CNMV
Comisión Nacional del Mercado de Valores

Financial Stability Note

No. 22, June 2022

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The Financial Stability Note is one of the CNMV's tasks in the framework of its monitoring of financial stability conditions in the areas it supervises. In particular, the Note assesses the stress level of **domestic securities markets during the last quarter,** flags any changes in the level of the various financial risks and identifies the major sources of risk.

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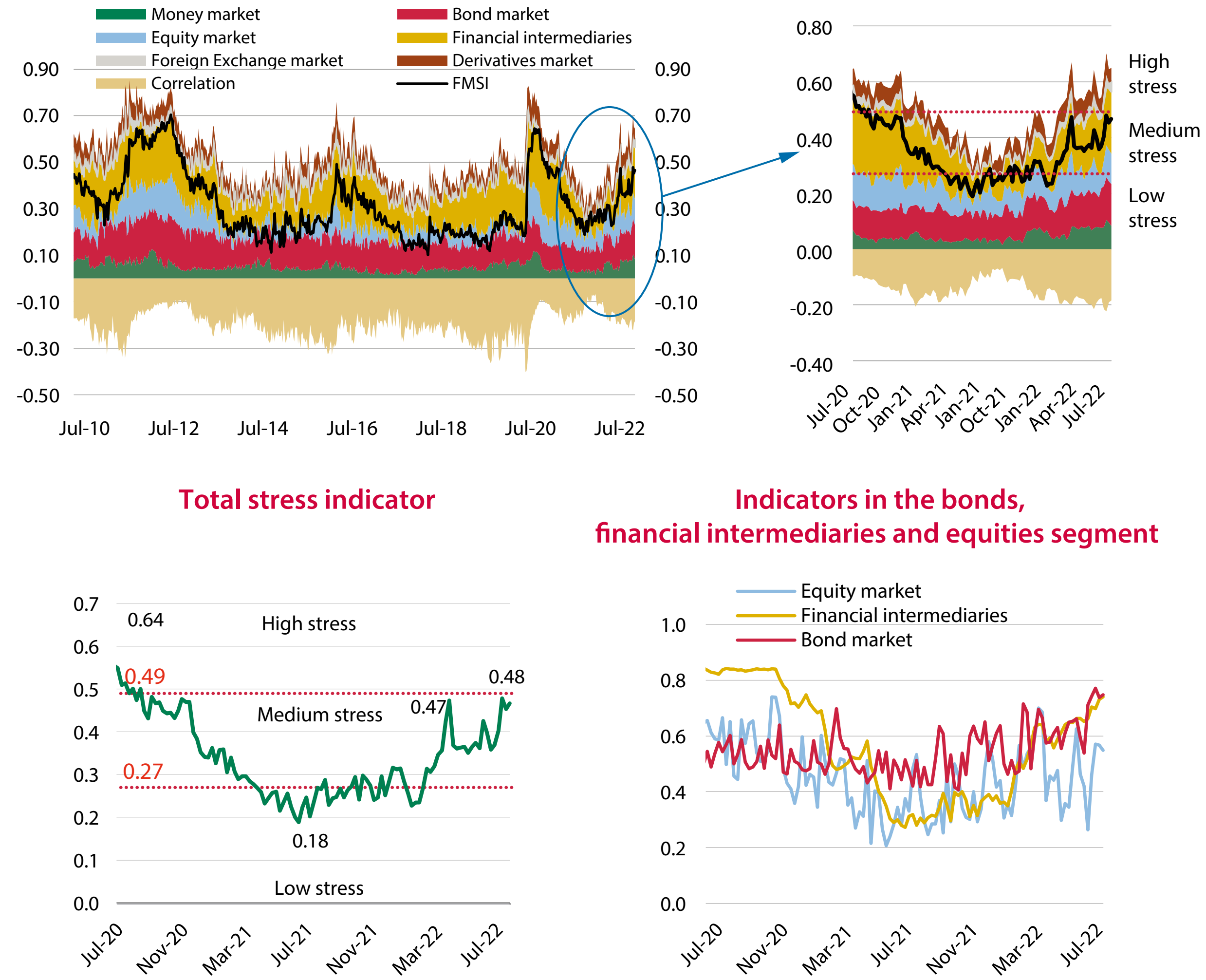
Summary

✓ The risks relating to the intensification of inflation, the repercussions of Russia's invasion of Ukraine, the shift in monetary policy and the slowdown of the economy in an environment of high uncertainty have led to the Spanish **financial markets stress indicator** showing an upward trend in the first half of the year. The indicator started the year at 0.24 and ended June at an annual maximum of 0.50,[1] which corresponds to a high stress level, somewhat above the upper threshold of the medium stress level (see Figure 1). Two maximums were recorded in the half-year, 0.47 and 0.50, reached at specific moments of high uncertainty: the first, at the beginning of the war, and the second, in the central part of the year, when an earlier and more intense than expected tightening of monetary policy was factored in. Widespread rises in stress are observed in all segments (particularly bonds and financial intermediaries) due, above all, to the increase in volatility indicators. The system's correlation is at a medium-high level.

Spanish financial markets stress indicator

FIGURE 1



Source: CNMV. For more detail on the recent movements in this indicator and its components, see the statistical series of the CNMV (Market stress indicators), available at: http://www.cnmv.es/Portal/Publicaciones/SeriesWeb/Inicio.aspx?codrama=1295. For further information on the methodology of this index, see Cambón, M.I. and Estévez, L. (2016). "A Spanish Financial Market Stress Index (FMSI)". Spanish Review of Financial Economics, Vol. 14, No. 1, pp. 23-41 or as CNMV Working Paper No. 60 available at: http://www.cnmv.es/DocPortal/Publicaciones/MONOGRAFIAS/Monografia_60_en.pdf.

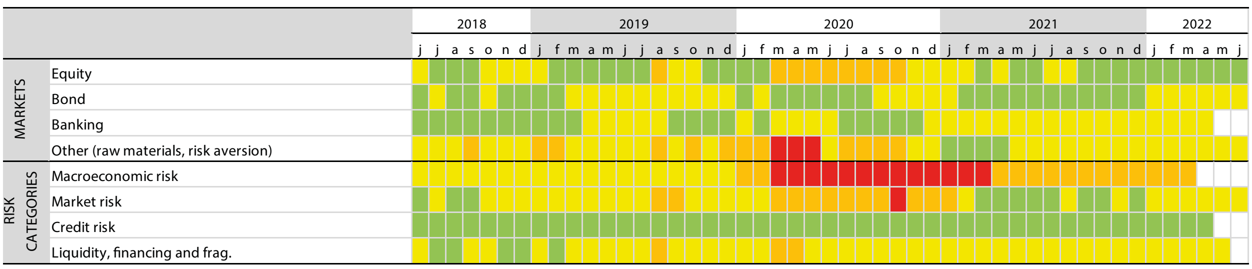
1 The closing date of this note is 30 June, except for the stress indicator, which stretches to 8 July, and certain other specific data.

- ✓ **Financial markets, both in Spain and internationally, evolved during the first half of the year under the weight of risks and uncertainties**. The year began with the prolongation of rising inflation, beyond what had been expected in previous months and which, far from easing, was once again driven by rising prices of raw materials and energy linked to the geopolitical situation. This scenario of high inflation has prompted a significant modulation in the tone of the main central banks' monetary policy, in a context of considerable complexity in which the prospects of deterioration in economic activity are intensifying due to persistent rigidities in supply, increasing general costs and the hardening of financing costs. In this context, the financial markets have seen falls in asset prices and rebounds in their volatility, particularly in the raw material and energy markets.

- ✓ **In equity markets, price declines in the first half were greatest in the US indices** (between 15.3% for the Dow Jones and 29.5% for the Nasdaq). The European indices showed notable falls, but somewhat lower, ranging between 7.1% for the Ibex 35 and 22.1% for the Mib 30. In this environment of falling stock prices, the Ibex 35 posted the smallest decline among its European counterparts, benefiting from the good relative performance of companies in the energy and banking sectors, both of which have a high weighting in the index, and from the lower presence of cyclical stocks and those linked to the technology sector, which performed less well. The Spanish index also benefited from the improvement in the prospects for the recovery of the Latin American economies, which are of great importance for some Spanish companies. **In European debt markets there were notable increases in asset yields**, ranging in the case of long-term sovereign debt between 1.3 and 2.3 percentage points (pp). For Spain, this increase was 1.9 pp, to 2.5%. The risk premiums of the various debt assets have tightened at specific times, but remain at contained levels thanks, in part, to the announcement and subsequent approval by the European Central Bank (ECB) of the Transmission Protection Instrument (TPI) intended to reduce the fragmentation of European markets and so, as its name suggests, avoid possible difficulties in the mechanism for transmitting monetary policy.

- ✓ **The rise in inflation and interest rates (along with lower growth) creates a complex environment with many sources of uncertainty**. First, it has a negative effect on **saving** and consequently on the available supply of funding. In addition, it is important for investors to take due account in their decisions of the fall in the **real return** on their assets and the **sensitivity of their portfolio to increases in interest rates** (for example, in fixed income investment funds). A shift in the composition of some agents' portfolios towards **more complex and risky assets** can by no means be ruled out. In this context, the most important financial risks identified are market and liquidity risks. Credit risk may increase depending on the degree of deterioration of the economy. Finally, it should be noted that the **most indebted agents** (public and private) may show a greater degree of financial vulnerability at times of rising interest rates and, therefore, more expensive financing conditions.

Heat map: summary by markets and risk categories[1] FIGURE 2



Source: CNMV. See Cambón, M.I. (2015). "Identification of vulnerabilities in the Spanish financial system: an application of heat maps". CNMV Bulletin, Quarter I, 2015 pp. 103-115.

1 Data to 30 June.

Sources of risk

Macroeconomic environment: inflation, the biggest risk

- **Spain's GDP grew by 0.2% in the first quarter of 2022 compared with the previous quarter and by 6.3% compared with the same quarter of the previous year, both figures 0.1 pp below the preliminary reading released in April.** These figures represent a slowdown compared with previous quarters[2] which is mainly explained by the 2% contraction in household consumption compared with the previous quarter, in a context marked by the start of the invasion of Ukraine and the significant rise in inflation. In year-on-year terms, however, household demand together with investment (gross capital formation) were the components with the greatest contribution to GDP growth, with increases of 4.9% and 6.5% respectively. Regarding foreign demand, exports of goods and services during the first three months of 2022 increased by 1.1% (18.1% in year-on-year terms), while imports decreased by 0.8% (in year-on-year terms they grew by 11.7%). In this first quarter of the year, the Spanish economy showed lower growth than that of the euro area as a whole, which was 0.6%, after having advanced significantly above it in the last two quarters of 2021. For this reason, the year-on-year growth rate in Spain continues to be above that of the euro area as a whole: 6.3% compared with 5.1% (see Figure 21).

- **Data from the Quarterly National Accounts of Spain showed a stagnation in the labour market during the first quarter of the year, with job creation of 0.5%[3] between January and March,** after 2021 in which growth was 6.6%. The results of the Active Population Survey (EPA) confirmed this trend, since according to this survey 100,200 jobs were destroyed compared with the previous quarter, bringing their total number to 20.08 million at the end of March.[4] This slight contraction was reflected both in the activity rate, which fell by 0.15% in the quarter, to 58.5%,[5] and in the number of unemployed, which increased by 70,900 persons[6] (2.3%), bringing the unemployment rate to 13.65% (13.3% at the end of 2021). These figures do not include those affected by furloughing (ERTE),[7] who numbered just 27,500 at the end of May (122,672 in December 2021), following the end of the ERTEs related to COVID-19 and the launch of the RED mechanism[8] for travel agencies.

  As for Social Security membership, data for June showed an increase of 469,791 in the first half of the year, to 20.1 million,[9] continuing the positive trend of 2021, which ended with an increase of 4.1% in the number of contributors. The Bank of Spain's forecasts for the end of 2022 indicate that the unemployment rate could stand at 13.0%, 0.5 pp less than its March forecast.

- **The provisional CPI data for the month of June place the inflation rate at 10.2%, which, if confirmed, would mean an increase of 1.5 pp in relation to the previous month and its highest level since 1985.** The items with the greatest influence on the

2 In the third and fourth quarters of 2021, the Spanish economy grew by 2.6% and 2.2% respectively.

3 FTE jobs.

4 This represents a decrease of 0.5% compared with December 2021 and an increase of 4.6% compared with the figure one year earlier.

5 In the fourth quarter it had fallen by almost half a percentage point, having exceeded 59.1% at the end of the third quarter.

6 In 2021, the number of unemployed had decreased by 616,000 people, which represents a variation of -16.6%.

7 In accordance with Eurostat and International Labour Organization (ILO) methodology these workers are considered employed.

