CNMV
Comisión
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del Mercado
de Valores

Financial Stability Note
No. 1 January 2017

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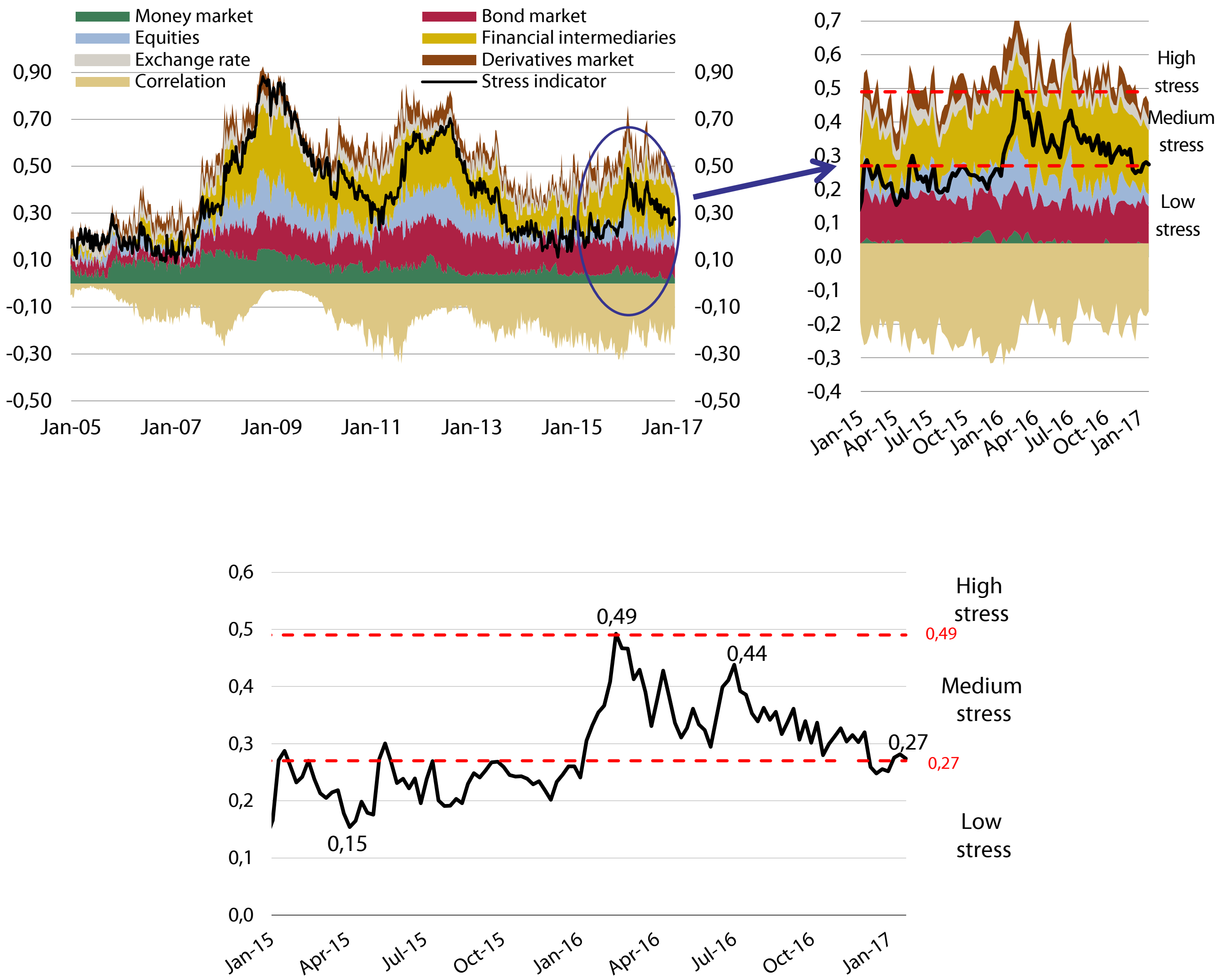
Summary

- ✓ The Spanish financial markets stress indicator stood at 0.27 in mid-January, indicating medium-low stress (figure 1). The highest level of stress was in the financial intermediaries segment, although this has fallen in recent months. In contrast, stress on bond markets increased in the first few weeks of January, mainly due to high volatility in the market for long-term debt.

Spanish financial markets stress indicator (FMSI)

FIGURE 1



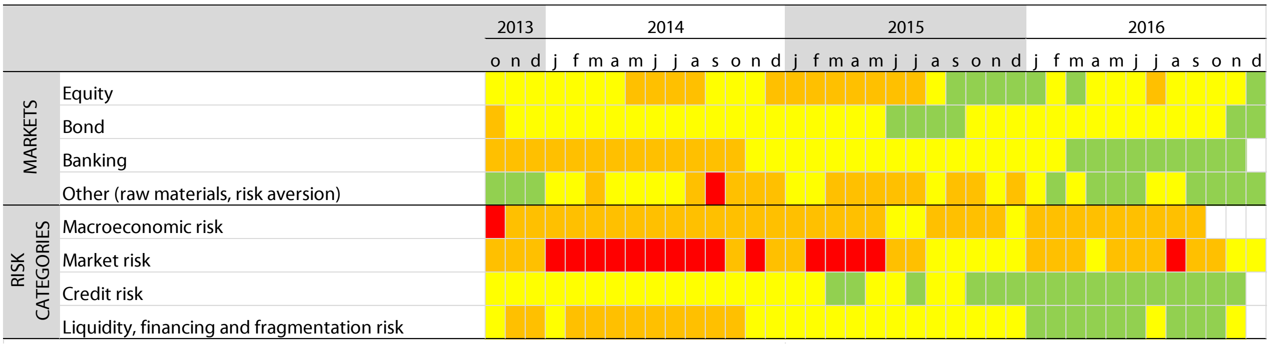
Source: CNMV.

See CNMV working document no. 60 "A Spanish Financial Market Stress Index (FMSI)".

- ✓ Market risk remains the most important risk element, especially for fixed-income markets where asset prices remain very high. That said, this risk is easing thanks to the new macro-financial scenario inaugurated with the new US administration and its likely more aggressive approach to monetary policy which is already putting downward pressure on long-term debt prices (driving up yields). Elsewhere, Brexit effects on equity markets seem to have eased as investors await the start of new negotiations.

- ✓ The Spanish economy continues to grow and create jobs at a healthy pace, with a promising short-term outlook. Fiscal consolidation remains a key macro-economic challenge but the deficit is gradually coming down. However, global uncertainty about the new US government could change the healthy outlook for coming years.

