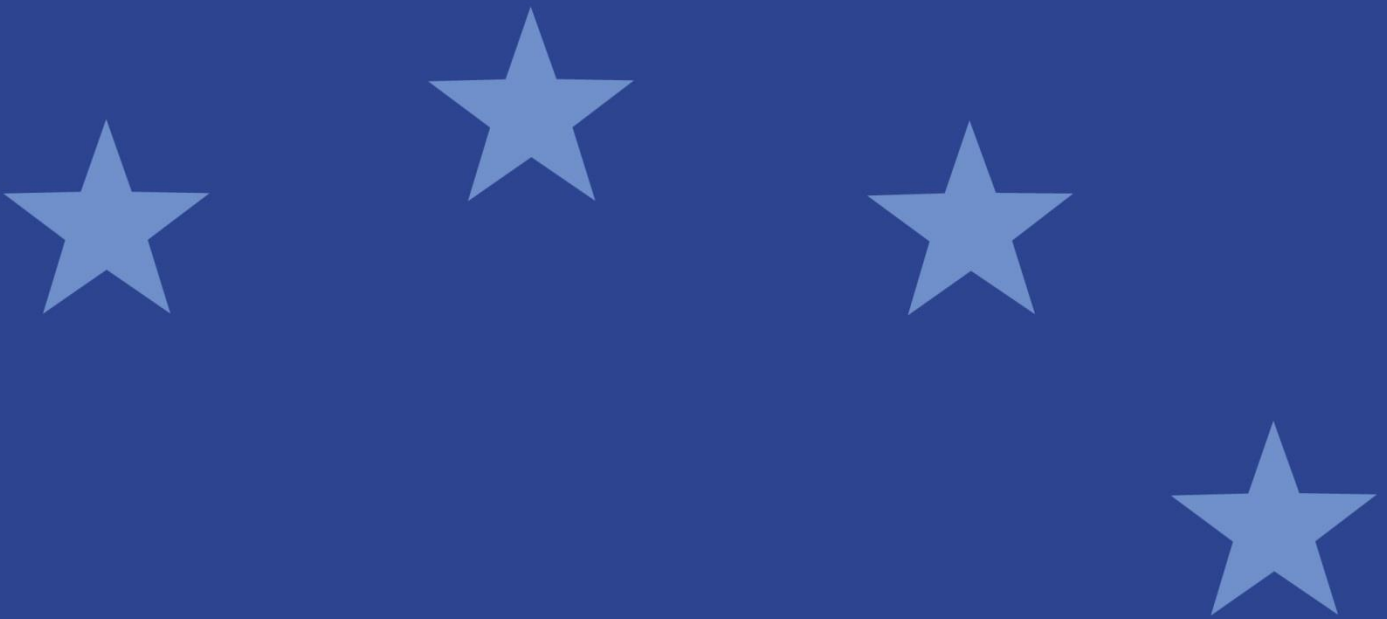




European Securities and  
Markets Authority

# ESMA Risk Dashboard

No. 3, 2015



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# ESMA Risk Dashboard

R.1

## ESMA risk assessment

Business area risks	Risk categories			Risk sources			
	Risk	Risk	Change	Outlook	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	→	→	Funding patterns	↗
Infrastructures and services	Yellow	Operational	Yellow	→	→	Market functioning	→

Note: Assessment of main risks by business areas 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 ESAs 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.

Systemic stress eased in 2Q15 but remained volatile, signalling continued underlying market uncertainty. On the one hand, lower levels of systemic stress may be related to improvements in the EU economic outlook and sustained market confidence in an environment of low oil prices, expansionary monetary policy and weaker exchange rates for euro. On the other hand, concerns surrounding the mispricing of risks, excessive risk taking, deteriorating liquidity, potential amplification of market distortions and risks to financial stability intensified. Underlying drivers were the continued low interest rate environment and still fragile – albeit improved – economic conditions, as well as expectations of monetary policy divergence at an international level and volatile exchange rates.