8 The RED Mechanism for Flexibility and Stabilization of Employment, introduced by Royal Decree-Law 32/2021 (labour reform), allows companies, in exceptional situations, to apply measures to reduce working hours and suspend employment contracts.

9 This figure is almost 900,000 more than the number of people in employment in February 2020, the month before the start of the COVID-19 crisis.

increase in the annual rate were, as in previous months, fuels, with a rise greater than that of June last year, and food and non-alcoholic beverages. Hotel, café and restaurant prices also increased more than in 2021. For its part, the underlying rate, which had closed 2021 at 2.1% after gradually increasing from 0.5% in January of that year, saw more intense growth over the course of the first half of 2022, reaching 5.5% at the end of June. This shows that the energy component, which was practically the only cause of the high levels of inflation in 2021 and the first months of 2022,[10] is now affecting goods and services generally. In comparison with the euro area as a whole, the data reflected a reduction in Spain's positive differential, from 1.6 pp at the end of 2021 to just 0.4 pp at the end of May this year (see Figure 22).

- **Available information on public finances reveals a notable contraction in the public deficit, reflecting, on the public spending side, the gradual ending of the measures approved to combat the effects of COVID-19 and, as regards revenues, the effects of economic growth and increased employment as well as inflation**. The consolidated deficit of the public administrations[11] stood at 0.6% of GDP at the end of April, well below the figure of 2.2% seen in the same period of 2021, with improvements in all administrations (central government, autonomous regions and social security funds).[12] The level of public debt fell in the first quarter of the year to 117.7% of GDP (118.4% at the end of 2021 and 125.2% a year earlier).

  The Bank of Spain's forecasts place the public deficit for 2022 as a whole at 4.6% of GDP (after a downward correction of 0.4 pp), while the calculations of the EC and the IMF place it respectively at 4.9% and 5.3%. These organisations' estimates of the level of public debt are very similar, placing it at around 115% of GDP. However, while the Bank of Spain foresees a gradual decrease in the next two years, the IMF's projections have it stabilising at around 114% in the next five years.

- **The data of the Financial Accounts for the first quarter of 2022 continue to show a gradual return to pre-pandemic patterns.** For example the savings rate, which had increased progressively since the start of the pandemic, reaching a maximum of 16.7% in the first quarter of 2021 (cumulative data of four quarters), has been falling since then, and in March 2022 it stood at 9.2%, a value very similar to that of the beginning of 2020. Spanish households' savings continue to be notably lower than those of the euro area as a whole (see Figure 29). The decrease in the level of savings of Spanish households was reflected in the acquisition of financial assets, which, although it continued to be high in twelve-month cumulative terms (6.5% of GDP at the end of the first quarter, 0.3 pp below the closing value of 2021), fell substantially in quarterly terms, to 0.9% of GDP. The evolution of the various asset classes that make up this investment followed patterns similar to those of previous quarters, with a significant disinvestment in term deposits and fixed-income securities, 2.7% of GDP, and a substantial portion of savings being invested in means of payment,[13] with inflows reaching 6.5% of GDP. If only the data for the first quarter are analysed, it can be seen that investment in means of payment was notably higher than in previous quarters (6.7% of GDP), to the detriment, above all, of subscriptions to investment funds (0.3% of GDP), which had been high in 2021 (3% of GDP).

[10] In March, the annual rate of growth in prices of electricity, gas and other fuels stood at 80%.

[11] Excluding local authorities and aid to financial institutions.

[12] In the case of the central government, the deficit decreased by 1.4 pp, to 0.3% of GDP, deriving from a greater increase in non-financial revenue in relation to expenditure. The autonomous regions, for their part, reduced their funding requirement to 0.2% of GDP (0.3% between January and April 2021), while the social security funds posted a deficit of just over €1.5 billion, compared with the deficit of more than €2.3 billion as a result, especially, of the growth in contributions (4.3%).

[13] Cash and demand deposits.

An analysis of the data available to the CNMV on flows of investment funds shows that the relative polarisation of investments that began in 2019 continued in the first quarter of 2022. Thus the categories most favoured by these inflows of resources in the first three months of the year were, on the one hand, fixed income, perceived as lower risk, and, on the other, international equity funds, one of the those considered riskier. Specifically, fixed income funds experienced net subscriptions of €3.8 billion in the quarter (more than €10 billion between March 2021 and March 2022), while inflows of resources to international equity funds amounted to €1.4 billion (almost €4.6 billion in the last 12 months). In the case of foreign CISs marketed in Spain, there was an 18% decline in their assets in the first quarter of the year, to €227.2 billion, which was essentially due to the loss of portfolio value.

- **The increase in the inflation rate, which is a global phenomenon at the moment, has become one of the major risks to our economy, and to other economies in our environment**. The rise in prices, which may significantly hamper economic growth in the short and medium term, comes at a particularly inopportune time, since it interrupts the process of economic recovery from the COVID-19 crisis. As discussed in other sections of this note,[14] the global rise in prices, which has exceeded initial expectations in both magnitude and persistence, is leading central banks to modify the tone of their monetary policy, either by raising reference rates or through the gradual reduction or termination of asset purchase programmes. The upward trend in interest rates is shaping up as a major source of risk due to the higher cost of financing, especially for agents (public and private) with variable financing costs.

- **The latest growth forecasts for the Spanish economy incorporate the existing risk elements – some of which have already been described – and correct the figures downwards estimated in the first months of the year**. Thus, the latest forecasts from the Bank of Spain and the European Commission place the increase in GDP for 2022 at 4.1% and 4.0%, respectively. The Bank of Spain's forecast represents a reduction of 0.4 pp compared with the April forecast, while that of the European Commission remained stable compared with the last one made in May, when it had revised its forecast downwards by 1.6 pp.[15] The IMF, for its part, revised the growth data in its latest report (July) relative to the previous forecast (April), from 4.8% to 4% (on top of the April reduction of 1 pp).

Interest rate context: shift in monetary policy

- **The ECB, which had initially been reluctant to raise rates, gradually changed the tone of the message as inflation rates continued their upward path and ended up increasing interest rates by 50 bp at its meeting of 21 July**. The realisation that the fight against rising prices[16] would force it to adopt more aggressive measures in terms of monetary policy caused a notable hardening of the ECB's message and the confirmation, after the meeting of its Governing Council on 9 June, that it would begin to normalise its monetary policy in July. Furthermore, in a context of rebound and variability in risk premiums in peripheral countries, an extraordinary meeting of the ECB Governing Council was held in mid-June, after which the institution confirmed that it will address market fragmentation by applying some flexibility in the reinvestment of the bonds that

14 For more detail on monetary policy in the euro area, see the following section.

15 Regarding the month of February.

16 The markets consider that inflation is taking on a certain structural character and that second-round effects are already appearing, so it will be more persistent than expected and will extend over time.

come to maturity, while announcing that it was working on the creation of a new instrument to deal with this situation. The end of July saw the materialisation of both decisions. On the one hand, the ECB decided to increase interest rates by 50 bp.[17] (its first hike in 11 years, and more than expected) and, on the other hand, it presented its new tool against financial fragmentation, the Transmission Protection Instrument (TPI).[18] This, which would be added to the reinvestments of maturities in the portfolio of the purchase programme adopted during the pandemic (PEPP), consists of the possibility of buying public sector securities (private securities could also be considered) of the Member States to counter unwarranted, disorderly market dynamics that pose a serious threat to the transmission of monetary policy across the euro area.

- **In the United States and the United Kingdom, rate hikes are moving ahead of the euro area.** The Federal Reserve began tightening its monetary policy in March, raising rates by 25 bp, and continued with 50 bp in May and 75 bp in June (up to the 1.5-1.75% range), while announcing that from June it would begin to reduce its balance sheet by ceasing to reinvest maturing debt purchased during the pandemic. Analyst forecasts place rates at around 3% at the end of the year. Likewise, the Bank of England has made five consecutive increases since December, bringing rates to 1.25%, their highest level in the last 13 years.

- **In this context, interest rate risk takes on greater significance and strategies to preserve the value of money in the face of the threat of inflation are intensified**. Interest rate increases are already giving rise to losses due to the valuation of fixed-income asset portfolios, which could increase and be more intense in assets with longer maturities and/or with a worse credit rating (among them, fixed-income and high-yield debt funds). Added to this is the loss of value due to inflation of liquidity positions and risk-free assets, which increases the incentives for investors to acquire more complex assets with higher expected returns and therefore with a significant increase in the associated risk levels.

  On the other hand, the expectations of the financial sector are improving in relation to its margins and its profitability, although in the medium term some vulnerabilities associated with the increase in the financing costs of companies and families may be revealed, which would be more pronounced in the case of the most indebted agents. To this can be added the effect, albeit possibly only transitory, on the valuation of banking entities of the announced tax on their activities.

Sources of political uncertainty: the fallout from the conflict between Russia and Ukraine will not end any time soon

- **The main source of political uncertainty today is the war between Ukraine and Russia, which is causing serious consequences in human, political and economic terms**. The Russian invasion that began in February has generated an exponential growth in political and economic insecurity and uncertainty and has involved a large part of the world powers. In fact, at the end of June, NATO updated its Strategic Concept and identified Russia as the most direct and significant threat to the security of the allies and to the maintenance of peace and stability in the Euro-Atlantic area.[19, 20] In addition, an

[17] Monetary policy decisions.

[18] The Transmission Protection Instrument.

[19] The previous NATO Strategic Concept adopted in 2010 declared Russia as a strategic partner.

[20] This renewed Strategic Concept makes mention of China for the first time throughout the document, declaring it a challenge for NATO. However, it also points out that the alliance is open to constructive commitments with this country, in order to safeguard the security interests of the NATO countries and have reciprocal transparency.

intensification of its military strength and presence in Europe was announced and Sweden and Finland were formally invited to join the alliance.

After the invasion, Western countries have adopted a series of sanctions on individuals, companies and assets of Russian origin in order to deteriorate the country economically and financially and help contain the aggression against Ukraine. At the beginning of June, more than four months after the beginning of the war,[21] the Credit Derivatives Determinations Committee in the United States effectively declared the Russian economy bankrupt, due to non-payment of default interest because of the impossibility of using dollars. The economic and financial consequences of the conflict are visible on a global scale. This situation has had a direct impact on the rise in commodity prices (and, consequently, on inflation), has interrupted some supply chains and, in general, has deteriorated economic activity. The energy supply of European countries has been significantly affected and, although energy dependence on Russia has been reduced, exposure to this risk continues to be very important and interruptions in said supply are not ruled out, which may follow the supposedly temporary closure of the gas pipeline that supplies Russian gas to Germany. Operational risks have also increased, given the possible increase in cyberattacks perpetrated against different entities and sectors.

The financial markets have reacted to this situation of high uncertainty with falls in prices and spikes in volatility, which have been especially important in the commodity markets and have affected the operation of some of the infrastructures of these markets. The duration of the conflict is still uncertain and, consequently, so are its repercussions in all areas. In this environment, new episodes of financial instability cannot be ruled out.

- **Various tensions persist in Europe, one of the main ones having to do with dependency on Russian gas.** The risk of shortages has led to an increase in the level of energy alert, so that some countries do not rule out the use of coal in the event of a total interruption of Russian supply.[22] In addition, for the first time in the history of the Union, the purchase and delivery of weapons and defence equipment to Ukraine has been financed with Community money.[23] Furthermore, in June the European Union formally named Ukraine and Moldova as candidate countries to join the Union. These actions take place in a very complex geopolitical context marked by the renewed strategic focus of NATO and the maintenance of sanctions on Russia, so that uncertainty and the risk of new episodes of turbulence and instability in the markets remain at very high levels.

  Another major source of political uncertainty for Europe is the political crisis in Italy. The Italian prime minister presented his resignation during the month of July after losing the support of the coalition parties and, consequently, the majority to govern. Until 25 September, the date of the next early elections, the Government of Mario Draghi will

[21] Economic sanctions on Russia date back to 2014, after the annexation of Crimea; however, after the start of the war in 2022, these have increased notably. Among others, the imposition of financial measures stands out (for example: freezing of assets and prohibition of access by the central banks of Russia and Belarus to reserves in international currencies and to transactions in these currencies), as well as commercial, industrial, personal and other diplomatic-type measures. Economic sanctions have been established against strategic Russian sectors such as energy, banking and defence, and restrictive measures have also been applied to individuals and entities, ranging from the immobilisation of goods and assets in the European Union, including funds available to them, to the prohibition of entry into the territory of the Union.

[22] Over these months, ten EU countries have issued early warnings regarding gas supply: the first of three crisis levels. These are Austria, Croatia, Denmark, Estonia, Finland, Italy, Latvia, the Netherlands and Sweden. Germany was also among these, although in June it raised the alarm level in the face of the high risk of gas shortages to level 2, which includes a clause that allows public service companies to immediately pass on the price increase to industry and households. At the highest alert level, rationing would be imposed and the state would take control of energy distribution.

