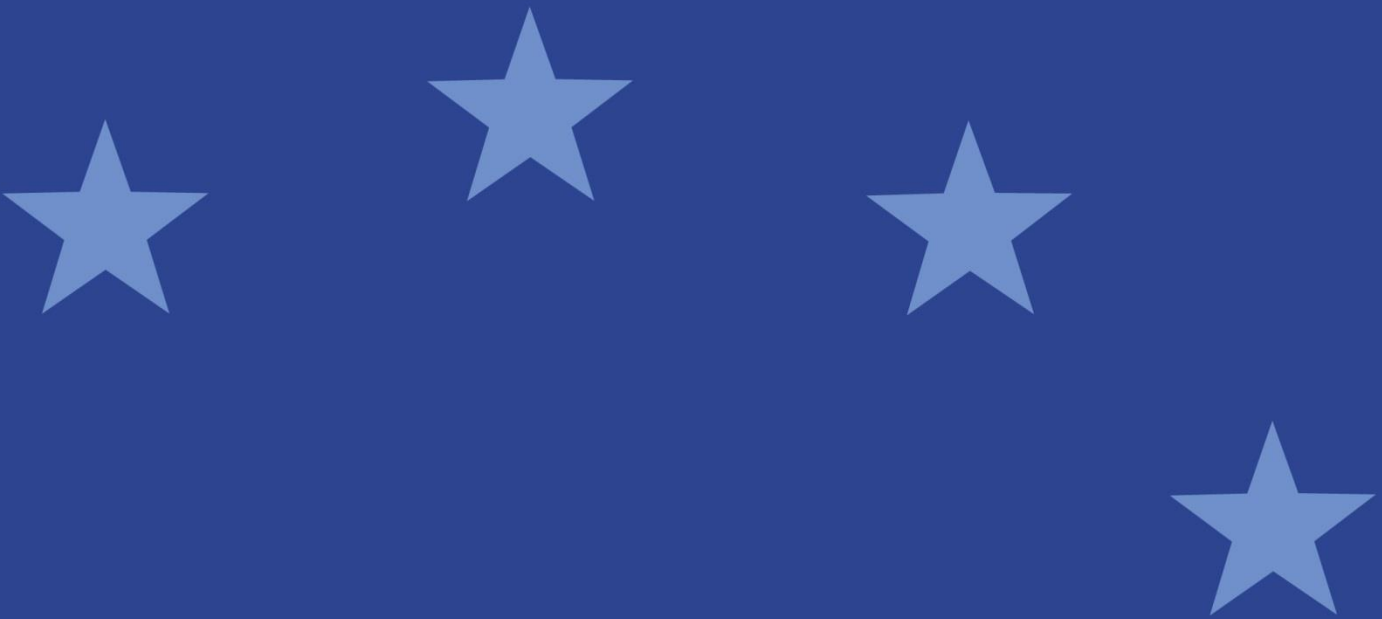




European Securities and
Markets Authority

ESMA Risk Dashboard

No. 3, 2016



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No. 3, 2016

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ESMA Risk Dashboard

R.1

Main risks

Risk segments	Risk	Risk categories	Risk	Change	Outlook	Risk sources	Change
Overall ESMA remit	Orange	Liquidity	Orange	→	↗	Macroeconomic environment	↗
Systemic stress	Yellow	Market	Red	→	↗	Low interest rate environment	→
Securities markets	Red	Contagion	Orange	→	↗	EU sovereign debt markets	→
Investors	Yellow	Credit	Red	→	→	Market functioning	→
Infrastructures and services	Yellow	Operational	Yellow	→	→	Political and event risks	↗

Note: Assessment of main risks by risk segments for markets under ESMA remit since last assessment, and outlook for forthcoming quarter. Assessment of main risks by risk categories and sources for markets under ESMA remit since last assessment, and outlook for forthcoming quarter. Risk assessment based on categorisation of the ESA Joint Committee. Colours indicate current risk intensity. Coding: green=potential risk, yellow=elevated risk, orange=high risk, red=very high risk. Upward arrows indicate an increase in risk intensities, downward arrows a decrease, horizontal arrows no change. Change is measured with respect to the previous quarter; the outlook refers to the forthcoming quarter. ESMA risk assessment based on quantitative indicators and analyst judgement.

After stabilising during 2Q16, markets reacted strongly to the outcome of the UK EU referendum, reflecting high economic and political uncertainty. While overall risk levels prevail for the time being, characterised by very high market and credit risks, the outlook for the markets in ESMA's remit has deteriorated, as reflected in our Risk Dashboard update of 13 July 2016. Market, liquidity, and contagion risks may rise going forward, as political and event risks have intensified, and the macroeconomic environment may deteriorate. Persistence of the low interest rate environment has sustained concerns related to excessive risk taking, especially in an environment characterised by correlated asset price movements and sudden changes in market confidence. Uncertain growth prospects and the fiscal situation in the Member States remain important drivers of market sentiment.

Risk summary

While overall risk levels prevailed and remained high in 2Q16, the outlook for the markets in ESMA's remit has deteriorated following the outcome of the UK referendum on EU membership, as reflected in our Risk Dashboard update of 13 July 2016¹. In the wake of the referendum, severe market movements occurred, especially in equity, bond, and currency markets. Market, liquidity, and contagion risks may rise going forward, as political and event risks have intensified, and the macroeconomic environment may deteriorate. As political developments post-referendum unfold, market turbulences may continue to occur. Business strategies and market structures may adjust to the new political realities in the months and years to come. Generally, recurrent swings in valuations and high volatilities continued to signal sustained risk sensitiveness and scope for sudden risk repricing or rising market imbalances.