### Risk summary

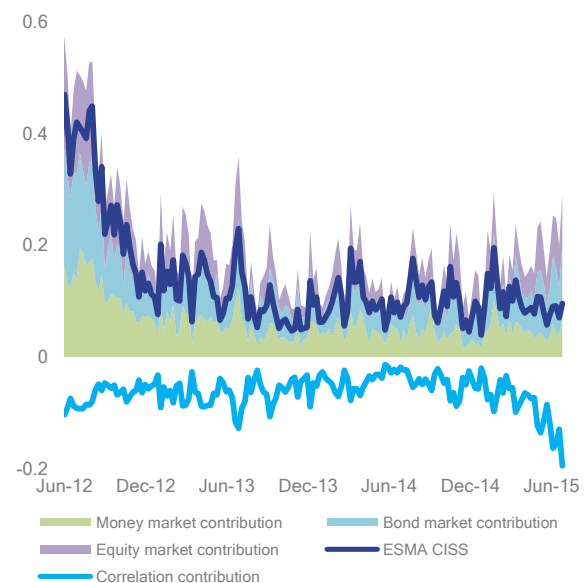
Risk levels in the markets under ESMA remit remain high, reflecting elevated risks for investors, infrastructures and services, and the financial system at large, as well as high risks in the securities markets. The latter corresponds to our assessment of market risks which we currently consider very high, following a sustained build-up in the preceding quarters. Our credit risk assessment remains unchanged at very high levels. While still at a lower level, liquidity risk is likely to intensify further going forward, while contagion and operational risk remain unchanged at high and elevated, respectively. Key risk sources remain: the improved but uneven economic outlook, ultra-low interest rates, the fiscal crisis in the euro area, funding patterns, and potential weaknesses in market functioning.

**Systemic stress** decreased at the beginning of 2Q15, only to tick up again slightly at the end of the quarter (R.2). Bond and money markets were the main drivers of the fluctuations in systemic risk. The commonalities in sub-indices were reflected in an increase in the correlation contribution as well as the total of the different sub-indices. To avoid an overestimation of

systemic stress, the composite index therefore corrects for the observed commonality.

R.2

### Systemic stress indicator Systemic stress lower in aggregate but volatile



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.

## Risk sources

**Macroeconomic environment:** In the EU, macroeconomic conditions improved slightly, probably as a result of the combined effect of additional monetary policy support and still-low oil prices. Growth, however, remained uneven<sup>1</sup> and concerns over recent sovereign debt developments deepened. At a more global level, emerging economies have been hit by both low commodity price dynamics and increasingly volatile exchange rates, with also noticeable effects on capital flows. Overall, concerns relating to vulnerabilities in emerging financial markets intensified. Markets anxiously followed the rapid price decline on China's equity market and subsequent emergency measures implemented by the authorities, but no significant spill-overs were observed in EU markets.

**Low-interest-rate environment:** To counteract deflationary risks and keep the money market liquid, monetary policy measures and low interest rates were maintained in the Euro Area. This contributed to strong market valuations across key parts of the securities markets. For several euro zone countries, sovereign debt traded at negative nominal yields. Indeed, in several countries sovereign bond yields were also negative in real terms, despite the prevailing low inflation environment. Such a situation may have unintentional negative consequences, including excessive risk-taking or capital misallocation. Signs of intensified risk perceptions remained. Market clustering was observed for sovereigns amid significant dispersion in yield correlations, driven by several more vulnerable countries, reflecting market concerns about national developments.

**EU sovereign debt markets:** Renewed concerns surfaced in 2Q15 mounting at the end with regard to the fiscal situation in the euro area and the ensuing political deliberations on Greece. Towards the end of the reporting period the situation worsened, sparking higher securities market volatility but having no extensive price impact. At the end of June, the Greek government closed large parts of its domestic financial system, including bank and market operations. In this context the Hellenic Capital Markets Commission introduced a series of emergency capital market measures including the suspension of trading in all securities, the redemption of units in mutual funds and clearing

and settlement, and including the temporary prohibition of net short positions. While these measures were unprecedented in the EU single financial market in terms of their extent, market reaction to their imposition was limited and no systemically relevant development was observed.

