Financial Stability Note

No. 11 July 2019

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The Financial Stability Note is framed within the tasks that the CNMV carries out to monitor financial stability conditions in the areas it supervises. In particular, the Note assesses the stress level of domestic securities markets during the last quarter, identifies changes in the level of different financial risks and identifies the major sources of risk.

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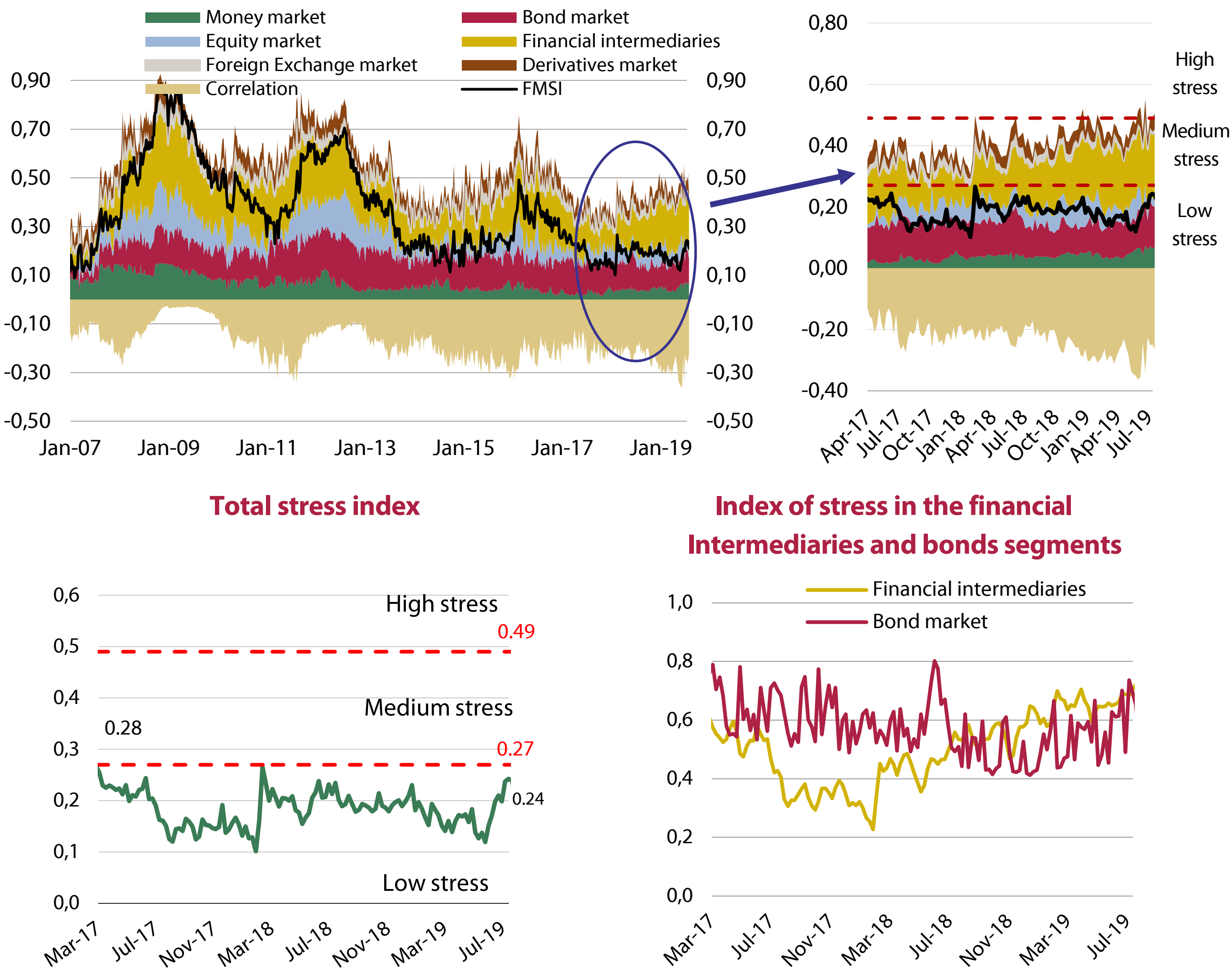
Summary

✓ The Spanish financial market stress index remained at low levels until the end of May, when it stood at annual lows (0.12). It has since risen to stand at a value of 0.24 in mid-July, close to the threshold separating low stress from medium stress. This value, which is the highest for the past year, is the result of the stress in the financial intermediaries segment remaining at high levels and the increase in the stress level of the debt segment in the last month. In the case of financial intermediaries (banks), the stress level (0.7) is essentially the result of the low levels of their share prices. In the case of the debt segment, there has been a sustained increase in their stress level (to 0.7), which has intensified as a result of the statements made by the President of the ECB in relation to the possibility of reducing interest rates if necessary, which has resulted in an increase in the volatility of the price of the sovereign debt bond and a reduction in its liquidity.

Spanish financial markets stress index

FIGURE 1



Source: CNMV.

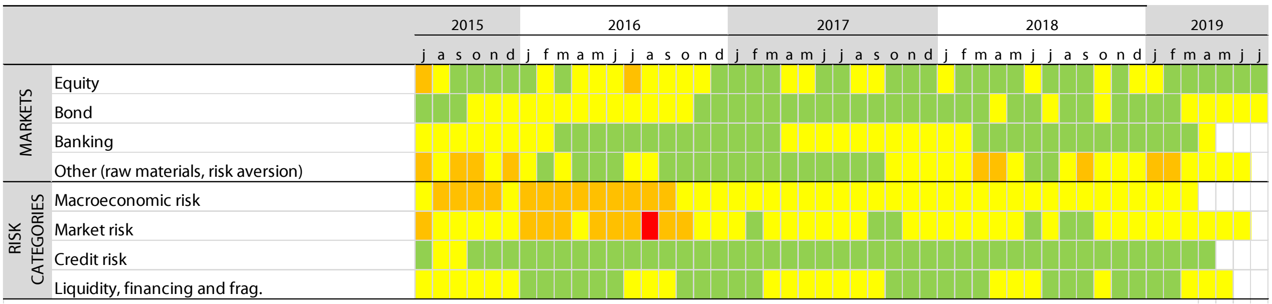
For further details on recent movements in this index and its components, see the CNMV's statistical series (market stress indices), available at http://www.cnmv.es/Portal/Publicaciones/SeriesWeb/Inicio.aspx?codrama=1295. For further information on the methodology of this index, see Cambón M.I. and Estévez, L. (2016) A Spanish Financial Market Stress Index (FMSI). Spanish Review of Financial Economics 14 (January (1)), 23-41 or CNMV Working Paper 60 (http://www.cnmv.es/portal/Publicaciones/monografias.aspx).

- ✓ The international macroeconomic context continues to be characterised by a slowdown in growth in which there are still certain downside risks resulting from uncertainty around the trade agreements between the US and other economic areas, as well as other elements of geopolitical instability in the Middle East and the final outcome of the Brexit process. The Spanish economy is not immune to this environment of economic slowdown, but the strength of domestic demand allows it to continue to grow at a higher rate than the euro area. The latest forecasts from the European Commission follow this line as they raised the growth forecast for this year from 2.1% to 2.3%. This evolution is not without risks, many of which are common to other European economies. However, there are other risks of a domestic nature, such as certain ongoing political uncertainties and the high, albeit falling, level of debt of economic agents.

- ✓ Spanish financial markets recorded somewhat higher volatility in the second quarter due to the worsening of some sources of uncertainty, with sharper movements recorded in debt markets. In these debt markets, yields on sovereign debt assets, which had fallen in the early months of the year as a result of their status as safe-haven assets, recorded sharp falls in June following statements by the ECB that had a significant impact on market participants' expectations. This led to many of these yields to stand at, or very close to, all-time lows in mid-July[1]. In Spain, the yield on the ten-year sovereign bond stood at close to 0.3%, well below the year-end 2018 figure (1.4%). In this regard, the market and liquidity risk of some debt assets remains high.

- ✓ Stock market prices increased significantly up to May. This trend was then interrupted by the emergence of uncertainties, although prices generally ended the second quarter with a positive balance. In Spain, the IBEX 35, which grew by 8.2% in the first quarter of the year, subsequently recorded much smaller changes and has recorded cumulative growth of 9.2% in 2019. This is a significant figure, but lower than the gains recorded in other European markets, which might be a symptom of Spain's specific vulnerabilities.

Heat map: summary by market and risk category FIGURE 2



Source: CNMV. See article in CNMV Quarterly Bulletin Quarter 1 2015. "Identification of vulnerabilities in the Spanish financial system: an application of heat maps". Data until 15 July.

[1] The closing date of this Note is 15 July.