[23] Through the European Peace Facility (EPF), the European Union has granted €2 billion in economic aid to Ukraine (from February) to finance military equipment designed to deliver "lethal force for defensive purposes" and cover the provision of personal protective equipment, first aid kits, and fuel.

remain in office. The change of government,[24] at a time of great macroeconomic and financial complexity, adds political and economic uncertainty (with possible delays in the execution of reform plans) and could give rise to new bouts of turbulence in the markets, as well as spikes in risk premiums.

In relation to Brexit, which materialised in December 2020, it should be noted that the agreement adopted between the United Kingdom and the European Union continues to generate disagreement between the parties on certain issues. The most recent are those relating to the Brexit protocol for Northern Ireland, since at the end of June the United Kingdom unilaterally backed a bill to amend the agreement reached with the European Union, without the consent of the community bloc. This situation, which has generated discomfort in the European Union[25] and opens up the possibility of trade tensions between the two partners in the future, may be exacerbated by the resignation of the UK Prime Minister in early July, since it creates even greater uncertainty.

- **It has been more than two years since the first phase of the trade agreement between China and the United States was subscribed. However, the uncertainties deriving from the trade relations between the two economies are still present**. The negotiation and future development of the trade agreement are still pending and, although serious tensions persist between the two powers regarding Taiwan and the continuing US policy of sanctions and prohibitions on Chinese companies, the US administration recently announced that it was studying a possible tariff reduction on certain Chinese products to try to reduce current inflationary pressures.

- **Turning to Spain, there are various risks of a political nature**. In this edition it is worth mentioning, in the international sphere, those that derive from the suspension, at the beginning of June, of the Treaty of Friendship, Good Neighbourliness and Cooperation between Spain and Algeria. At the national level, there continues to be a high degree of parliamentary fragmentation, which can sometimes make decision-making difficult.

  Another relevant factor for national growth and stability is related to the need for effective implementation of the plans financed with the funds allocated to Spain under the **Next Generation EU programme**.

Other sources of uncertainty

- **The uncertain evolution of the COVID-19 pandemic continues to be an element of risk for the global economic recovery**. Although in recent months this risk has been reduced and the restrictions imposed by many countries to stop the spread of the virus have been lifted, we cannot rule out the appearance of new variants of the virus, more resistant to vaccines, that may cause new outbreaks and lead to the reimposition of restrictive measures, with the economic repercussions that this entails.

- **Cybersecurity is shaping up as one of the most important risks for all types of entities, especially due to the high intensity with which technological changes are taking place and the current geopolitical context, which has led to an increase in cyberattacks**. The

[24] In this regard, the Italian president has summoned the parties to urge them not to allow the elections to affect the work in progress on the main challenges facing the country in the current context: its role in the war in Ukraine, the reforms agreed with the European Union to receive funds from the recovery plan, anti-crisis measures, the approval of the 2023 budgets, etc.

[25] This Law could take up to a year to be approved; however, if it goes ahead, the British Government would have powers in Northern Ireland to limit the border controls agreed with Brussels, annul the role of the Court of Justice of the European Union or apply subsidies and tax relief. All these aspects were part of the most important controversies during the negotiations for the United Kingdom's exit from the European Union, since for the community bloc it is essential to control the entry of products into the European community market and prevent unfair competition.

materialisation of this operational risk would have very significant consequences, but if it occurred in the financial sector, there would be the added risk of contagion to other sectors due to its high degree of interrelation, which could lead to a generalised loss of confidence and endanger financial stability. In an increasingly interconnected system and with the digital and technological boost that came from the increase in remote activity due to the pandemic, the chances of suffering cyberattacks have increased significantly.[26] The adequate management of this risk requires an increase in investment in cybersecurity and coordination between the different sectors and authorities to try to reduce and prevent the possible systemic consequences of a cyber incident.[27] From a regulatory point of view, it is worth highlighting the upcoming approval of the EU Digital Operational Resilience Act (DORA).[28] In the Spanish sphere we would point to the joint presentation by the CNMV, the Bank of Spain and the General Directorate of Insurance and Pension Funds (DGSFP) of the guides for carrying out advanced tests in cybersecurity under the adopted TIBER-ES framework.[29] In addition, at the end of March the National Cybersecurity Plan was approved. With more than €1 billion, it involves around 150 initiatives in the next three years, for example, the creation of a national platform for reporting and monitoring cyber incidents and threats, and a boost to the start-up of the Cyber Security Operations Centre of the General State Administration.

- **The expansion of crypto-currencies and, above all, the interest they are arousing among non-professional clients is a phenomenon that falls fundamentally within the scope of investor protection, but which could generate turbulence in the markets in the medium term**. These assets are associated with very high risks, which the CNMV has pointed out on various occasions,[30] in particular their high volatility and the possibility of losing the entire investment.[31] The protection of the retail investor, especially with regard to the advertising and promotion of these investments, is essential, which is why in January 2022 the CNMV published a circular regulating the advertising of crypto-assets presented as investments and defining the rules regarding the content and format of the messages published in campaigns to promote this type of asset.[32] Today, investment in crypto-currencies in Spain is low: a study recently promoted by the CNMV reveals that fewer than 7% of investors have ever invested in crypto-currencies, most of whom dedicate less than 5% of their capital to them. In general, the population evinces very little knowledge of these assets. The expansion of investment in crypto-assets on a global scale and of the interconnection between the crypto-asset market and the traditional financial sector, if it continues or increases over time, could create risks for the financial system as a whole. That is why the establishment of an adequate regulation at European level is of particular significance.[33]

26 According to a report by the World Economic Forum, in 2021 companies suffered an average of 270 cyberattacks each, 31% more than in 2020.

27 In January, the European Systemic Risk Board (ESRB) published a recommendation for the establishment of a pan-European systemic cyber incident coordination framework (EU-SCICF), with the main objective of strengthening coordination among the various financial authorities in the European Union as well as with other authorities in the European Union and major international players.

28 Its objective is to establish a common framework of obligations, principles and requirements in the area of cybersecurity, so that all financial institutions are subject to a set of standard regulations to mitigate and manage the security risks affecting networks and information systems.

29 TIBER-ES is the Spanish adaptation of TIBER-EU, the advanced cybersecurity testing framework published by the ECB, and aims to strengthen the cyber-resilience of financial institutions operating in Spain.

30 In March of this year, the European authorities for the supervision of the financial system (EBA, ESMA and EIOPA), published a warning about the risks that crypto-assets pose to consumers in the European Union, and this warning was in turn endorsed in a joint statement by the Bank of Spain, the DGSFP and the CNMV (see the press release of 17 March 2022). Available at: https://www.bde.es/f/webbde/GAP/Secciones/SalaPrensa/NotasInformativas/22/presbe2022_19en.pdf

31 For example, the price of Bitcoin has fallen by almost 70% since November 2021, when it surpassed $68,000, its all-time high.

32 https://cnmv.es/DocPortal/Legislacion/Circulares/Circular_1_2022_EN.pdf

33 At the end of June, the Presidency of the Council and the European Parliament reached a provisional agreement on the proposal for a Regulation on Markets in Crypto-Assets (MiCA). This is expected to come into force some time in 2024 and will provide a common framework at the European level to regulate the crypto-asset market and thus provide legal certainty.

- **The risks relating to climate change continue to have a significant specific weight in agents' economic decisions, a circumstance that has become more important following the pandemic**. The effects of climate change are going to entail important transformations both in the economy and in the financial markets, deriving not only from the direct costs[34] (also called "physical risks") but from the costs of transition[35] towards a low-carbon economy, which could now be altered as a result of the economic and energy impact of the invasion of Ukraine. This conflict could give rise to a redistribution of resources and an acceleration of plans to replace fossil fuels, although in the short term it may prove necessary temporarily to make more rather than less use of them. The volume of costs will largely depend on preventive measures to mitigate them, but also on the speed of the transformation process, which will affect sectors that account for a significant part of GDP[36] and current employment, while at the same time requiring huge volumes of financial resources[37] to finance these changes. In this regard, the financial markets constitute a key mechanism for channelling the necessary resources, in a context of growing market and investor interest in sustainable assets.

  The need to accelerate the energy transformation towards more sustainable energies may contribute in the short and medium term to further increase the rise in prices, but it can also be a tool that allows economies to be progressively less vulnerable to changes in energy prices and geopolitical conflicts. Thus, in the current context of rising energy prices, some regions have chosen to temporarily relax their restrictions on the use of fossil fuels such as coal, in order to be less dependent on suppliers and, at the same time, accelerate the development of their renewable energy plans.

  In this context, the financial markets are facing a process of rapid transformation towards investments in assets that meet sustainability criteria (ESG).[38] The growing demand for this type of asset by investors has allowed sustainable investment to consolidate itself as an area of investment, by including a broad group of agents such as investors, issuers, asset managers, credit rating agencies, investor relations offices and index administrators, which are progressively expanding their offer of services and business models. In the case of issuers, the supply of this type of asset continues to grow with the incorporation of new issuers of ESG bonds,[39] as well as a wide range of investment funds.[40] There was a significant humanitarian aspect to the pandemic, and no doubt as a result we see increasing attention being paid to the social aspect of sustainability, not forgetting governance aspects, given investors' interest in the transparency and quality of corporate information.

34 The direct costs of climate change are clearly seen as a consequence of the events associated with it, with constant growth in these costs observed in recent years as a result of losses associated with disasters and extreme weather events (floods, fires, heat waves, droughts, etc.).

35 Deriving from costs of mitigation, adaptation and substitution to achieve a low-carbon economy (replacement of cars, energy systems, changes in production processes and supply sources).

36 Reducing high-emitting activities and increasing low-emitting ones will imply high capital expenditure on physical assets and require reallocation of labour, allowing the creation of new direct and indirect jobs, while others will be lost. The most exposed sectors will be those with products or operations with high emissions (such as energy, industry, agriculture and mobility, among others) which today represent 20% of world GDP, while another 10% corresponds to sectors whose supply chains have high emissions, such as construction. By the same token the costs of the energy transition will be lower for service-based economies such as Spain's and for those with relatively high per capita GDP. Low-income households may be more affected in this process due to the higher cost of electricity in the short term and the need to purchase low-emission products such as new heaters or electric cars.

37 In public resources alone, the Sustainable Europe Investment Plan envisages the mobilisation of €1 trillion in sustainable investments over the next decade from the EU budget with the goal of achieving a carbon neutral economy by 2050.

38 Environmental, Social and Governance.

39 Many of the issuers of these assets carry out issues on a recurring basis and an increasing number of countries and institutions are joining them. Among them, the Kingdom of Spain and the European Union, which made the first issues of this type in the second half of 2021. The European Union is expected to become the world's largest green bond issuer, as its debt issues to finance the NextGenerationEU programme are expected to reach €250 billion by the end of 2026.

40 In the case of Spain, the CNMV had registered at the end of April 2022 a total of 207 investment funds and three SICAVs, with aggregate AuM of €71.76 billion under Articles 8 (light green product) and 9 (dark green product) of the Sustainable Finance Disclosures Regulation (SFDR).

The most significant risks to financial stability identified are related to the continuing difficulty of correctly evaluating the risks associated with climate change,[41] and the imbalance between the demand for these products and the available supply. These elements can cause distortions in the price formation process, so future episodes of sharp valuation adjustments cannot be ruled out. Likewise, from the point of view of investor protection, one of the most important focuses of regulators and supervisors is on avoiding greenwashing,[42] as well as governance crises, which could affect the credibility of the markets and of the companies themselves.

[41] The pricing mechanism for carbon emissions does not allow a correct assessment of the negative externalities associated with the climate, in the absence of complete information on this risk.

[42] Greenwashing refers to a set of mechanisms whereby companies try to make their products or activities appear sustainable when in fact they are not, with the aim of attracting the interest of potential investors or clients.

Risk categories

Market risk: yellow

- **International equity markets, which had made significant gains in 2021, reversed course in 2022 as adverse news or events occurred and recorded losses that, in some cases, wiped out almost all of the gains accumulated during the previous year**. Although the problems caused by the pandemic were dissipating, the high rates of inflation registered in both the United States and Europe caused the first falls in prices, given the prospect that the Federal Reserve and other main central banks would raise their rates of interest to contain the rise in prices.

  These initial declines were accentuated after the invasion of Ukraine and the outbreak of war, which accelerated the rise in energy and commodity prices and thus intensified inflationary pressures. In addition, China reintroduced restrictions due to the pandemic, which added more uncertainty to the problems in supply chains. As described in a previous section, rate hikes started early in the United States and the United Kingdom, and in July the euro area joined.