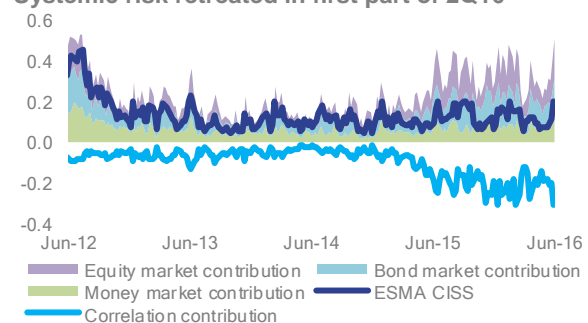
Systemic stress had declined in the first part of 2Q16, driven by improvements in both equity and bond markets, with valuations reinforced by supportive EA monetary policy. This explained

most of the reduction in the composite indicator of systemic stress (R.2). Despite this, key risk sources remained, including the weak and uneven economic development in the EU, slow implementation of national structural reforms, and uncertainty related to the political developments around the outcome of the UK EU referendum.

R.2

ESMA composite systemic stress indicator

Systemic risk retreated in first part of 2Q16



Note: ESMA version of the ECB-CISS indicator measuring systemic stress in securities markets. It focuses on three financial market segments: equity, bond and money markets, aggregated through standard portfolio theory. It is based on securities market indicators such as volatilities and risk spreads.

Sources: ECB, ESMA.

¹ https://www.esma.europa.eu/sites/default/files/library/2016-1096_risk_dashboard_

Risk sources

Macroeconomic environment: Even though signs of improved economic growth, fuelled by consumption and a pick-up in investments, were observed for the EU in 2Q16, economic activity overall remained weak and the outlook uncertain. This was related to both EU-internal and external financial and economic developments.² Still-uneven growth and structural reform implementation across EU countries, low inflation, and internal EU developments were the major source of concern. Following the UK EU referendum, lower asset prices, high volatility and delayed issuance deals will likely weigh on the medium-term economic outlook, while the long-term outlook will depend on political developments and the outcome of the negotiations with the UK.

Low-interest rate environment: Risks stemming from the low-interest rate environment persisted as monetary policy in the Euro Area remained accommodative. The ECB in April provided details on the outright purchases of investment-grade EUR-denominated bonds issued by non-bank corporations established in the Euro Area, starting in June 2016. Both sovereign and corporate bond spreads decreased in 2Q16 (R.12), while HY issuance picked up considerably. Sustained search-for-yield strategies thus remained a source of concern, as in an environment of high risk sensitiveness and rapid changes in market confidence vulnerabilities related to risk re-assessment and repricing can be substantial and can materialise even in the absence of a rise in interest rates. This was mirrored in the sudden decline in investor appetite for riskier assets observed following the UK referendum, with outflows from funds focused on riskier assets and increased demand for sovereign bonds. Moreover, additional strains may follow in the medium term with potential increases in risk premia and substantial reversals in capital flows across EU markets.

EU sovereign debt markets: Overall, the demand for EU sovereign bonds remained high and risk premia subdued amid low interest rates and supportive monetary policy. This was reinforced by the tendency of a flight to safety, especially after the UK EU referendum.

Market functioning: No significant disruptions in EU market functioning were observed in 2Q16.

Results for the ESMA EU-wide CCP stress tests were published. The system of EU CCPs proved resilient to counterparty risk under the scenarios used to model extreme and plausible market developments.³ No relevant events affecting the operations of EU trading venues were observed, even after the UK referendum when large trading volumes were recorded. Noteworthy in terms of the importance of exercising effective surveillance is the successful conclusion of a high-profile insider dealing case in the UK. Regarding market efficiency, it is worth mentioning plans within the bank payment systems network to increase information sharing in order to more effectively act against cyber-attacks.

Political and event risk: The UK EU referendum vote created substantial uncertainty regarding the future economic outlook and EU institutional arrangements, with key aspects to be negotiated over the coming months, and possibly years. Focus on the news flow and announcements may result in intensified political and event risk, contributing to uncertainty and greater asset price volatility in EU markets. Further risks in this group include political and geo-strategic challenges at the EU perimeter and at international level.

Risk categories

Market risk – very high: Market risk remained very high. Indeed, the risk outlook increased as a consequence of the UK referendum outcome. Valuations improved at the beginning of 2Q16, and implied volatilities receded, with 1M VSTOXX averaging around 25% in 2Q16, 5 percentage points lower than 1Q16 (R.7). Improving market conditions were also observed for other asset classes. On average, spreads for BBB and AAA-rated corporate bonds in 2Q16 declined by 26% and more than 45% respectively compared to 1Q16 (R.12). Most of the improvements reversed following the UK EU referendum vote. Equity price volatility increased up to 35% on 24 June, while market turnover multiplied. The 1M VSTOXX hit a 40% peak, above February 2016 (R.7). The GBP lost 10% to the EUR, 13% to the USD, and 17% to the JPY, reflecting an increase in short-term implied volatility contracts in foreign exchange markets ahead of the referendum (R.6). The EUR has also been impacted, losing 3% to the USD, and 8% to the JPY.

² European Commission (2016), "European Economic Forecasts, Spring 2016", Institutional Paper 025.

³ ESMA (2016), "EU-wide CCP Stress Test Report 2015".

Liquidity risk – high: Liquidity risk maintained a high level, yet with an increased outlook. Liquidity pressures eased in 2Q16, but increased again in June in relation to higher stock market volatility triggered by the UK referendum results (R.4). In fixed income markets liquidity conditions ameliorated (R.9, R.13), with reduced volatilities and improved market confidence linked to continued monetary policy support and better economic conditions in the EU. However, uncertainty surrounding market liquidity and the potential for sudden liquidity evaporation remained. Even if market conditions were relatively calmer in 2Q16, risks of a sudden change in market confidence and liquidity deterioration lingered. The UK's decision to leave the EU heightened financial stability risks, especially in an environment of high interconnectedness across financial market sectors leading to the simultaneous unwinding of positions and exacerbating market stress. Following the UK vote, increased outflows have precipitated the suspension of redemptions in a number of open-ended funds holding UK commercial property. This has highlighted the potential vulnerability of funds that offer daily redemptions while investing in illiquid assets.