Sources of risk

Macroeconomic environment

- During the first quarter of 2019, the GDP of the Spanish economy continued to grow at a good rate, recording quarter-on-quarter growth of 0.7% and year-on-year growth of 2.4%, 0.1 percentage points above that at the end of 2018 (Figure 21). The forecasts for the second quarter indicated a prolongation of the current expansion, with Spanish GDP growing by 0.6%[2]. However, these figures show that a slight slowdown is taking place, although it is much less intense than in other comparable economies: the quarterly growth rate in the euro area was 0.4% in the first quarter and is expected to be 0.2% in the second. Employment also continues to grow at a good pace, which is reflected in the latest unemployment figures for the month of May, in which 84,000 people left the list of job-seekers (173,000 in year-on-year terms). In line with these results, social security affiliation rose by 211,000 contributors in May to stand at almost 19.5 million job holders, while the unemployment rate stood at 13.6%.

- After having risen slightly in the first few months of the year to 1.5% year-on-year in April (1.2% at year-end 2018), inflation fell notably in May and June to stand at 0.4% year-on-year (Figure 22). The main reason for this fall was the 1.4% reduction in transport prices, which reflect lower fuel prices, followed some way behind by clothing and footwear, and housing prices. The core inflation rate, however, which excludes the most volatile elements (energy and fresh food), has fluctuated since the start of the year between 0.7% and 0.9%, standing at the latter figure at the end of June, the same as at the end of 2018 (Figure 22). The level of inflation in Spain is lower than the average in the euro area and the inflation gap (in terms of the harmonised index of consumer prices) has risen over recent months to 0.6 pp (0.3 pp in December).

- The latest data on the public accounts indicate that the deficit to April was slightly higher than that of the same period of 2018: 0.58% of GDP in 2019 compared with 0.53% in 2018[3]. The deficit of the Central Government rose from 0.55% to 0.68%, while the deficit of the regional governments rose from 0.17% to 0.19% of GDP. In contrast, the surplus of the Social Security system rose from 0.18% to 0.29%. The level of public debt at the end of March stood at 98.6% of GDP, a rise of 1.6 pp compared with the figure for year-end 2018. The forecasts of leading institutions and bodies indicate that the public deficit will end the year at between 2%[4] and 2.3% of GDP[5].

[2] Bank of Spain estimate for June 2019.

[3] These figures are for the combined deficit of the Central Government, regional governments and the Social Security system. Therefore, they do not include the balance of local authorities or the amount of financial assistance given to banks, which between January and April amounted to 156 million euros.

[4] AIREF (Independent Authority for Fiscal Responsibility).

[5] European Commission. BBVA and Funcas estimate a deficit of 2.2% of GDP.

- According to the forecast published by the European Commission in July, the outlook for the Spanish economy is relatively positive, with expected growth in 2019 of 2.3%, 0.2 percentage points up on its previous forecast. This forecast, which is the only one that has been revised upwards, means that Spanish GDP will grow at almost twice the rate expected for the euro area (1.2%[6]). This positive performance is a consequence of the strength of domestic demand and also the positive contribution from the external sector to growth as a result of the fall in imports. With regard to next year, the Commission indicates that there will be a gradual slowdown in the Spanish economy, which will grow, according to its forecasts, by 1.9% (compared with 1.4% in the euro area), with private consumption that will continue to be the main driver of growth, but which may suffer from a potential increase in household savings. Employment will continue to improve, but its rate of growth will progressively slow down in line with the deceleration in economic growth[7].

- Despite the relatively good performance of the Spanish economy compared with comparable countries, some major challenges remain which might hinder growth in the medium term. The most significant challenges still include the high unemployment rate (Spain is the European Union country with the second highest unemployment rate, behind Greece), the challenges resulting from the progressive ageing of the population and the high level of financial vulnerability of some economic sectors, including the public sector, resulting from their high debt levels[8]. A possible rise in interest rates, which for the time being is not imminent (see the following section) might have negative effects for groups on lower incomes and with a high level of debt. In addition, parliamentary fragmentation, which remains after the results of the General Elections held on 28 April, continues to be a source of uncertainty.

Low interest rate environment

- Expectations with regard to the monetary policy stance in the euro area have changed significantly in recent months following the termination of the debt purchase programme at the end of 2018, which seemed to indicate the start of the shift in monetary policy, to a context marked by a slowdown in economic growth and a fall in inflation[9], which led to the ECB: (i) firstly announcing a delay in the first rate hike, (ii) then (in March) deciding to establish a new round of liquidity for the banking sector and (iii) finally (in June) indicating that it is weighing up the possibility of adopting new expansive measures, which include not ruling out resuming the public and corporate debt purchase programmes and even new cuts in interest rates. With regard to the round of liquidity for the banking sector starting in September (TLTRO-III[10]), in

[6] Euro area growth is being particularly hampered by low growth in Germany and Italy. Germany, which is particularly suffering from the difficulties faced by the European manufacturing sector as a result of international trade tensions, will grow by 0.5% this year, while Italy will only grow by 0.1%.

[7] The latest forecast from the Bank of Spain in this regard (June) indicates that employment will grow by 2% in 2019 and by 1.6% in 2020.

[8] The debt of households and non-financial companies amounted to 58.4% and 93.9% of GDP, respectively, at the end of March.

[9] Inflation in the euro area stood at 1.2% and 1.3% in May and June, respectively, far from the ECB's target of an inflation rate below, but close to, 2%.

[10] Liquidity auctions will be held quarterly with a maturity of two years, starting in September and lasting until March 2021.

June the ECB established that the interest rate for each operation will be set at 10 basis points above the average deposit facility rate of the Eurosystem over the life of each operation. Following the same line, the Federal Reserve, which maintained interest rates at the same level at its last meeting in June, has shown signs that there may be a reduction in the short term. The prolongation over time of a context of low interest rates maintains the risks discussed in previous stability notes: i) the increase in incentives for agents to borrow, ii) the continuation of search-for-yield strategies and iii) difficulties for the banking sector to increase its margins. However, it also implies positive effects for indebted agents in the form of lower finance costs.

- The prolongation of the environment of very low returns on most available investment products continues to have a clear impact on the decision-making of investors, who continue accepting higher-risk assets in order to obtain higher returns than those offered by traditional products, such as bank deposits. However, as a result of increased volatility in equity markets in the last part of 2018, there have been changes in the profile of some investment decisions, particularly those that involve greater risks. In this regard, the latest data from the Financial Accounts of the Spanish economy corresponding to the first quarter of the year reveal that households continued divesting from term deposits and debt securities[11] and used their funds to buy more liquid assets (cash and sight deposits). In contrast, the substantial subscriptions seen in investment funds between 2012 and the middle of 2018, particularly in the higher risk categories[12], turned into net redemptions in the last quarter of 2018 and the first quarter of 2019. The divestment from these vehicles in the aforementioned period was greater than 4 billion euros, with noteworthy redemptions in the absolute return, mixed fixed income and Euro equity categories, with outflows of funds of almost 3 billion, 2.5 billion and 1.5 billion euros in net terms, respectively. In contrast, fixed income funds, which may be considered to be more conservative, recorded significant net subscriptions, particularly in the first quarter of the year, of around 3 billion euros.

- In the scope of the new developments introduced by MiFID II/MiFIR in the area of investor protection, it is important to note that the CNMV issued two statements in June to inform about the imposition of equivalent measures to those adopted by ESMA on the marketing of binary options and CFDs[13] and to include FX Rolling Spot Futures Contracts in the restrictions that are already applicable to financial contracts for differences (CFDs) when aimed at retail investors[14]. These measures, adopted since 2018 directly by ESMA at a European Union level, have been successively renewed and will no longer apply in July and August. The measures adopted by the CNMV, which are practically identical to those of ESMA, entered into force on 2 July and apply to all entities that market these products in Spain regardless of their home country. The

[11] The volume of divestments amounted to 2.2% of GDP in the four quarters up to the first quarter of 2019.

[12] Equity funds (international and Euro), global funds and absolute return funds.

[13] https://www.cnmv.es/PORTAL/verDoc.axd?t={71a00a91-409b-4c62-91d5-900924609eba}

[14] https://www.cnmv.es/Portal/verDoc.axd?t={768ccf5d-f628-412b-a985-ec1286a76bd0}

securities supervisors of most European countries are also approving similar domestic measures in order to provide continuity to those implemented by ESMA given the complexity and high risk level of these products.