**Funding patterns:** In a context of moderate bank lending, market-based financing has continued to grow. In April and May 2015, IG and HY issuance was EUR 98.3bn and EUR 19bn respectively (EUR 24bn and EUR 10bn more than same period in 2006). Issuance, however, slowed at the very end of 2Q15, probably in response to recent events in the EU. Leverage ratios increased, as did volatilities in returns in several fund segments (R.22). In a market environment of this kind substantial imbalances may arise as the risk of portfolio rebalancing and liquidity risk intensify.

**Market functioning:** Systems resilience remained a key concern as demonstrated by a system outage at one of the most important providers of real-time financial information. Benchmark manipulation continued to be under supervisory focus with new developments related to the enforcement of rules and good conduct. The events associated with the lifting of the CHF/EUR cap at the beginning of the year also had notable repercussions on retail investors, especially with regard to mortgage loan denomination. This raised concerns over the conduct of financial institutions, in particular in terms of transparency and risk disclosure. Moreover, the unprecedented emergency market measures taken in Greece in June 2015 and their subsequent lifting in August 2015 were carefully monitored.<sup>2</sup> The international dimension of trading and the interconnectedness among financial markets makes events like this of crucial interest from a supervisory point of view.

## Risk categories

**Market risk – very high:** We currently consider market risk to be very high, following a sustained build-up in the preceding quarters. The solid EU equity market performance in 2Q15 raised concerns related to excessive asset valuation, as search for yield continued to be sustained by historically low interest rates. Volatility, abated in

<sup>1</sup> EU Commission, European Economic Forecasts, Spring 2015.

<sup>2</sup> Hellenic Capital Market Commission, Announcement 715 and Announcement 716, 29 June 2015; Announcement 719, Announcement 721 and Announcement 722, July 2015; Announcement 725 and Announcement 726, 3 August 2015.

1Q15, increased in 2Q15 especially at the end of the quarter, as markets priced in the uncertainty linked to the sovereign debt developments in the Euro Area. In EU sovereign bond markets, yields remained at low levels. Signs of mounting market concerns, however, surfaced at the end of the quarter as strong fluctuations in valuations were observed in bond markets. Sovereign yields broadly increased both in core countries (e.g. German Bunds) and in more vulnerable economies (R.8). Bond market volatilities fluctuated significantly (R.6). These movements were related partly to higher than expected inflation figures and partly to increasing concerns about low secondary market liquidity and the situation around Greece. Notwithstanding this high market sensitivity, risk appetite persisted. Risk premia for corporate bonds remained low, although they did increase at the end of the quarter. In this scenario, increasing variability in the foreign exchange market deepens concerns over materialisation of the above risks (R.7). Overall, the potential for disorderly unwinding of market imbalances intensified and may continue to do so depending most importantly on monetary policy stances in key economies.

**Liquidity risk – high:** In 2Q15, liquidity pressures remained elevated. The equity illiquidity index fluctuated significantly around the long term average rising at the end of 2Q15 (R.4). Bid-ask spreads for sovereigns remained broadly stable, but increased for more vulnerable countries at the end of 2Q15, probably due to the heightened uncertainty related to recent developments in the Greek situation (R.9). Volatilities fluctuated across markets, particularly in fixed income markets (R.6). In 1H15, thin liquidity and the associated risks were at the centre of debate, both among market participants and regulators. Structural market changes may have modified costs and incentives for market makers in the provision of liquidity services, with market based funding intermediation assuming an increasing role. Such developments are a source of apprehension especially in an environment of sustained flows to riskier investments and increasing leverage among various fund types (R.23). The potential for risk reassessments and portfolio rebalancing remained significant.