Heat map: Summary by market and risk category FIGURE 2



Source: CNMV.
See article in the CNMV Quarterly Bulletin for Q1 2015, "Identification of vulnerabilities in the Spanish financial system: An application of heat maps".

Sources of risk

Macro-economic environment

- Spain continues to expand its economy. In Q3 2016 GDP grew at a year-on-year rate of 3.2% and a quarterly rate of 0.7%, faster than the euro zone as a whole, which managed 1.7% year-on-year and a quarterly 0.3%. Employment continues to expand vigorously, by just below 3% driving unemployment down to 18.9% (20% in Q2 2016). Inflation, meanwhile, rose in December to 1.6% year-on-year, nine-tenths of a point higher than in November, mainly reflecting rising energy prices. The underlying rate, which strips out volatile energy and fresh food components, was up by two-tenths of a point in December to 1.0% (0.9% in the wider euro zone).

- Fiscal consolidation, still a key challenge, was helped by the vigour of domestic activity. The 2016 deficit will probably come in at 4.6% of GDP (2.6% in the year to October) and in 2017 could fall to somewhat above 3% (3.1% according to government forecasts and 3.3% according to the European Commission). Public sector debt has stabilised at around 100% of GDP[1]

- Latest IMF forecasts[2] confirm the healthy performance of the Spanish economy, thought to have grown at 3.2% in 2016 and expected to continue expanding by 2.3% and 2.1% in 2017 and 2018, respectively, one-tenth and two-tenths faster than the Fund's October forecasts. These figures are again better than forecasts for the euro zone (1.7% in 2016 and 1.6% in 2017). However, the IMF also warned about the wide dispersion in its projected outcomes due particularly to uncertainty surrounding the policies of the new US government and their international ramifications.

Low interest rate environment

- Current low interest rates have driven investors into a search for yield, a potential risk to the financial system as market participants have greater incentives to prefer equities to fixed-income and, within the fixed-income market, to pick less creditworthy and less liquid assets. In these circumstances, a significant correction in asset prices, already detectable in long-term debt, could take a heavy toll on market participants and unleash negative contagion spirals.

- As for Spanish households, Q3 2016 data from the *Cuentas Financieras* confirm that investment is rising at an accelerating pace[3] with a preference for highly conservative products. As in previous years, there was a substantial outflow away from long-term deposits and debt instruments, still paying meagre returns, and into cash and sight deposits, insurance products and investment funds (figure 27). Among the latter, the

[1] The latest available figures are from September 2016, showing 100.3% of GDP compared to 99.8% at end-2015.
[2] Data published 16 January.
[3] Net acquisition of financial assets was 2.9% of GDP (cumulative four-quarter data) compared to 2.2% in 2015 and 0.4% in 2014.

biggest inflows were recorded by global and fixed-income funds, while the greatest outflows were from mixed funds (figure 28).

- The European banking industry is still suffering from current rock-bottom interest rates, despite early indications of a change in trend, and from other structural factors, including heavy volumes of poor quality assets in some countries, high operating costs and intensifying competition from the shadow banking sector and fintechs. Spain's dynamic economy is helping the sector recover but the recent ruling by the European Court of Justice on "floor clauses" will be a substantial hit for some banks' P&Ls.

Political uncertainty sources

- The incoming US administration has changed the international economic and financial environment. It is hard, for now, to quantify the scope of measures already announced and those that might come down the road. Expectations are for a rise in protectionism, a more expansionary fiscal policy in the short term, a greater deregulation in some strategic industries and some changes in migration policy.

- Economically, any curbs on trade and migration are likely to be bad news for activity in the medium and long terms as they will tend to depress productivity. For international financial markets, measures announced to date have bumped up yields on medium- and long-term fixed-income assets and we cannot rule out short-lived spikes in volatility given the prevailing high levels of uncertainty. Faced with this environment of rising interest rates and higher inflationary expectations, the Federal Reserve decided in December to hike its policy rate to 0.50-0.75% and future progress toward a more normal monetary policy may be less gradual than previously believed.

- Brexit negotiations remain a major source of uncertainty for the euro zone's economic and financial outlook. The British government said in January it planned to strike a free trade agreement with the EU. How negotiations progress will therefore be critical to determining whether there will be a hard Brexit and assessing the economic impact of the process.

- But there are other potentially significant political events on the horizon for Europe. This year the Netherlands, France and Germany all go to the polls[4]. Any result that exacerbates the effects of Brexit and the new US government could boost market volatility.

- Finally, risks persist from the Chinese economy and rumbling geopolitical conflicts which might have a significant impact on financial markets.

[4] On, respectively, 15 March, 23 April (second round on 7 May) and 24 September.

Risk categories

Market risk: yellow

- The Ibex 35 fell by 2% in 2016 as a 6.5% rally in the second half of the year failed to offset losses in the first six months. The Ibex underperformed all the main European indices except Italy's[5]. Germany's DAX 30 gained 6.9% in 2016 and the UK's FTSE 100 advanced by 14.4%[6].

- The Ibex 35 P/E rose to 14.2 times at end-2016 – historical average is 13.6 – as share prices outstripped forecast earnings per share. Short positions also rose to around 1.2% of market cap (figure 1), their highest in recent years, and were concentrated on a number of mid-scale companies in the financial sector. Market risk perception is moderate. The main sources of uncertainty are financials and companies potentially exposed to the Brexit outcome and rising interest rates.

- The most salient market risk is again in fixed-income assets, where long yields have started to climb encouraged by anticipated changes in the new US government's economic policy and the Federal Reserve's monetary policy. Although the ECB's debt-buying programmes continue to hold down yields on sovereign and corporate bonds[7], investors expect the Bank to start gradually withdrawing its unconventional monetary policy measures[8]. The ECB had acquired EUR 150,333 million of Spanish public sector debt in December[9]. Meanwhile, Spain's primary market for corporate debt began 2017 with a rush of issues[10], as borrowers sought to anticipate likely spread-widening as the year wears on.

Credit risk: green

- The risk premium applied to Spanish issuers has remained unchanged, narrowing slightly in the case of financials which are nonetheless paying more than non-financial firms reflecting the problems of the wider European sector (137 bp vs. 87 bp, figure 12). Risk premiums on the Spanish 10Y sovereign bond (spread between yields on the Spanish and German 10Y sovereign bonds) also tended to stabilise in the last quarter of 2016, at around 110 bp in mid-January (figure 11).