- All the uncertainties affecting the banking sector have remained or even worsened in an environment of rising risks, as shown by the results of the first quarter, which were characterised by a certain level of weakness. The sector's margins are burdened by an extremely lax monetary policy, which is expected to be prolonged over time and the adjustment process (reduction in size and costs) is therefore likely to continue. In addition, legal risks remain, such as that relating to the judgement of the Court of Justice of the European Union on the IRPH (Spain's mortgage rate index). The sector's solvency remains satisfactory although there are some less favourable signs, such as Moody's recently reducing the outlook for the sector's debt. In addition to the usual risks faced by the banking sector, such as low interest rates and a slowdown in economic growth (which might affect its business and the NPL ratio), there is also the risk of the effect that a possible upturn in risk premiums, in an episode of uncertainty, might have on the value of their sovereign debt portfolios, together with the risk resulting from growing competition from new technological operators (fintech and insurtech).

Sources of political uncertainty

- The most significant uncertainties at an international level are related to the extent of the trade tensions between the US and China. The latest imposition of tariffs by the Chinese Government entered into force in June, raising from 5% to 25% the rates on US products as a response to the measure adopted by the US of raising tariffs on Chinese imports from 10% to 25%. This trade war has a negative impact on global economic activity and also generates turmoil in financial markets. Although no trade agreement has yet been formalised, both governments resumed talks in the framework of the G20 meeting at the end of June in Japan. As an early sign of reduced tensions, the US administration reversed the ban on selling products to Huawei that it had imposed on US companies. It also confirmed that it will not add tariffs on Chinese imports for the time being, as it appeared to have indicated prior to the meeting. Even though this easing of trade tensions is positive, there are other sources of risk relating to future trade relations between the US and other economic areas, including Europe, with regard to which warnings have already been made

- In Europe, the elections held in May have led to a certain increase in fragmentation in the European Parliament. The centre-right and centre-left parties have lost the majority they used to have as a result of the increase in votes for liberal, green and Eurosceptic parties. In this context, reaching a consensus will be a somewhat more complex task.

- Brexit remains one of the main sources of political risk for the economic and financial scenario in the European context. At the start of June, the British Prime Minister resigned as leader of the Conservative Party after the agreement negotiated with European Union

(EU) had been rejected three times by the UK Parliament and in view of the possibility of a second referendum on the withdrawal of the United Kingdom (UK) from the EU. The name of the new leader of the Conservative Party and Prime Minister will be known by the end of July. In this context, the possibility of a no-deal Brexit remains, which would complicate the future relationship between the UK and the EU and might generate turmoil in financial markets and the real economy[15].

In view of this possibility, measures continue to be taken that aim to facilitate the transition to the new situation resulting from the United Kingdom's status as a third country in the event that the agreement provided for in Article 50 of the Treaty on European Union is not reached. In the area of securities, it is important to note the decision of the European Securities and Markets Authority (ESMA) with regard to the share trading obligation established by Article 23 of MiFIR[16] in the event of a 'no-deal' Brexit and in absence of an equivalence decision with regard to the UK by the European Commission. A new public statement has been issued modifying that issued in March of this year, establishing that shares with ISINs starting with GB will not be subject to this article. Consequently, European companies may trade shares with ISINs starting with GB on any trading venue in either the UK or the EU.

- Another risk to financial stability in Europe relates to the fiscal policies adopted in Italy. Expectations in this area seem to have improved over recent weeks following the budgetary adjustment made by the Italian Government, which has ultimately prevented the European Commission from opening an Excessive Deficit Procedure. By means of this adjustment, which amounts to 7.6 billion euros, the Italian public deficit will end this year at 2.04% of GDP instead of the 2.5% expected in spring, and a structural adjustment of 0.45% of GDP will be made. Furthermore, the Italian Government will need to continue making structural reforms that will allow it to comply with the requirements established in the context of the Stability and Growth Pact. Increased doubts about the sustainability of its public finances might generate tensions in debt markets and spread to the most vulnerable European economies in financial terms.

- In Spain, parliamentary fragmentation, which remains following the results of the general elections held on 28 April, continues to be a source of uncertainty.

Other sources of uncertainty

- The announcement in mid-June of the launch of Libra, Facebook's new cryptocurrency, has generated many doubts for monetary and political authorities that consider that this may become a global risk. The aim of this virtual currency is to represent a global payment method that allows both transactions between individuals and purchases. As a

[15] In Spain, the CNMV has opened a new section on its website called "After Brexit: issues relating to the financial sector", which sets out information that may be useful for market participants and investors.

[16] Article 23 of MiFIR establishes the obligation for investment firms to ensure the trades they undertake in shares admitted to trading on a regulated market or traded on a trading venue shall take place on a regulated market, MTF or systematic internaliser, or a third-country trading venue assessed as equivalent in accordance with Article 25 of Directive 2014/65/EU, unless such trades are non-systematic, *ad-hoc*, irregular and infrequent or are carried out between eligible and/or professional counterparties and do not contribute to the price discovery process.

cryptocurrency, Libra would rely on blockchain technology, but the main difference with other cryptocurrencies, such as bitcoin, is that it would be fully backed by a set of low-risk assets, such as bank deposits and short-term government securities so that its price will not fluctuate significantly.

- In order to separate the business and data from the social network and the financial data, Facebook created a subsidiary – Calibra - which would be responsible for managing the cryptocurrency. This would be based in Geneva and therefore the Swiss central bank would be responsible for establishing the regulatory framework for Libra. The concern around Libra is particularly focused on aspects such as privacy, money laundering, consumer protection and financial stability. It is therefore considered that appropriate measures to regulate this asset are required. In this context, and given the high number of potential users of this cryptocurrency, it is essential to dissipate the doubts existing with regard to its nature and the most appropriate regulation for this asset.

Risk categories

Market risk: yellow

- International equity markets, which had begun the first quarter of the year with significant gains, started the second quarter with fresh uncertainty as the trade conflict between the US and China returned, at the same time as geopolitical tensions in the Middle East resurfaced, in the context of doubts about the outlook for growth in the euro area. As the second quarter progressed, part of the existing trade and geopolitical tensions eased, the US economy gave signs of greater strength and the outlook was generated that both the ECB and, to a lesser extent, the Federal Reserve will maintain an accommodative monetary policy. These elements allowed the main international indices to continue recording positive, albeit discrete, gains in the quarter. In many cases, the indices recovered the losses of the previous year and, in the case of US indices, even recorded significant cumulative gains.

- In this context, the main international stock indices recorded significant gains in the year, which are higher in the case of the US and some European markets. All US markets recorded significant gains up to mid-July, at which point they stood at all-time highs, which ranged between the 17.3% of the Dow Jones index and the 24.5% of the NASDAQ technology index. With regard to the latter index, there are an increasing number of professional investors warning that some technology companies are overvalued[17] despite good expectations with regard to their growth. The gains in Europe were similar in the leading stock markets, which allowed the losses of 2018 to be offset. With the exception of the Spanish index, the gains ranged between the 16.7% of the Eurostoxx 50 and the 21% of the Italian Mib 30[18]. European shares have benefited from their attractive prices and in many cases from their high dividend yield, in a context of interest rates at historic lows, although risks associated with the economic slowdown and an unresolved Brexit persist.

- In Spain, the IBEX 35, which had accumulated a gain of 8.2% of the first quarter of the year, lower than that of most comparable European indices, hardly grew at all in the following months. This performance may have been affected by low share prices in the banking sector and domestic uncertainties relating to the election result, the process of forming a new government and, consequently, the future economic policy and reforms to be carried out. To date this year, the index has gained 9.2%[19], well below that recorded by benchmark European indices, which have mostly gained over 17%[20].

[17] The shares of the leading US technology companies known as FAANG (Facebook, Apple, Amazon, Netflix and Google) recorded cumulative gains up to 15 July of 55%, 30%, 34%, 37% y 10%, respectively.

[18] The German Dax 30 index and the French Cac 40 index have gained 17.3% and 17.9%, respectively, in the year.

19 With figures to 15 July.

[20] The main European indices recorded significant gains: 16.7% for the European Eurostoxx 50, 17.3% for the German Dax 30, 17.9% for the French Cac 40 and 21% for the Italian Mib 30.

- The sector analysis shows that the largest gains of the year were recorded by companies from the building, consumer goods, electricity and energy sectors. These latter companies benefited from the expectations that interest rates would remain low for a prolonged period, although they have recently suffered as a result of the proposal by the CNMC (National Markets and Competition Commission) that their regulated revenue should be cut[21]. In addition, significant gains were recorded by companies from the pharmaceutical and biotechnology sector, companies from the technology sector and, to a lesser extent, small-cap companies (9.4%, annual), whose activity is more closely linked to the domestic market and which were therefore able to benefit from its greater buoyancy. At the opposite end were banks, which performed very discreetly as their margins remained limited by an extremely lax monetary policy and the expectation that this will continue over time, in a context of economic slowdown and regulatory uncertainties[22], in addition to the recent downgrading of the outlook of its debt rating by Moody's.