  In this context of high uncertainty, the expectation of falling corporate earnings and even a recession in some areas, together with the prospect of a notable tightening of monetary policy, have led to a significant adjustment in both equity and debt asset valuations. The falls in their prices have also been accompanied by upticks in volatility.

- **Most of the major international indices, with the exception of the British FTSE 100,[43] presented notable falls in the first quarter,[44] which worsened in the second,[45] being more significant in the case of the US markets and the euro area**. Thus, the trend for the half-year as a whole was negative for all of them, although uneven, with significant drops in the case of the US indices and most of the euro area indices. More moderate falls were observed in the case of the Japanese indices and the Spanish Ibex 35, which, together with the UK FT 100, presents the best performance among the large European indices.

  All US indices show losses in the first half of 2022, ending three consecutive years of increases and falling to the levels of the beginning of 2021 and even the end of 2020 in the case of the technology-heavy Nasdaq index. The smallest decline, 15.3%, corresponded to the Dow Jones, favoured by the greater weight of companies in the traditional economy – banks and manufacturing –, while the most intense falls corresponded to the more general S&P 500 index[46] (-20.6%); but, above all, to the technology-heavy Nasdaq,[47] which fell by 29.5%.[48] The latter suffered more intensely from expectations of

[43] The British FTSE 100 index rose by 1.8% in the first quarter of the year, favoured by the high presence of mining and raw material companies in this market.

[44] The US indices accumulated decreases ranging between 4.6% for the Dow Jones and 9.1% for the Nasdaq, while the European indices presented falls in the same period of between 9.3% for the German Dax 30 and 3.1% for the Spanish Ibex 35. Likewise, the European Eurostoxx 50, the French Cac 40 and the Italian FTSE Mib fell by 9.2%, 6.9% and 8.5%, respectively.

[45] In the second quarter the declines intensified to range between 11.3% and 22.4% for the US Dow Jones and Nasdaq indices, respectively, while in the case of the European indices they worsened to range between 14.9% for the Italian FTSE Mib and 4.1% for the Spanish Ibex 35. Likewise, the European Eurostoxx 50, the French Cac 40 and the German Dax 30 fell by 11.5%, 11.1% and 11.3%, respectively. The UK FT 100 posted losses of 4.6%.

[46] The S&P 500 index is the most representative of the US economy and includes all sectors, from technology to manufacturing. The weight of technology companies in this index is growing and represents more than 28% of its capitalisation, the highest proportion in history. Of the top 10 companies by weighting in this index, six are technology stocks, accounting for more than 21% of the total.

[47] A significant portion of Nasdaq stocks have fallen by more than 50% and even 75% so far this year. These include companies such as Netflix, Peloton and Shopify, whose prices had grown strongly with the outbreak of the pandemic.

[48] The Nasdaq index appreciated in 2019 and 2020 by 35.2% and 43.6% respectively.

rapid growth in interest rates, in a context of a significant downward adjustment in forecasts for expected growth and moderation of the positive impact on these companies of changes in consumer habits and leisure[49] as the pandemic situation has normalised.

The trend was similar among major European stock markets,[50] the biggest falls being concentrated in the indices of the major economies, with declines of around 20%. The best relative performance corresponded to the UK FT 100 and the Spanish Ibex 35, which benefited from the high presence of mining and raw material companies among their components in the former case and from the lower weighting of cyclical and technology companies in the latter.

- **In Spain, the Ibex 35 also fell, although, as mentioned, it did so with a more moderate intensity (-7.1%)[51] than most European indices**. The Spanish index has benefited from the relatively greater weighting of the financial and energy sectors, which have performed better than most sectors, as well as from the lower presence of cyclical companies and technology companies, which have performed notably less well as they have been more affected by the prospects of an economic slowdown. In addition, the Spanish index benefits from the improvement in the prospects for the recovery of the Latin American economies, due to the great exposure of the large listed companies to this area. Even so, the better relative performance of the Spanish index in the first half of the year does not close the yield gap that opened up with respect to other European indices in recent years. The decline in prices in the first half caused the Ibex 35 price-earnings ratio (PER) to fall from 12.9[52] in mid-December until 11.9[53] in June. Its historical average is 13.6 (see Figure 4).
- **Most sectors saw stock prices decline during the half-year, the best performers being oil companies, which benefited from the sharp increase in the price of oil**. Companies in the renewable energy, pharmaceutical and real estate sectors also performed positively, although more discreetly so. Also notable were the moderate falls – less than 5% – of companies in the energy and telecommunications sectors, which benefit from the greater stability of their businesses, of banks, which are favoured by the positive effect of rising interest rates on their margins, and of small-caps. On the other hand, the greatest falls were concentrated in the industrial sector and in consumer goods and services. These were particularly notable in the case of industrial companies, the textile sector and trade, due to falls in investment and consumption, as well as of companies in the tourism, leisure, hotel and transport sectors due to doubts about how the business will evolve beyond the end of summer.
- **The international debt markets showed an upward trend in the return on assets in the first quarter of the year, which intensified from the second**. Thus, interest rates on Spanish public debt increased during most of the half-year, ending it with positive values in practically all segments of the curve.[54] Corporate debt rates,[55] which had ended 2021 with positive values at all terms, also followed a similar trend. Public debt yields in

49 The shares of the main US technology companies, known as FAANG (Meta – formerly Facebook –, Apple, Amazon, Netflix and Google) accumulated falls in the first half of the year of 52.1%, 23%, 36.3%, 71% and 24.4%, respectively.

50 In the euro area, the six-monthly falls of 22.1%, 19.6%, 19.5% and 17.2% of the FTSE Mib, the Eurostoxx 50, the Dax 30 and the Cac 40, respectively, stood out. The best performance was that of the Ibex 35, which fell by 7.1%. Outside the euro area, the British FTSE 100 fell by just 2.9%.

51 The Ibex 35 registered a revaluation of 7.9% in 2021, after registering losses of 15.5% in 2020.

52 In the same period, the PER of the American S&P 500 stock index decreased to 17.3 times, while that of the Eurostoxx 50 fell to 12 times.

53 The PER ratio reached a value of 11.3 times in March, the lowest point so far this year.

54 The yields of the Spanish debt curve present positive values from the term of six months. Likewise, in the primary market, all auctions presented positive rates, except for three-month bills. For the first time in recent years, six-month bills posted a positive average return of 0.117% in the auction of 5 July.

55 Although some corporate bonds, and even commercial paper, have been included in the ECB's corporate debt purchase programmes, since the end of 2021 corporate debt stopped showing negative yields in secondary markets.

all European economies[56] closed the half-year with significant increases at most terms, with yields on ten-year bonds reaching the highest levels in more than five years.[57] A this term the increases were between 155 bp in Germany and 230 bp in Greece. On average they were around 180 bp. At the end of the half-year it was only in Germany that the yield on 10-year debt was less than 1.5% (1.37%). 10-year debt yields were below 2% in the Netherlands, Austria, Finland and France. In Belgium and Ireland they were around 2%, Spain and Portugal showed values close to 2.5%, while Italy was close to 3.5% and Greece slightly exceeded it.

- **Yields on corporate debt also increased in all sections of the curve, although the increases were mainly concentrated in the longer sections**, which are those that had been most supported by the ECB's specific purchasing programmes. Despite the fact that this type of asset shows a greater dispersion in its yields,[58] they still remain at levels close to those observed in public debt. In the coming months there could well be a greater dispersion of these yields, depending on ratings and the degree of subordination of assets, and this is likely to be more marked in the least creditworthy assets. In a scenario of low interest rates such as that of a few months ago, many high credit risk assets had seen sharp price increases favoured by the search for yield, which had pushed their yields downwards due to the lack of return on risk-free assets. Given the normalisation of the interest rate context that is taking place, it is very likely that this situation will be reversed and the assets subject to these strategies will suffer price adjustments.

- **The market risk of debt assets has increased notably**. **This risk is greater in the case of the lowest rated high-yield corporate debt and subordinated debt**, since their credit risk premiums tend to increase even more in a context of rising rates and their liquidity tends to be lower. The financial structure of some companies, which had already been significantly weakened by the pandemic, could suffer even more from rate hikes, so the premiums required on their debt will depend largely on economic developments and their sensitivity to increased financial costs. Accordingly, companies that find it difficult to maintain their levels of activity and with relatively weak financial structures and high leverage could have problems obtaining financing at a reasonable cost. A similar situation could occur in the most vulnerable economies, with higher levels of debt and significant fiscal imbalances, since a rise in interest rates would cause a significant increase in debt servicing requirements.

  Based on the foregoing, the potential effects of the foreseeable increase in risk premiums demanded by the market on the prices and valuations of certain assets bear repeating. This is particularly relevant in the case of certain fund portfolios, especially fixed income funds, which are sometimes exposed to assets that are illiquid,[59] complex and have credit ratings below investment grade.

[56] In the case of the United States, 10-year rates increased by almost 150 bp in the half-year, ending it at 2.97%, although at certain points during the half-year they had reached values close to 3.5%.

[57] In the case of Spanish debt, 10-year rates reached their highest level since the second half of 2014, while in the case of German debt they stood at values not seen since the first half of 2014.

[58] Corporate debt shows greater dispersion in yields depending on the type of asset (senior or subordinated debt), its credit rating and whether or not it is eligible for purchase by the ECB.

[59] The ECB's large-scale purchases of corporate debt and some types of debt issued by financial institutions in both the primary and secondary markets could have affected the liquidity of certain issues with smaller volumes or where ownership is concentrated in a limited number of investors.

Credit risk: green

- **The risk premiums of both the public and private sectors, which had remained at low levels during 2021 due to the specific support of the ECB's purchasing programmes,[60] increased gradually as the half-year progressed and the ending of these programmes was known**.[61] Within this trend, there was a notable rise in risk premiums in May and June, which moderated after the ECB announced that it was working on a tool to limit financial fragmentation in the euro area in order not to harm the transmission of monetary policy. The approval of this tool, the Transmission Protection Instrument or TPI, came at the end of July.[62] In this context, the sovereign risk premium – measured as the difference between the yield on 10-year public debt in Spain and Germany – stood at 109 bp at the close of June (77 bp at the beginning of the year), after a maximum in the year of over 135 bp registered in the middle of the same month (Figure 11).

- **The risk premiums of private sector entities also increased progressively over the course of the half-year**. This trend takes place, as has already been mentioned, against a backdrop of: i) the end of the ECB's debt purchasing programmes, which had included the debt issued both by banks[63] as well as non-financial corporations,[64] and ii) high uncertainty and expectation of deterioration of the economic situation in the coming months. In this context, a rebound in non-performing loans of financial institutions is foreseeable, as is an increase in the financing costs of companies. The average of the CDS of banks stood at 122 bp at the end of June, 58 bp above the values at the beginning of the year; while the average CDS of non-financial corporations stood at 87 bp, 36 bp more than at the beginning of the year and a similar level to that of the first half of 2020, when the pandemic broke out.

- **The credit quality of Spanish private issuers did not show significant changes in the first quarter of 2022 and the majority of Spanish debt continued to be of high quality**. Thus, 89.7% of debt was investment grade, compared with 89.4% in December, the credit quality of financial sector debt being noticeably better than that of non-financial companies[65] (91.8% of the total outstanding balance of the former is investment grade, while in the non-financial sector it is 79.3%). In both sectors, this proportion increased slightly in the first quarter, due to the increase in the absolute value of assets with this rating and the decrease in high-yield assets. The proportion of investment grade private debt that was just one step away from being considered high-yield was 10.9% in the first quarter of the year, slightly below that observed in previous quarters (11.2% in September and December 2021). In addition, a credit improvement of assets of non-monetary financial institutions was detected, which went from being rated high-yield to investment grade. Thus, the relevant importance of high-yield debt fell to 10.3% of the total in March 2022 (10.6% in December).

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60 The ECB acquires Spanish public debt through its PSPP and PEPP asset purchase programmes, accumulating a balance of close to €503 billion at the end of May, over 43% of the outstanding balance of long-term government debt.

61 The PEPP program ended in June as planned and purchases under the PSPP programme gradually reduced in amount until the ECB also announced at the beginning of June that the programme would end on 1 July.

62 See the section entitled "Interest rate context".

63 The ECB has several specific programmes for purchasing securities issued by financial institutions, such as covered bonds (CBPP3) and securitisations (ABSPP), which accumulated purchases to June of €301.24 billion and €25.59 billion respectively, of which 38% and 72% respectively were acquired in the primary market. Until May the ECB had accumulated covered bonds for the amount of €6.01 billion acquired under the PEPP.

