finnish and Dutch curves falling below 0%, owing to the search for safe-haven assets in the face of an expected economic slowdown, new monetary easing measures, trade tensions and uncertainty over Brexit. From September onwards, the signs of stabilisation contributed to a rise in yields.

Sovereign spreads in the euro area narrowed sharply. In the case of Italy and Greece, there were contributions from local factors, such as the new Italian Government and Greece's return to the market. The Spanish spread fell by 52 bp to 66 bp at end-year, compared with 118 bp at the start of 2019.

As with sovereign debt, the performance of interest rates on corporate debt can be broken down into two sub-periods: an across-the-board fall between January and August (iBoxx EUR Corp: -120 bp), and a less marked upward revision between September and December (iBoxx EUR Corp: +33 bp), owing to improvements in agents' risk perception. The price of non-investment-grade debt saw sharp increases, reaching close to all-time highs both at end-August and at end-December.

2019 saw record figures for euro-denominated corporate debt issuance and high lending to highly leveraged firms, especially to those in the United States and, in some cases, in Europe. A portion of this debt is being securitised (as collateralised loan obligations, or CLOs) and will represent a notable risk factor at the international level. Conversely, data on activity in the primary debt markets in Spain showed a further contraction in 2019, with CNMV-registered fixed income securities amounting to €90 billion.

Money and bank intermediation markets

In 2019 the European Central Bank (ECB) resumed its expansionary monetary policy. At its meeting on 12 September, the Governing Council of the ECB announced that on 1 November it would restart net purchases under the asset purchase programme (APP) at a monthly pace of €20 billion. This was above that of the October-December 2018 period, but far slower than the €80 billion peak of the period from April 2016 to March 2017. In cumulative terms, at end-2019 the ECB held €2.58 trillion of securities purchased under the APP on its balance sheet. As regards interest rate policy,

the ECB lowered the deposit facility rate by 10 bp. Its key rates were thus set as follows: deposit facility rate, -0.50%; main refinancing operations rate, 0%; and marginal lending facility rate, 0.25%. Lastly, the ECB introduced a two-tier system for remunerating excess liquidity holdings, whereby part of credit institutions' reserve holdings in excess of minimum reserve requirements are exempt from negative remuneration at the rate applicable on the deposit facility. A multiplier of six was set to calculate the exempt tier. At end-2019, the ECB's total liabilities amounted to approximately €4.7 trillion, €29.5 billion less than at end-2018.

Foreign exchange markets

In 2019 the euro depreciated against the US dollar, the yen and the pound sterling. In 2019 the euro depreciated 2.25% against the US dollar. The euro's performance was marked by the ECB's shift towards a more expansionary monetary policy, the openness of the European economy, which made it more vulnerable than the US to the economic slowdown, and, lastly, improved trade. In terms of the nominal effective exchange rate, the euro depreciated 1.6% in total in 2019.

The US dollar remained relatively strong and the pound sterling gained strength following the Brexit agreement. Despite the Federal Reserve's interest rate cuts, the US dollar remained strong, underpinned by the US's sound macroeconomic data and its role as a safe-haven currency when trade tensions between China and the US were at their highest. In turn, the pound sterling was the currency that most appreciated in 2019, its position improving following the announcement of the conclusion of the EU-UK withdrawal agreement.

2.2 Banking sector

In 2019 the Spanish banking sector performed positively. Continuing the trend of previous years, Spanish deposit institutions were in a stronger position in December 2019 than in 2008 just before the last financial crisis. As regards systemic risks, the key indicators did not trigger early warnings in connection with the cyclical build-up of imbalances warranting the adoption of macroprudential measures, such as setting a positive CCyB rate.

Changes in lending in operations in Spain and abroad

In 2019, Spanish deposit institutions' lending to the private sector continued to decrease. In December, the year-on-year rate of change was -1.3%, with the decline moderating compared with prior quarters (see Chart 2.1). New loans grew year-on-year by 1.9% in 2019, notably lower than the 15.5% year-on-year growth recorded in 2018.¹

As in recent years, the NPL ratio for lending to the resident private sector also continued to fall in 2019. The ratio decreased by 1 pp in 2019, ending the year at 4.8%. From its peak (14% in December 2013), the NPL ratio for operations in Spain has fallen by 9.2 pp (see Chart 2.1). Since 2013, NPL recoveries and write-offs have more than offset new inflows of non-performing loans, allowing the NPL balance to decline. Forborne loans also fell in 2019. In December 2019 they accounted for 5% of total loans, down 9 pp since end-2014. In turn, foreclosed assets decreased by more than €12 billion in 2019 to €30 billion.²

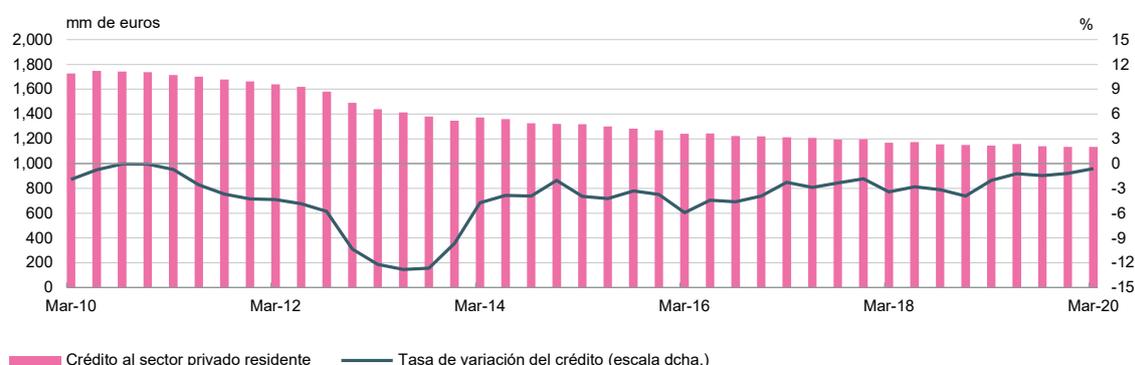
In December 2019 deposit institutions' exposure to productive sectors that are particularly sensitive to physical disruptions to economic activity, such as those associated with the COVID-19

¹ In 2020 Q1, the downward trend in lending to the private sector continued, with the year-on-year rate falling to -0.6%, due to developments in lending to non-financial corporations (NFCs), which outstripped the greater decline in lending to households. A significant increase in new loans to NFCs was also recorded, particularly so in March.

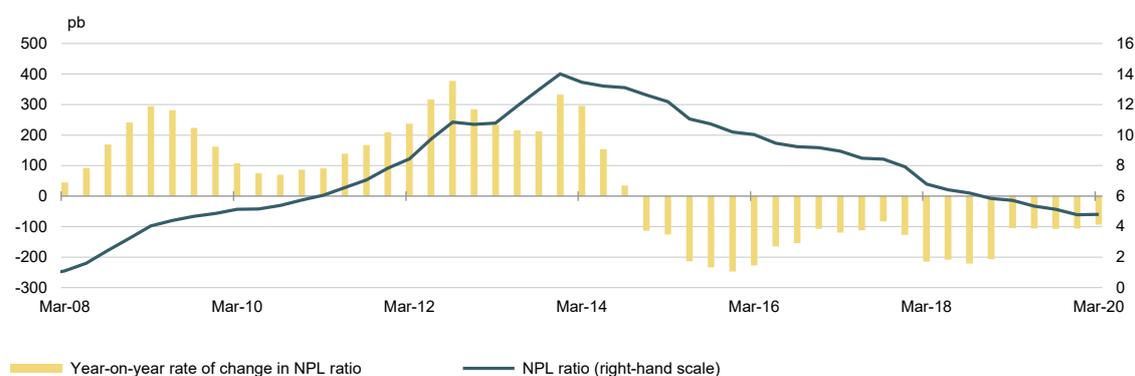
² The downward trend in the NPL ratio will presumably change in 2020 due to COVID-19, since the downturn in economic activity will prompt NPL inflows and hinder recoveries and sales of troubled assets. However, the economic uncertainty and the implementation of important measures supporting firms and households make it difficult to ascertain the scale of the increase.

Chart 2.1 Lending and NPL ratio, resident private sector

1 Volume of credit and year-on-year rate of change. Business in Spain, ID



2 NPL ratio, resident private sector. Business in Spain, ID



SOURCE: Banco de España.

crisis, accounted for around 20% of lending to NFCs, both in the large firm and SME segments (see Chart 2.2). The sectors particularly sensitive to physical disruptions include manufacturing more reliant on global value chains (imports accounting for more than 25% of their inputs), and the segments of the services sector hardest hit by the disruptions to activity associated with the lockdown (accommodation and food service activities, transport, etc.). As can be seen in Chart 2.2, in 2019 lending to the segments of the services sector sensitive to physical disruptions taken as a whole clearly outweighed lending to manufacturing reliant on global value chains. The NPL ratio of these sectors has fallen significantly since the last financial crisis, as part of a widespread credit quality improvement process. However, in December 2019 some segments had higher NPL ratios. These include accommodation and food service activities and other sensitive services (in the SME lending segment) and retail trade (in both the large-firm and SME lending segments).

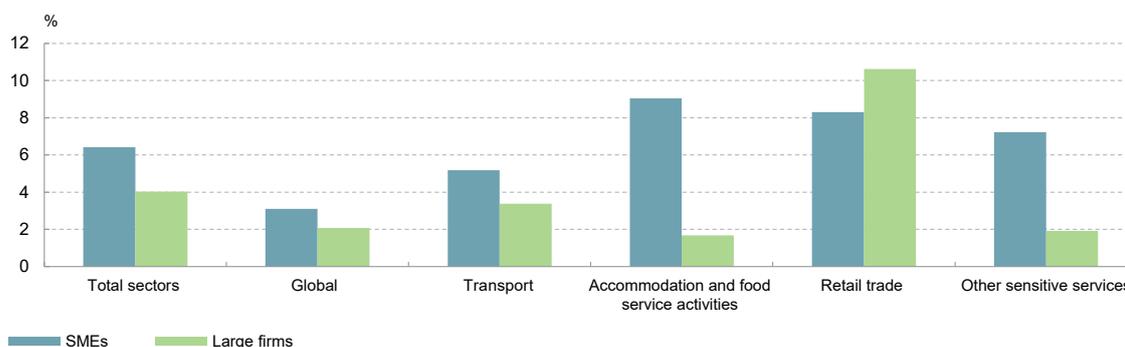
Chart 2.2 Exposure of deposit institutions and NPL ratio in sectors sensitive to physical disruptions to economic activity (a) (a)

December 2019. ID

1 Exposure to sectors sensitive to physical disruptions



2 NPL ratio in sectors sensitive to physical disruptions



SOURCE: Banco de España.

a The sensitive sectors comprise: 1) Global, manufacturing sectors sensitive to value chains (imports account for more than 25% of their inputs); 2) Transport; 3) Accommodation and food service activities; 4) Retail trade; and 5) Other sensitive services (education activities, recreation, etc.).

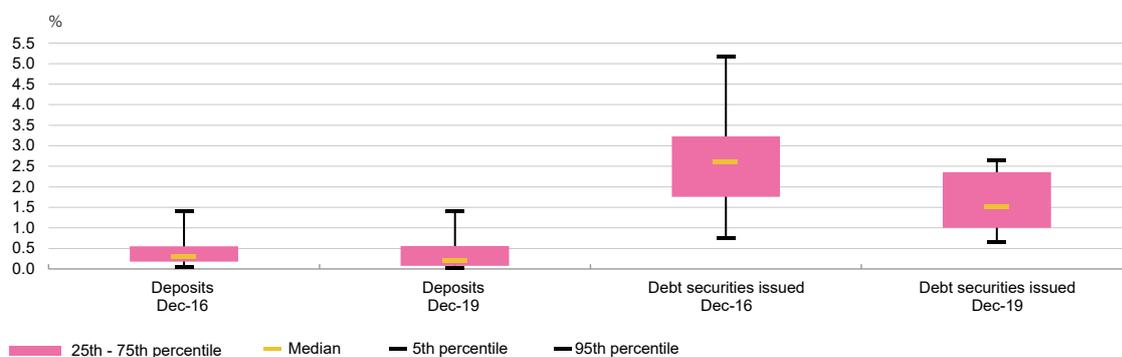
In comparison with financial assets in operations in Spain, which decreased by 1.8% in 2019, financial assets abroad increased at a year-on-year rate of 9.3% in the year. They now account for more than 50% of consolidated financial assets, growing in Spanish deposit institutions' main geographical areas of activity (see Chart 2.3). Foreign operations are concentrated in three geographical areas: Europe (UK, growing by 6.6% in 2019), North America (US and Mexico, respective changes of 11.4% and 11.3% in 2019) and South America (Brazil, an increase of 2.2% in 2019). The growth in the volume of financial assets in 2019 in some key geographical areas (US, UK and Mexico) was supported by the depreciation of the euro against their respective currencies; however, it cannot be attributed in full to this change in the exchange

Chart 2.3 International exposure and funding costs of deposit institutions

1 Growth in financial assets in the main geographical areas of activity (a)
Consolidated data. December 2019



2 Rates of deposits and debt securities issued (a)
Consolidated data



SOURCE: Banco de España.

- a Growth in financial assets is measured as a percentage of the volume recorded in euro for each geographical area (ES: Spain; UK: United Kingdom; US: United States; MX: Mexico; BR: Brazil; TR: Turkey).
- b A positive (negative) rate of change indicates an appreciation (a depreciation) of the euro against the currency.
- c The chart shows the dispersion of the deposit rate for Spanish deposit institutions and of the interest rate for those institutions that have issued debt securities.

rates. In key geographical areas where the euro appreciated against their respective currencies, Spanish institutions managed to maintain modest growth (Brazil), or an almost constant volume (in EUR billions) of financial assets (Turkey).