- Household and corporate borrowing continued the trend of previous months. Household borrowing continued to fall at an annual pace of 1.6% (November 2016 data) due to declining mortgage lending, while consumer credit grew at 3%. As for

[5] German DAX (6.9%), French CAC (4.9%) and European Eurostoxx 50 (0.7%) all advanced in 2016 while the Ibex 35 retreated, although the worst performer was the Italian Mib30 which lost 10.2% and was the worst performer among leading European benchmarks.

[6] Although it suffered a 1.2% loss in euro terms following the slump in the pound, which fell 10.2% against the euro following the UK's referendum vote to leave the European Union (Brexit).

[7] At 13 January 2017, the ECB was holding EUR 54.10 million of European corporate debt, of which over 13% was acquired on the primary market.

[8] The ECB said in December it was pushing back the end-date for its public sector and corporate debt buying programme from March to December 2017 but would be scaling back its monthly purchases from EUR 80,000 million to EUR 60,000 million.

[9] Representing 17.8% of the Spanish state's long-term debt issuance.

[10] According to Dealogic, euro zone issuance to 19 January was EUR 63,700 million, up 65% on the same period 2016. Of this, EUR 6,500 million was by Spanish issuers.

companies, despite the improving economy, demand for credit by SMEs is moderate (falling by 1,1% at a year on year rate) and major companies continue to swap some of their bank loans for debt[11].

Liquidity, financing and fragmentation risk: yellow

- Primary market activity in 2016 was generally less intense than in other years. Fixed-income issues filed with the CNMV totalled EUR 138,911 million, up 1.7% on 2015, but this was due partly to the heavy volumes placed by SAREB. On the other hand, there were declines in debt issuance by Spanish companies abroad (down 12.3%) and equity offerings (down 46%).

- Average daily trading volumes on the continuous market rose slightly in the final quarter of the year to EUR 2,130 million (figure 17) breaking a five-month run of declines. Trading in Spanish shares on European multilateral trading facilities (MTFs) seems to have stabilised at around a third of total trading in Spanish stocks and was 32.7% in Q4.

- Liquidity indicators, measured using bid-ask spreads, were stable for the Ibex 35 but more volatile for the Spanish bond which felt the influence of changing US monetary policy.

- The spread on yields demanded by investors between corporate loans in Spain and in the rest of the euro zone narrowed to 19 bp for loans of less than a million euros but rose slightly in the more-than-a-million bracket to 28 bp.

Contagion risk: yellow

- Correlations between the different classes of Spanish financial assets reduced in recent months. Average correlation between fixed-income/equity asset pairs dropped substantially in late October (see figure 29)[12] and again, to a lesser extent, following the US elections, taking it to its lowest since 2010 in mid-January. At the same time, the range of maximum to minimum correlation widened considerably in Q4 2016, mainly as a result of lower correlations between the share prices of financial firms and the Spanish 10Y bond.

- Meanwhile, correlations between yields on Spanish sovereign debt and that of other European countries held at high levels. The correlation indicator with the strongest European countries increased in Q4 to 0.95, slightly above Spain's correlation to peripheral member states (excluding Greece) which was 0.90 (see figure 30).

[11] In the euro zone, overall loans continued to increase: 1.8% for companies and 2.1% for households (November figures).

[12] Due to the looming prospect of Brexit.

Market risk: yellow

Figure 3: Short selling

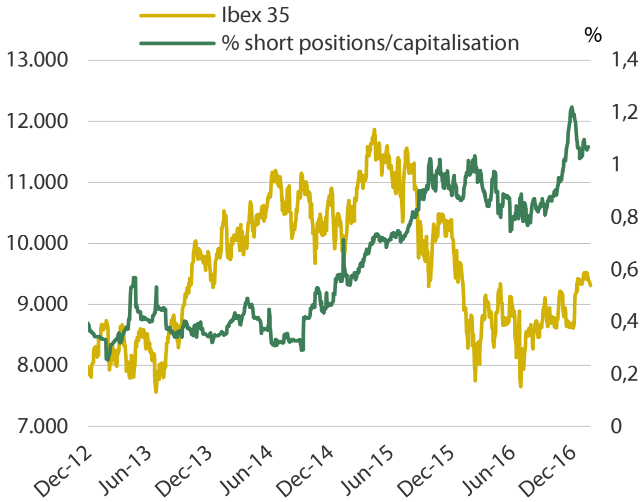


Figure 4: Price earnings ratio (PER)

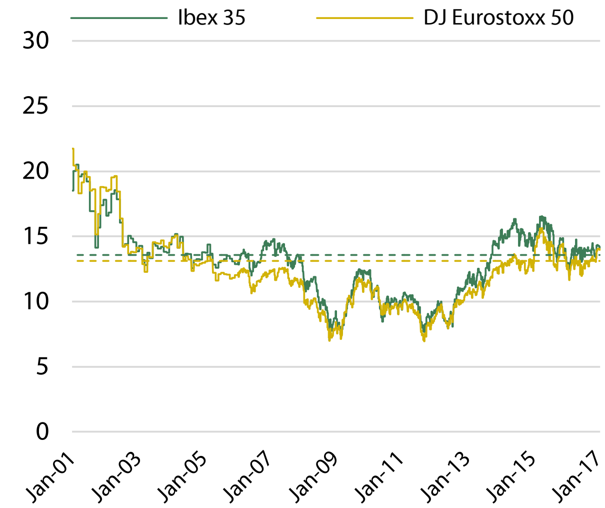


Figure 5: Short-term interest rates (3m)

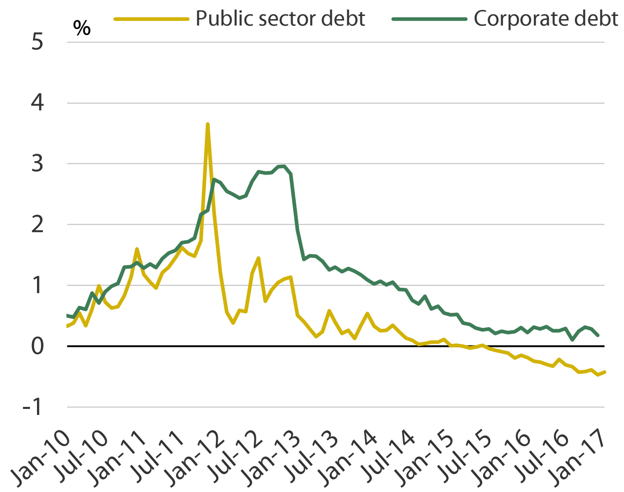


Figure 6: Long-term interest rates (10Y)