64 The ECB has a specific programme for the purchase of corporate debt (CSPP), which has been extended to all issuers meeting the conditions of the programme (minimum rating of BBB-), and which at the end of June had accumulated purchases of €344.19 billion, of which nearly 24% acquired in the primary market. In addition, at the same date it had accumulated corporate bonds and commercial paper amounting to €41.83 billion and €4.35 billion respectively, acquired under the PEPP.

65 Since the COVID-19 crisis, there has been a progressive deterioration in the credit quality of the debt of non-financial issuers: the proportion of investment grade debt has fallen from 90% of the total balance in March 2020 to 79% in March 2022.

- **However, the concurrence of several circumstances in the current context may increase companies' perception of credit risk**. The effects of some of these circumstances, for example, those that have to do with the ending of the ECB's debt purchase programmes, are already being seen in the markets. Others have to do with the possibility of reappearance of fragmentation between the different issuers based on their credit ratings, which is especially relevant in the field of high-yield issuers, which had benefited in recent years from investors' search for yield strategies in the context of low rates. It should also be borne in mind that the ratings and risk premiums analysed correspond mostly to large or medium-sized companies, which have greater financial capacity to face complex situations.

  Finally, the ending of support measures for companies, such as public guarantees and moratoriums, adopted by the authorities during the pandemic in a context of deteriorating economic activity, may aggravate the financial problems of many companies and lead to higher levels of delinquency in the coming months. Consequently, we detect a growing credit risk[66] that may force many companies to carry out financial restructuring processes,[67] especially smaller companies such as SMEs or those in sectors that have not yet managed to recover from the effects of the pandemic.

- **Financing to the non-financial sectors of the economy,[68] which had ended 2021 with an annual increase of 1.8%, continued to slow in 2022, to a rate of 0.8% in May**. This evolution is explained by the progressive slowdown in the growth of financing to non-financial corporations so far this year, which has not been offset by the growth of financing to households. Financing to financial companies, which ended 2021 with an increase of 2.4%, moderated to 0.4%. This evolution had its origin in the decrease in financing via debt securities, which stood at 4.1% – its lowest value in the last two years –, and in the fall in foreign loans.[69] On the other hand, the variation in credit went from 0.8% in December to 1.1% in May, after a first quarter registering negative rates. For its part, the increase in financing to households is explained both by the continued recovery of credit for home purchases, which is growing at year-on-year rates close to 1% (supported by the expansion of the real estate market), and by the expansion of consumer credit, which until May grew on average at rates close to 6% year-on-year.

Liquidity, financing and fragmentation risk: yellow

- **Fixed income issues registered with the CNMV in the first half of 2022 reached €60.06 billion, 24.2% more than in the same half of 2021 and the highest amount in this period since 2016**. This advance was due to the intense issuing activity in the first quarter, which offset the drop in activity observed in the second, concentrating on issues of covered bonds, securitisation bonds and, to a lesser extent, commercial paper. The weakest behaviour corresponded to simple bond issues, which have suffered from the drop in the issuing activity of the Management Company for Assets from Bank Restructuring (SAREB), traditionally an active issuer at the beginning of the year. On the other hand, fixed income issues made by Spanish companies abroad stood at €45.32 billion[70] until

66 Resident private credit non-performing loans stood at 4.19% in April.

67 The Solvency Support Fund for Strategic Companies, the objective of which was to provide temporary public support to strengthen the business solvency of non-financial companies affected by the pandemic, concluded its activity in June after having approved 30 support operations for a total amount of €3.26 billion, 60.3% of the total amount requested.

68 Source: Economic indicators of the Bank of Spain.

69 Its year-on-year rate was negative in May, when it reached 2.1%.

70 Long-term debt issues represented 56% and the rest corresponded to commercial paper.

May, a reduced amount in relation to previous years. Thus, in the absence of data for the month of June, it is likely that the amount of debt issues carried out abroad will be somewhat below that registered in the CNMV in the half-year. These foreign issues had been growing in recent years as a proportion of the total issues of Spanish issuers, but since the onset of the pandemic in 2020, they have shown greater variability.

The slowdown in debt issue activity in the second quarter is explained by the increase in financial costs, as well as by the volatility of the markets, and by companies having covered a large part of their financing needs in 2021 given the likelihood of hardening costs in the near future. In the equity markets, at the end of July the renewable energy company Operability went public through a public offering for sale (OPV), with a valuation of close to €500 million. This is the first IPO of a company in the continuous market in the year, since the high uncertainty and volatility have delayed the processes of new incorporations. However, a greater degree of dynamism is observed in the alternative market BME Growth, in which six new companies have been incorporated so far this year, raising capital amounting to €407 million.

- **The amount of green, social, sustainable or sustainability-related[71] (ESG) issues by Spanish issuers decreased significantly in the first half of the year**. This stood at €6.02 billion (close to 9% of long-term debt issues), approximately 25% less than in the same period of 2021. 56% of this amount was issued by financial institutions and the remaining 44% by non-financial companies, which represented a strong advance for the latter, which the previous year accounted for 30% of the total. Prominent among the latter were issues by companies in the energy and utilities (62%) and telecommunications (38%) sectors. Regarding the type of issues, the increase in the relative importance of sustainable issues and, to a lesser extent, of social issues was especially noteworthy, both standing at 17% of the total in the first half of 2022 (1% and 12% in the same period of 2021, respectively). Although the proportion of green bond issues continues to be the majority (58.4% of the volume issued), it decreased compared with the first half of 2021, when it was 87%. Finally, it should be noted that the bulk of these issues, around 80%, are made in foreign markets.
- **The financing capacity of the Spanish economy stood at around €260 million in April,[72] below the almost €1.5 billion registered in the same period of 2021**. This was largely the result of the current account deficit of €500 million, which in tun was due to the sharp increase, to €3.2 billion, in the goods deficit (compared with the surplus of €1.3 billion the previous year). The evolution of the latter is explained by the strong growth in imports (35% year-on-year), compared with 20% for exports. The trade deficit was partially offset by the surplus in services, where the improvement in the tourism surplus stood out, reaching €4.7 billion (compared with €300 million in the same period in 2021). Likewise, primary and secondary income accumulated a deficit of €2 billion (compared with €0.7 billion a year earlier), while the capital account improved its surplus to €0.7 billion. On the other hand, in accumulated terms of 12 months, the financing capacity reached €18.2 billion, above the €15.9 billion of the same period of 2021.

71 Green Bonds are any type of bond instrument where the proceeds are exclusively applied to finance or re-finance, in part or in full, new and/or existing eligible Green Projects and which are aligned with the four core components of the Green Bond Principles (GBP). Social bonds are intended for new or existing social projects and aligned with the four components of the Social Bonds Principles (SBP); while sustainable bonds are used exclusively for financing or refinancing a combination of green and social projects. For their part, sustainability-linked bonds are any type of bond whose financial or structural characteristics may vary depending on whether or not the issuer reaches certain predefined sustainability or ESG objectives.

72 According to the Bank of Spain monthly advance balance of payments data.

- **Household deposits grew by 6.1% year-on-year in May, while those of non-financial companies grew by 4.6%**, reaching €984.8 and €311.5 billion respectively, its historical maximum in the first case and values close to this in the second. Both households – whose deposits grew every month except August – and companies continued to accumulate liquidity in deposits (between them, more than €70 billion in the last 12 months.[73] They seem to have slowed down or delayed their consumption and investment decisions in the current context, marked by the strong increase in inflation, the increase in financing costs and high uncertainty.

- **The consolidated debt of households and non-financial companies stood at 157.9% of GDP in the first quarter of 2022,[74] totalling €1.95 trillion, 4.5 pp below the level of debt recorded at the end of 2021**, but still 7.9 pp above the level of the last quarter of 2019 when the pandemic had not yet started. Household debt accounted for 57.0% of GDP, while corporate debt stood at 100.9%. Likewise, the financial wealth of households reached €2.65 trillion (215.0% of GDP), 1.1% less than at the end of the previous year, while in net terms the figure was €1.9 trillion (153.7% of GDP), 1.3% below the December value (but 4.8% above that of the same period in 2021).

- **Average daily trading on the continuous market recovered in the first quarter of 2022**, reaching €1.65 billion, driven by increased volatility. This level is 12.4% higher than the same period of the previous year and is also above the average for the entire 2021 financial year (€1.45 billion). The average data for the second quarter of the year (€1.6 billion) indicate that daily trading fell slightly, by 6.2%, compared with the first quarter.

  Total trading of Spanish shares in the first half of the year amounted to €430 billion, 22.7% more than in the first half of 2021. Of this amount, nearly €206 billion were traded on the BME (11.3% more) and the rest at trading venues other than BME.[75] The fact that trading on these alternative venues increased more intensely (35.5%) – which usually occurs in periods of high volatility – meant that the market share of these venues slightly exceeded 51% of total trading of securities[76] (this percentage was 47% for the whole of 2021). Other alternative sources of information – in particular, those provided by BME based on Liquidmetrix data – point to a higher market share of BME in securities trading, of 68.5% in the first half of the year. The difference is explained by the trading volume in foreign centres, which is considerably lower in the information provided by Liquidmetrix.

  On the other hand, the trading of Spanish shares carried out through systematic internalisers continued to decline, reaching less than 5% of the total trading of Spanish securities in the first half of the year,[77] 1.6 pp less than in 2021 as a whole. This trend represents a significant advance in fulfilling one of the objectives of the MiFID II Regulation, which was to displace part of the trading carried out under discretionary rules towards trading venues that use non-discretionary rules.

- **The liquidity indicator of the Ibex 35 (measured through the bid-ask price differential) remained at satisfactory levels, but deteriorated slightly in the first half of the year**. The same thing happened in the case of the 10-year Spanish sovereign bond, which maintains a very low spread in absolute terms, but slightly on the rise due, in part, to the

[73] This liquidity comes partially from the disinvestment in time deposits and in fixed income. See household savings data described in the "Macroeconomic environment" section.

[74] Source: Financial Accounts of the Spanish Economy published by the Bank of Spain.

[75] Information calculated with data obtained from the financial information provider Bloomberg.

[76] Total trading understood as trading subject to non-discretionary market rules.

[77] Total trading being defined as the sum of trading subject to non-discretionary market rules and that carried out through systematic internalisers.

highly volatile environment (see Figure 15). In relative terms, the range has narrowed slightly due to the rise in interest rates.

- **Interest rate differentials between loans to companies in Spain and in the euro area as a whole decreased in the first half of the year**. In the case of loans of less than €1 million, this spread went from -10 bp in December to -13 bp in May (in other words, loans to companies in the euro area show, on average, higher interest rates than in Spain and this difference has widened). In the case of loans of higher amounts, this spread decreased from -8 bp to -23 bp (with a yearly low of -34 bp in April). On the other hand, the Bank Loan Survey for the first quarter of the year showed that the criteria for granting loans were tightened for companies both in Spain and in the euro area, in a context of a moderate increase in loan requests and greater concern as a result of the risks associated with the energy crisis and the war in Ukraine. This increase in risks may anticipate a contraction in supply in the second quarter both in Spain and in the euro area as a whole.

  Finally, we would point out that the process of increasing interest rates is taking place at a particularly unfavourable time for families due to the rise in inflation, and it is relevant that the proportion of loans at variable interest rates in Spain is higher than the average for the euro area.

Risk of contagion: orange

- **The correlation between the daily returns of the different types of Spanish assets has experienced certain ups and downs throughout the first half of the year, although in general it has had a downward trend since the end of January**. Despite this, the half-yearly average value of the correlation stood at 0.33, above the average values for the whole of 2021 (0.26). The decreases in the correlation were observed, above all, from March, with the variability of the indicator in June also standing out, at times of turbulence in the markets. The median of these correlations ended that month at around 0.23. The difference between minimum and maximum values of these correlations has decreased since January: in fact, such small differences have not been observed since March 2020. The minimums went from values of around -0.43 on some days in January to positive values (close to 0.01) at the end of June and the maximums fell from 0.81 in January to 0.63 in June. The correlation between the different sectors also registered ups and downs over the course of the half-year, among which those identified between sovereign debt and equities stand out, and, to a lesser extent, between sovereign debt and private fixed income. Although the general trend is a decline in both fixed-income and equity asset prices, the sharp increase in the volatility of the latter at specific times generates this variability in the correlation indicators. It should be remembered that the probability of contagion is lower with lower correlation levels and that, furthermore, low correlations facilitate portfolio diversification.