Financing conditions and liquidity

Owing to the low interest rate environment, in 2019 the cost of the various liability instruments (deposits and debt issues) was very low for Spanish deposit institutions (see Chart 2.3). 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 rose³

In 2019, deposits taken by the banking sector continued to rise. There was an overall year-on-year increase in deposits of 2.6% (above the 0.9% growth in 2018) at deposit institutions, which presented a high level of liquidity. The liquidity coverage ratio (LCR) of Spanish deposit institutions stood at around 167% in December 2019, indicating that their reserves of liquid assets exceeded by 67% the net liquidity outflows assumed under the regulatory stress scenario.

Profitability

In 2019, Spanish institutions obtained consolidated net profit of around €19 billion, down 13.1% on 2018. Return on assets (ROA) and return on equity (ROE) thus fell to 0.52% and 7.1%, respectively (see Chart 2.4). The following lay behind the performance of profitability in 2019: gains or losses 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 Chart 2.4). COVID-19 is expected to have an adverse impact on profitability in 2020 due to its contractionary effect on the volume of performing loans and the foreseeable increase in impairment losses on financial and non-financial assets.

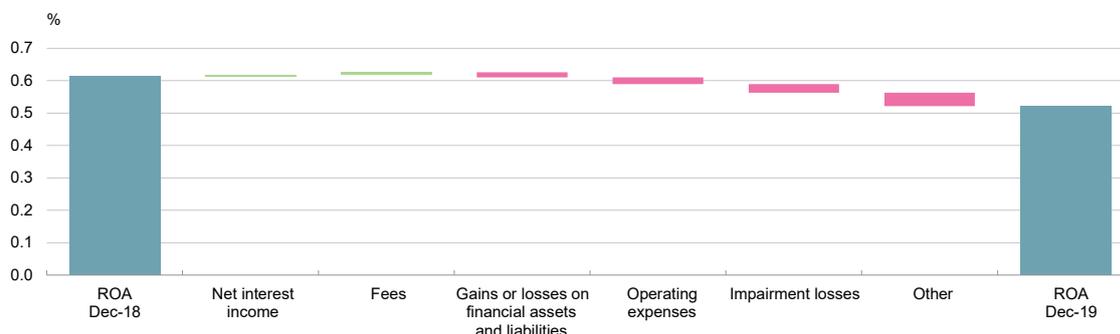
Solvency

Spanish deposit institutions' capital ratios rose in 2019 and a sizeable cumulative increase in available capital has been observed since the onset of the previous financial crisis. The CET1 ratio increased by 35 bp in 2019, ending 2019 at 12.6%, above the minimum Pillar 1 requirements (see Chart 2.5). Similarly, the Tier 1 capital ratio rose 30 bp to 13.8%, and the total capital ratio reached 15.7%, up 35 bp in December 2019. This increase in capital ratios was widespread among institutions. Non-debt exposures and reserve holdings together make up more than 90% of their eligible instruments, with the growth in reserve holdings being the main reason for the increase in the CET1

³ Market information from 2020 Q1 shows a sizeable increase in the cost of issuing subordinated debt, in keeping with the increased risk aversion resulting from the COVID-19 crisis.

Chart 2.4 Profitability of deposit institutions

1 Breakdown of the change in profit. Net consolidated profit as a % of ATAs (a)



2 Financial asset impairment losses (as a % of ATAs)
Consolidated data



SOURCE: Banco de España.

a In Chart 2.4.1 the green (pink) bars indicate a positive (negative) contribution by the corresponding item to the change in consolidated profit at December 2019 compared with December 2018.

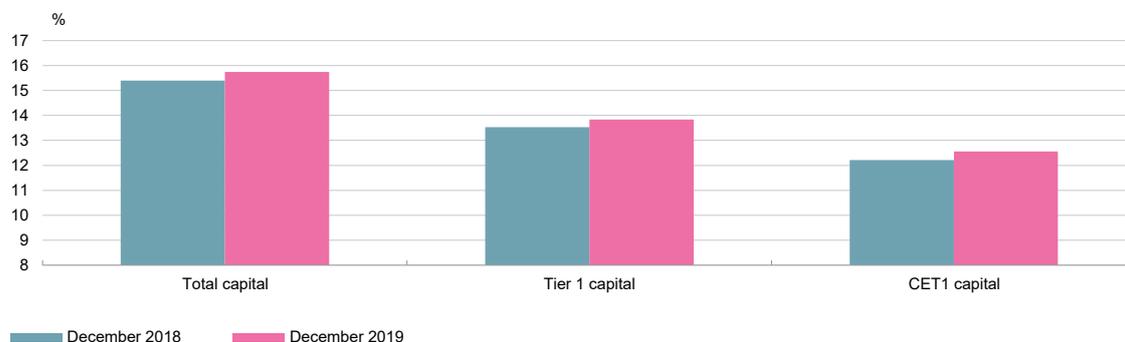
ratio. In 2019 the main component of deductions, i.e. goodwill and other intangible assets, decreased, further contributing to increasing the ratio's level. Over a broader timespan, since December 2008 the Tier 1 capital ratio has increased by more than 5.5 pp, while the total capital ratio has risen by almost 4.5 pp.⁴

Spanish deposit institutions have a significant volume of capital with which to absorb unexpected losses. Of the total CET1 available, at December 2019 the system as a whole held a voluntary CET1 buffer of €28 billion that could be used to absorb unexpected losses. The prudential authorities' response to the challenges posed by COVID-19 allows for losses to be absorbed by using the capital associated with the Pillar 2 Guidance (P2G),

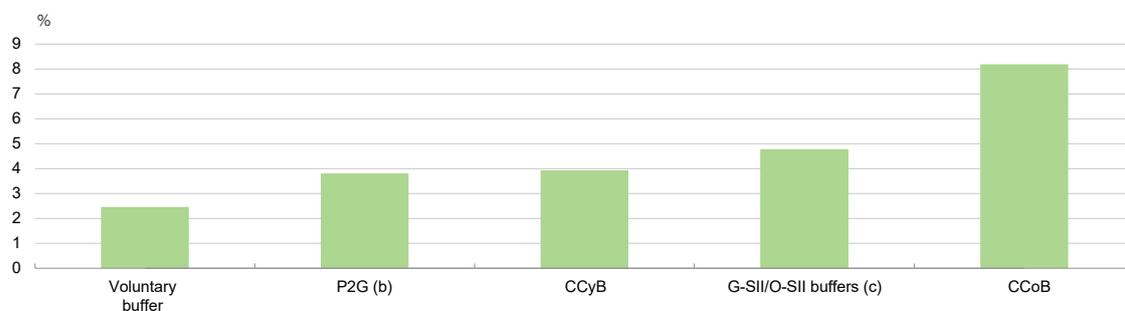
⁴ Common Equity Tier 1 (CET1) is a narrower definition of capital, introduced in 2014 as a result of the application of the prudential solvency standards generally known as "Basel III". Therefore, increases therein can only be calculated from 2014 onwards.

Chart 2.5 Solvency of deposit institutions

1 Capital ratios



2 Cumulative percentage of potentially non-performing loans that each buffer could absorb (a) December 2019



SOURCE: Banco de España.

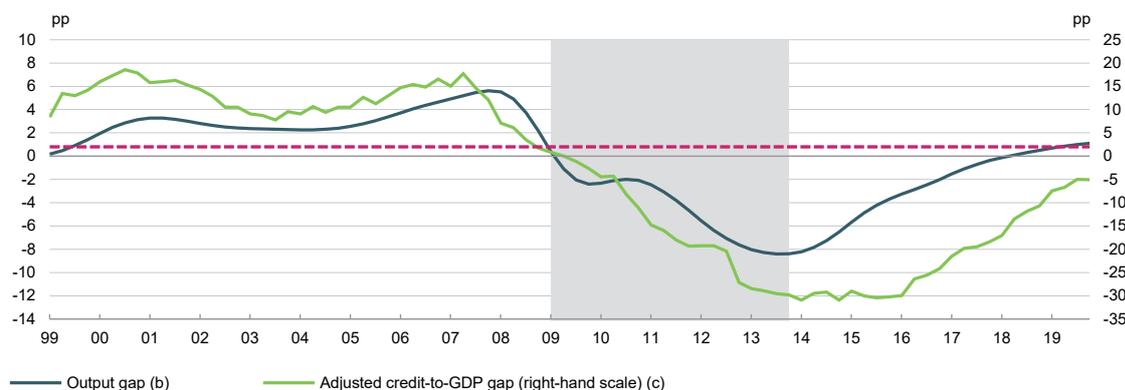
- a** Each bar represents the cumulative percentage of loans at December 2019 which, pursuant to the ECB and NCA supervisory guidance in force, could be covered by the various buffers were they to be classified as non-performing.
- b** Pillar 2 Guidance.
- c** The buffers for global systemically important institutions and other systemically important institutions.

the systemic and countercyclical capital buffer requirements, and the capital conservation buffer. This amounts to additional capital of €64.9 billion. These buffers would cover an increase of around 8.2 pp in the NPL ratio in Spain (see Chart 2.5). The capacity to absorb a potential increase in non-performing loans rises considerably if we factor in the moratoria on loans and the Spanish government's guarantee scheme for lending to NFCs.

Macroprudential measures in the banking sector

The Banco de España's macroprudential policy aims to prevent or mitigate the identified risks to financial stability and increase

Chart 2.6 Output gap and credit-to-GDP gap, 1999-2019 (a)



SOURCE: Banco de España.

- a The shaded area shows the last systemic banking crisis (2009 Q1 to 2013 Q4). The horizontal dotted line represents the CCyB activation threshold equal to 2 pp of the credit-to-GDP gap.
- b The output gap represents the percentage difference between recorded GDP and its potential value. Values calculated at 2010 constant prices (for more details, see P. Cuadrado and E. Moral-Benito (2016), *Potential growth of the Spanish economy*, Occasional Paper No 1603, Banco de España).
- c The credit-to-GDP gap is calculated as the percentage point difference between the ratio recorded and its long-run trend calculated using a one-sided Hodrick-Prescott filter with a smoothing parameter equal to 25,000. This calculation method aims to fit the financial cycles historically observed in Spain (for more details, see J. E. Galán (2019), *Measuring credit-to-GDP gaps. The Hodrick-Prescott filter revisited*, Occasional Paper No 1906, Banco de España).

credit institutions' resilience to shocks.⁵ To this end, the Banco de España regularly sets two types of macroprudential capital buffer intended to address the build-up of cyclical and structural risks: i) the countercyclical capital buffer (CCyB); and ii) the G-SII and O-SII buffers.

In 2019 the CCyB rate was held at 0% due to the lack of signs of cyclical risk and the uncertainty surrounding the macrofinancial environment. Throughout 2019, the credit cycle showed signs of a progressive strengthening, without exhibiting imbalances resulting from an excessive credit growth. In particular, the adjusted credit-to-GDP gap - the key indicator for measuring credit imbalances during expansionary phases of the credit cycle - gradually corrected. However, at end-2019 it remained below the long-term equilibrium level and the 2 pp activation threshold (see Chart 2.6). Other indicators of credit and real-estate-sector price imbalances were somewhat stable, after moving towards equilibrium in recent years.⁶ The output

⁵ See J. Mencía and J. Saurina (2016). *Macroprudential policy: objectives, instruments and indicators*, Occasional Paper No 1601, Banco de España.

⁶ The set of quantitative indicators guiding decisions on the CCyB includes indicators of credit imbalances, real-estate-sector price imbalances, debt servicing, external imbalances and the macroeconomic environment. For a technical analysis of the selection of indicators used, see C. Castro, Á. Estrada and J. Martínez (2016), *The Countercyclical Capital Buffer in Spain: An Analysis of Key Guiding Indicators*, Working Paper No 1601, Banco de España. For a historical perspective on the cyclical performance of bank lending in Spain, see M. Bedayo, Á. Estrada and J. Saurina (2018), *Bank Capital, Lending Booms and Busts. Evidence from Spain in the last 150 years*, Working Paper No 1847, Banco de España.

Chart 2.1 Capital buffers for systemically important institutions in 2019

Institution	Classification	Capital buffer (% of RWAs)
Banco Santander, SA	G-SII and O-SII	1.00
Banco Bilbao Vizcaya Argentaria, SA	O-SII	0.75
CaixaBank, SA	O-SII	0.25
Banco de Sabadell, SA	O-SII	0.25
BFA Tenedora de Acciones, SAU (Bankia, SA)	O-SII	0.25

SOURCE: Banco de España.

gap was also monitored. Its use to set the CCyB is justified by the possibility of activating this instrument when economic conditions so allow, even where there are no signs of excessive credit growth. Thus, macrofinancial stress events exogenous to the financial system could be withstood. The trajectory of the available projections for most of these indicators appeared to suggest that the CCyB would soon be activated. The outbreak of COVID-19 in early 2020 drastically altered the 2019 diagnosis of cyclical risks.⁷

The Banco de España identifies systemically important institutions and sets their regulatory capital buffers annually. Specifically, the Banco de España identifies “global systemically important institutions” (G-SIIs) and domestic systemically important institutions, dubbed “other systemically important institutions” (O-SIIs). Unlike the CCyB, the G-SII and O-SII buffers aim to address the cross-sectional dimension of systemic risk. In 2019 the list of systemically important institutions remained unchanged from 2018. In November 2019 the Banco de España⁸ announced the classification of one institution as a G-SII for 2021 and of five institutions as O-SIIs for 2020, and set their respective buffer rates (see Table 2.1).