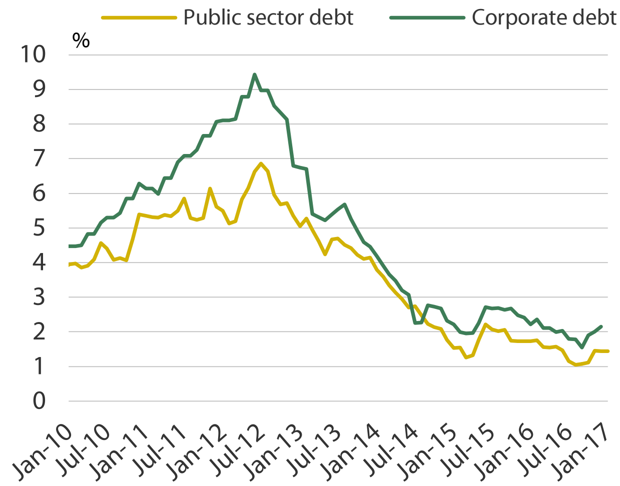
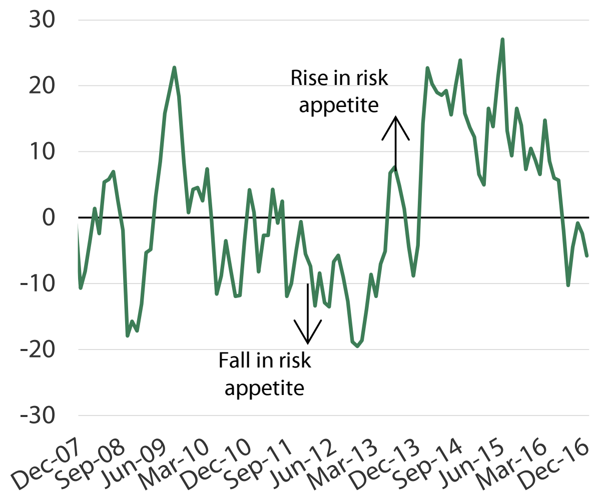


Figure 7: Oil price

Figure 8: Risk appetite (State Street)



Credit risk: green

Figure 9: Financing of non-financial sector

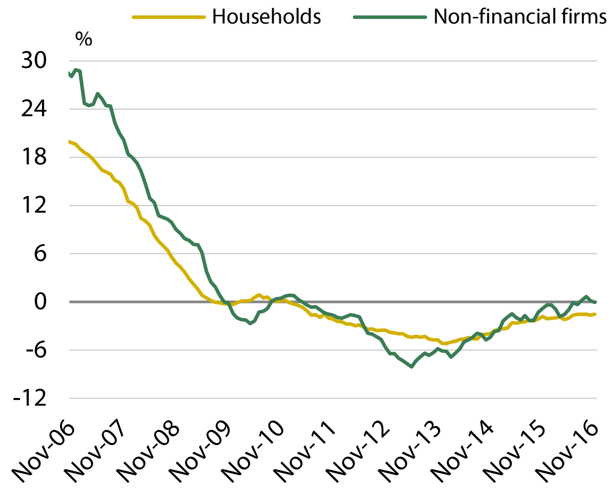


Figure 10: NPLs and unemployment

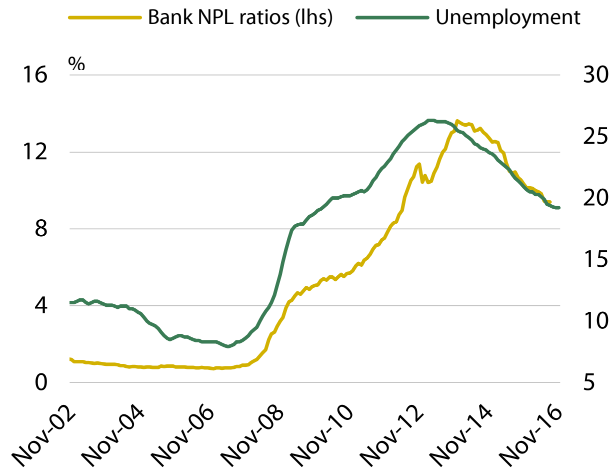


Figure 11: Risk premium on 10Y sovereign debt (spread to German yields)

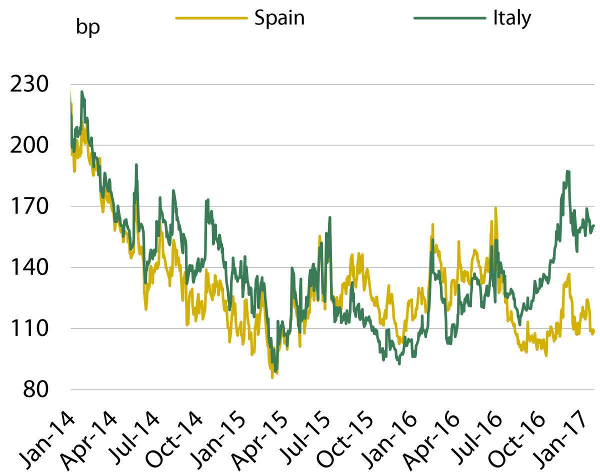


Figure 12: Risk premium on corporate debt (5Y CDS)

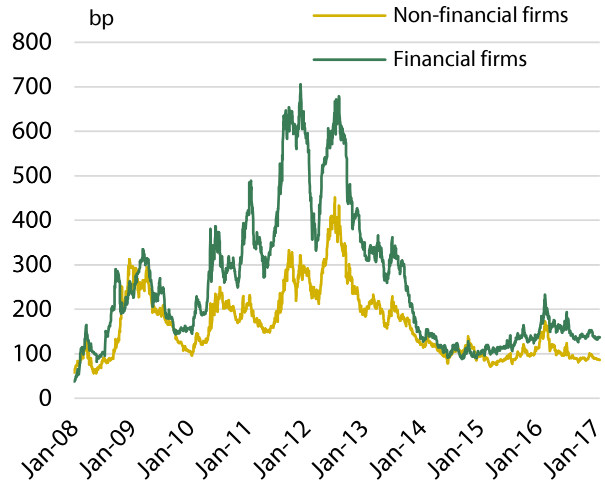


Figure 13: Residential prices (year-on-year change)