Signs of increased stress were also observed in the sovereign debt market with an increase in the dispersion of repo specialness (R.11) at the end of 2Q16.

Contagion risk – high: Contagion risk remained high, but with an increased outlook as a result of the potential implications and perceived impact of the UK referendum on other EU countries. Sovereign bond correlations decreased in 2Q16 and dispersion increased (R.16). These developments were probably due to more prudent valuations for peripheral countries amid growing uncertainty over structural developments and debt sustainability. Concerns remained regarding the increasing interconnectedness of the asset management sector with the banking and insurance sectors and the potential for spillovers into different financial market segments. In fact, increased correlation in market valuations across different market segments has been observed: periods of stress seemed to affect different asset classes simultaneously

(R.27). Against this background, increased uncertainty may intensify market stress and endanger financial stability.

Credit risk – very high: Credit risk remained at a very high level, with a stable outlook. 2Q16 saw a rise in corporate bond issuance for both IG and HY segments. The growth in HY issuance was around 150% in 2Q16 compared to 1Q16 (R.20). This was also mirrored in fund flow movements: Inflows for bond funds, especially those focused on the EU and the US, increased significantly in 2Q16 (R.25). The above developments probably reflected a combination of the new ECB monetary policy measures, including the outright purchases of investment-grade, euro-denominated bonds issued by non-bank corporations, and sustained search-for-yield strategies. Underlying risks remained, with further deterioration in credit quality (R.14) and corporate bond spreads higher than a year ago, albeit decreasing (R.12). In the UK, this was also reflected in its sovereign credit rating downgrade after the referendum. In the second half of the quarter, outflows from EU funds invested in equities were observed. Uncertainty about economic growth and the consequences stemming from the UK decision likely contributed to this development.

Operational risk – elevated: Results from the ESMA EU-wide CCP stress test, published on 29 April 2016, showed that:

- prefunded CCPs' resources were sufficient for CCPs to withstand default by the top two EU-wide clearing member groups under historical and hypothetical market stress shocks;
- under more severe scenarios, CCPs faced small amounts of total (i.e. across all CCPs) residual uncovered losses varying from EUR 0.1bn up to EUR 4bn.⁴

On the day after the UK referendum EU trading venues and other market infrastructures were resilient, despite multiplied trading volumes and high volatility. A substantial number of circuit breakers were triggered on EU trading venues under these market conditions. However, no trading disruptions were observed, nor any operational issues on EU trading venues and other market infrastructures.

⁴ That is the case in particular for scenarios assuming default of the top two CMs per CCP where a CM defaulting in one CCP would also be considered to be in

default in all CCPs, leading to more than 25 CM defaulting EU-wide.

Securities markets

R.3

Risk summary

Risk level

Risk change from 1Q16

Outlook for 3Q16



Risk drivers

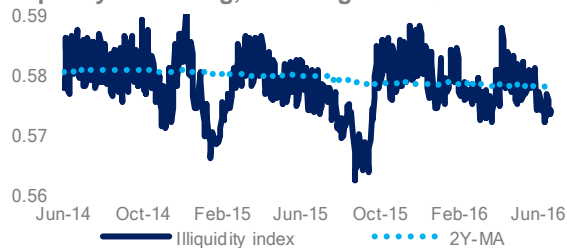
- Asset revaluation and risk reassessment.
- Low-interest-rate environment and excessive risk taking.
- Low inflation and uneven EU growth.
- Political and event risks.

Note: Assessment of main risk categories for markets under ESMA remit since past quarter, and outlook for current quarter. Systemic risk assessment based on categorisation of the ESA Joint Committee. Colours indicate current risk intensity. Coding: green=potential risk, yellow=elevated risk, orange=high risk, red=very high risk. Upward arrows indicate a risk increase, downward arrows a risk decrease. ESMA risk assessment based on quantitative indicators and analyst judgement.

R.4

Equity illiquidity

Liquidity oscillating, declining end-2Q16

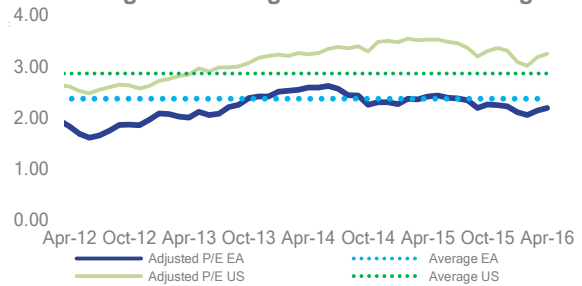


Note: Composite indicator of liquidity in the equity market for the current Eurostoxx 200 constituents, computed by applying the principal component methodology to six input liquidity measures (Amihud illiquidity coefficient, bid-ask spread, Hui-Heubel ratio, turnover value, inverse turnover ratio, MEC). The indicator range is between 0 (higher liquidity) and 1 (lower liquidity). Sources: Thomson Reuters Datastream, ESMA.

R.5

Equity valuation

Below long-term average in EU but increasing

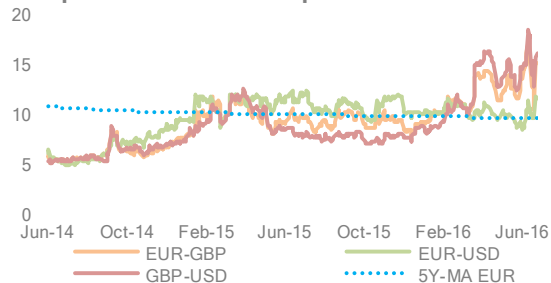


Note: Monthly earnings adjusted for trends and cyclical factors via Kalman filter methodology based on OECD leading indicators; units of standard deviation; averages computed from 8Y. Data available until the end of April 2016. Sources: Thomson Reuters Datastream, ESMA.