In 2019 the Banco de España commenced work on drawing up a circular on a new set of macroprudential tools. These tools were conferred under Royal Decree-Law 22/2018 and Royal Decree 102/2019 and may be applied to credit institutions. The new tools include: i) limits on credit standards (a widespread tool among our

⁷ This circumstance led the Banco de España to announce in March 2020 that it would hold the CCyB rate at 0% for a prolonged period, at least until the main economic and financial effects of the pandemic had dissipated. See press release of 31 March 2020 “The Banco de España holds the countercyclical capital buffer at 0%”.

⁸ See the press release of 25 November 2019 “Banco de España updates the list of systemically important institutions and sets their capital buffers”.

European peers); ii) sectoral concentration limits; and iii) the sectoral countercyclical capital buffer. The latter is an extremely new tool, for which the Basel Committee on Banking Supervision (BCBS) prepared guiding principles⁹ that it published at end-2019.

⁹ For more details, see [Box 3.1](#) of the *Financial Stability Report*, spring 2019, Banco de España.

2.3 Securities markets

In 2019 the Spanish financial markets performed relatively similarly to those of other European countries. However, there were some particularities, especially in the equity markets. In this regard, stock markets recorded notable gains (the Ibex-35 appreciated by 11.8%). Yet this growth was far lower than that posted by other stock exchanges, owing mainly to the indices' differing composition, while some uncertainty surrounding the electoral cycle could also have played its part. As in other international markets, volatility was low in the Spanish stock market, ending 2019 at a record-low of close to 10%, with an average annual volatility of 13.7%.

Trading of Spanish equities totalled €805 billion for 2019 as a whole, its lowest amount since 2013. Trading continued to shift from the Spanish regulated market (falling almost 21% to €460 billion) towards other competing trading venues and markets, whose volumes barely decreased (a decline of 1.5% to €345.6 billion). As a result, the latter's market share increased between 2018 and 2019 from 37.4% to 42.6%.

As in other European economies, in 2019 yields on Spanish debt securities markets fell to an all-time low, in keeping with the ECB's monetary policy. At end-2019 negative yields were applicable to government debt maturing at up to five years, while a rate of 0.45% applied to ten-year bonds, having reached a low of close to zero in September. In turn, the sovereign risk premium decreased from 118 bp at end-2018 to 66 bp, as did the risk premia of the economy's private sub-sectors.

Data on activity in the primary debt markets signalled a further contraction in 2019. Specifically, debt security issues totalling €90,066 million were recorded at the CNMV. This was 11% less than in 2018 and the lowest level in recent years. Except for asset-backed bonds, which increased 3%, the decline was widespread among the various types of debt. Conversely, debt security issues by Spanish issuers abroad continued to rise (at a rate of 12.3%, exceeding €100 billion) and therefore stood above the amount recorded at the CNMV for the first time, accounting for 53% of the year's total (47% in 2018). Also noteworthy is the expansion of the green bond market, dating back to 2014, although the related amounts are still low (just over €6 billion in 2019). These funds were

earmarked for energy projects and, to a lesser extent, transport sector projects.¹⁰

At end-2019 the most significant risks identified in the financial markets concerned search-for-yield strategies and the potential increase in some agents' financial vulnerability, owing to the low level of interest rates. The search for yield has for several years led to purchases of riskier, less liquid assets and, as a result, to compressed risk premia, especially those of high-yield bonds. In this context, any shock that could result in the repricing of agents' assets could lead to substantial drops in most instruments' prices, drive sales in markets up and ultimately give rise to further price declines in what are dubbed "second-round effects". In the case of lower-quality bonds, which are generally less liquid, the downward price spirals could be more pronounced.

Into 2020, the COVID-19 crisis has already had a significant impact on the economy and, consequently, on the financial markets. Uncertainty in financial markets, assessed using various stress indicators, has risen to levels unseen since the 2008 global financial crisis or the European sovereign debt crisis of 2012. Significant increases in stress in all the financial system's segments, and a greater correlation between them, have been identified.¹¹

With regard to the equity markets, a large part of economic activity coming to a standstill, amid high uncertainty, gave rise to steep drops in stock valuations and surges in volatility levels to peaks exceeding other crisis periods. In this context, several European securities authorities¹² (including the CNMV) decided to impose short-selling restrictions. These can be established where circumstances pose a serious threat to financial stability and were adopted by the CNMV in mid-March. The CNMV decided to ban for a month (decision renewed to 18 May) the creation of, or increase in, net short positions in all equities.¹³

¹⁰ Just over €1.5 billion of social bonds were issued. Funding for these projects through (green and social) lending has also been particularly vigorous and is prominent among the most important European countries.

¹¹ See the CNMV's quarterly *Financial Stability Notes* and the stress indicator statistical series.

¹² France, Italy, Belgium, Austria and Greece.

¹³ CNMV, *Information on the situation caused by COVID-19*.

2.4 Non-bank financial intermediation

Non-bank financial intermediation (NBFi) is a valuable alternative to credit institution lending, since it increases the sources of funds available to businesses and households and can foster healthy competition with traditional banks. For several years NBFi was known as shadow banking, since in some cases the institutions or activities in question were outside the traditional banking system and subject to scant regulation or supervision. However, this is not the case in Spain, where the bulk of this activity is carried on by investment funds, which are strictly regulated and supervised.

The volume of assets related to this activity in Spain decreased slightly in 2018. They totalled approximately €504.1 billion at end-2018 (down 5.3% on 2017) using the broad NBFi measure and €295.9 billion using the narrow NBFi measure. The narrow measure discounts institutions' assets consolidated in banking groups, according to the methodology established by the Financial Stability Board (FSB), which quantifies NBFi activity on the basis of the economic functions (EFs) that entities pursue (five EFs in total). Thus, NBFi activity in Spain accounts for 6.7% of total financial assets. This is lower than in other jurisdictions.¹⁴ As a benchmark, NBFi activity in the sample of jurisdictions analysed by the FSB¹⁵ represents 13.6% of total global financial assets.¹⁶ Based on the various EFs, the most important entities in Spain would be certain types of investment fund¹⁷ (EF1) and securitisation special-purpose entities (EF5), which represent 85.5% and 9.4%, respectively, of the total. These would be followed by specialised lending institutions (EF3), which represent 4.2% of the total, and securities dealer companies (EF3) and mutual guarantee companies (EF4), with an immaterial relative weight. Among the entities engaged in NBFi, securitisation special-purpose entities have the highest level of interconnectedness with the banking system.

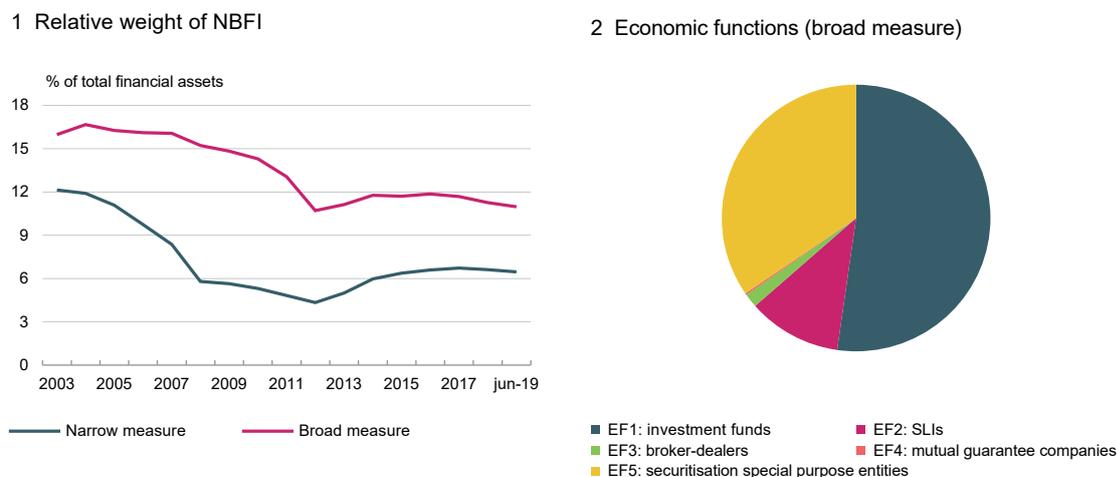
¹⁴ See the CNMV's half-yearly Non-banking financial intermediation monitor.

¹⁵ See the FSB's Global Monitoring Report on Non-Bank Financial Intermediation 2019.

¹⁶ The FSB's sample for 2018 included 22 jurisdictions: 21 individual non-euro area jurisdictions and the euro area as a whole. Were the euro area jurisdictions to be quantified individually, the total number of jurisdictions would rise to 29.

¹⁷ According to the FSB's definition, money market funds, fixed income funds, mixed funds, hedge funds and open-end investment companies were deemed to belong to this economic function.

Chart 2.7 Non-bank financial intermediation (2019)



SOURCES: CNMV and Banco de España.

In 2019 the key components of NBFi performed heterogeneously.

In aggregate terms, preliminary data point to the volume of assets for both the broad and narrow measures increasing slightly (growth of under 2% in both cases) to stand at approximately €513.1 billion and €301.5 billion, respectively. However, in relative terms, the weight of NBFi in Spain appears to have decreased slightly in 2019 and now represents 6.5% of total financial assets. With regard to the performance of the various entities engaging in NBFi, investment funds' total assets grew more than 5% and the financial assets of securities dealer companies increased by more than 100%.¹⁸ This growth was partially offset by the 4.9% decline in the outstanding balance of securitisations, which has remained on a consistent downward trend since 2010. Thus the relative weight of the two most important types of entity would change slightly in favour of investment funds (EF1), which would represent more than 88% of total NBFi (using the narrow measure). Conversely, the relative importance of securitisation special-purpose entities (EF5) would slip below the 9% figure of 2018. Albeit still small, that of securities dealer companies would increase from 0.6% to 2%.

Analysis of liquidity risk by type of asset using data available on the funds' portfolios in 2019 reveals that, although it is not excessively high, the proportion of less liquid assets has risen

¹⁸ This increase in the size of the securities dealer companies segment was fundamentally the result of the transfer of a large portion of activity from a single entity because of Brexit.

in recent years.¹⁹ This analysis is also supplemented by the liquidity conditions that are actually observed for each asset in the market, based on the trading or the time required to make a sale, and by the assessment of exposure to assets on the basis of their credit rating. In stable market conditions, such as in 2018 and 2019, the supplementary liquidity analysis significantly reduces the volume of less liquid assets, since most of these instruments are traded without difficulty. In times of turmoil, like in March 2020, the volume of less liquid and/or riskier assets can rise and become a vulnerability for those funds that could experience a significant increase in redemptions. With regard to the exposure of funds to companies on the basis of their credit rating, it should be noted that at end-2019 most of the bonds of Spanish funds had a high credit rating. 92% of the debt portfolio was invested in investment grade bonds, compared with high-yield bonds.

The indicators of direct leverage, i.e. through the acquisition of credit, are irrelevant with respect to investment funds. Investment funds operate under regulatory limits that prevent excessive leverage growth by this means. However, these institutions may be leveraged through derivatives. This area of analysis is under development and will use the indicators recently proposed by the International Organisation of Securities Commissions (IOSCO) to monitor the leverage of these institutions at a global level.²⁰ A study based on data for 2019 H1 showed that the systemic risks arising from these operations were very limited for Spanish investment funds.

For collective investment schemes (CISs) subject to UCITS regulations which perform their calculations using the commitment approach²¹ (99% of the total), the identified exposure to market risk represented 26% of their net assets, well below the maximum permitted by current legislation (100% of net assets).²² The level of exposure in funds referred to as

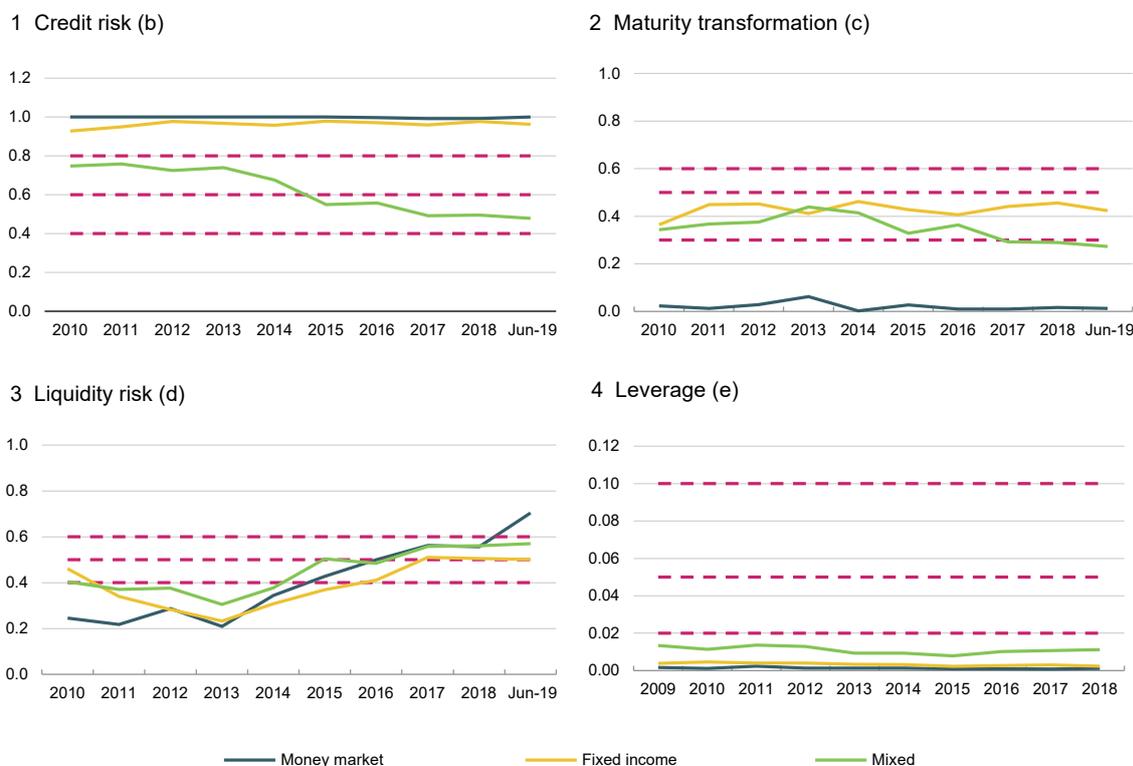
¹⁹ This analysis is conducted for the types of investment fund with a greater weight within NBF1, which in this case are the mixed and fixed income funds (representing together 87% of EF1), and for the money market funds (these are of scant relevance in terms of total assets).