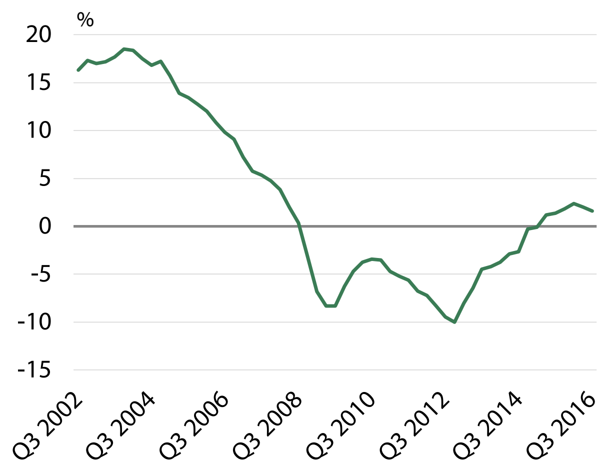
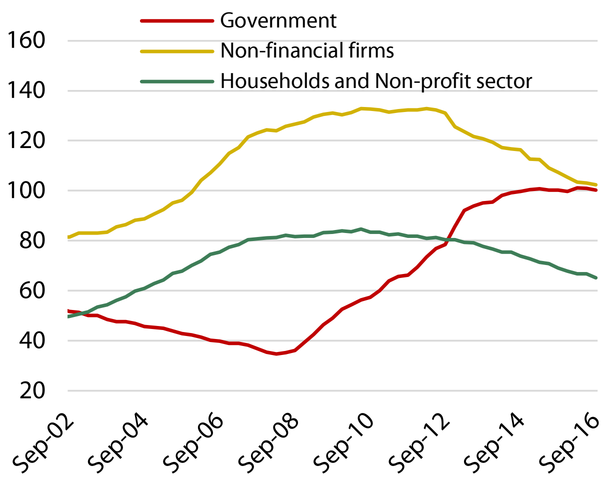
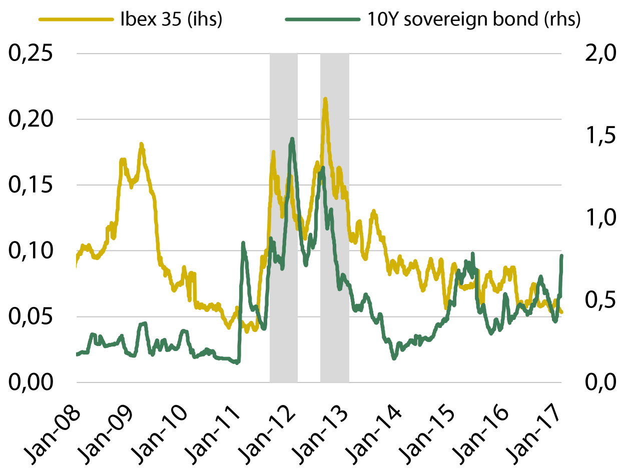


Figure 14: Borrowing (% GDP)



Liquidity, financing and fragmentation risk: yellow

Figure 15: Liquidity (bid-ask spread, %)



The shaded área shows periods when short-selling was banned.

Figure 16: Volatility (1m moving average)

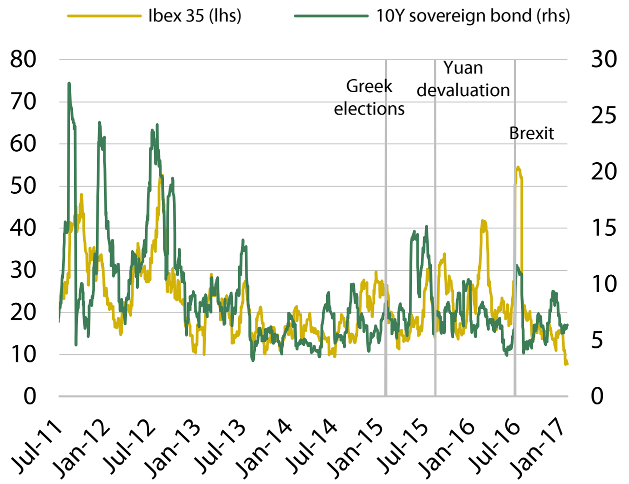


Figure 17: SIBE trading (1m moving average)

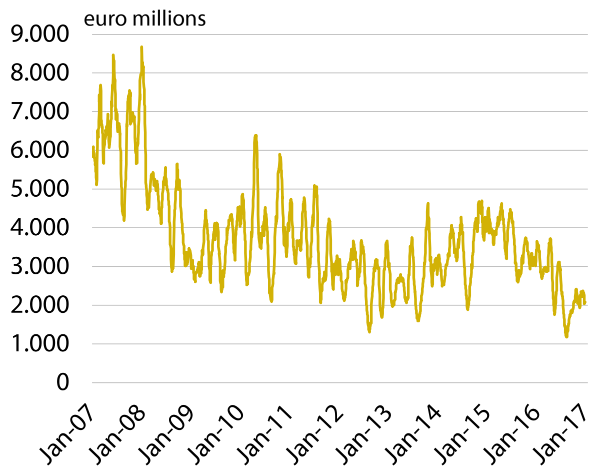


Figure 18: Interbank spread (LIBOR-OIS)