**Contagion risk – high:** Signs of market clustering were observed (R.12, R.13). Dispersion was high for correlations in sovereign yields, led by some peripheral countries, reflecting heightened concerns around the recent developments in EU sovereign debt markets. For the hedge fund

sector, intra-sector contagion between hedge funds remained low in 2Q15, both for funds balancing the sector's performance trend and for those reinforcing it (R.26). Simultaneously, the sector's performance dispersion increasingly impacted on individual fund performances, presumably mainly because higher exposure to volatility made more funds vulnerable. Looking at the financial system overall, the likelihood increased of systemic effects materialising, especially in the presence of cross-holdings between asset managers and banking institutions. Furthermore, low liquidity can exacerbate run risks for investment funds, especially in the event of liquidity mismatches between the assets invested in and shares issued.

**Credit risk – very high:** Sovereign and corporate debt issuance was limited in 2Q15 with the exception of ABS and MBS (R.14). Signs of higher risk perceptions emerged in the fixed income market, associated with increased uncertainty about debt and fiscal sustainability. Within the fund sector, leverage broadly increased. This created unease, especially in an environment of sustained volatility (R.22) and increasing flows into more risky investments. The heightened risk sensitivity is also mirrored in the high correlation between corporate and sovereign bond yields (R.13).

**Operational risk – elevated:** Operational risk, including technology and conduct risks, is an area of increasing supervisory and regulatory attention. Recent events have again highlighted the importance of safeguarding the efficiency and integrity of market infrastructures and of ensuring correct market practices. At the beginning of 2Q15, several markets were significantly affected by the temporary failure of one major financial market data provider, whose outage had a considerable impact on trading. The lack of information flowing into the market caused palpable delays in trading across market segments. In addition to technical weaknesses, risks from cyber-attacks on financial systems are coming under increasing scrutiny. Besides monitoring and prevention, the strengthening of business continuity is another key concern.<sup>3</sup> In terms of financial benchmarks, the departure of a bank from the Euribor panel in May interrupted the panel stability achieved since issuance of the EBA-ESMA principles and other policy initiatives.

<sup>3</sup> OICV-IOSCO, "IOSCO consults on business continuity plans for trading venues and intermediaries", IOSCO/MR/15/2015, April 2015.

# Securities markets

R.3

## Risk summary

Risk level



Risk change from 1Q15



Outlook for 3Q15



## Risk drivers

- Low-interest-rate environment and high market asset valuations
- Significant market risk sensitiveness
- EU fiscal and political developments, geopolitics
- EM financial market performance, growth

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

### Equity illiquidity fluctuating around long-term average

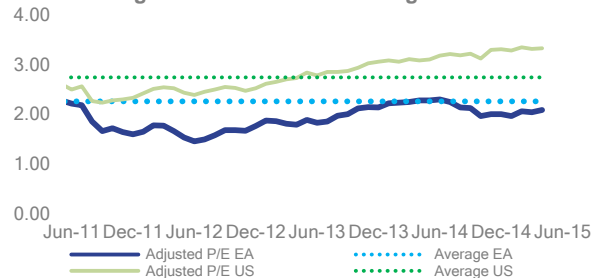


Note: Composite indicator of liquidity in the equity market for the Eurostoxx 50 constituents, computed by applying the principal component methodology to six input liquidity measures (Amihud illiquidity coefficient; bid-ask spread, Hui-Heubel ratio, turnover value, inverse turnover ratio, MEC). The indicator range is between 0 (higher liquidity) and 1 (lower liquidity). Sources: Datastream, ESMA.

R.5

## Equity valuation

### Price-earnings ratio stable or increasing

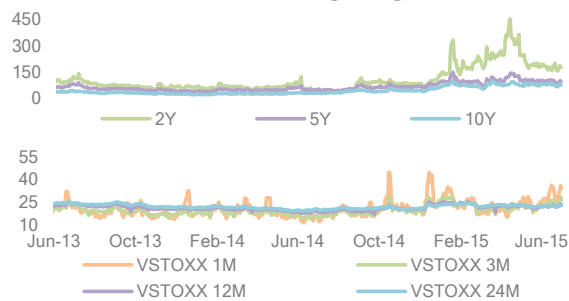


Note: Monthly earnings adjusted for trends and cyclical factors via Kalman filter methodology based on OECD leading indicators; units of standard deviation; averages computed from 8Y. Data available until the end of April 2015. Sources: Thomson Reuters Datastream, ESMA.