- The price-earnings (P/E) ratio of the IBEX 35 rose slightly from 11.8 in mid-April to 11.9[23] in July (its highest level so far this year, but lower than its historic average of 13.5) as the small gain in prices was accompanied by lower growth expectations for business earnings for the coming months (see Figure 4).

- The expectation that the ECB will extend its accommodative monetary policy over time, which will probably be accompanied by a new set of additional stimulus measures, as well as the possibility that the Federal Reserve may cut its rates for the first time since 2008[24], keep market risk relating to debt assets at moderate levels even though it remains high for high-risk corporate debt and for subordinated debt. Economies with higher debt ratios have a significant level of vulnerability as a worsening of the economic environment will easily spread to risk premiums, particularly those of indebted companies and of assets with the worst credit rating. In addition, risk remains very high for assets with longer maturities, which are very sensitive to any upturn in interest rates.

- The evolution of public debt assets in Europe has been significantly conditioned by the information that the ECB has been offering in relation to its monetary policy decisions: firstly, with the confirmation of the delay in time of any rate rise; then, with the announcement of a new round of injections of liquidity for banks and, subsequently, the willingness to adopt more monetary stimulus measures if necessary, including new

[21] On 5 July, the CNMC (National Markets and Competition Commission) published the public consultation of seven draft circulars establishing a regulatory framework for the remuneration of electricity and gas sectors in issues of grid tolls and fees, as well as the regulated activities of both sectors.

[22] The Spanish banking sector faces the legal risk of a judgement by the Court of Justice of the European Union on the use of the IRPH (Spain's mortgage rate index) in some mortgages. In addition, some European regulators have adopted measures that entail capital surcharges to offset the growing risks linked to rising real estate prices.

[23] In the same period, the P/E ratio of the European Eurostoxx 50 and the US S&P 500 stock indices rose to 13.3 and 19.1, respectively, their highest levels since the first half of 2018.

[24] The markets expect the Federal Reserve to cut rates at the end of July following the declarations of its chairman, Jerome Powell, indicating that the US monetary authority "is prepared to act" in order to sustain the economic expansion.

rate cuts. In this context, in which the ECB also maintains its purchase programme[25] that continues to reinvest the maturing securities, most of the yields on sovereign debt assets have stood at historic lows. Accordingly, since March the yield on European sovereign debt has recorded falls of between the 145 bp of Greece and the 15 bp of the Netherlands. Yields on ten-year sovereign bonds stood at negative values in Germany, France, the Netherlands, Austria, Finland and Denmark, while in the case of Spain and Portugal they stood at values of around 0.3%, with most of the maturities of the curve with negative figures. The volume of Spanish public debt held in the ECB's portfolio stood at 257.04 billion euros[26] in mid- July.

Credit risk: green

- Sovereign and private Spanish issuers' risk premiums continued to improve progressively from the end of March, although the improvement was more intense in the former as they benefited to a larger extent from the announcements on the short to medium-term development of the ECB's monetary policy. The sovereign risk premium fell as the expectations of a relaxed monetary policy for a significant period of time were confirmed and as a result of continued growth of the Spanish economy despite the uncertainty associated with the process of forming a new government and the direction of the possible economic measures that it intends to adopt. Accordingly, the value of the risk premium, measured as the spread between the yield on ten-year government bonds in Spain and Germany (Figure 11), stood at around 80 bp at the closing date of this report, 36 bp below the level at the end of the first quarter and at the end of 2018 (117 bp).

- The credit risk premiums of financial institutions recorded the smallest falls, with their average falling from the 94 bp recorded at the end of March to the 75 bp recorded at the start of July. Even though a scenario of low interest rates maintained over time harms their intermediation margin, it may also contribute to preventing a worsening of the NPL ratio in the context of the slowdown in GDP growth and rising economic uncertainties. In addition, the financial sector has benefited positively from the announcement of a third round of ECB financing for banks, which will allow them to access long-term financing at a low cost. The risk premiums of non-financial companies also fell to stand at around 52 bp on average in July, their lowest level since the end of 2007. This was due to the fact that the scenario of ongoing low interest rates and abundant liquidity favours the reduction of finance costs, although it reveals the rising uncertainty about the future performance of their operations. In addition, companies continue to benefit from the reinvestment of maturing securities acquired under the purchase programmes, which favours low finance costs, and generally from rate expectations generated by the ECB.

[25] The ECB's asset purchase programme (APP) accumulated assets in June for an amount of 2.55 trillion euros, of which 2.09 trillion euros corresponded to public debt.

[26] This amount accounts for 26.9% of the balance of long-term debt securities issued by the State.

- The evolution of lending to non-financial sectors of the economy continues to improve discreetly, with annual increases greater than 1% since October last year, thanks to the expansion of lending to companies and maintenance of the rate of growth of lending to households. In the case of the latter, the growth in lending remained at 0.5% year-on-year in May, which is made up of growth in consumer lending of 4.7% in May and a fall in home purchase loans of 1%. The balance of total lending to non-financial companies continued growing (1.6% in May) as a result of the increase in debt issues (16.6%), which reached their highest rate in the quarter (18.2% in April). Large non-financial corporations continue taking advantage of the good market conditions and interest rates at all-time lows to obtain long-term financing or to refinance with better terms. In addition, financing through bank lending of resident entities fell by 1%, while the balance of foreign loans grew slightly by 0.8%.

Liquidity, financing and fragmentation risk: yellow

- Fixed-income issues registered with the CNMV in the second quarter stood at 14.18 billion euros, 31% up on the same period of 2018. Particularly noteworthy were renewals of issues of mortgage-backed bonds, which accounted for over 40% of the total. There were also once again very few issues of asset-backed securities[27], which mostly corresponded to cards and assets under leasing agreements. In the half-year period as a whole, fixed-income issues registered with the CNMV amounted to 34.72 billion euros, 12% up on the same period of 2018 (46% corresponded to bonds). Debt issued by Spanish companies abroad grew by 4% in year-on-year terms to May (44.57 billion euros), with commercial paper accounting for 47% of the total. In equity markets, there has been no IPO so far this year.

- Average daily trading volumes on the electronic market stood at 2.09 billion euros in the second quarter, 31% down on same period of 2018, but above the 1.87 billion euros of the previous quarter. The fragmentation of the trading of Spanish shares remains very high, although there was a slight recovery in BME's market share (58.4% of lit plus dark trading) in relation to trading venues other than the home market[28]. With regard to the trading of Spanish shares that is not subject to market rules and, in particular, to that performed through systematic internalisers, it is important to note the increasing volumes registered through this channel since entry into force of MiFID II, in line with that seen in other leading European markets. According to preliminary estimates, this trading has increased from values of under 5% of total trading[29] in the first quarter of 2018 to figures of close to 17% and 12% in the first and second quarters of this year, respectively.

- The Ibex 35 liquidity index (assessed through the bid-ask spread) remained at satisfactory levels in the context of low volatility in stock markets. The bid-ask spread

[27] The delay in defining the technical standards for STS securitisations (simple, transparent and standardised) may be delaying the issuance of these assets.

[28] The market share of trading venues other than the home market amounted to 44.9% in the first quarter of the year, its all-time high.

[29] Total trading understood in this context is the sum of the trading subject to market rules and that performed through systematic internalisers.

of the sovereign bond rose significantly during most of the second quarter, with the largest upturns in July, coinciding with the sharp fall in its yield to historic lows (Figure 15).

- The spread in interest rates between loans to euro area companies and to Spanish companies once again fell slightly for smaller loans of up to 1 million euros to stand in negative terrain (-7 bp), its lowest level since 2008. It also fell slightly for larger loans (from 45 bp in March to 35 bp in May), although they remain above the average for the last 12 months (30 bp).

Contagion risk: yellow

- The correlation between the daily returns of the different types of Spanish assets continued to remain stable in the second quarter of the year. Although there was a fall in correlation in April compared with previous months, as from June this rose across the board (see Figure 31). The median value of the correlations, which had stood at around 0.14 in May, rose to close to 0.24 in mid-July, still far from the average recorded over the last decade (0.5). However, both the maximum and the minimum value of the correlations fell slightly from April onwards. In general, lower levels of correlation make it possible to achieve a greater level of diversification and reduce the possibility of contagion between the different asset types.
- With regard to the movements of European public debt assets, the correlation between the yield on Spanish government bonds and that of the core European countries in the second quarter remained at high levels, although with two trends over the period. The correlation fell from 0.88 at the start of April to 0.77 at the end of May and then increased to 0.98 in mid-July. Similarly, the correlation between the yield on the Spanish sovereign bond and that of peripheral countries fell in May from 0.93 to 0.61 and then rose to 0.91 in mid-July.