R.6

Exchange rate volatilities

Sharp increase in GBP implied volatilities

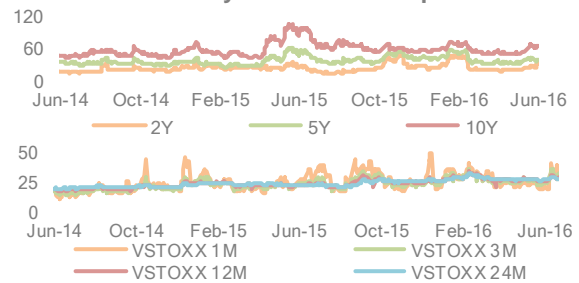


Note: Implied volatilities for 3M options on exchange rates. 5Y-MA EUR is the five-year moving average of the implied volatility for 3M options on EUR-USD exchange rate. Sources: Bloomberg, ESMA.

R.7

Financial instruments volatilities

Short-term volatility increases for equities

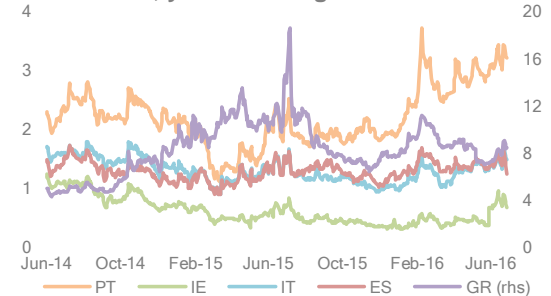


Note: Top panel: implied volatilities on 1M forward ICAP Euro vs. 6M Euroibor swaps based on the Normal volatility model, in bp; low panel: Eurostoxx50 implied volatilities, measured as price indices, in %. Sources: Thomson Reuters Datastream, ESMA.

R.8

Sovereign risk premia

At low levels, yet increasing for some countries

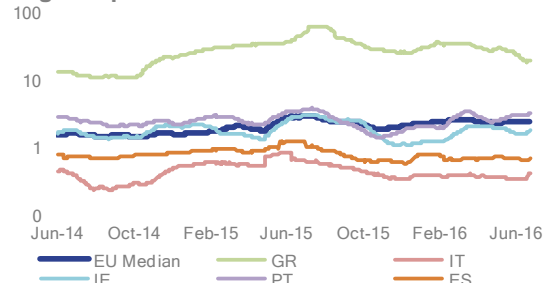


Note: Selected 10Y EA sovereign bond risk premia (vs. DE Bunds), in %. Sources: Thomson Reuters Datastream, ESMA.