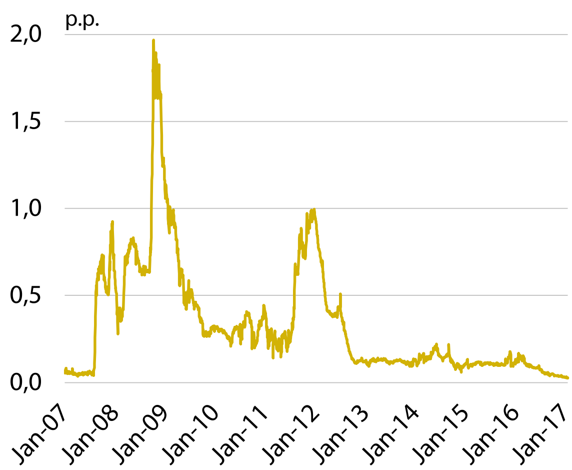


Figure 19: Spain-EU spread on corporate credit rates

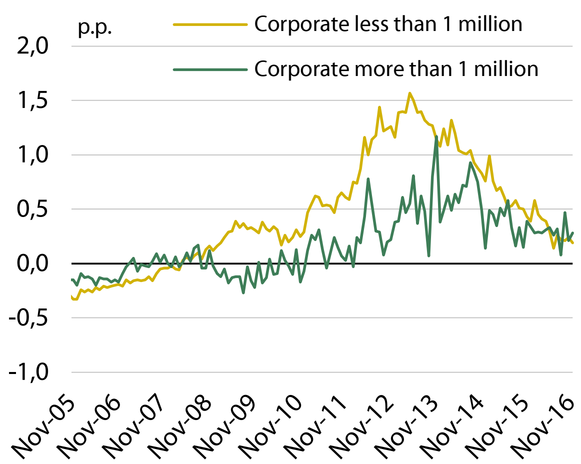
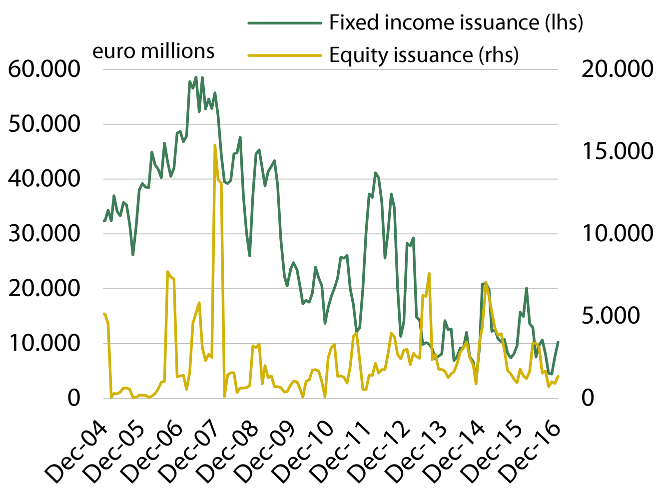


Figure 20: Issuance (3m moving average)



Macro-Economic risk: orange

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

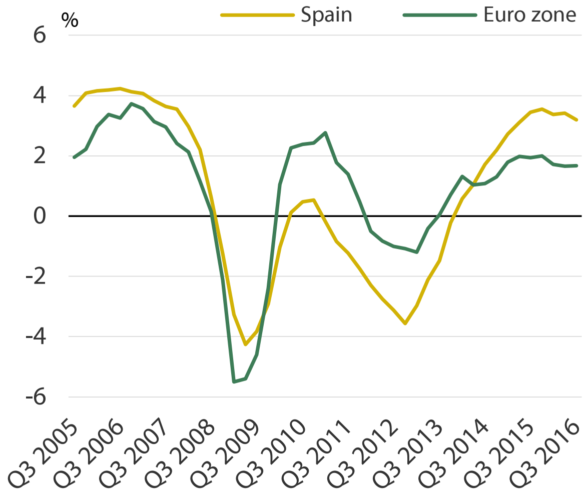


Figure 22: HIPC and underlying CPI (year-on-year change)

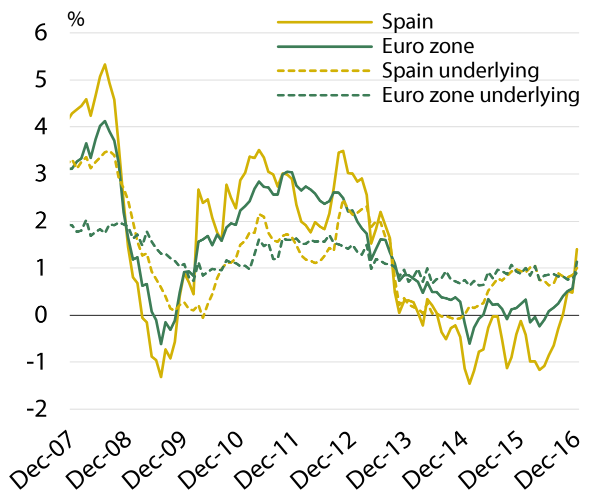


Figure 23: Employment (year-on-year change)

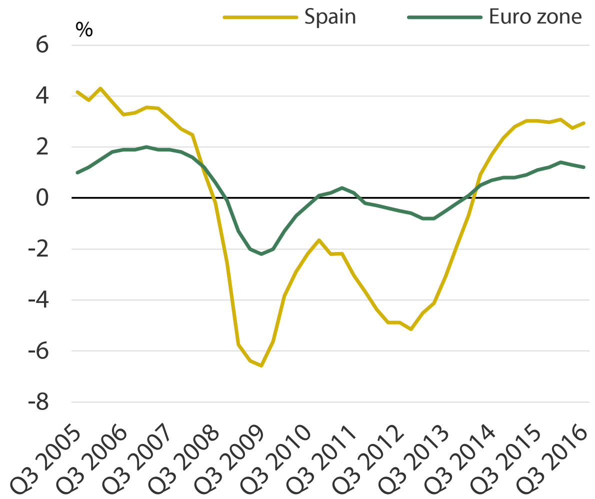
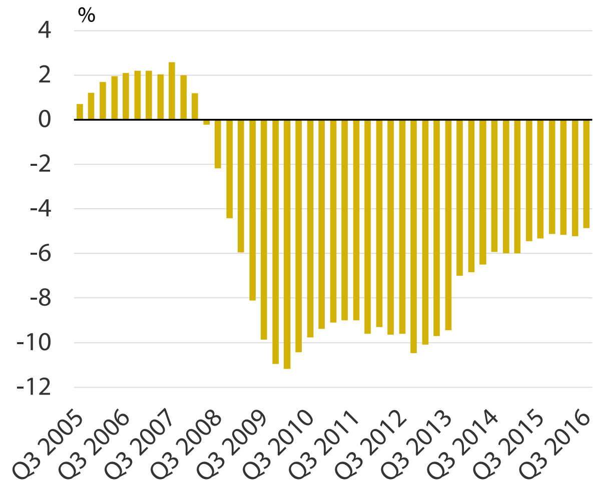


Figure 24: Public sector budget (% GDP)



Cumulative 4-quarter data.