- This initial fall in the correlation between the yield on the Spanish sovereign bond and that of euro area countries might be the result of a faster reduction in the yield of the Spanish bond compared with the others, which is partly the result of the growth in Spain and the expectation, and subsequent confirmation, that Spain would leave the Excessive Deficit Procedure which it had been under since 2009. However, the general levels of correlation are high and are the result of the falls in the yields on public debt in all euro area economies as a result of the possibility of renewed stimulus measures by the ECB that would prolong the accommodative monetary policy and even see a possible cut in rates.

Market risk: yellow

Figure 3: Stock market prices

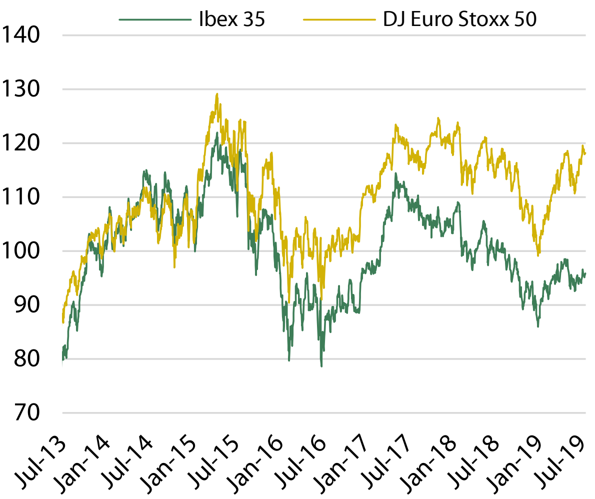


Figure 4: Price-earnings ratio (P/E)

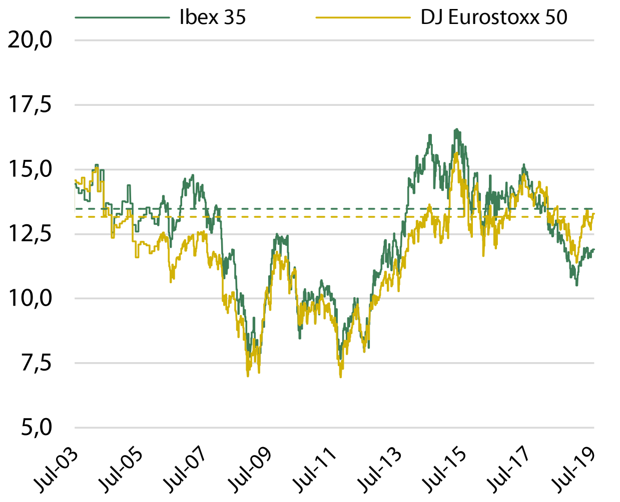


Figure 5: Short-term interest rates (3m)

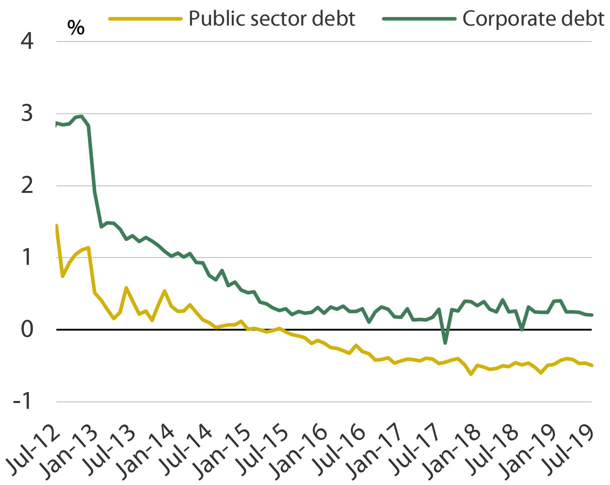


Figure 6: Long-term interest rates (10y)

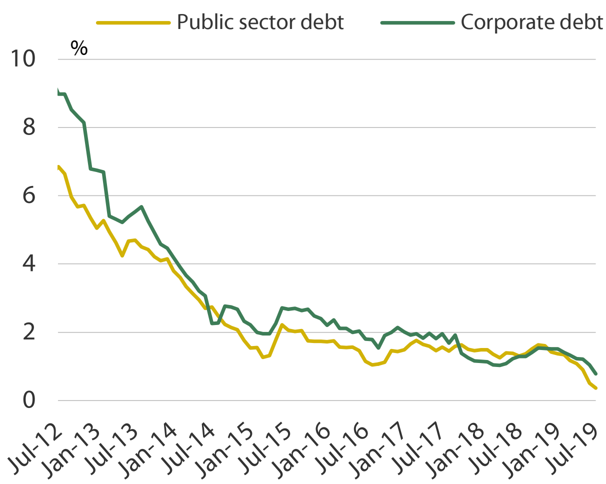
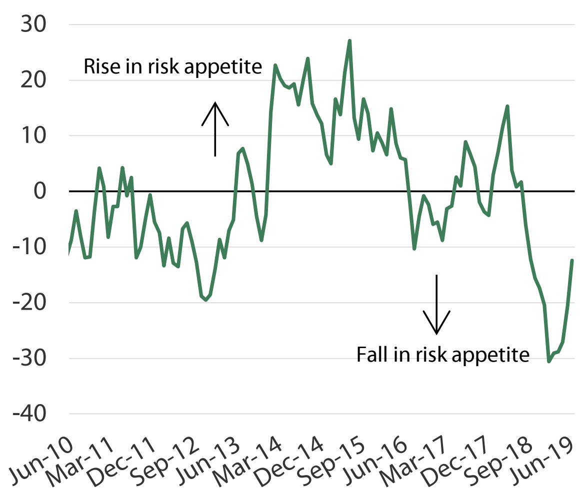


Figure 7: Oil price

Figure 8: Risk appetite (State Street)



Credit risk: green

Figure 9: Financing of non-financial sector

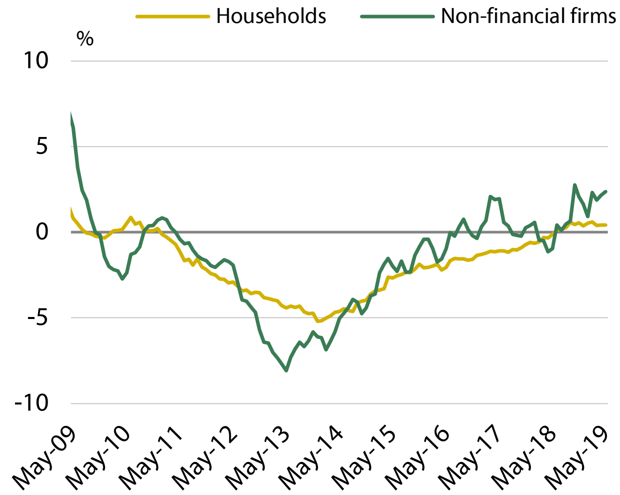


Figure 10: NPL rate and unemployment rate

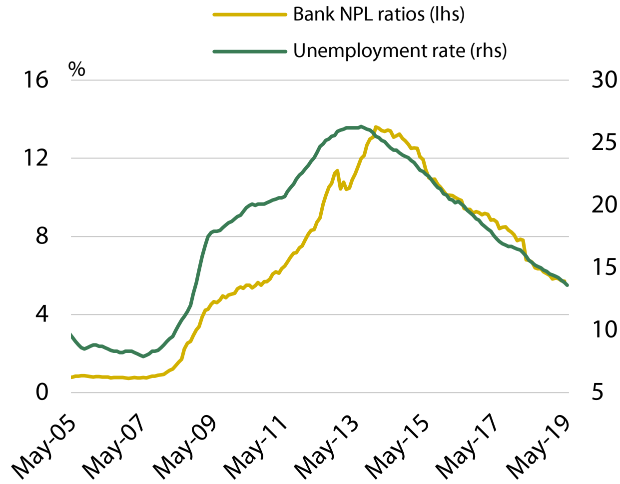


Figure 11: 10-year government debt risk premium (spread with Germany)

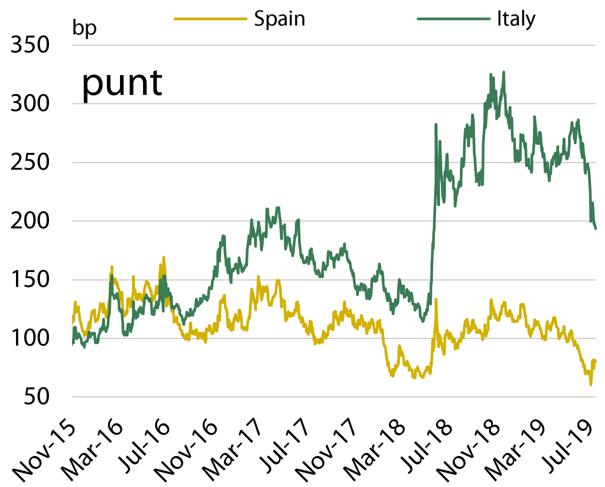


Figure 12: Private debt risk premium (5-year CDS)