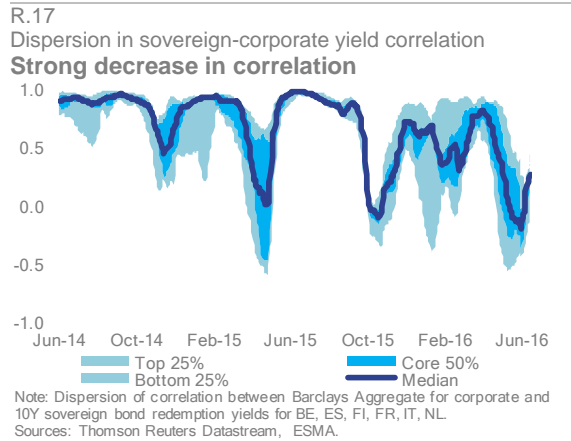
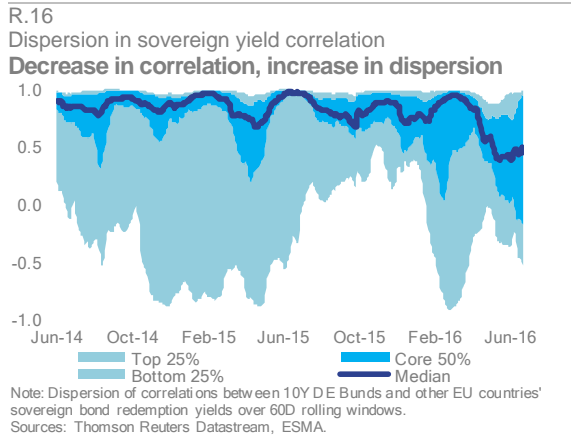
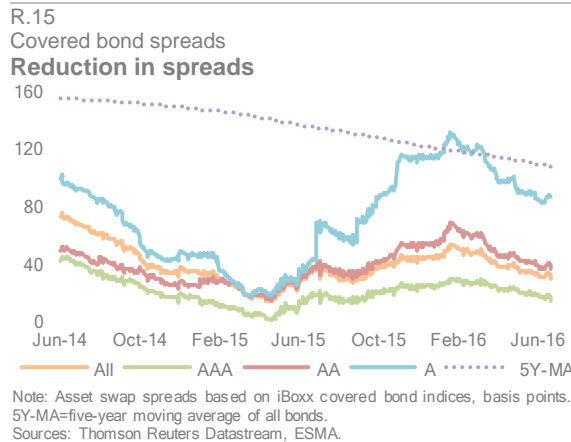
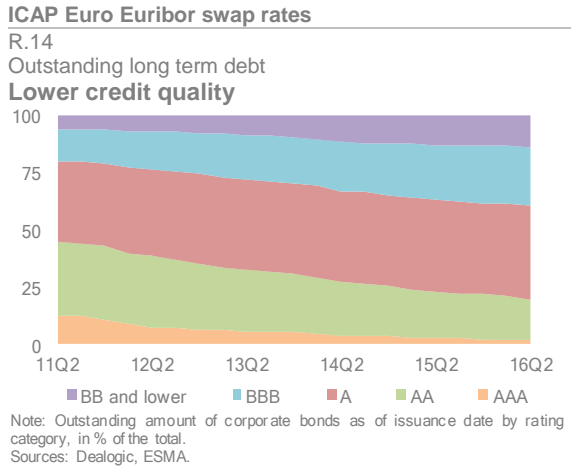
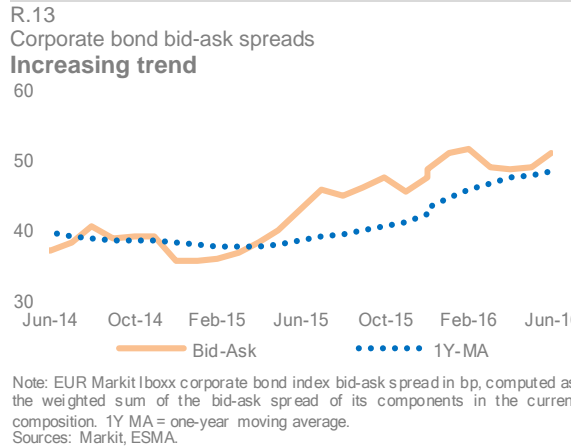
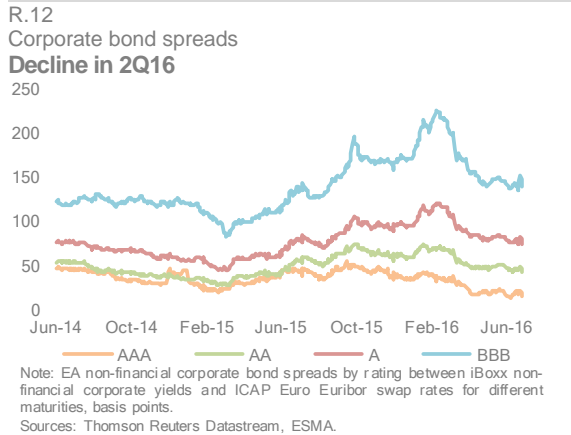
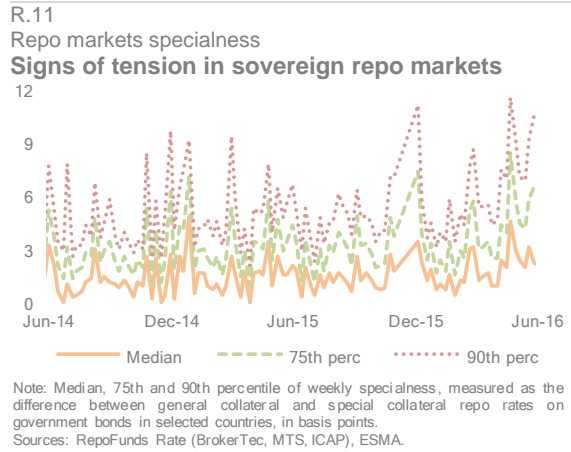
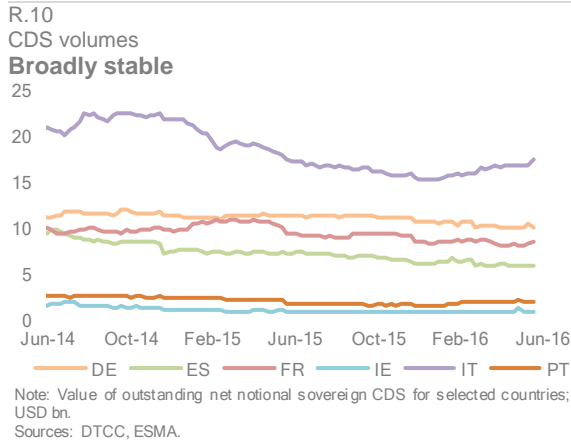
R.9

Sovereign liquidity

Slight improvement in 2Q16



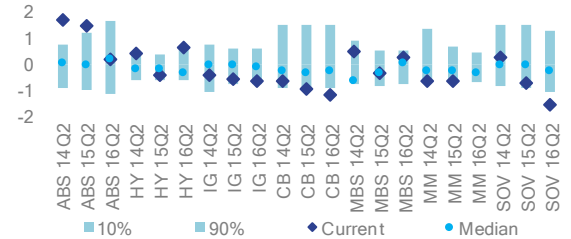
Note: Liquidity measured as difference of ask and bid yields for 10Y sovereign bonds, in basis points. EU Median computed using data for 24 countries. Logarithmic scale. Sources: Bloomberg, ESMA.



R.18

Debt issuance growth

Increased HY debt issuance

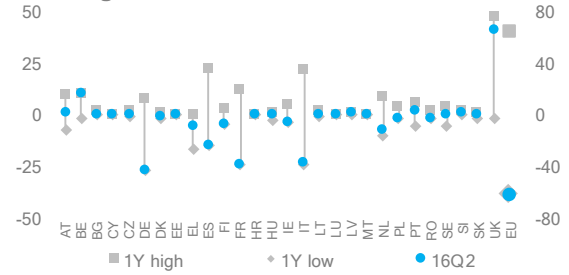


Note: Growth rates of issuance volume, in %, normalised by standard deviation for the following bond classes: asset backed securities (ABS); high-yield (HY); investment grade (IG); covered bonds (CB); mortgage backed securities (MBS); money market (MM); sovereign (SOV). Percentiles computed from 12Q rolling window. All data include securities with a maturity higher than 18M. Bars denote the range of values between the 10th and 90th percentiles. Sources: Dealogic, ESMA.