Figure 25: Exchange rates

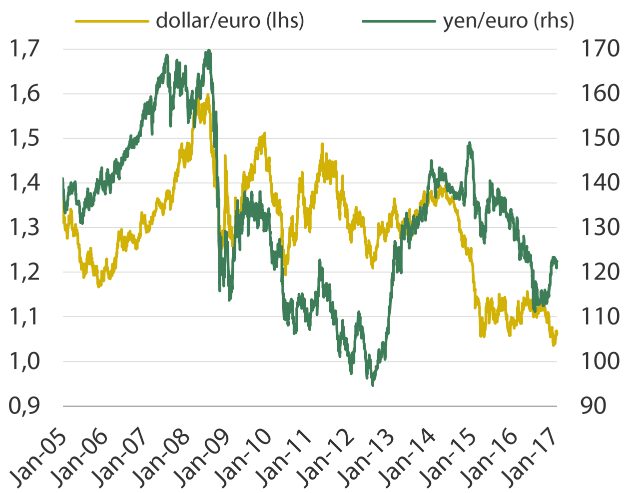
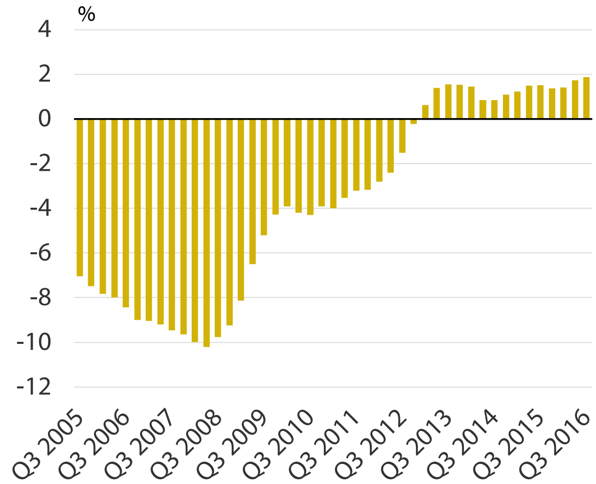
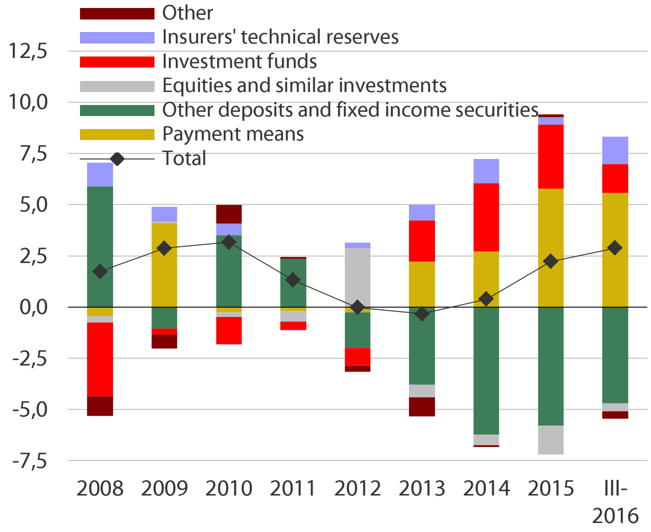


Figure 26: Current account balance (% GDP)



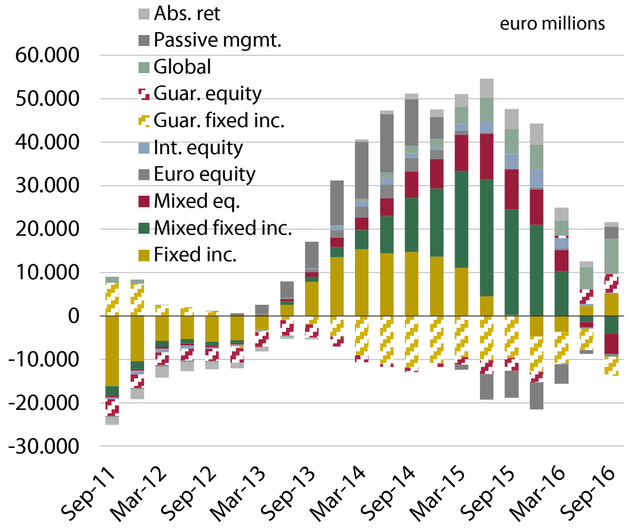
Investors

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



Cumulative 4-quarter data.

Figure 28: Net suscriptions to mutual funds



Cumulative 4-quarter data.

Contagion risk

Figure 29: Correlations between asset classes

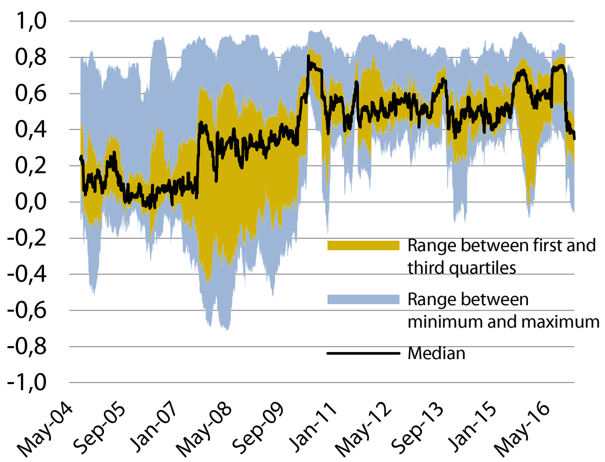
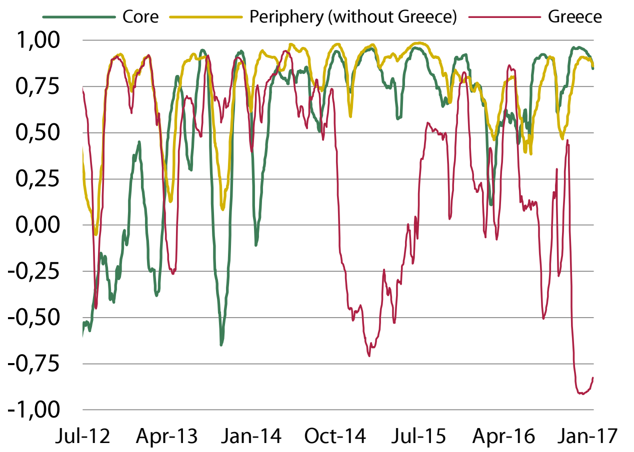
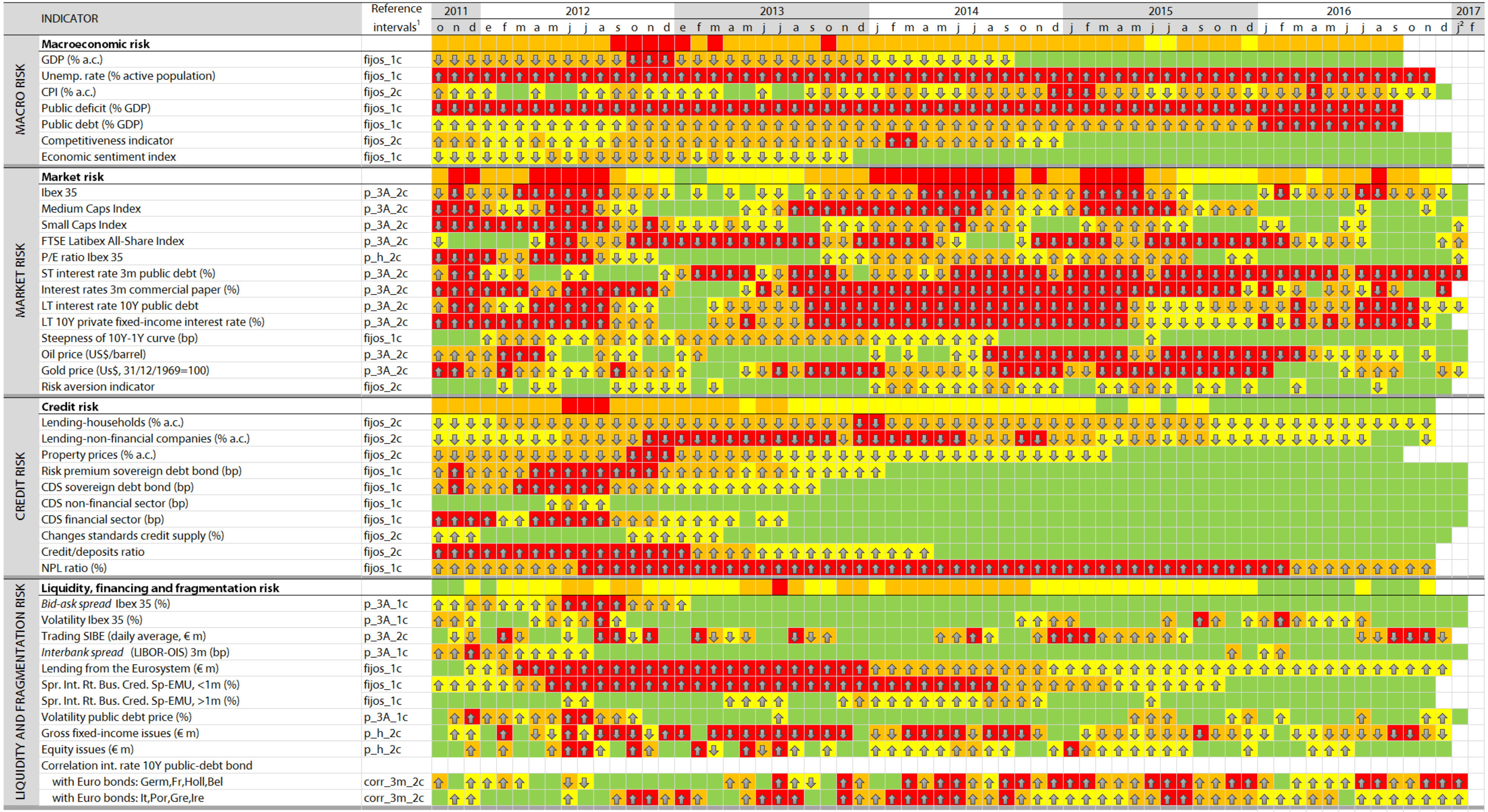