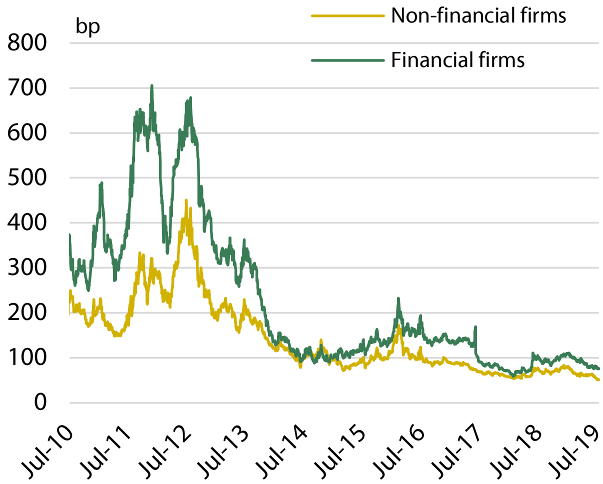


Figure 13: House prices (year-on-year change)

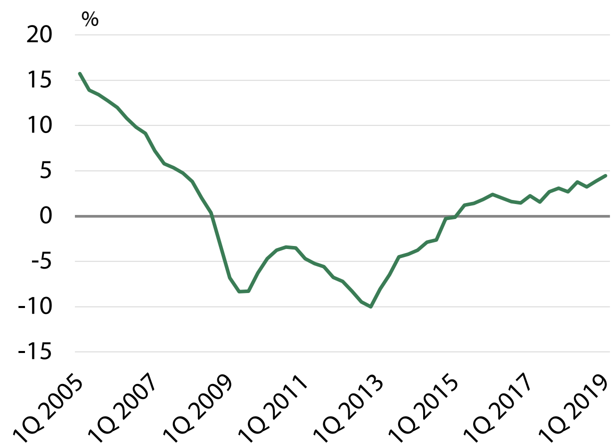
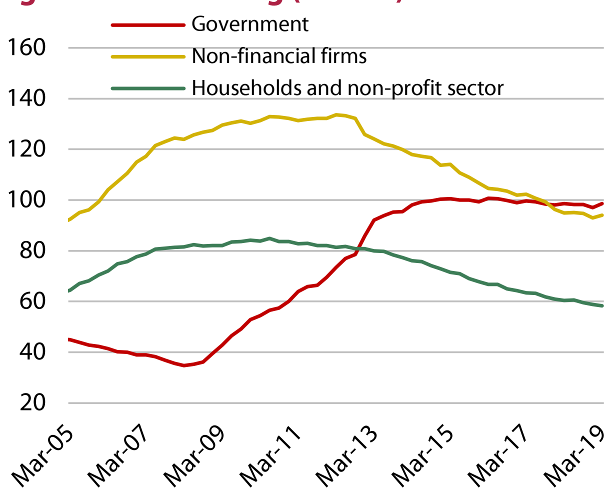
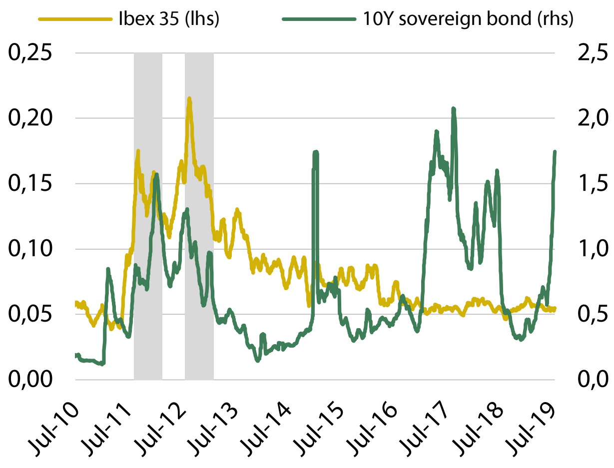


Figure 14: Borrowing (% GDP)



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 (1m moving average)

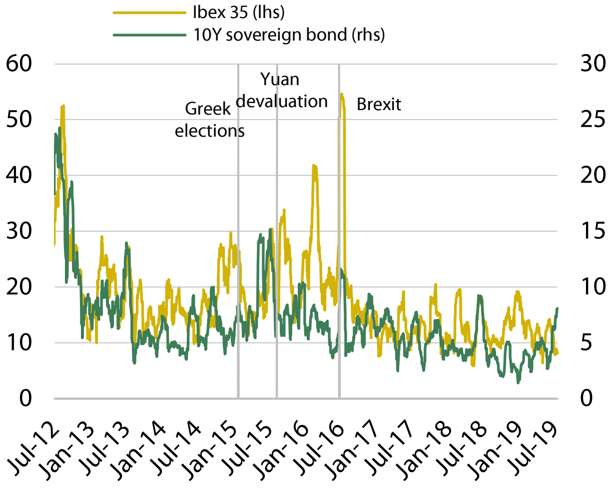


Figure 17: SIBE trading (1m moving average)

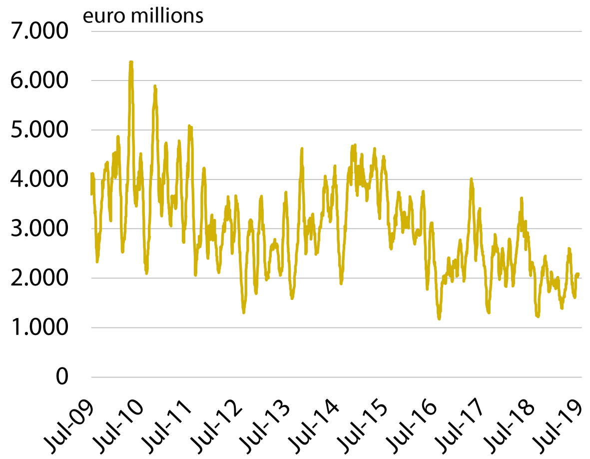


Figure 18: Interbank spread (LIBOR-OIS)

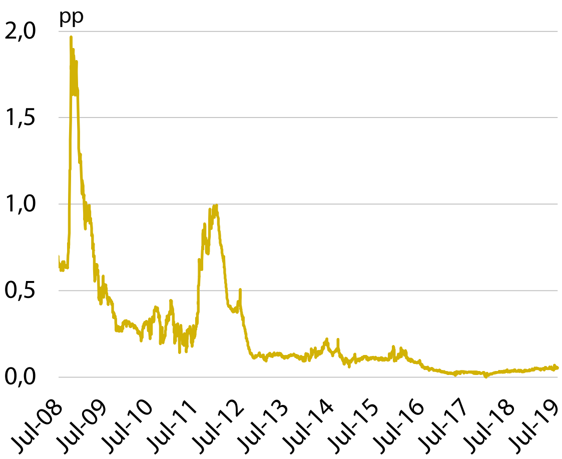


Figure 19: Spain-EU spread on corporate lending rates

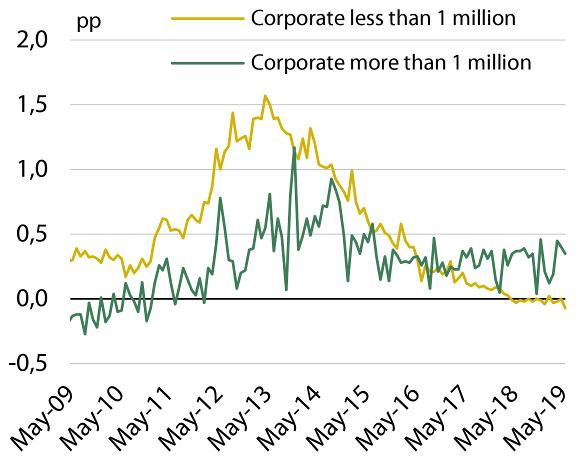
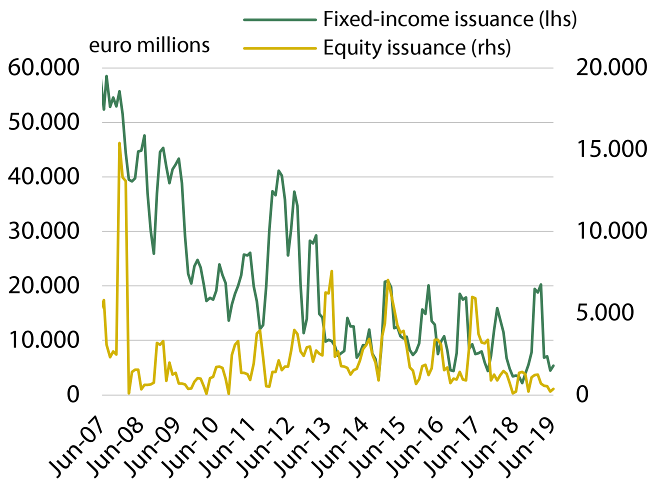