R.19

Net sovereign debt issuance

Sovereign issuance subdued

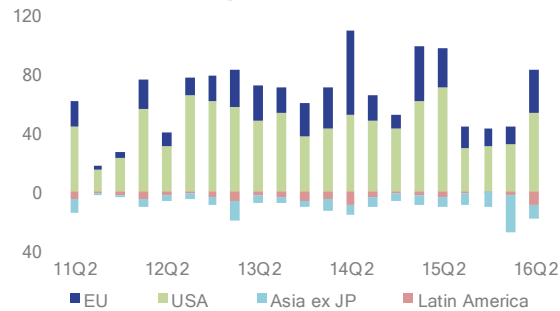


Note: Quarterly net issuance of EU sovereign debt by country, EUR bn. Net issuance calculated as the difference between new issuance over the quarter and outstanding debt maturing over the quarter. Highest and lowest quarterly net issuance in the past year are reported. EU total on right-hand scale. Sources: Dealogic, ESMA.

R.20

HY issuance

Issuance increasing in EU and US

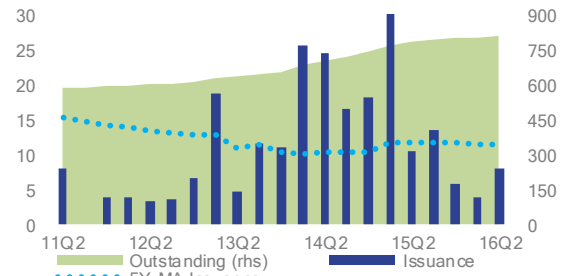


Note: Quarterly data on high-yield corporate bond issuance by region of issuance, EUR bn. Sources: Dealogic, ESMA.

R.21

Hybrid capital issuance and outstanding

Low issuance

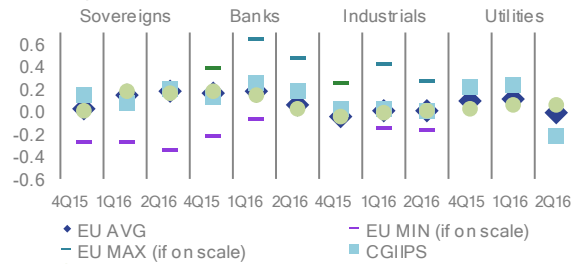


Note: Outstanding amount computed as the cumulated sum of previously issued debt minus the cumulated matured debt prior to reference date. EUR bn. According to Dealogic classification, hybrid capital refers to subordinated debt Tier 1 capital mostly having perpetual maturity. Sources: Dealogic, ESMA.

R.22

Debt maturity

Broadly stable

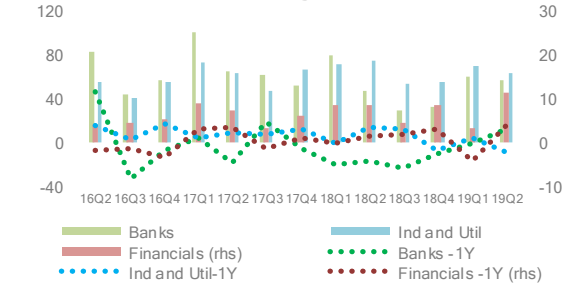


Note: Quarterly change in maturity of outstanding debt by sector and country groups in the EU, years. CGIIPS include CY, GR, IT, IE, PT and ES. Min and Max may not be displayed where they are out of the scale provided in the graph. Sources: Dealogic, ESMA.

R.23

Debt redemption profile

Redemptions decreasing for banks



Note: Quarterly redemptions over a 3Y-horizon by European private corporates (banks, non-bank financials, and industrials and utilities), current and change over last year (dotted lines), EUR bn. Excluding bank redemptions to central banks. Sources: Dealogic, ESMA.

Investors

R.24

Risk summary

Risk level

Risk change from 1Q16

Outlook for 3Q16



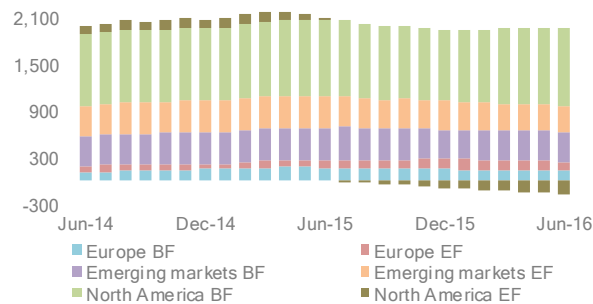
Risk drivers

- Sustained search for yield.
- Correlation in asset prices and increase in redemptions.
- Deterioration in quality of securities in portfolios.
- Uncertainty on economic outlook and political developments in EU.

Note: Assessment of main risk categories for markets under ESMA remit since past quarter, and outlook for current quarter. Systemic risk assessment based on categorisation of the ESA Joint Committee. Colours indicate current risk intensity. Coding: green=potential risk, yellow=elevated risk, orange=high risk, red=very high risk. Upward arrows indicate a risk increase, downward arrows a risk decrease. ESMA risk assessment based on quantitative indicators and analyst judgement.