²⁰ IOSCO Final Report on Recommendations for a Framework Assessing Leverage in Investment Funds, December 2019.

²¹ The European commitment approach, whose technical specifications are detailed in the ESMA Guidelines on Risk measurement and the calculation of global exposure and counterparty risk for UCITS (CESR/10-788), serves to calculate exposure based on the conversion of all derivative contracts into their equivalent underlying asset positions. The approach takes the market value of the underlying asset (or its notional value where this is more conservative), adjusting for the delta in the case of options and implementing certain rules to offset long positions with short positions in the same underlying asset (netting) or in different underlying assets (hedging).

²² 1% of the remaining assets correspond to investment funds, whose credit risk exposure is calculated using the VaR approach.

Chart 2.8 Exposures in NBF investment funds (a)
June 2019



SOURCE: CNMV.

NOTE: The broken lines correspond to the thresholds that determine the change from low risk to moderate risk, from moderate risk to medium risk and from medium risk to high risk.

- a Except for the leverage indicator, which is up to 2018.
- b Defined as the percentage of credit assets (treasury, deposits and debt securities) relative to total assets.
- c Defined as the percentage of long-term assets relative to total assets.
- d Defined as the percentage of less liquid assets (total financial assets-liquid assets) relative to total assets. Liquid assets include deposits, government debt, guaranteed issues, repos and 50% of the value of the equity portfolio.
- e Measurement of direct leverage, i.e. through the purchase of credit.

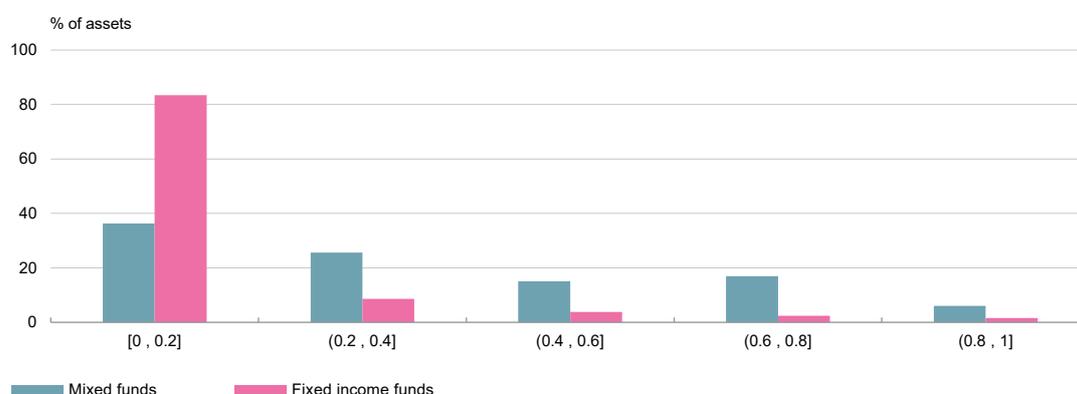
“quasi-UCITS”²³ stood below 70%. Lastly, as regards hedge funds (which are included in the alternative investment fund category and subject to more flexible regulation), the empirical evidence likewise points to a generally moderate level of leverage, with just a few isolated funds making more intensive use of leverage.

In NBF, the work conducted both nationally²⁴ and at the European level in relation to the available macroprudential tools should be noted. The effectiveness and efficiency of these tools are under

²³ These are funds subject to UCITS regulations that may avail themselves of greater flexibility in certain aspects of transactions with derivatives, with the option of exceeding the 100% limit for exposure to market risk.

²⁴ See The participation of the CNMV in macro-prudential policy, published in 2019.

Chart 2.9 Indirect leverage of investment funds (a)
June 2019



SOURCE: CNMV.

a Distribution of funds based on their exposure to market risk through the use of derivatives.

assessment, along with the possible need for certain additional tools to allow optimal management of the potential mismatch between the funds' redemptions and the liquidity of their assets, and likewise their leverage. Notable in this connection is the introduction in 2019 of a new macroprudential tool enabling the CNMV to require an entity or a set of institutions to increase their percentage of investment in particularly liquid assets. This requirement would be for reasons of financial stability and on a temporary basis.²⁵ In 2020, in the context of the crisis, a new measure has also been adopted to facilitate the liquidity management of these institutions, consisting of the possibility of establishing prior notice periods for redemptions without adhering to the term, minimum amount and prior evidence requirements in the management regulations, which are ordinarily applicable. These notice periods may be established by the management company or the CNMV itself.²⁶

As a result of the crisis prompted by COVID-19, efforts related to financial stability in the area of collective investment have essentially focused on assessing the asset liquidity of these institutions' portfolios and the ongoing monitoring of redemptions. The latter, which rose in March to nearly 2% of funds' assets, were

²⁵ Royal Decree-Law 22/2018 of 14 December 2018, establishing macroprudential tools. More broadly, this legislation also allows the CNMV to introduce limits and conditions on the activity of the supervised entities to prevent excessive private sector debt that might affect financial stability.

²⁶ Royal Decree-Law 11/2020 of 31 March 2020, adopting urgent complementary social and economic measures to address COVID-19.

addressed without significant incident. The CNMV recalled the suitability, in certain cases, of using the bid price in valuations or adopting swing pricing mechanisms. Also worth noting in this connection is the multitude of liquidity management tools that are available to managers (some of which are likewise available to the supervisor of these institutions), which are highly useful should a future increase in the level of redemptions need to be addressed. These include suspensions of redemptions, swing pricing mechanisms, redemptions in kind, side pockets and redemption fees. Notable among the most recent tools are the aforementioned possibility of establishing notice periods, which was approved in the context of the crisis, and the tool introduced just over a year ago empowering the CNMV to require the reinforcement of more liquid assets in the funds' portfolios.

2.5 Insurance undertakings and pension funds

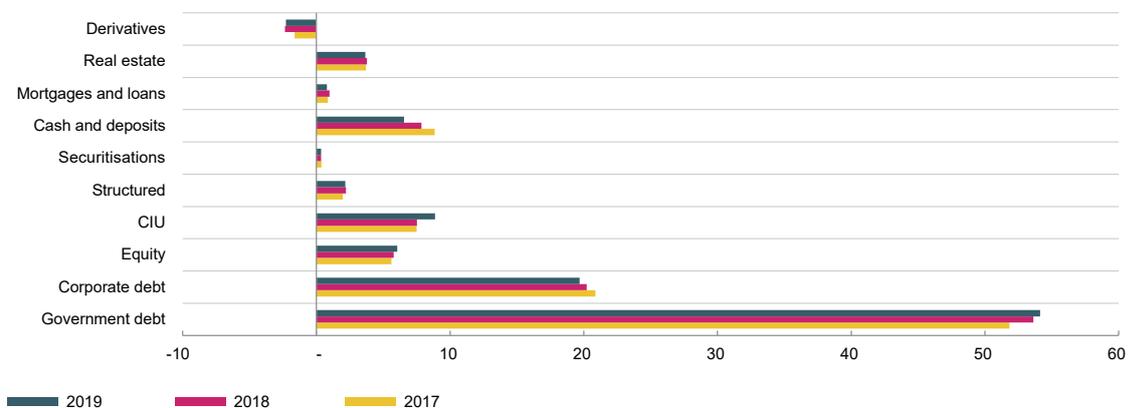
The business environment for the insurance sector

The low interest rate environment remained a financial constraint for the insurance sector in 2019, with discernible effects on the management, results and financial position of insurance undertakings. The immediate consequences for the financial position and solvency of insurance undertakings have been felt simultaneously in assets, via a lower return on investment, and in liabilities, through higher technical provision requirements, particularly in the case of life insurance policies with long-term guarantees. Even so, the sector's average solvency ratios are sound, holding at double the benchmark minimums.

The decline in returns on investment has affected the life insurance and non-life insurance businesses alike. However, the impacts are largest on the life insurance business, given its long-term nature and the corresponding longer duration of its liabilities. This situation has also generated some pressure on own funds, both in accounting and solvency terms, owing to the need to increase levels of technical provisions.

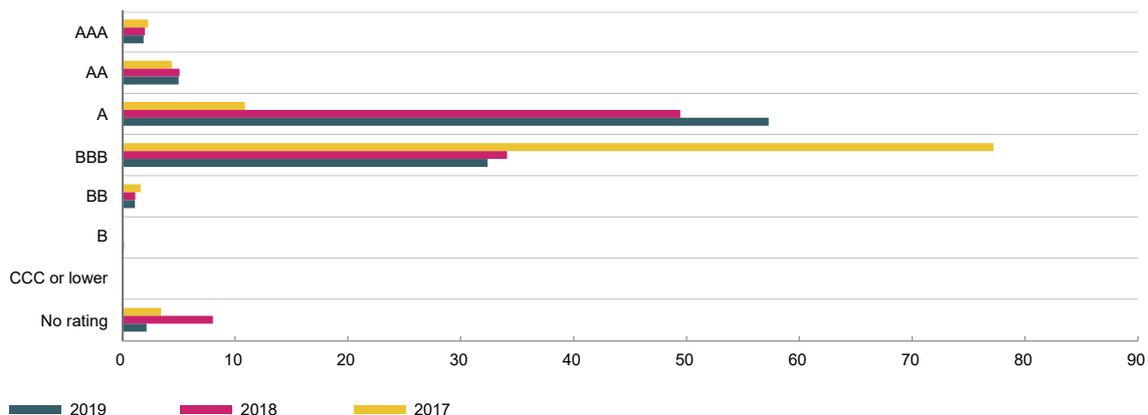
One mitigating aspect of the consequences of this environment has been the use of measures to manage the long-term guarantees provided for in European solvency regulations. The impacts of the low interest rate environment may be significantly mitigated by reducing the consequences of market volatility and heading off procyclical behaviour by institutions. This can be achieved by applying matching adjustment techniques which, subject to certain strict requirements, allow provisions to be discounted based on the return on the assets covering those provisions (matching adjustment), and by implementing other portfolio management measures geared to achieving an asset and liability management (ALM) that offsets unfavourable fluctuations in liabilities with reverse movements in assets. However, the persistence of old portfolios of policies with relatively high guaranteed interest rates requires close monitoring.

Chart 2.10 Investments by asset type (%)



SOURCE: DGSFP.

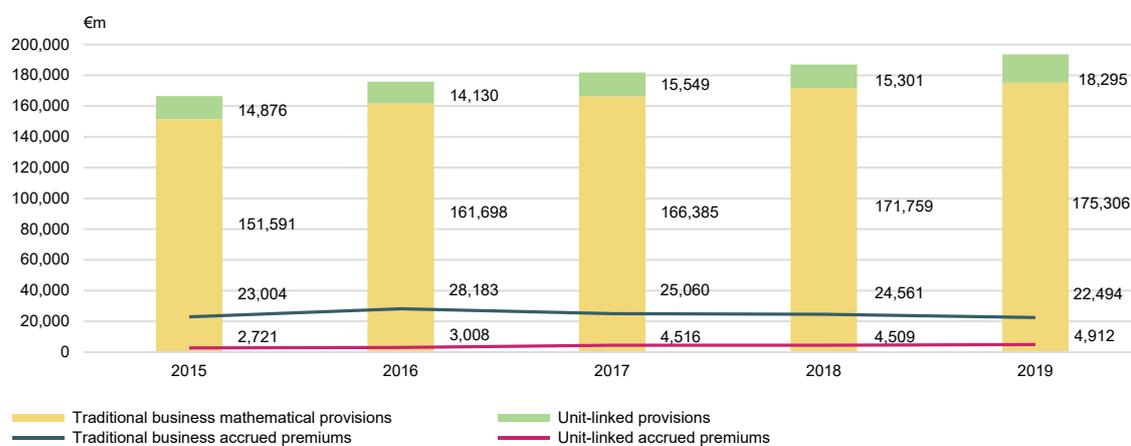
Chart 2.11 Investments in government and corporate debt, fixed income CIUs and structured products, by credit quality (%)



SOURCE: DGSFP.

Lower returns on fixed income assets, which account for the main part of insurance undertakings' investments, have led to the pursuit of more profitable and less liquid investments. This search for yield is driven by the need to offer more competitive insurance products, which means assuming an accordingly higher level of risk and requires particularly rigorous credit risk management. Nonetheless, to date there has been no significant change in the structure of the investments of insurance undertakings, which has remained stable over time (see Chart 2.10). Furthermore, there has been no impairment of the credit quality of their investments in recent years (see Chart 2.11).

Chart 2.12 Gross accrued direct insurance premiums, gross provisions and change (traditional business, unit-linked)



SOURCE: DGSFP.

The decline in the return on investment and, consequently, net financial income has exerted particular additional strain on the technical accounts of those insurance segments with the lowest results. As a result of the combination of low technical results and declining net financial income, to achieve technical equilibrium operators must either make efficiency gains in terms of managing costs and claims or restructure insurance premium rates. Given that competition in the insurance sector is fierce, entities have geared efforts towards improving efficiency and rationalising the claims and costs that make up the technical result.