Figure 20: Issues (3m moving average)



Macro-economic risk: yellow

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

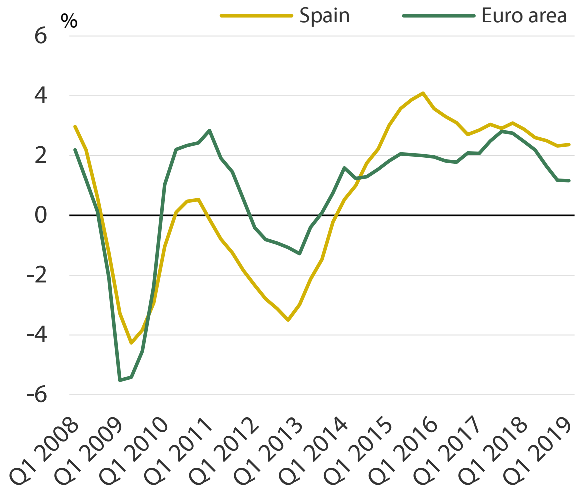


Figure 22: HCPI and core CPI (year-on-year change)

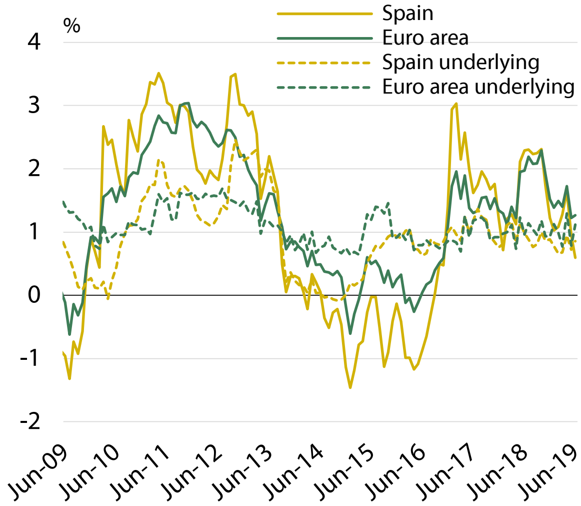


Figure 23: Employment (year-on-year change)

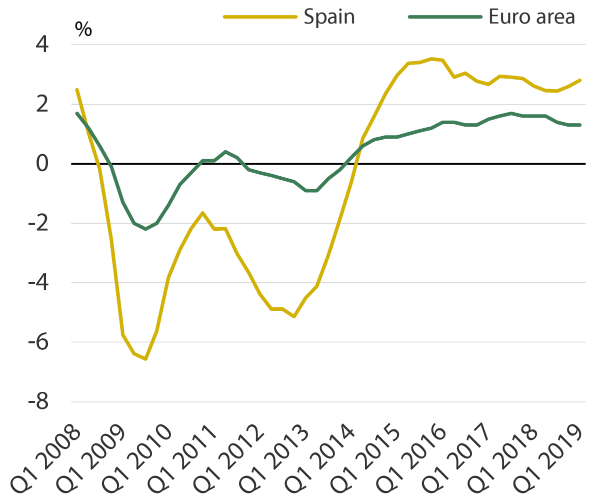
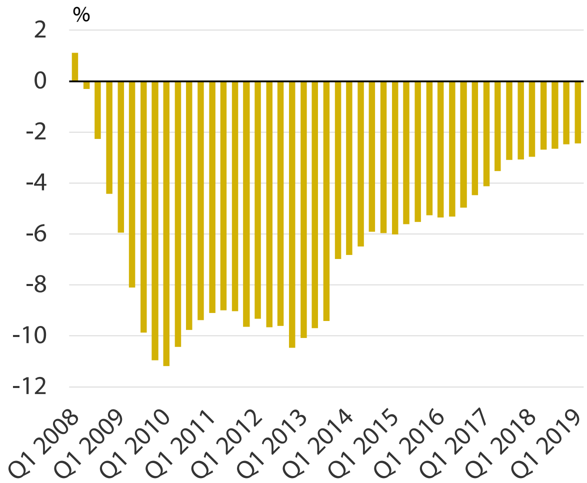


Figure 24: Government balance (% GDP)



Cumulative data four quarters.

Figure 25: Exchange rates

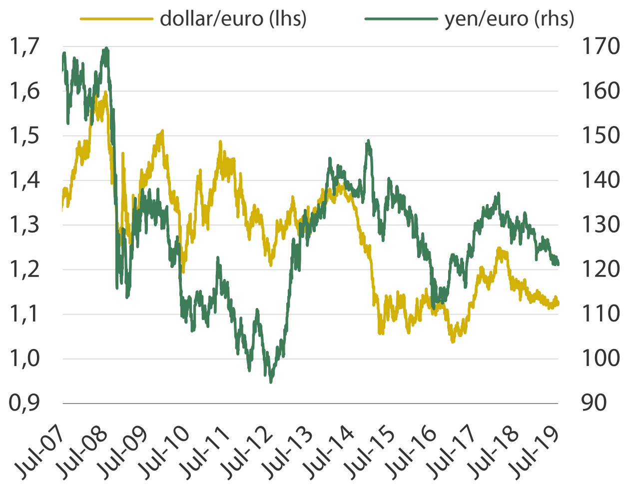
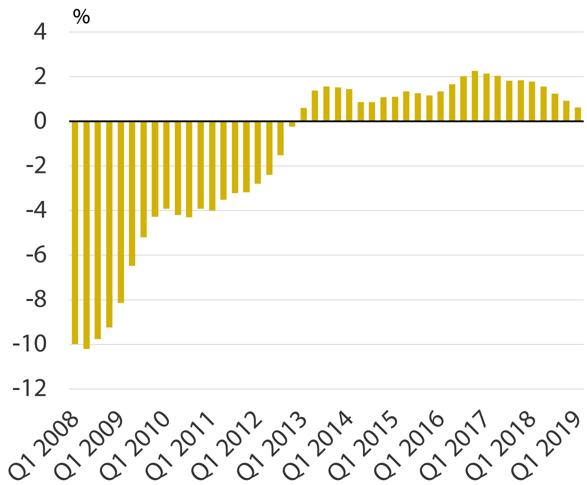
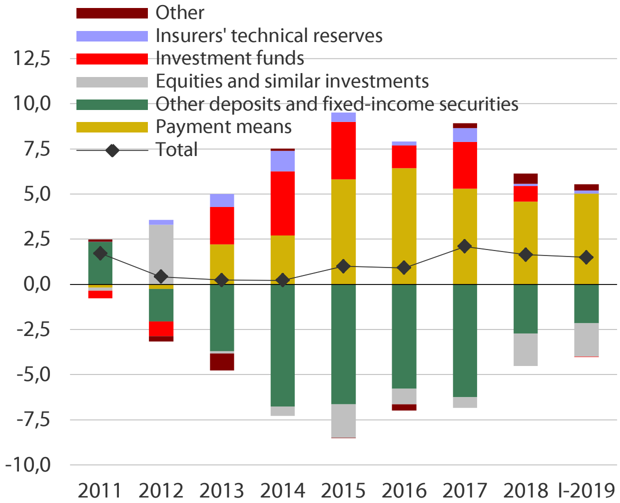


Figure 26: Current-account balance (% GDP)



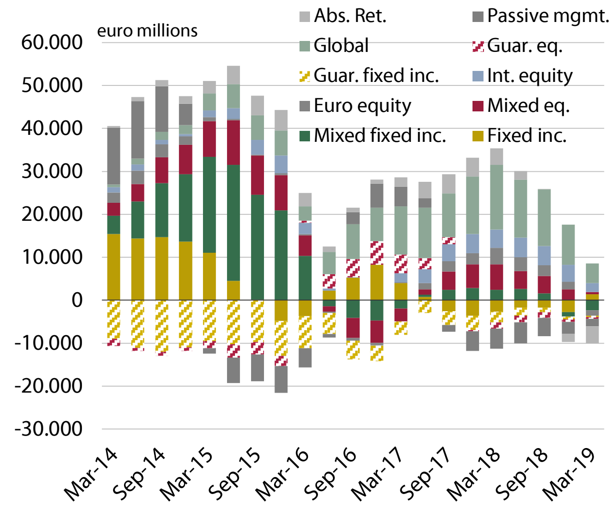
Investors

Figure 27: Households: net financial asset acquisitions (% GDP)



Cumulative data four quarters.