- **The correlation between the yield of the 10-year Spanish sovereign bond and the rest of the European sovereign bonds remained at high levels throughout the half-year (except with the yield of the Greek bond)**. The correlation between the yield of the Spanish sovereign bond and that of the core EU countries remained stable and at high levels, around 0.98 from the end of January (see Figure 32). This differs from other past periods of uncertainty, in which a decrease in the correlation between the yield of Spanish debt and that of the core countries was frequently observed, caused by a tightening of the risk premiums of the peripheral EU countries relevant to the most solid countries in financial terms. The correlation between the yield of Spanish sovereign bonds and of those of the peripheral countries was less stable than in the case of the core countries. After starting the year at levels close to 0.60 (due to the negative correlation between the Spanish and Greek bonds at the end of 2021), a significant increase was observed in a few weeks to values above 0.90, around which it hovered for the rest of the half-year, but always at very high levels. This fluctuation of the indicator with the peripheral countries was determined, to a great extent, by the correlation between the Spanish and Greek bonds and, to a lesser extent, with the Irish bond, since the correlation between the yield of the Spanish bond and the Italian and Portuguese sovereign bonds is very high and stable, around 0.99.

Market risk: yellow

Figure 3: Stock market prices

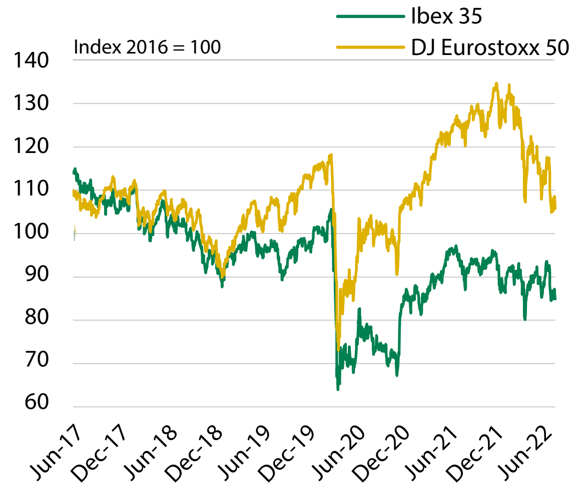
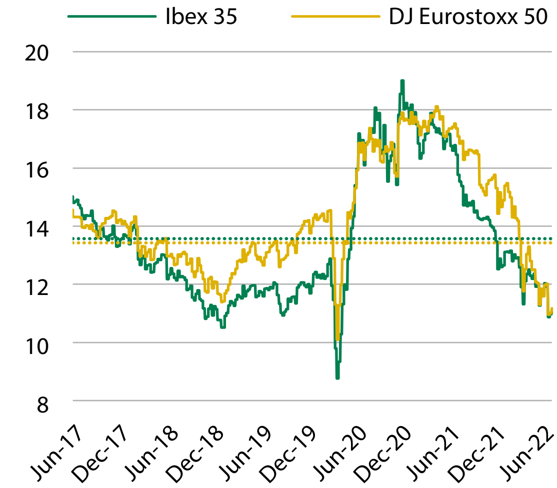


Figure 4: Price-earnings ratio (PER)



The dashed lines correspond to the average P/E ratio calculated since 2000.

Figure 5: Short-term interest rates (3 months)

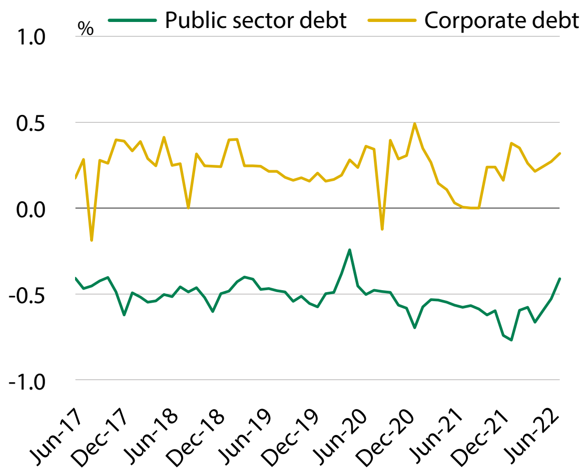


Figure 6: Long-term interest rates (10 years)

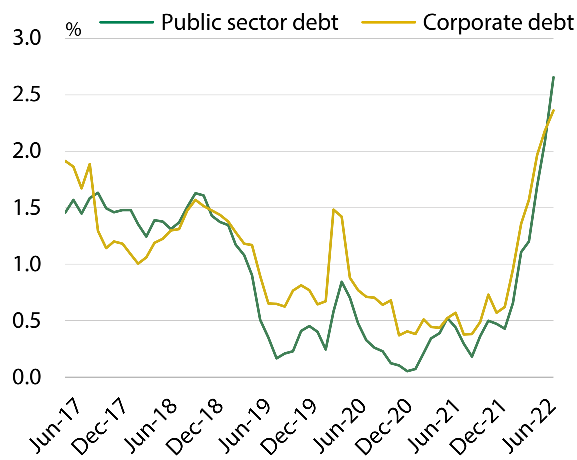


Figure 7: Oil price

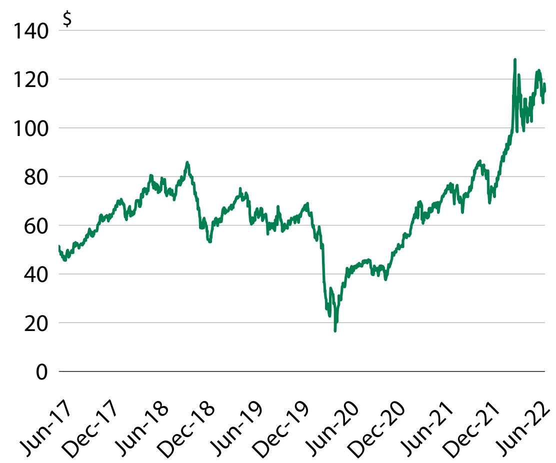
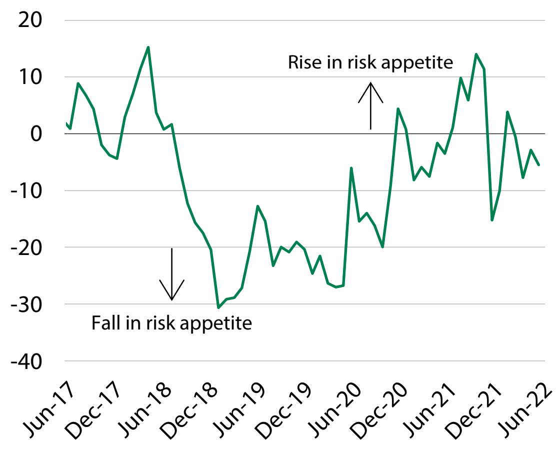


Figure 8: Risk appetite (State Street)



Credit risk: green

Figure 9: Financing of the non-financial sector

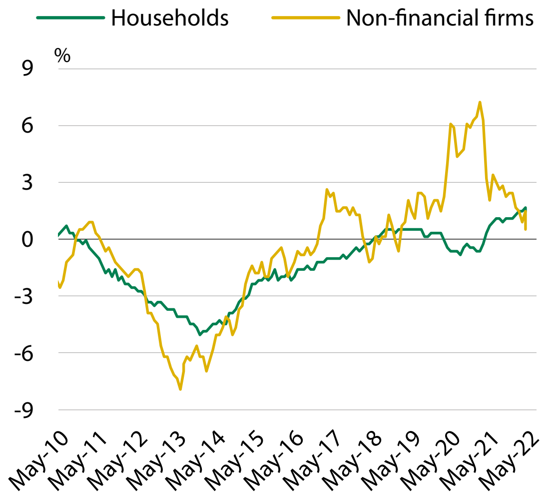


Figure 10: NPL (delinquency) ratio and unemployment rate

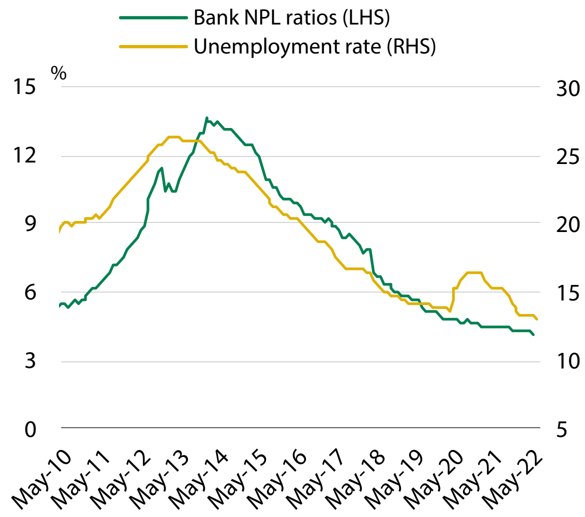


Figure 11: 10-year government debt risk premium (rate differential with Germany)

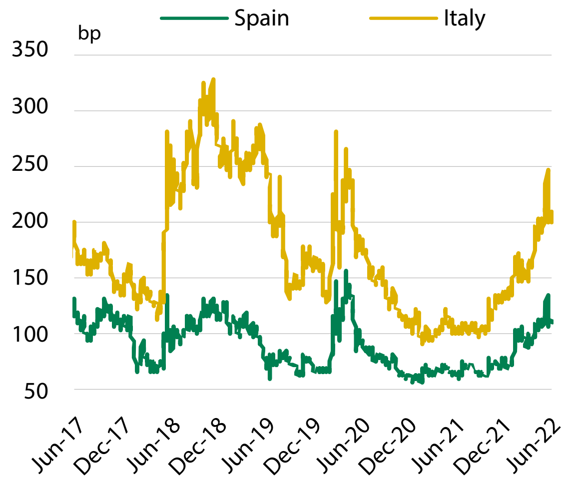


Figure 12: Private debt risk premium (5-year CDS)

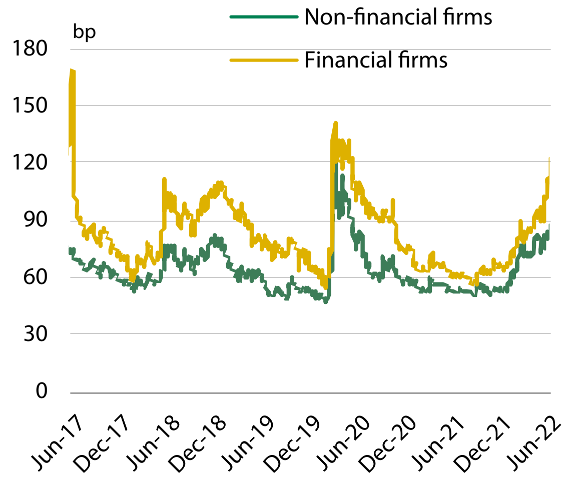


Figure 13: Housing prices (year-on-year change)

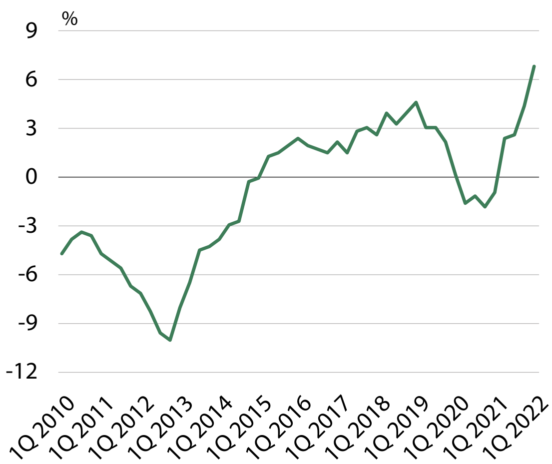
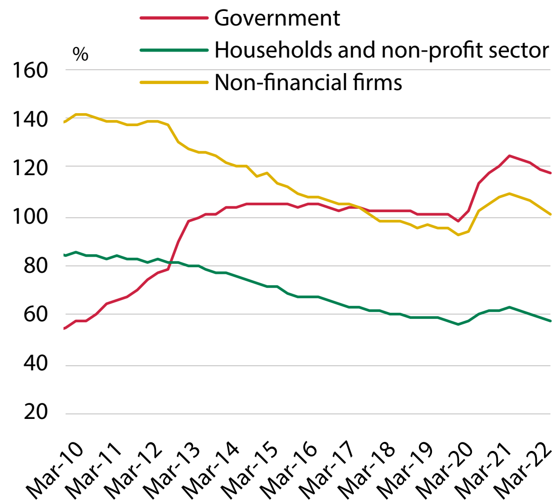
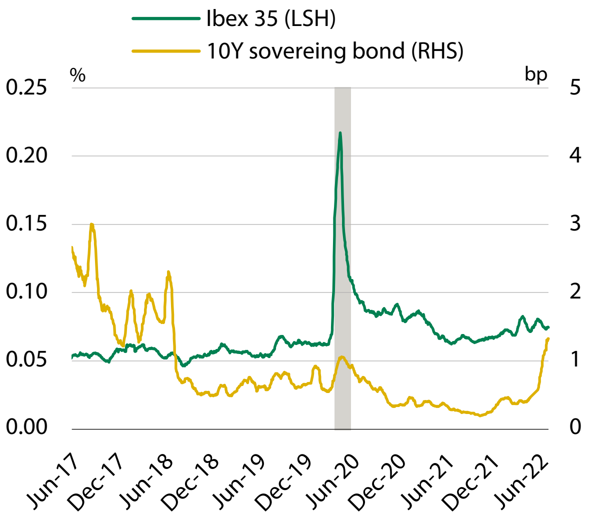