One of the more evident consequences of this low interest rate environment is how the life insurance business model is changing. Life insurance products, which cover death or disability and are largely linked to mortgage loans and consumer finance, have gained prominence in the portfolios of life insurance undertakings. This owes to their technical results and because, by their very nature, they do not exert the kind of pressure on balance sheets that savings plans do. The latter have been affected by the decline in activity for traditional insurance products with long-term interest rate guarantees, in favour of products where the policyholder assumes the investment risk directly, such as unit-linked insurance plans (see Chart 2.12).

The protracted low interest rate environment demands sustained close monitoring of several aspects of the insurance activity. Specifically, the key aspects include an analysis of changes in the risk profile of investments, monitoring of the product strategy, continuous

assessment of how the situation affects institutions' income statements and monitoring of the relationship between returns on assets and guaranteed rates, together with control of the relationship between asset and liability durations.

Review of insurance sector biometric tables

To address the challenge posed by longevity, in 2019 an in-depth review was conducted of the biometric tables commonly used by Spanish insurance undertakings and of their management processes.²⁷ The aim of the review was to ensure the suitability of the biometric tables for setting premiums and calculating the technical provisions for life insurance with longevity risk and for insurance with exposure to mortality risk, including prepaid funeral plans.

The assessment extended to survival and mortality tables. In the case of insurance covering survival risk, such as annuity contracts and, generally speaking, savings plans, it is necessary to determine whether life expectancy and the expected increases in longevity calibrated in the commonly used tables are appropriate to realistically reflect the future behaviour of policyholders and the commitments undertaken with them. This alignment is essential to ensure, first, the sufficiency of the technical provisions and the appropriate capital management, and, second, the present and future solvency of the insurance sector. For their part, the biometric tables used in life insurance and prepaid funeral plans, which are based on mortality data for the early 2000s and factor in no improvement whatsoever, are no longer entirely appropriate to reflect the confirmed reduction in mortality in recent years. Updating these tables is essential to ensure a transparent technical basis for insurance pricing that is proportional to the risks taken.

Technically reliable and robust biometric tables must be used to preserve the stability of the insurance sector. These traits are needed in both segments of the insurance business (savings and life) and enhance technical rigour, contributing to the stability of the insurance sector and, given its growing interconnectedness with other sectors, the financial system.

The review actions complied with the principles of transparency and co-operation. The contributions made by the sector's main

²⁷ See DGSFP (2019), *Estudio de impacto relativo a la revisión de las tablas biométricas del sector asegurador*.

professional institutions, the academic community and the insurance industry were pivotal to the review. The process led to the creation of mortality and survival tables for both accounting and solvency purposes, followed by an impact assessment covering approximately 95% of the relevant insurance market. The end result was a proposed review of the existing regulatory framework and the preparation of technical guidelines for the supervision of the biometric tables. This came alongside a set of recommendations geared to promoting the compilation of standardised biometric statistics based on robust methodologies. Also under analysis is the creation of an institutional longevity monitoring mechanism, as a key step towards the future compilation of standardised, reliable and technically robust biometric statistics for the sector and the management of biometric risk from the perspective of each insurance undertaking and the insurance sector as a whole.

European stress tests for insurance and occupational pension funds

In 2019, the results of the 2018 European stress tests for insurance and occupational pension funds were subject to supervisory monitoring. At end-2018, the European Insurance and Occupational Pensions Authority (EIOPA) published the results of the stress tests for that year. These were the fourth stress tests for the European insurance sector.²⁸ Two of Spain's largest groups took part in the tests. The tests assessed the resilience of the participant insurance undertakings in the following three severe scenarios:

- i) A yield curve up scenario combined with provisions deficiency and repercussions on surrenders, a sudden and sizeable repricing of risk premia and a significant increase in claims inflation.
- ii) A considerable yield curve down scenario combined with longevity stress, leading to a protracted period of extremely low interest rates accompanied by an increase in life expectancy.
- iii) A series of natural catastrophes, where European countries are hit in a quick succession of events having a material impact.

The test preceded a process of dialogue and monitoring that has reinforced the supervisory action taken during 2019. By focusing on aspects relevant to the Spanish insurance sector and the rest of

²⁸ See the "Insurance stress test 2018" section of the EIOPA website.

the macroeconomic system, such as interest rates and population ageing, the tests represent a fundamental input for the monitoring of the Spanish insurance sector.

In 2019, the EIOPA performed a stress test on occupational pension funds. The aim was to assess, in a sufficiently representative sample of occupational pension funds from 19 countries (including Spain), the effects of severe market stresses on the financial equilibrium and available funds of defined benefit schemes and on the future retirement benefits of participants in defined contribution schemes. The main results of the test²⁹ suggested that, in the case of defined contribution schemes, the adverse scenario would entail a decline in the value of the investments and a reduction in benefits, particularly for participants close to retirement age. As for the defined benefit schemes, the adverse scenario would mean a shift from an aggregate surplus to an aggregate deficit, leading to an increase in future sponsor support. The test also assessed the steps taken by the pension funds to identify environmental, social and governance (ESG) risks for their investment decisions.

The projected impact of COVID-19 on the insurance sector

Given the nature of this health crisis, which has no close precedent, the foreseeable and unavoidable effects of COVID-19 are subject to significant uncertainty. COVID-19 is affecting the insurance sector in various ways: impacting claims in some insurance segments, lower income (premiums) prompted by the fall-off in economic activity, reduced profitability due to the entrenchment and persistence of negative real interest rates, and, finally, a loss in value of portfolios as a result of widening credit spreads and declining equity prices. These impacts may become larger should the widening of credit spreads be joined by a subsequent reassessment of credit ratings, which tend to react to spread movements with something of a delay.

The pressure exerted by the COVID-19 health crisis means that insurance undertakings must strengthen the monitoring of liquidity risk, which may be strained as a result of the crisis, and reconsider their potential own funds requirements as part of their capital management policies. In this context, capital conservation policies are especially important for ensuring the required solvency

²⁹ For more information, see the press statement “EIOPA publishes the results of the 2019 Occupational Pensions Stress Test”, of 17 December 2019.

levels and adequate protection for policyholders. This requires a review of dividend distribution and variable remuneration payment policies. In this connection, both the EIOPA and the DGSFP have released supervisory statements on dividend distribution and variable remuneration policies at insurance and reinsurance undertakings and their groups.

New macroprudential tools

Royal Decree-Law 22/2018 of 14 December 2018 reinforced macroprudential supervision in the insurance sector, allowing for measures to reduce excessive concentrations in certain sectors of activity or categories of assets, and likewise to prevent the transfer of risks and insurance portfolios between companies from affecting the sustainability of the companies themselves or the stability of the financial system.

2.6 Interconnections in the financial system

The interconnections between the different entities in the financial system may act as channels of risk contagion during crisis episodes. In the course of their business, entities in the financial system establish relationships with each other through direct exposures, i.e. asset holdings or loans extended within the system, and indirectly, as a result of similar investments in their securities portfolios. Analysing these interconnections has become a higher priority on the agendas of national and international regulatory and supervisory bodies. This is a lesson of the previous financial crisis, when it became evident that shocks affecting specific entities or sectors can be passed on to other, initially unaffected, entities through these interconnections.

Direct interconnections within the national financial system are relatively limited, but those between the banking sector and other financial institutions (OFIs) are notable. The banking sector plays a central role within the Spanish financial system, both in terms of size - accounting for 65% of the private financial system³⁰ - and the volume of direct exposures to other financial sectors. Prominent among the banking sector's exposures to non-bank financial sectors are those with the other financial intermediaries sector, standing at around €215 billion, equivalent to 4% of total banking assets.³¹ The liabilities held with this sector are also the highest, exceeding 3% of total assets. The links with other financial sectors are far smaller, not exceeding 1% of banking assets. Chart 2.13 shows the composition of these interconnections by type of asset and liability.

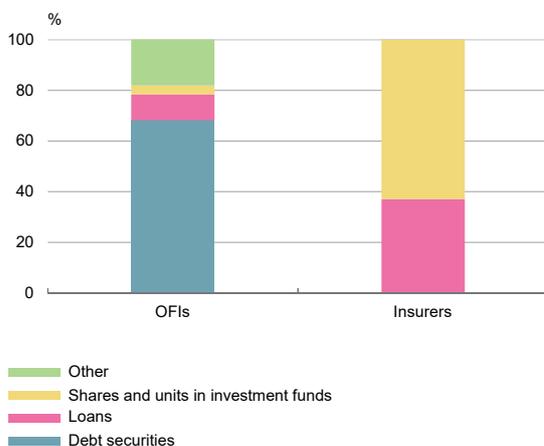
The volume of indirect interconnections is significant and represents a high percentage of the portfolio of the non-bank financial sectors. There are two significant facets to these indirect interconnections. The first of these facets is that the indirect interconnections are reflected in correlations between the prices of different assets in the Spanish financial system. In 2019, these correlations held below those observed in the four preceding years (see Chart A.7.6 of the Annex).

³⁰ The Banco de España and the Official Credit Institute (ICO, by its Spanish abbreviation) are excluded from the calculation.

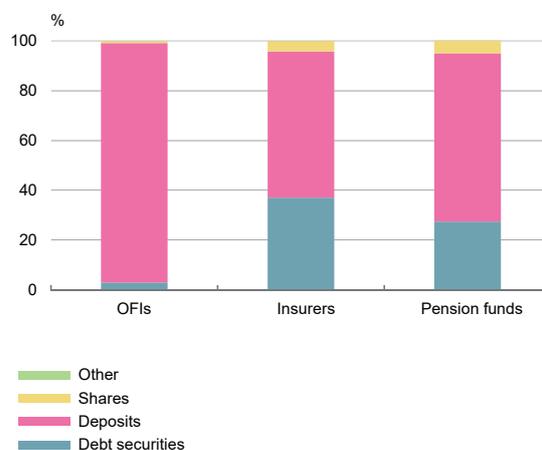
³¹ Total assets refer to the banking assets of institutions domiciled in Spain, not consolidating foreign subsidiaries.

Chart 2.13 Direct interconnections of banks with other non-bank financial sectors

1 Direct exposures of banks with other sectors



2 Liabilities of banks with other sectors

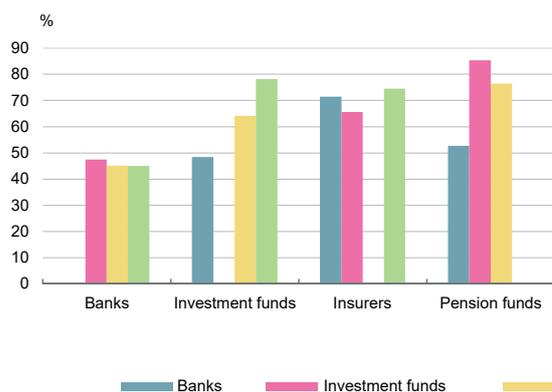


SOURCE: Banco de España.

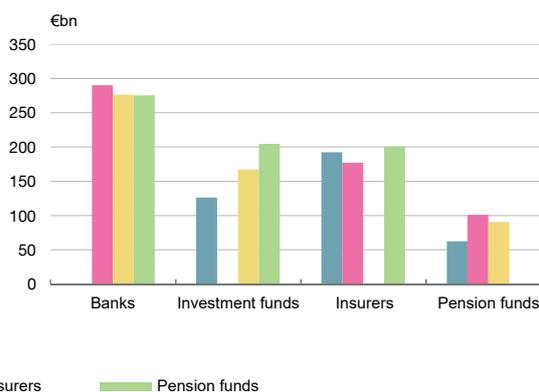
- a The stacked bars indicate the instrument's relative weight in the banking sector's total exposure, either through asset or liability positions, with the corresponding non-bank financial sub-sector.
- b The set of other financial institutions (OFIs) includes investment funds (money market and non-money market), specialised lending institutions and other financial intermediaries (securities dealer companies, securitisation special purpose entities, venture capital firms, bank asset funds, central counterparties and asset management companies (including Sareb) and other entities).

Chart 2.14 Portfolio overlap

1 Common holdings as a proportion of the overall portfolio (a). December 2019



2 Volume of common holdings December 2019



SOURCE: ECB (Securities Holding Statistics by Sector).

- a The chart shows the common holdings of marketable securities, understood as the holding of identical securities from the same issuer. For example, of the common holdings between banks and investment funds, banks hold around €300 billion, representing 49% of their overall portfolio. Whereas investment funds hold €130 billion, which represents 51% of their overall portfolio. The market value of the holdings reported by the entities is taken into account (or, if applicable, their fair value).

Even when correlations between asset prices are low, interconnectedness may still be high if the financial institutions invest largely in the same assets. To assess this second facet, the “portfolio overlap” of the different sectors of the financial system has been measured (see Chart 2.14) by identifying the common marketable securities holdings of each pair of sectors and the amount held in each case (e.g. identical Spanish government bonds held by banks and insurance undertakings). The similarity of the portfolios means that the different sectors are exposed to the same types of risk and could lead to widespread valuation losses should a sector have to sell off assets under stressed market conditions. At end-2019, the percentage of overlap exceeded 45% in all cases. It was particularly high for pension funds vis-à-vis investment funds and insurance undertakings, at over 75%. In absolute terms, the banking sector had the largest volume of common holdings of securities from the same issuers, with more than €275 billion vis-à-vis each of the other sub-sectors. The common exposure to certain sovereign bonds is one of the main factors determining the high degree of portfolio overlap.