Figure 28: Net subscriptions to investment funds



Cumulative data four quarters (million euros)

Figure 29: Households: savings (% disposable income)

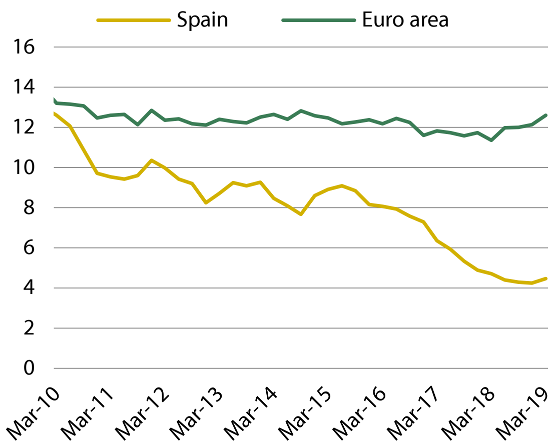
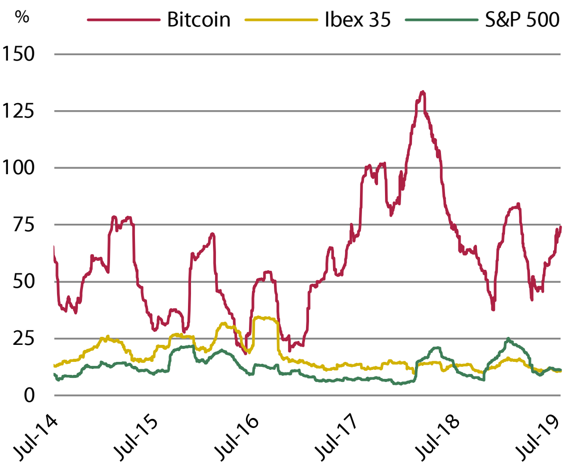


Figure 30: Bitcoin volatility



Contagion risk: yellow

Figure 31: Correlation between asset classes

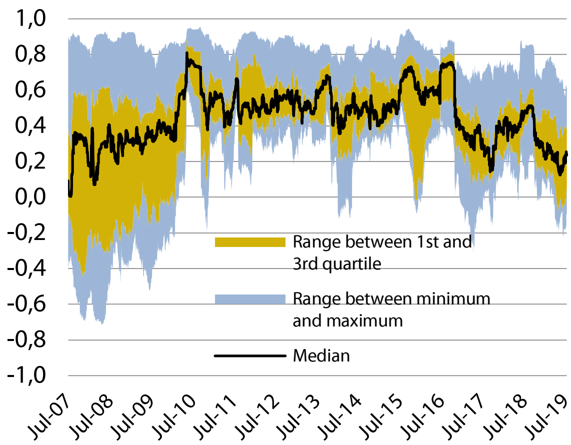
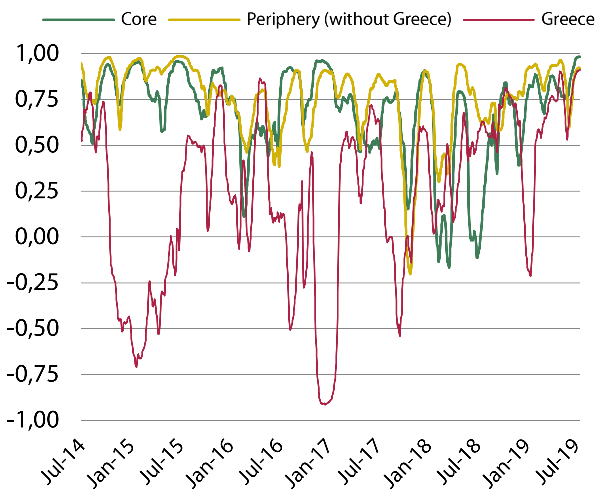
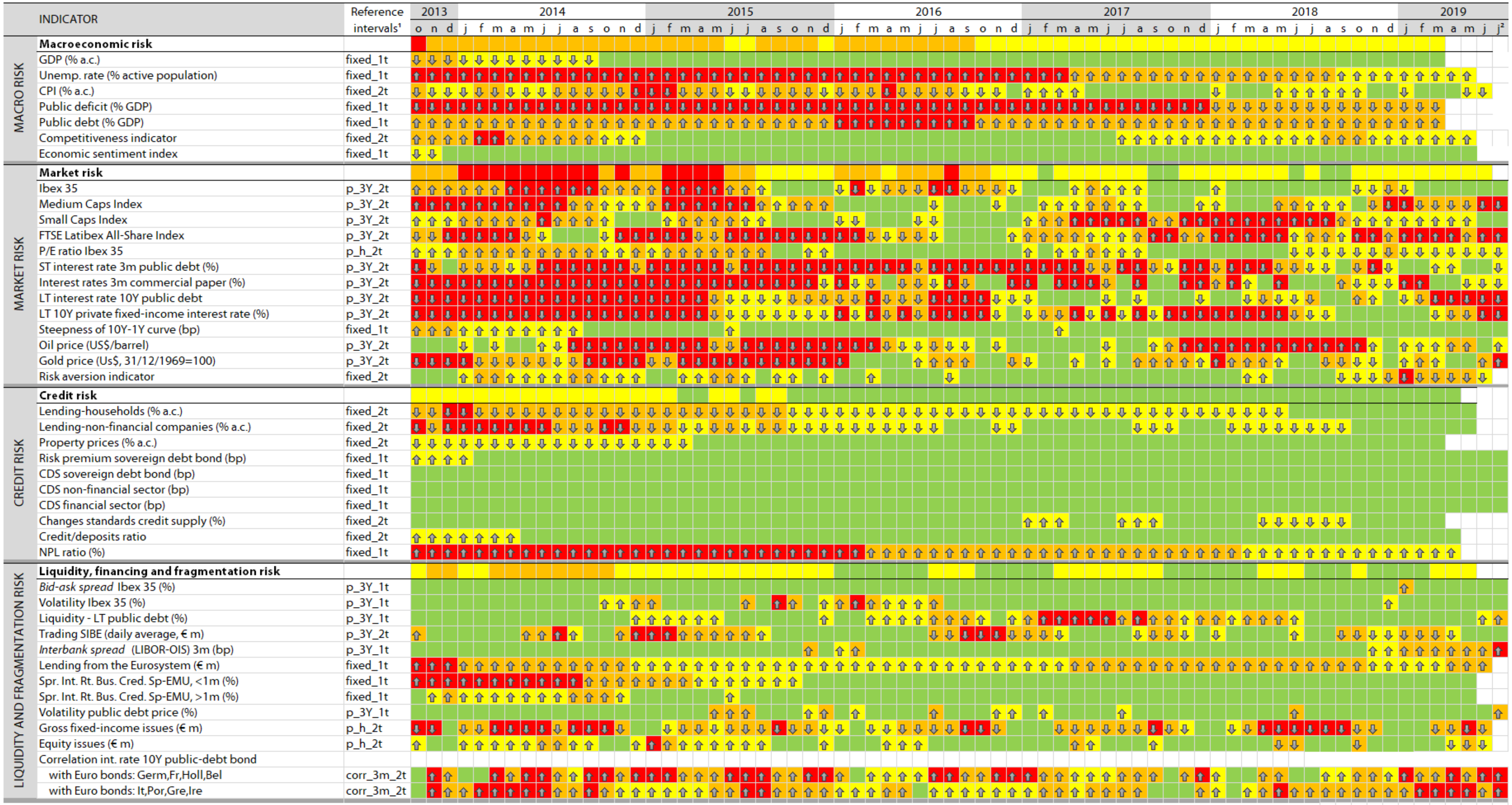


Figure 32: Correlation between the yield on the Spanish and European 10Y bonds



Heat map: risk categories



(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. Source: CNMV, Bloomberg and Thomson Datastream. (2) Data until 15 July.

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 between zero and one. To this end, stress is evaluated in six segments of the financial system (equity income, 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 indices), 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 14 (January (1)), 23-41 or CNMV Working Paper 60 (http://www.cnmv.es/portal/Publicaciones/monografias.aspx).

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 (see page 13) includes 43 indicators[30], 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

[30] Since June 2017, the heat map includes an additional indicator: the bid-ask spread of the ten-year sovereign bond.

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 detailed information on the methodology and the analysis of these maps, see the article "Identification of vulnerabilities in the Spanish financial system: an application of heat maps", published in the Quarterly Bulletin of the CNMV corresponding to the first quarter of 2015.

Bitcoin Historical volatility (Figure 30): Annualised standard deviation of the daily changes in prices in 90-day windows.

Contagion risk: The indicators making up this block are of somewhat greater 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 from financial institutions, fixed income from non-financial firms and Ibex 35 securities, 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 European 10Y bond (Figure 32). The correlation is calculated using daily data in three-month windows. The countries of the core group are Germany, France, Holland and Belgium, and the peripheral countries are Portugal, Italy, Greece and Ireland.