R.25

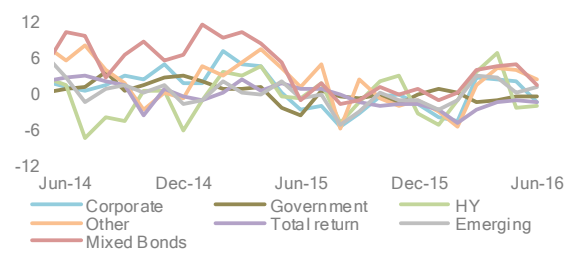
Cumulative investment fund flows Rise in EU and US bond fund flows



Note: Cumulative net flows into bond and equity funds (BF and EF) over time since 2004 by regional investment focus, EUR bn. Sources: Thomson Reuters Lipper, ESMA

R.26

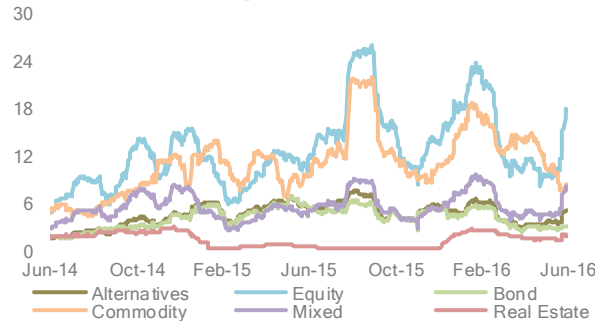
EU bond fund net flows Outflows from riskier strategies



Note: Net flows for bond funds, EUR bn. Funds investing in corporate and government bonds that qualify for another category are only reported once (e.g. funds investing in emerging government bonds will be reported as Emerging; funds investing in HY corporate bonds will be reported as HY). Sources: Thomson Reuters Lipper, ESMA.

R.27

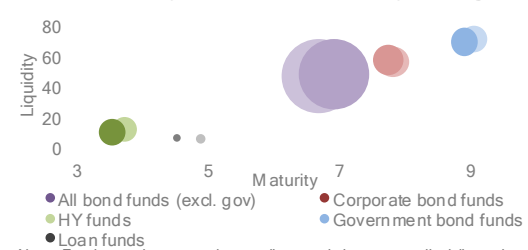
RoR volatilities by fund type Volatilities increasing at the end of 2Q16



Note: Annualised 40D historical return volatility (%) of EU domiciled mutual funds. Sources: Thomson Reuters Lipper, ESMA.

R.28

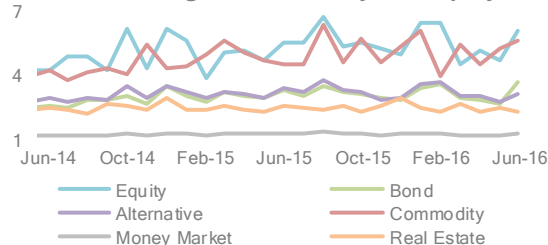
Liquidity risk profile of EU bond funds Stable liquidity and mixed maturity changes



Note: Fund type is reported according to their average liquidity ratio, as a percentage (Y-axis), the effective average maturity of their assets (X-axis) and their size. Each series is reported for 2 years, i.e. 2015 (mid tones) and 2016 (hue). "All bond funds" also include mixed bond funds, convertible bond funds, total return bond funds and other bond funds. Sources: Thomson Reuters Lipper, ESMA.

R.29

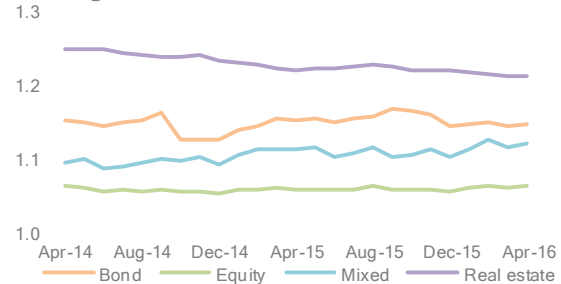
Retail funds synthetic risk and reward indicator Risks increasing for commodity and equity



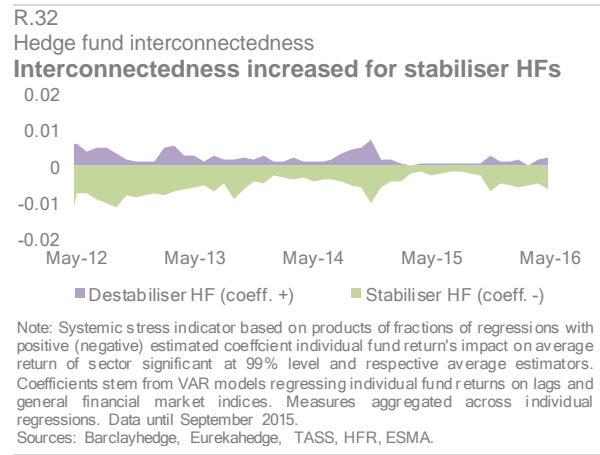
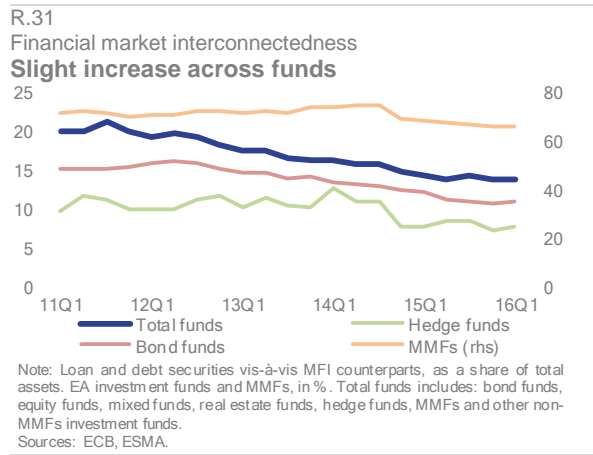
Note: The calculated Synthetic Risk and Reward Indicator is based on ESMA SRRI guidelines. It is computed via a simple 5 year annualised volatility measure which is then translated into categories 1-7 (with 7 representing higher levels of volatility). Sources: Thomson Reuters Lipper, ESMA.

R.30

Leverage by investment fund type Leverage declined for real-estate funds



Note: EA Investment funds' leverage by fund type computed as the AuM/NAV ratio. Data until April 2016. Sources: ECB, ESMA.