Figure 14: Indebtedness (% GDP)



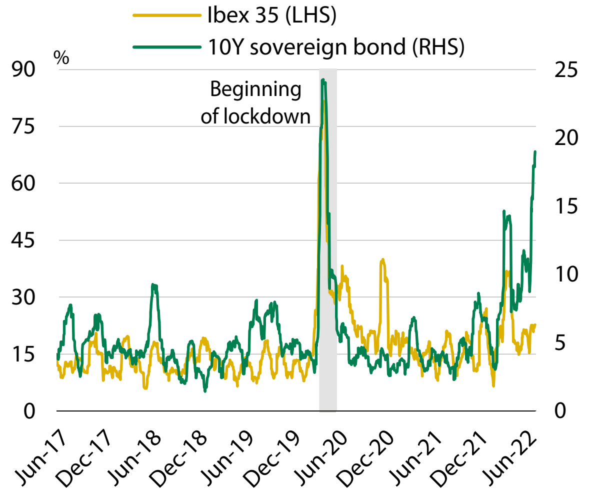
Liquidity, financing and fragmentation risk: yellow

Figure 15: Liquidity (bid-ask spread)



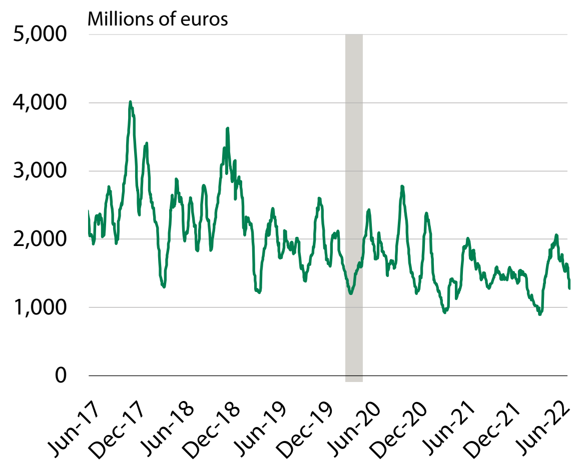
The shaded area corresponds to periods when short selling was banned.

Figure 16: Volatility (1-month moving average)



The shaded area corresponds to periods when short selling was banned.

Figure 17: SIBE trading (1-month moving average)



The shaded area corresponds to periods when short selling was banned.

Figure 18: Interbank spread (LIBOR-OIS)

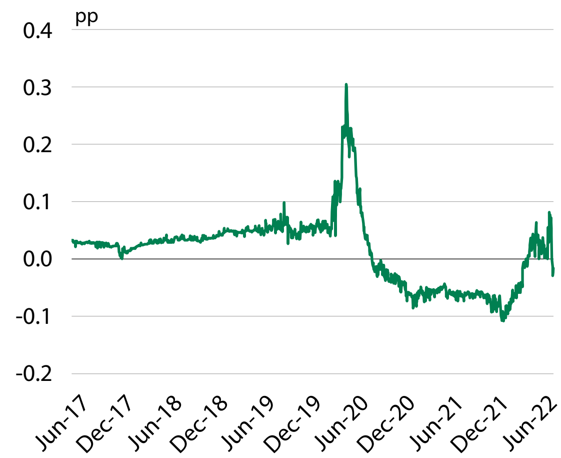


Figure 19: Differential (Spain-EMU) on corporate lending rates

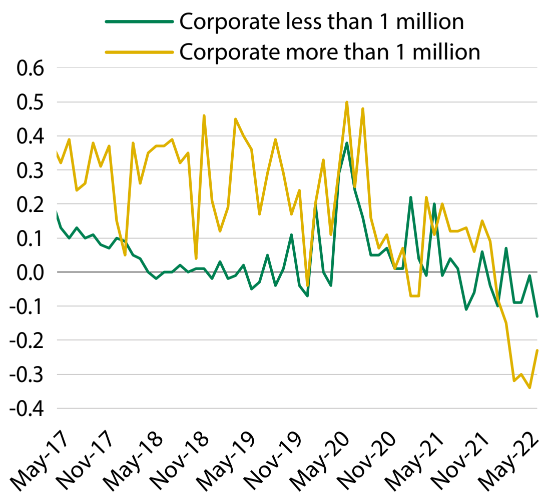
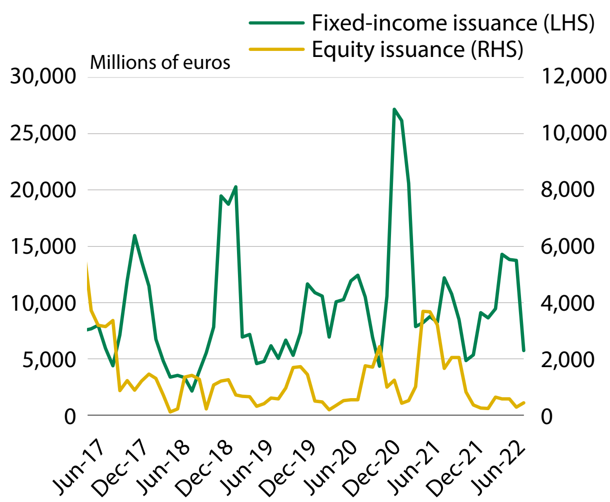


Figure 20: Issues (3-month moving average)



Macroeconomic risk: orange

Figure 21: GDP (year-on-year change)

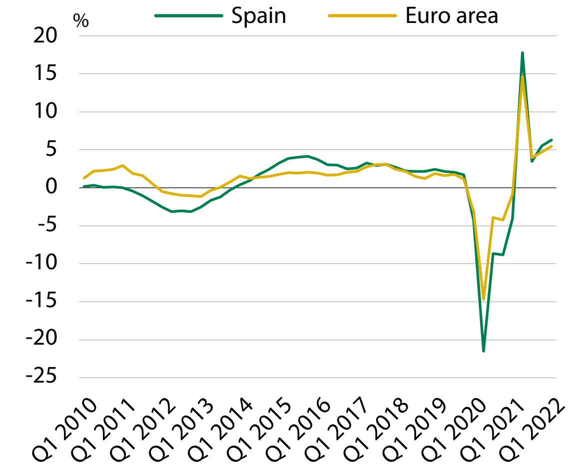


Figure 22: HCPI and core CPI (year-on-year change)

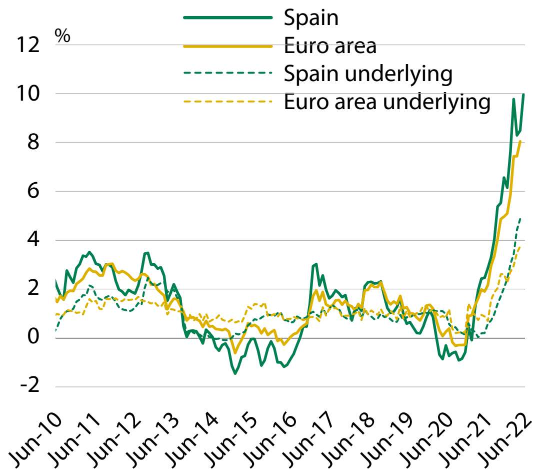


Figure 23: Employment (year-on-year change)

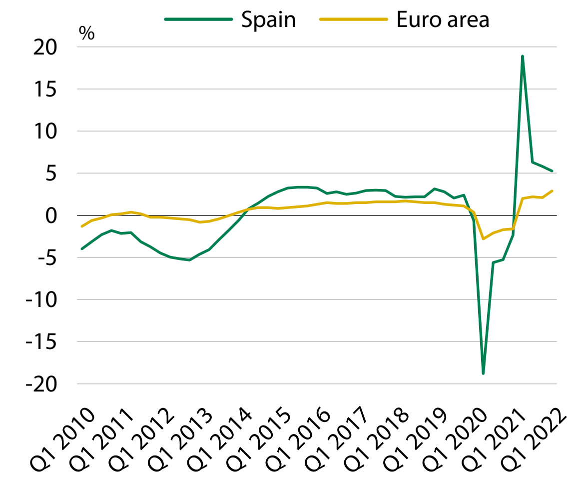
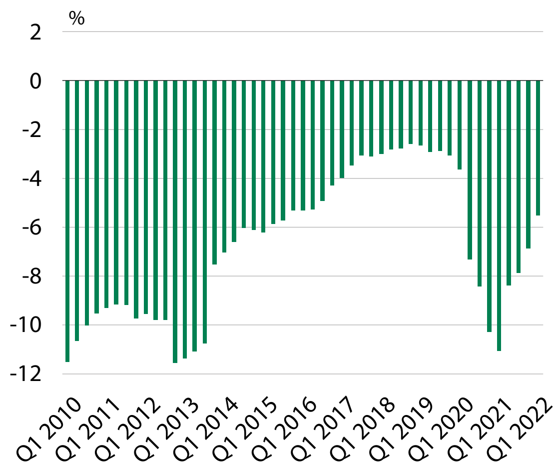


Figure 24: Public deficit (% of GDP)



Cumulative data for four quarters.

Figure 25: Exchange rates

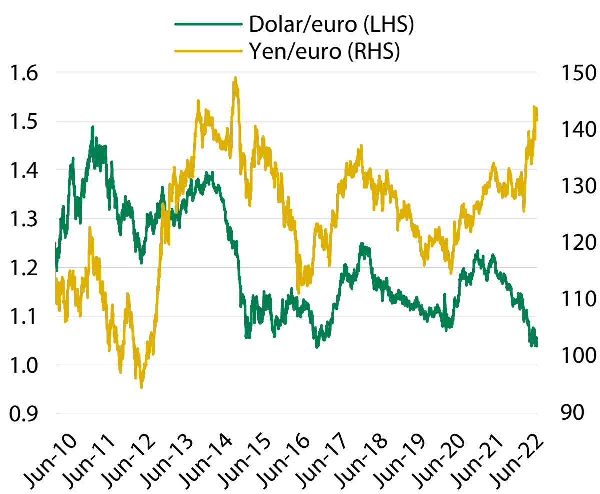
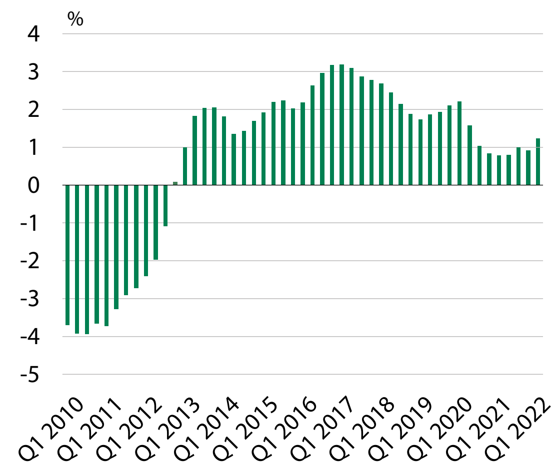
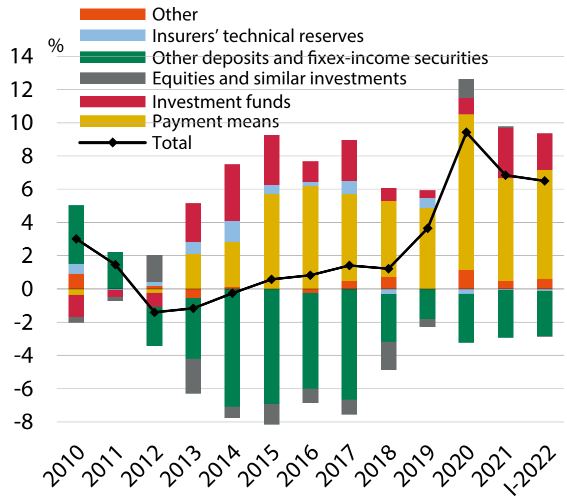


Figure 26: Current account balance (% of GDP)



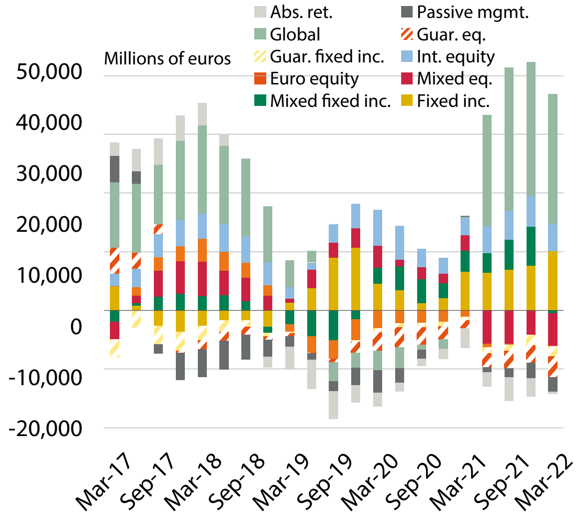
Investors

Figure 27: Households: net acquisition of financial assets (% GDP)



Cumulative data for four quarters.