R.6

## Financial instruments volatilities

### Short term volatilities fluctuating at high levels

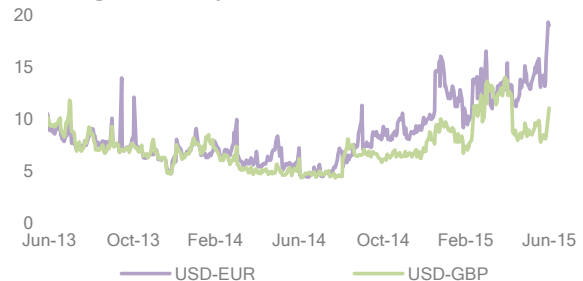


Note: Top panel reports 1M forward Euro-Euribor swaptions implied volatilities; low panel reports Eurostoxx50 implied volatilities measured as indices, %. Sources: Thomson Reuters Datastream, ESMA.

R.7

## Foreign exchange volatilities

### Mounting uncertainty

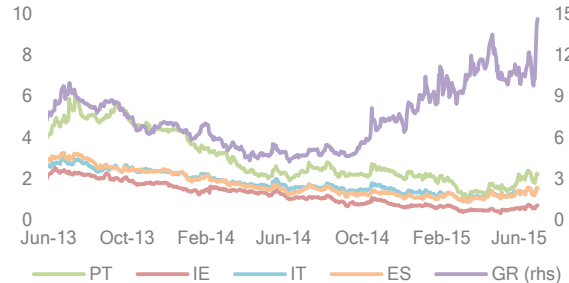


Note: Implied volatilities for continuous options on exchange rates traded in the Chicago Mercantile Exchange. 5Y-MA EUR is the 5 years moving average for the implied volatility for the option on the USD / EUR exchange rate. Sources: Thomson Reuters Datastream, ESMA.

R.8

## Sovereign risk premia

### Increases for vulnerable countries

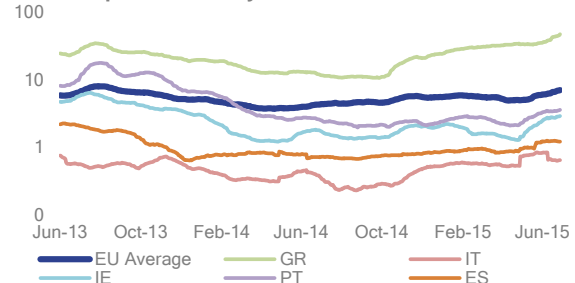


Note: Selected 10Y EA sovereign bond risk premia (vs. DE Bunds); percentage points. Sources: Thomson Reuters Datastream, ESMA.