Figure 30: Correlations between yields on the Spanish and other European 10Y bonds



Heat map: risk categories



(1) Reference intervals could be: (i) "fijos": predetermined numerical tresholds, one (1c) or two-tailed (2c); (ii) "corr_3m": 3 months windows correlation coefficients; (iii) "p_3A": percentiles obtained from 3 past years distribution, one (1c) or two-tailed (2c) or (iv) "p_h": percentiles obtained from historical distribution. (2) Data until january 20th. Source: CNMV and Thomson Datastream.

Explanatory notes

Spanish financial markets stress indicator (figure 1): The stress indicator provides a real-time measure of systemic risk to the Spanish financial system in a range between zero and one. It works by evaluating the level of stress in six segments of the financial system (equities, fixed income, financial intermediaries, money markets, derivatives and the forex market) and aggregates the results into a single figure. Stress in each segment is gauged using cumulative distribution functions and the subsequent aggregation is adjusted to allow for cross-segment correlations, so that the gives greater weight to stress situations where correlations are high. The stress variables used for each segment (three in each) are typically volatilities, risk premiums, liquidity indicators and sharp falls in value. These accurately represent the characteristics of market stress. Economometric estimates suggest that indicator values below 0.27 correspond to periods of low stress in the financial system, while values between 0.27 and 0.49 correspond to intermediate stress periods and anything above 0.49 indicates high stress. The methodology used follows that proposed in Holló, Kremer and Lo Duca's 2012 study of a similar indicator for the euro zone. For further information see inset 1.1 in the CNMV 2014 Annual Report and CNMV Working Paper No. 60 "*A Spanish Financial Market Stress Index (FMSI)*". http://www.cnmv.es/portal/Publicaciones/monografias.aspx

Heat map: Summary by market and risk category (figure 2 and final appendix). The heat maps included in this report show the monthly change in the indicators most relevant to the Spanish financial system over recent years. They contain information on Spain's securities markets, banking sector and some macro-economic indicators. The purpose of such maps is to show where the indicators are compared to their recent history (usually the last three years) or with respect to pre-set limits. This is represented by different colours. The change in an indicator from green to hotter colours (orange or red) does not necessarily indicate a risk, but rather a movement toward an extreme value (very high or very low) for the period measured or relative to the benchmark range of values. If an indicator remains at an extreme value for a prolonged period it may suggest more detailed analysis is needed, i.e. it can be taken as a warning sign. The bigger heat map (see page 13) includes 42 indicators of which five are calculated by the CNMV. The multitude of indicators included makes it possible to analyse vulnerabilities by each segment of the financial markets (equities, fixed income, banking, etc.) or risk category (macro, market, liquidity, credit, etc.) as shown in figure 2. For further details on the methodology and analysis of these maps see the article "Identification of vulnerabilities in the Spanish financial system: an application of heat maps", in the CNMV Quarterly Bulletin for Q1 2015.

Contagion risk: The indicators making up this block are somewhat more complex: We explain the most important indicators below:

- Correlation between asset classes (figure 29). Correlations between the asset pairs are calculated using daily data in three-month windows. The asset classes considered are six: sovereign debt, financial and non-financial corporate debt and the stock prices of financial firms, utilities and the other sectors in the Ibex 35. A high correlation between the various Spanish asset classes would suggest possible gregarious behaviour by investors. This could tend to increase volatility during periods of stress. It would also mean reduced benefits from diversification as, in these circumstances, it would be harder to escape exposure to sources of systemic risk.

- Correlation of yields on the Spanish bond and other European 10Y bonds (figure 30). The correlation is calculated using daily data in three-month windows. Core countries are Germany, France, the Netherlands and Belgium. Peripheral countries are Portugal, Italy, Greece and Ireland.