Annex

Dashboard of risk indicators

Chart A.1 Macroeconomic risk

- 1 Real GDP growth
- 2 Unemployment rate according to LFS
- 3 Inflation according to headline HICP
- 4 Government debt and deficit
- 5 Resident private sector debt, consolidated
- 6 Current account balance
- 7 Negative net international investment position
- 8 Unit labour costs

Chart A.2 Market risk

- 1 Equity markets
- 2 10-year government bond yield
- 3 One-year EURIBOR
- 4 International market volatility
- 5 IBEX-35 volatility

Chart A.3 Credit risk

- 1 NPL ratio of deposit institutions
- 2 Coverage ratio of deposit institutions
- 3 Spanish 10-year government bond yield spread over Germany
- 4 Credit default swap indicators
- 5 Credit to the resident private sector
- 6 New credit to the resident private sector

Chart A.4 Real estate exposure

- 1 Developments in the real estate market
- 2 Estimates of house price overvaluation
- 3 Loans for housing and construction
- 4 New loans for housing

Chart A.5 Liquidity and funding risk

- 1 3-month LIBOR-OIS spread
- 2 Eurosystem monetary policy interest rates
- 3 Spain average interest rate spread against the euro area on new loans of up to €1 million extended to firms
- 4 Fixed income issuances
- 5 Equity issuances by Spanish firms
- 6 Loan-to-deposit ratio for other resident sectors
- 7 Trading of Spanish equities
- 8 Bid-ask spreads

Chart A.6 Solvency and profitability risk

Banks

- 1 Return on equity
- 2 Cost-to-income ratio
- 3 Capital ratios
- 4 Leverage ratio (phase-in)

Insurance undertakings

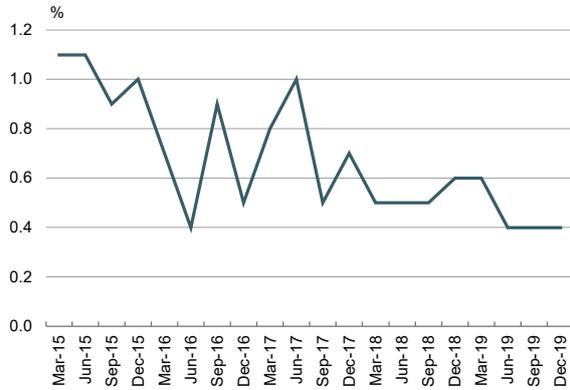
- 5 Return on equity
- 6 Gross non-life combined ratio
- 7 Solvency ratio

Chart A.7 Structural risks and interconnections

- 1 Financial sector assets
- 2 Assets of other financial intermediaries
- 3 Investment funds
- 4 Assets of insurance undertakings and pension funds
- 5 Banking sector liabilities, by sector
- 6 Indicator of correlation between asset classes
- 7 Systemic risk indicator

Chart A.1 Macroeconomic risk

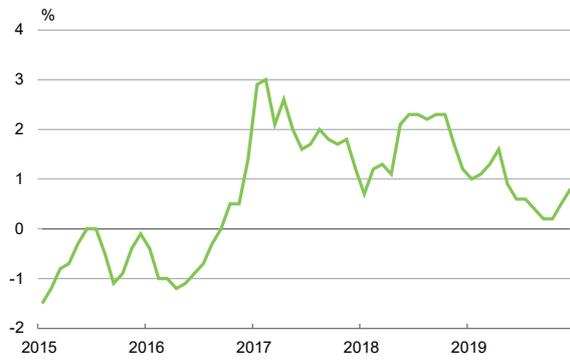
1 Real GDP growth (a)



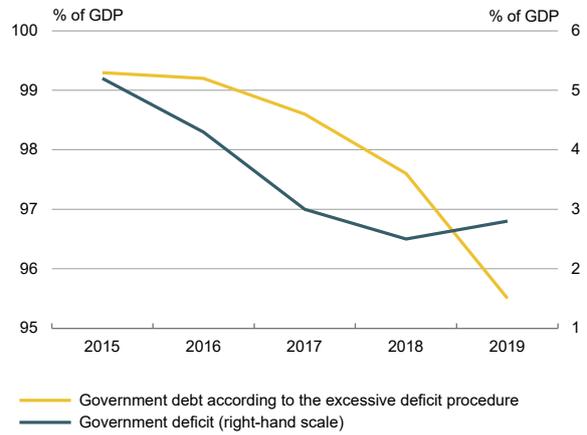
2 Unemployment rate according to LFS



3 Inflation according to headline HICP (b)



4 Government debt and deficit

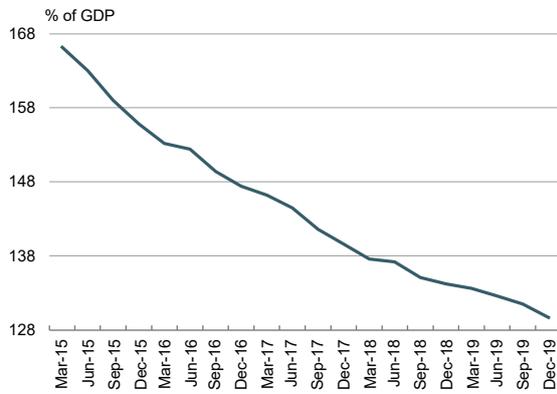


SOURCE: MINECO.

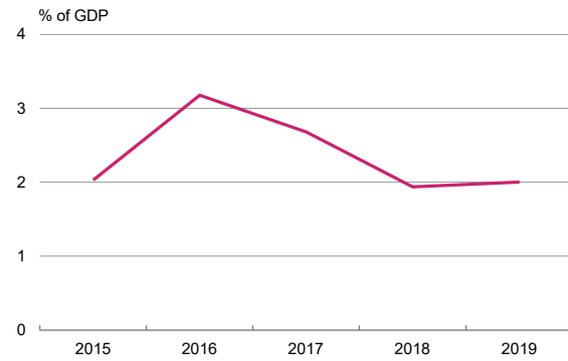
- a Q o q rate of change.
- b Y o y rate of change.

Chart A.1 Macroeconomic risk (cont'd.)

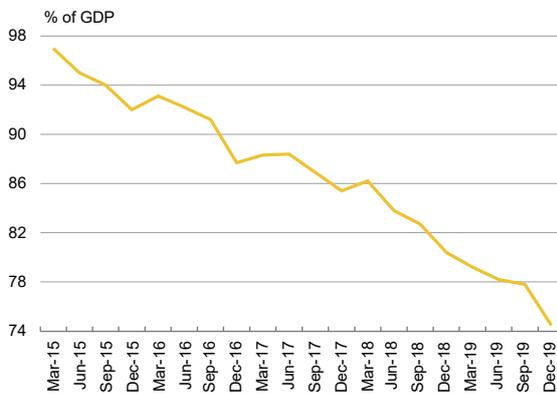
5 Resident private sector debt, consolidated (a)



6 Current account balance



7 Negative net international investment position



8 Unit labour costs (ULC) (b)

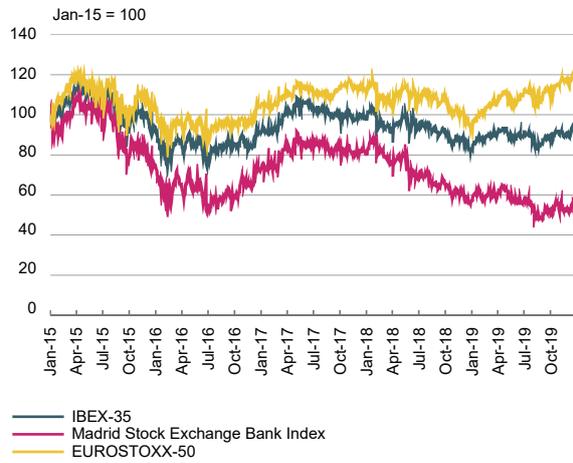


SOURCE: MINECO.

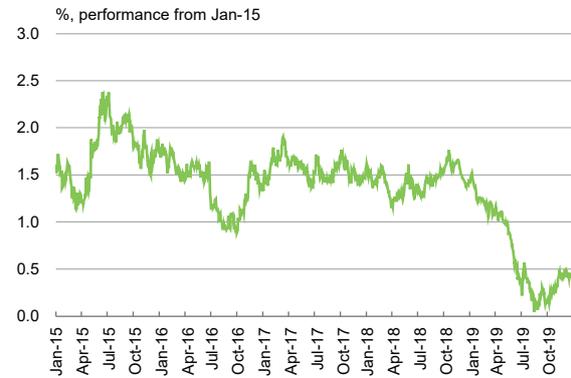
- a Non-financial corporations and households and non profit institutions serving households.
- b Y o y rate of change.

Chart A.2 Market Risk

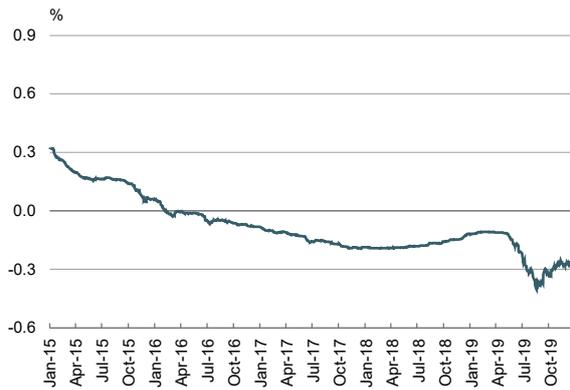
1 Equity markets



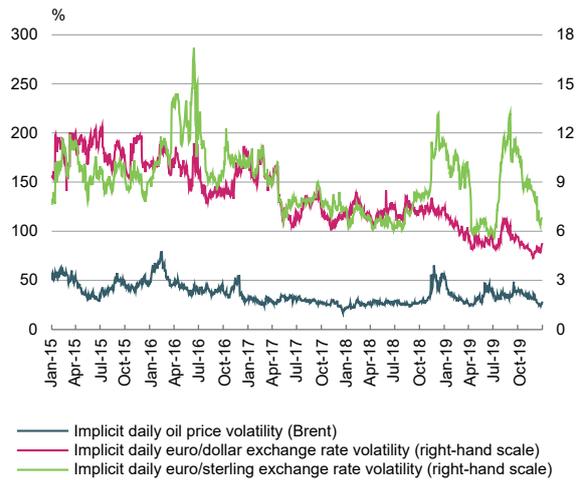
2 10-year government bond yield



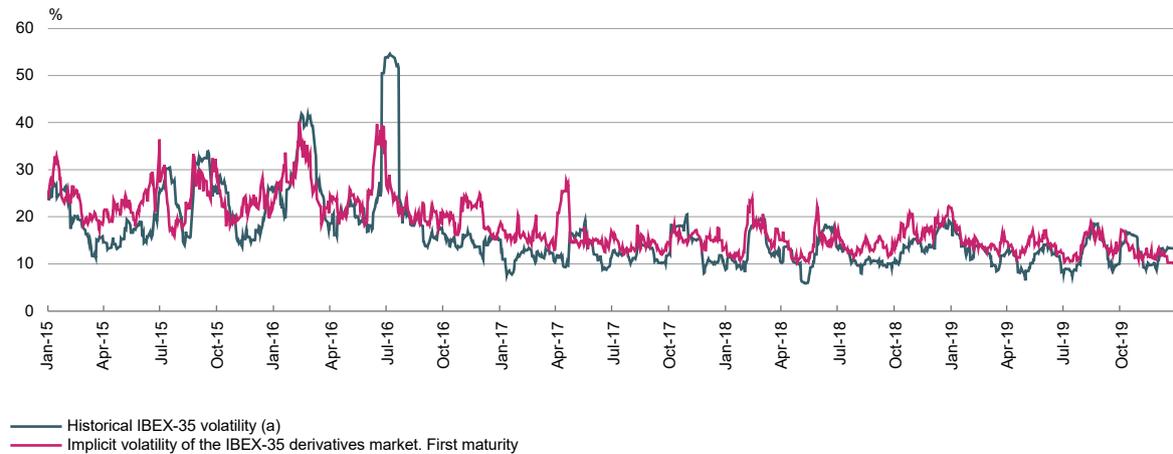
3 One-year EURIBOR



4 International market volatility



5 IBEX-35 volatility

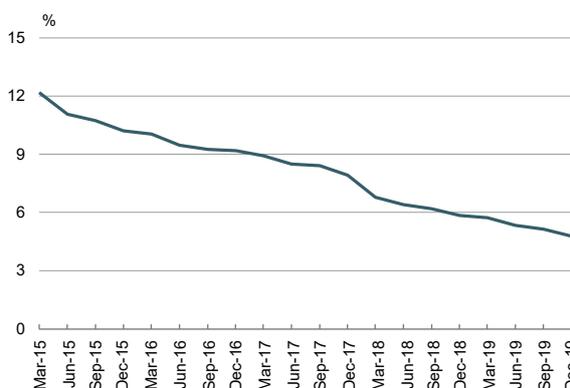


SOURCE: Datastream.

a The indicator of historical volatility is calculated as the annualised standard deviation of daily IBEX 35 price changes over 21 days.