Figure 28: Net subscriptions to investment funds



Cumulative data for four quarters (millions of euros).

Figure 29: Households: savings (% of disposable income)

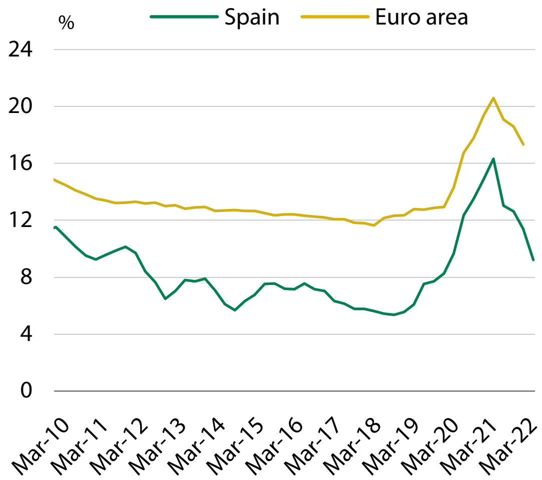
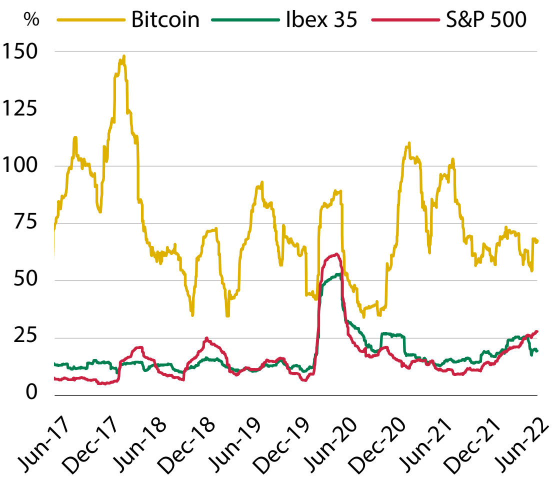


Figure 30: Bitcoin volatility



Risk of contagion: orange

Figure 31: Correlations among asset classes

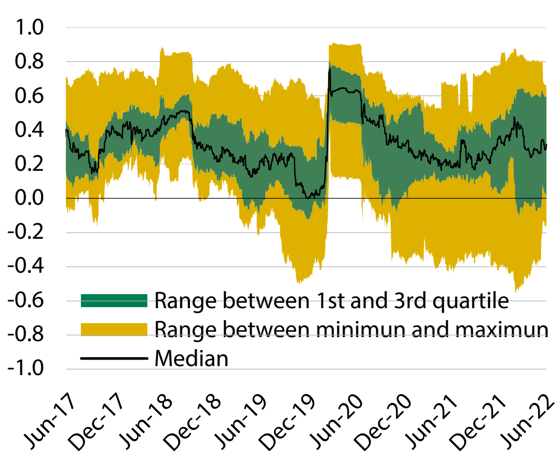
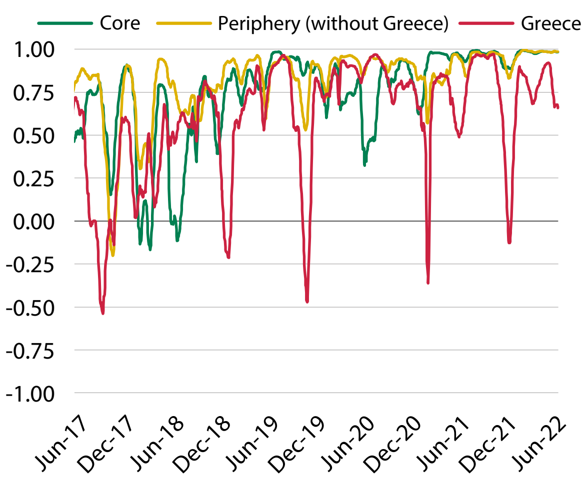
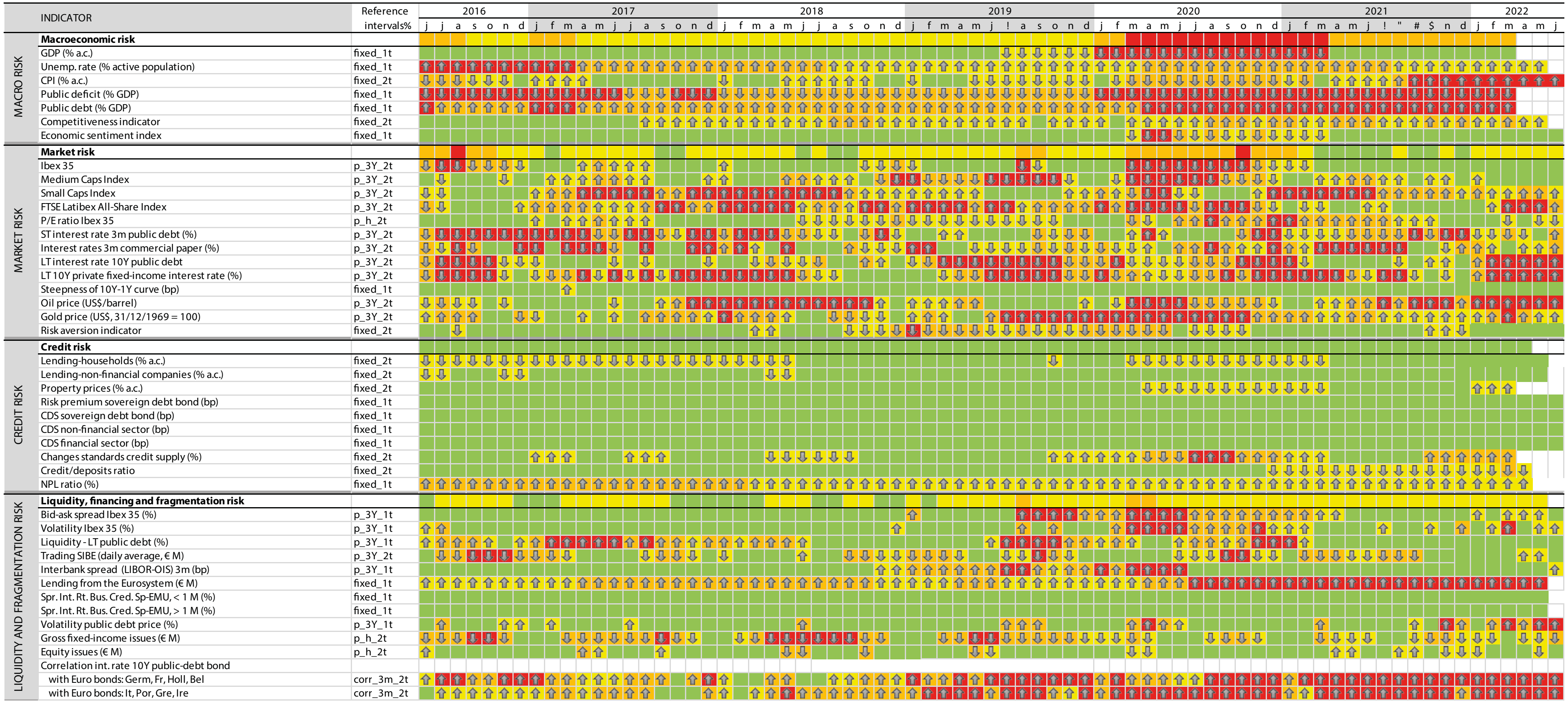


Figure 32: Correlation between the yield on Spanish and other European 10-year bonds



Heat map: risk categories



Source: CNMV and Refinitiv Datastream.

1 Reference intervals could be: i) "fixed": predetermined numerical tresholds, one (1t) or two-tailed (2t); ii) "corr_3m": 3 months windows correlation coefficients; iii) "p_3Y": percentiles obtained from 3 past years distribution, one (1t) or two-tailed (2t), or iv) "p_h": percentiles obtained from historical distribution

Explanatory notes

Spanish financial markets stress index (Figure 1): The stress index provides a measurement in real time of the systemic risk facing the Spanish financial system, ranging from zero to one. To this end, stress is evaluated in six segments of the financial system (equities, fixed income, financial intermediaries, the money market, derivatives, and the exchange markets) which are then aggregated to obtain a single figure. The stress for each segment is evaluated by means of cumulative distribution functions and the subsequent aggregation takes into account the correlation between segments, in such a way that the index places greater emphasis on stress situations in which correlations are very high. In general terms, the stress variables chosen for each segment (three for each one) correspond to volatilities, risk premiums, liquidity indicators, and sudden loss of value. These variables are good indicators of the presence of stress in the markets. Econometric estimates indicate that index values below 0.27 correspond to periods of low stress in the financial system, while scores between 0.27 and 0.49 correspond to periods of medium stress, and values above 0.49 indicate periods of high stress. The methodology of this index follows the work of Holló, Kremer and Lo Duca in 2012 to propose a similar index for the euro area. For further details on recent movements in this index and its components, see the CNMV's statistical series "Market stress indicators", available at http://www.cnmv.es/portal/Menu/Publicaciones-Estadisticas -Investigacion.aspx. For further information on the methodology of this index, see Cambón, M.I. and Estévez, L. (2016). "A Spanish Financial Market Stress Index (FMSI)". *Spanish Review of Financial Economics,* Vol. 14, No. 1, pp. 23-41 or as CNMV Working Paper No. 60 available at: http://www.cnmv.es/DocPortal/Publicaciones/MONOGRAFIAS/Monografia_60_en.pdf.

Heat map: summary by market and risk category (Figure 2 and final annex). The heat maps provided in this release show the monthly trend of the most important indicators in the Spanish financial system in recent years. They contain information on domestic securities markets, the banking sector, and also some macro-economic variables. The main purpose behind the production of these maps is to provide an idea of the position of the reference indicators in relation to their recent history (in most cases three years) or with some predetermined limits, by associating this position with a certain colour. When an indicator changes from green to a warmer colour (orange or red), it does not necessarily mean the existence of risk; rather it indicates a movement towards an extreme value (very high or very low) in the period or range of values used as a reference. If an indicator remains at extreme values for a prolonged period, it may suggest the need for a more detailed analysis; that is to say, it may be interpreted as an alarm signal. The most comprehensive heat map includes 43 indicators,[78] five of which are prepared by the CNMV. The large number of indicators taken into consideration allows us to make an analysis of vulnerabilities for each segment of the financial markets (equity income, fixed income, banking sector, etc.) or for different risk categories (macro, market, liquidity, credit, etc.), as illustrated in Figure 2. The colours of these aggregates (markets or risk categories) are assigned by calculating a weighted average of the values of the individual indicators they comprise. In each aggregate, one of the individual indicators determines the generation of the overall colour: for example, in macro-economic risk, the indicator used to calculate the aggregate is GDP. This means that until this is published, the macro-economic risk block is not given any colour in the map. For more detail on the methodology and analysis of these maps, see Cambón, M.I. (2015). "Identification of vulnerabilities in the Spanish financial system: an application of heat maps". *CNMV Bulletin*, Quarter I, 2015 pp. 103-115.

[78] Since June 2017, the heat map has included an additional indicator: the bid-ask spread of the 10-year sovereign debt bond.

Bitcoin historical volatility (Figure 30): Annualised standard deviation of daily price variations in 90-day windows.

Risk of contagion: The indicators that make up this block are of somewhat higher complexity. We set out the most important of these indicators below:

- Correlation between assets (Figure 31). The correlation pairs are calculated using daily data in three-month windows. There are six asset classes: sovereign debt, private fixed income of financial institutions, fixed income of non-financial firms and Ibex 35 securities of financial companies, utilities and other sectors. A high correlation between the different classes of Spanish assets would indicate the possible existence of herding behaviour by investors. This situation could lead to high volatility in periods of stress. Meanwhile, diversification would offer fewer advantages since in this context it would be more difficult to avoid exposure to sources of systemic risk
- Correlation between the yield on the Spanish and other European 10-year bonds (Figure 32). The correlation is calculated using daily data in three-month windows. The countries of the core group are Germany, France, the Netherlands and Belgium and the peripheral countries are Portugal, Italy, Greece and Ireland.