Infrastructures and services

R.33

Risk summary

Risk level

Risk change from 1Q16

Outlook for 3Q16



Risk drivers

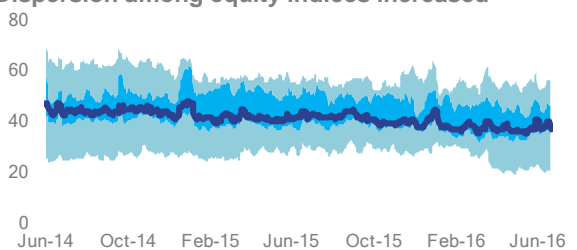
- Operational risks, incl. insufficient technology management, cyber-attacks.
- Conduct risk, incl. intentional or accidental behaviour by individuals, market abuse.
- Systemic relevance of individual operations, incl. market share, complexity of operations, interconnectedness with other infrastructures or financial activities, system substitutability.

Note: Assessment of main risk categories for markets under ESMA remit since past quarter, and outlook for current quarter. Systemic risk assessment based on categorisation of the ESA Joint Committee. Colours indicate current risk intensity. Coding: green=potential risk, yellow=elevated risk, orange=high risk, red=very high risk. Upward arrows indicate a risk increase, downward arrows a risk decrease. ESMA risk assessment based on quantitative indicators and analyst judgement.

R.34

Market concentration

Dispersion among equity indices increased

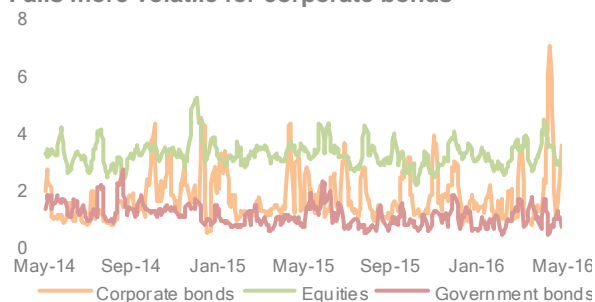


Note: Concentration of notional value of equity trading by national indices computed as a 22D-MA of the Herfindahl-Hirschmann Index, in %. Indices included are FTSE100, CAC40, DAX, FTSE MIB, IBEX35, AEX, OMXS30, BEL20, OMXC20, OMXH25, PSI20, ATX. Sources: BATS, ESMA.

R.35

Settlement fails

Fails more volatile for corporate bonds

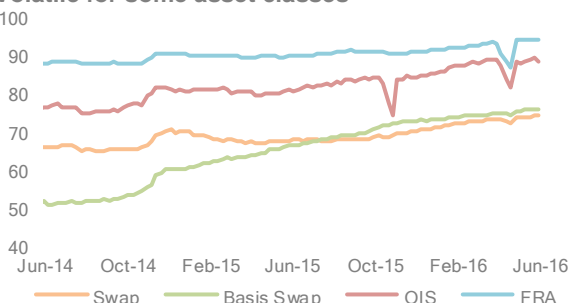


Note: Share of failed settlement instructions in EU; % of value, 5D-MA. Free-of-payment transactions not considered. Data available until May 2016. Sources: National Competent Authorities, ESMA.

R.36

IRS clearing

Volatile for some asset classes

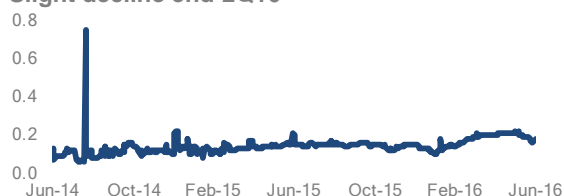


Note: OTC interest rate derivatives cleared by CCPs, in % of total notional amount. Sources: DTCC, ESMA.

R.37

Euribor – Dispersion in contributions

Slight decline end-2Q16

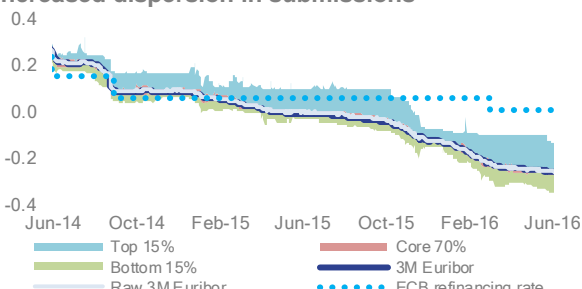


Note: Normalised difference in percentage points between the highest contribution submitted by panel banks and the corresponding Euribor rate. The chart shows the maximum difference across the 8 Euribor tenors. The increase since 2013 is linked to technical factors such as low Euribor rates. The spike in August 2014 is linked to technical factors such as low Euribor rates. The spike in August 2014 reflects the fact that two panel banks submitted respectively a quote for the two-week tenor which was 7 times higher than Euribor and a quote for the 1M tenor which was 10 times higher than Euribor. Sources: European Money Markets Institute, ESMA.

R.38

Euribor – Dispersion of submission levels

Increased dispersion in submissions

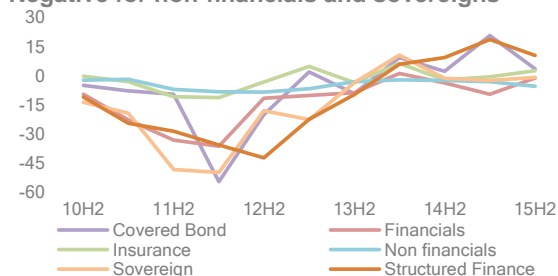


Note: Dispersion of 3M Euribor submissions, in %. The "Raw 3M Euribor" rate is calculated without trimming the top and bottom submissions of the panel for the 3M Euribor. Sources: European Money Markets Institute, ESMA.

R.39

Rating changes

Negative for non-financials and sovereigns



Note: Drift of ratings from all credit rating agencies, excluding CERVED and ICAP, by asset class computed as percentage number of upgrades minus percentage number of downgrades. Sources: CEREP, ESMA.



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