Chart A.3 Credit risk

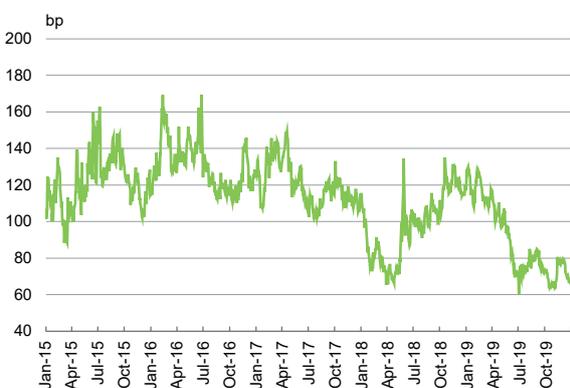
1 NPL ratio of deposit institutions (a)



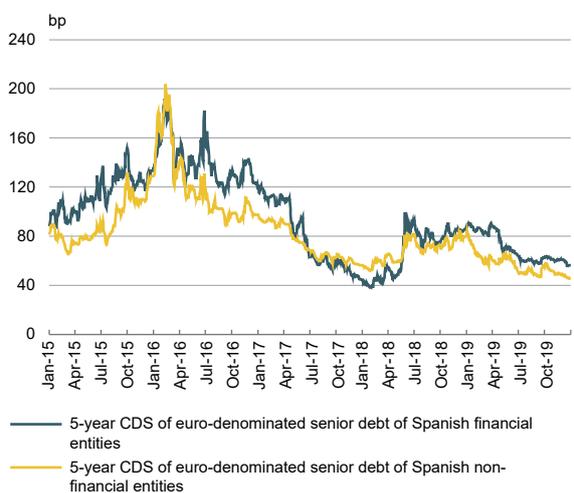
2 Coverage ratio of deposit institutions (a)



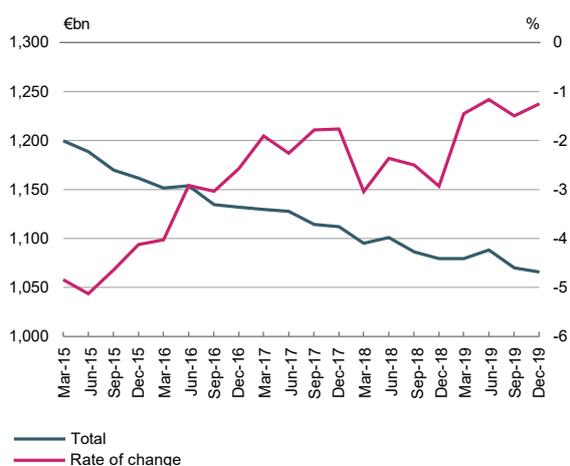
3 Spanish 10-year government bond yield spread over Germany



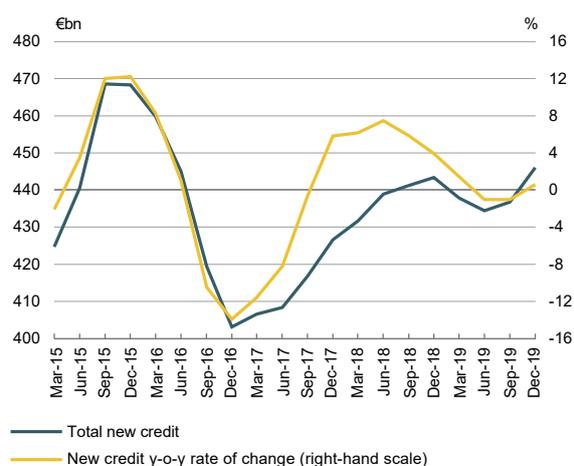
4 Credit default swap indicators (b)



5 Credit to the resident private sector (c)



6 New credit to the resident private sector (d)

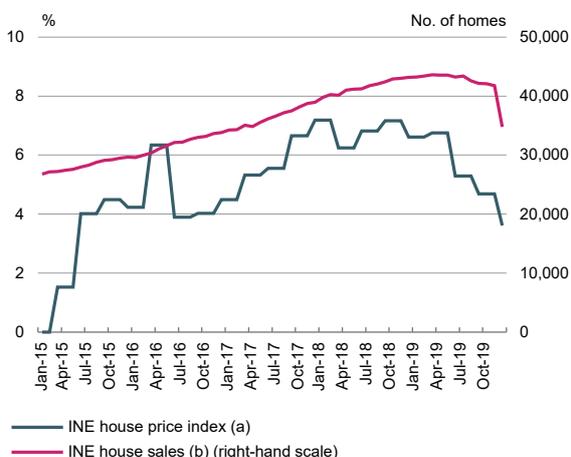


SOURCE: Banco de España.

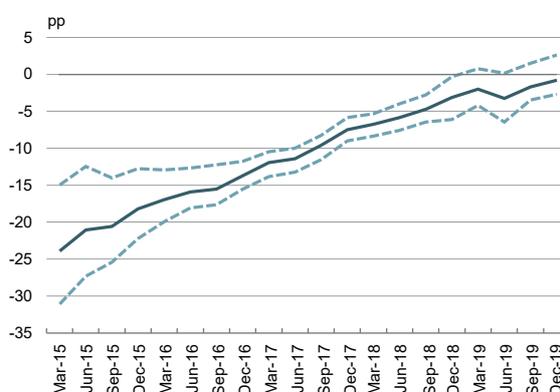
- a Individual data, business in Spain.
- b Simple average of a sample of IBEX 35 entities.
- c Households and non-financial corporations.
- d Cumulative 12 month flow.

Chart A.4 Real estate exposure

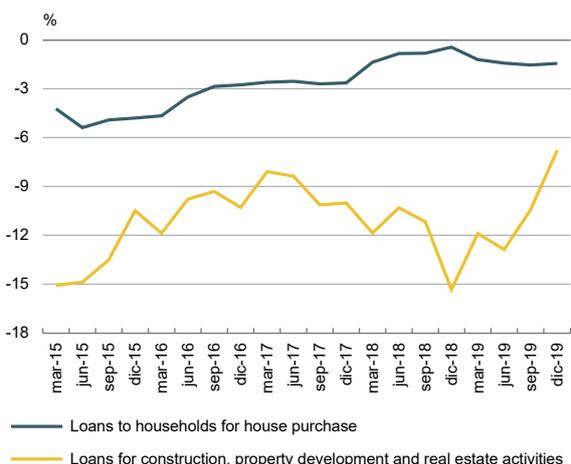
1 Developments in the real estate market



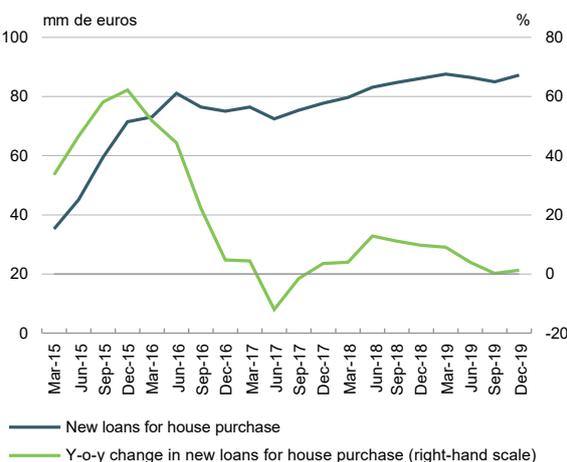
2 Estimates of house price overvaluation (c)



3 Loans for housing and construction (d)



4 New loans for housing (e)

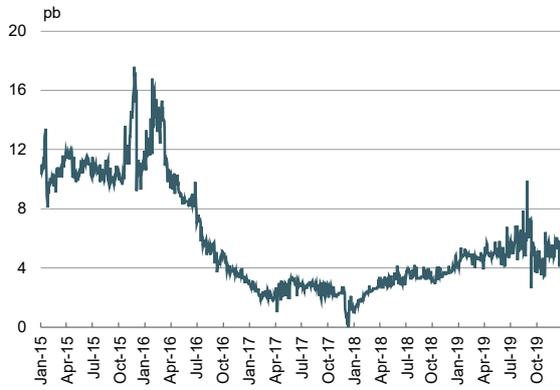


SOURCE: Banco de España.

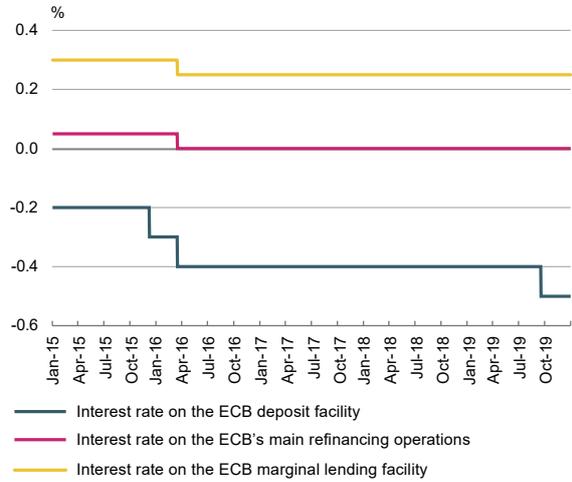
- a Year on year rate of change.
- b 12 month moving average.
- c The solid and broken lines represent, respectively, the average, minimum and maximum values of a set of four indicators for changes in real estate sector prices vis à vis their long term trends: i) house price gap with respect to the long term trend calculated using a Hodrick Prescott filter with a smoothing parameter of 400,000; ii) house price to disposable income ratio gap with respect to the long term trend calculated using a Hodrick Prescott filter with a smoothing parameter of 400,000; iii) econometric model for house price imbalances explained by long term trends in disposable income and mortgage rates, and iv) long term econometric model for long term house price imbalances explained by prices in preceding periods, disposable income, new mortgage rates and fiscal variables.
- d Year on year rate of change.
- e Cumulative 12 month flow.

Chart A.5 Liquidity and funding risk

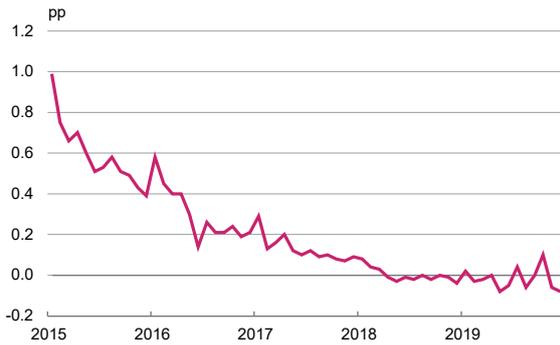
1 3-month LIBOR-OIS spread



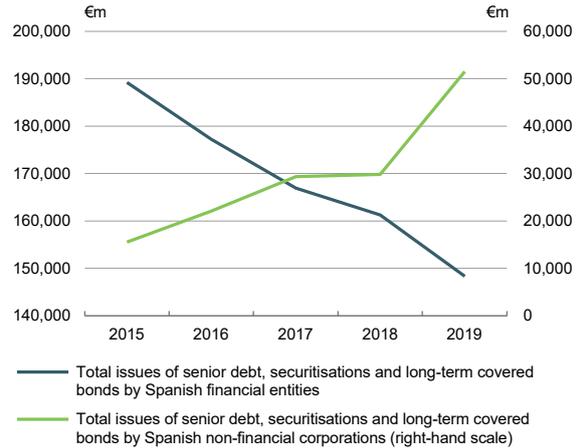
2 Eurosystem monetary policy interest rates



3 Spain average interest rate spread against the euro area on new loans of up to €1 million extended to firms



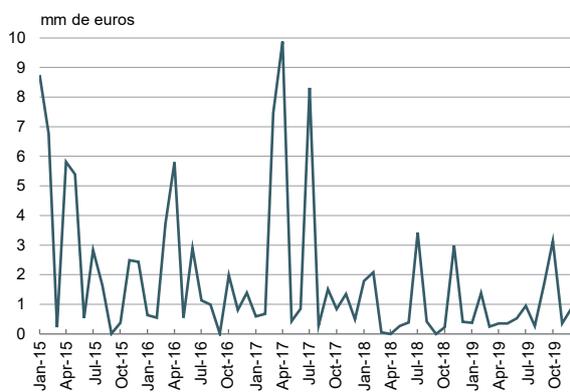
4 Fixed income issuances



SOURCES: Banco de España, ECB and CNMV.

Chart A.5 Liquidity and funding risk (a) (cont'd.)

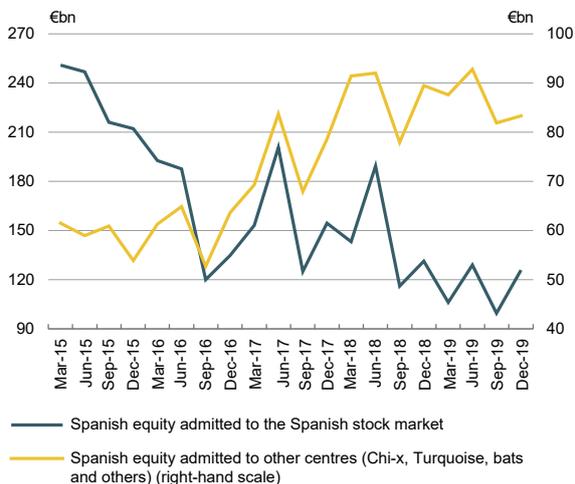
5 Equity issuances by Spanish firms



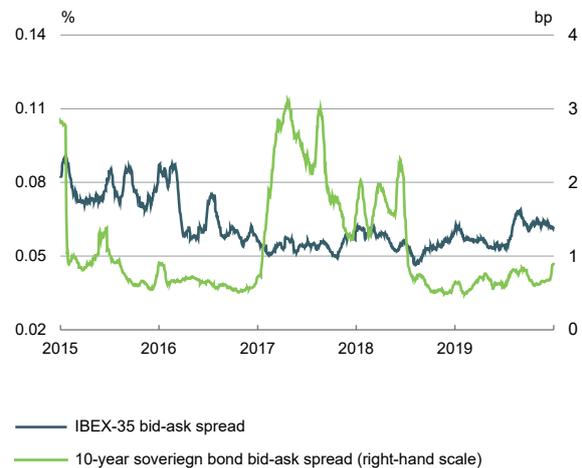
6 Loan to deposit ratio for other resident sectors



7 Trading of Spanish equities in Spanish stock markets



8 Bid ask spreads



SOURCES: CNMV and Banco de España.

a Households and non financial corporations.

Chart A.6 Solvency and profitability risk. Banks
Consolidated data

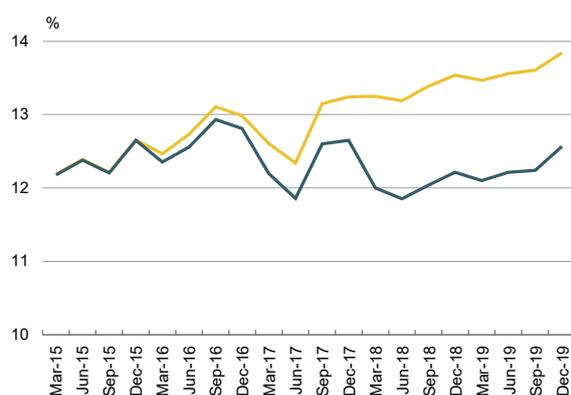
1 Return on equity (a)



2 Cost-to-income ratio (b)



3 Capital ratios



— Tier 1 capital ratio (phase-in)
— CET1 ratio (phase-in)

4 Leverage ratio (phase-in)



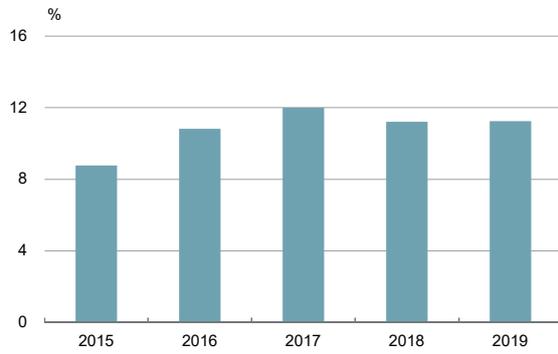
SOURCE: Banco de España.

a Net income as a proportion of net equity.

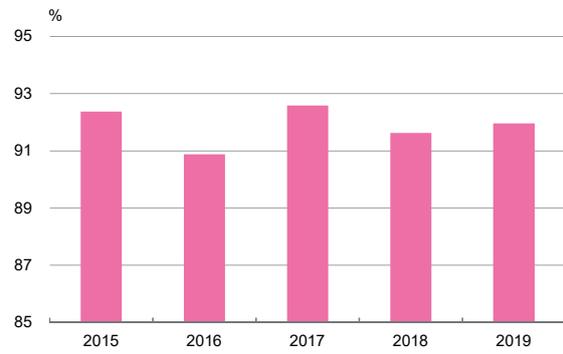
b Operating costs as a proportion of gross margin.

Chart A.6 Solvency and profitability risk. Insurers (cont'd)

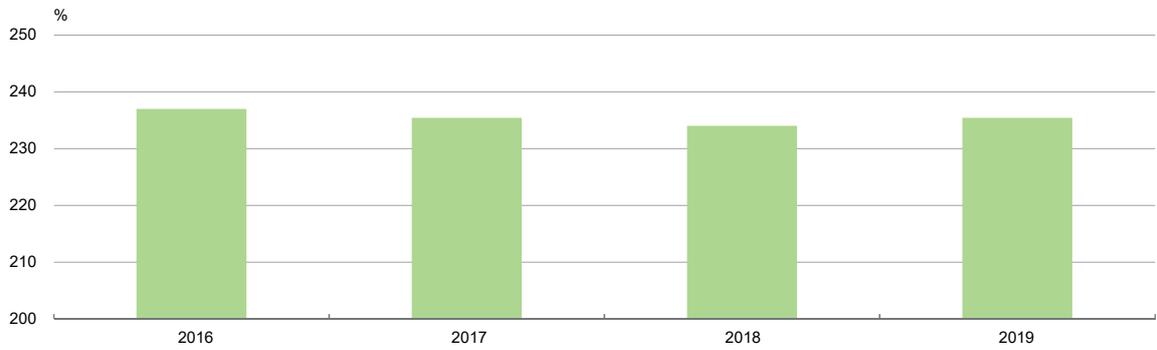
5 Return on equity



6 Gross non-life combined ratio



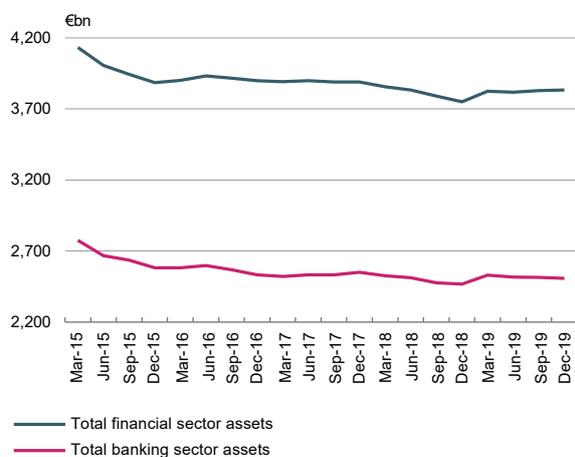
7 Solvency ratio



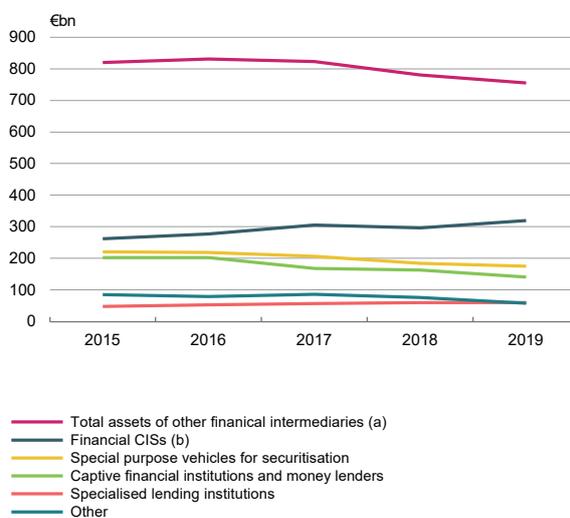
SOURCE: DGSFP.

Chart A.7 Structural risks and interconnections

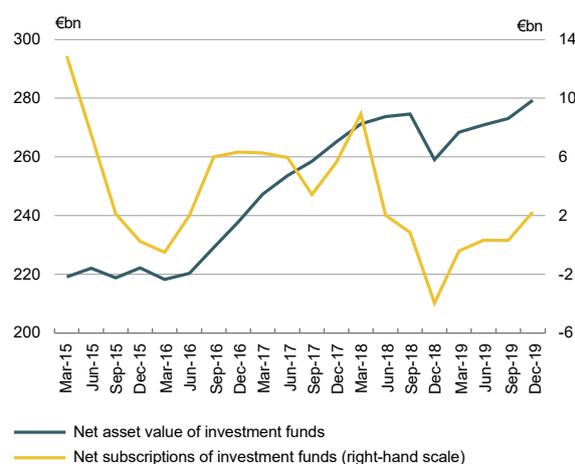
1 Financial sector assets



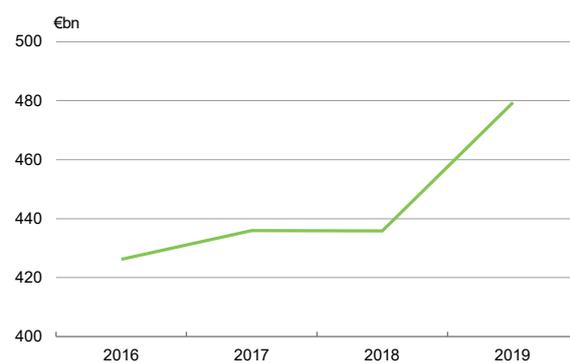
2 Assets of other financial intermediaries



3 Investment funds



4 Assets of Insurers and pension funds



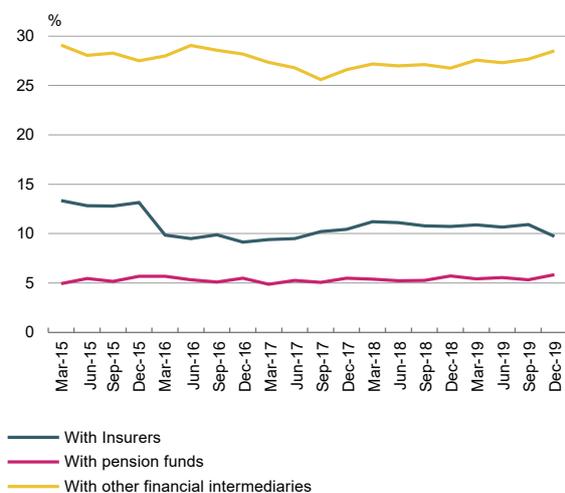
SOURCES: CNMV, DGSFP and Banco de España.

a 2019 data, provisional.

b Including investment funds (including money market funds), SICAVs and hedge funds.

Chart A.7 Structural risks and interconnections (cont'd.)

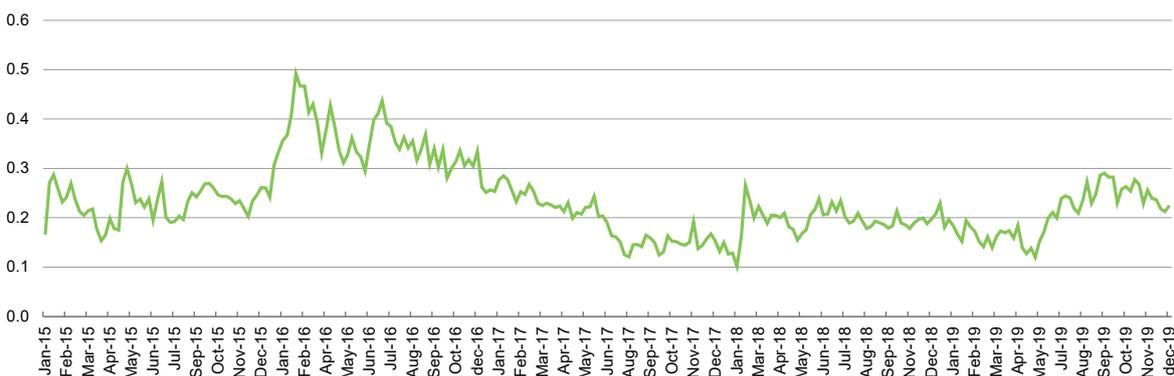
5 Banking sector liabilities, by sector (a)



6 Indicator of correlation between asset classes (b)



7 Systemic risk indicator (c)



SOURCES: CNMV and Banco de España.

- a Distributions as a percentage of total liabilities with the financial sector.
- b The indicator of correlation between asset classes takes into account pairs of correlations calculated using daily data in three month windows. The asset classes are sovereign debt, private fixed income of financial and non financial institutions and Ibex 35 securities of financial companies, utilities and other sectors.
- c Stress is assessed in six segments of the financial system and aggregated. This obtains a single figure that factors in the correlation between those segments. The econometric estimates suggest that an indicator value below 0.27 corresponds to periods of low stress, while values between 0.27 and 0.49 correspond to periods of medium stress and those over 0.49 to periods of high stress.

Glossary

Glossary

ALM	Asset and liability management
AMCESFI	<i>Autoridad Macropudencial Consejo de Estabilidad Financiera</i> (Spanish Macropudencial Authority)
APP	Asset purchase programme
ATA	Average total assets
BCBS	Basel Committee on Banking Supervision
bn	Billion
bp	Basis points
CCoB	Capital conservation buffer
CCyB	Countercyclical capital buffer
CDS	Credit default swap
CESFI	<i>Comité de Estabilidad Financiera</i> (Financial Stability Committee)
CET1	Common Equity Tier 1
CIS	Collective investment scheme
CLO	Collateralised loan obligation
CNMV	<i>Comisión Nacional del Mercado de Valores</i> (National Securities Market Commission)
COVID-19	Coronavirus disease 2019
CPI	Consumer price index
DGSFP	<i>Dirección General de Seguros y Fondos de Pensiones</i> (Directorate General of Insurance and Pension Funds)
EBA	European Banking Authority
ECB	European Central Bank
EF	Economic function
EIOPA	European Insurance and Occupational Pensions Authority
EMU	Economic and Monetary Union
ESG	Environmental, social and governance
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
EU	European Union
EUR	Euro
FSB	Financial Stability Board
FSTF	Financial Stability Technical Committee (AMCESFI)
GDP	Gross domestic product
G-SIIs	Global systemically important institutions
HICP	Harmonised index of consumer prices
ICO	<i>Instituto de Crédito Oficial</i> (Official Credit Institute)
ID	Individual data

IMF	International Monetary Fund
INE	<i>Instituto Nacional de Estadística</i> (National Statistics Institute)
IOSCO	International Organisation of Securities Commissions
LCR	Liquidity Coverage Ratio
LFS	Labour force survey
LTRO	Longer-Term Refinancing Operations
MINECO	<i>Ministerio de Asuntos Económicos y Transformación Digital</i> (Ministry of Economic Affairs and Digital Transformation)
NBFI	Non-bank financial intermediation
NBFS	Non-bank financial sector
NFC	Non-financial corporations
NIIP	Net international investment position
OFI	Other financial institutions
OIS	Overnight Interest Swap
O-SIIs	Other systemically important institutions
P2G	Pillar 2 guidance
P2R	Pillar 2 requirement
pp	Percentage points
Q	Quarter
ROA	Return on assets
ROE	Return on equity
RWA	Risk-weighted assets
Sareb	<i>Sociedad de Gestión de Activos procedentes de la Reestructuración Bancaria</i> (asset management company for assets arising from bank restructuring)
SFV	Structured finance vehicle
SGTFI	<i>Secretaría General del Tesoro y Financiación Internacional</i> (General Secretariat of the Treasury and International Financing)
SHSS	Securities holdings statistics by sector
SICAV	<i>Sociedad de inversión de capital variable</i> (open-end investment company)
SMEs	Small and medium-sized enterprises
SRI	Systemic risk indicator
UCITS	Undertakings for collective investment in transferable securities
ULC	Unit labour costs

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