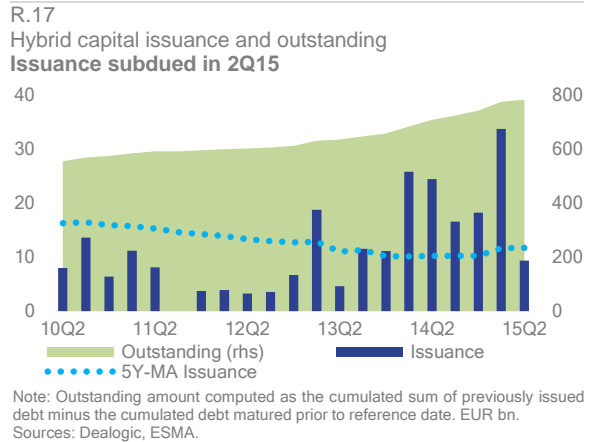
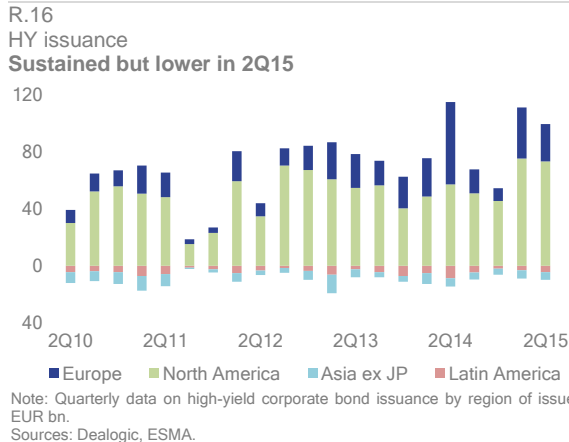
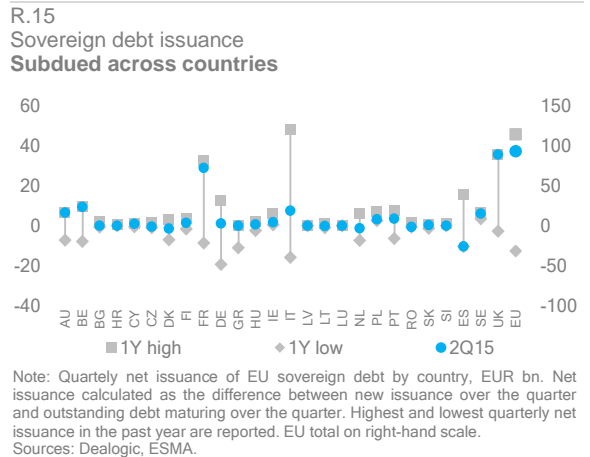
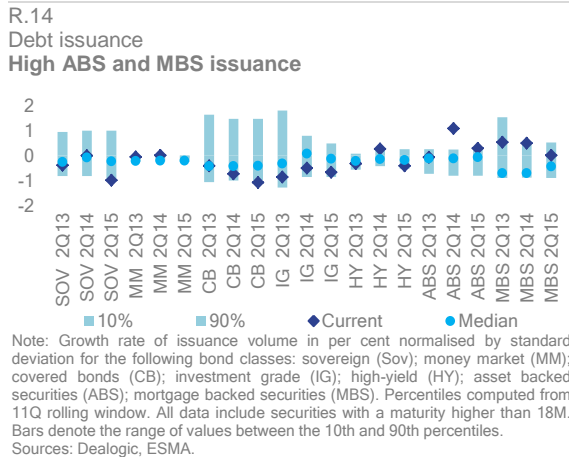
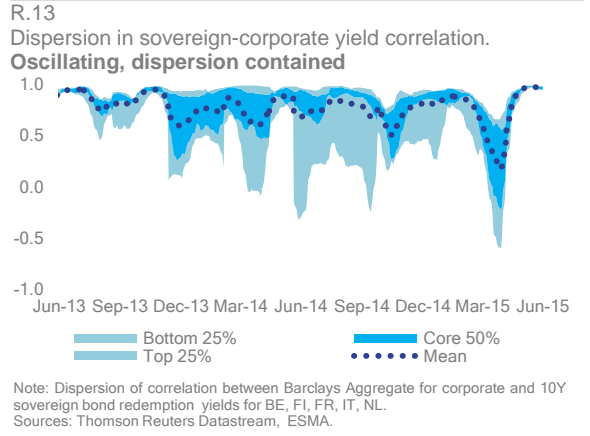
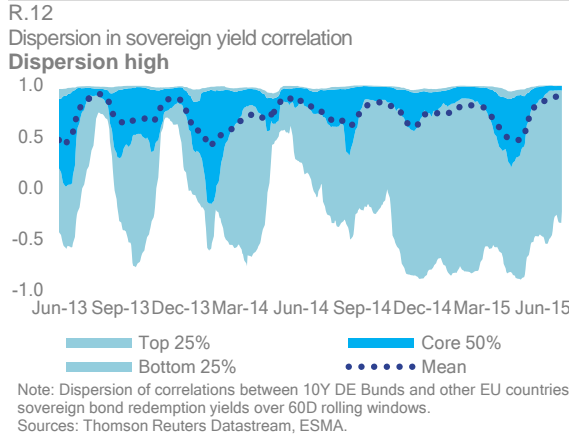
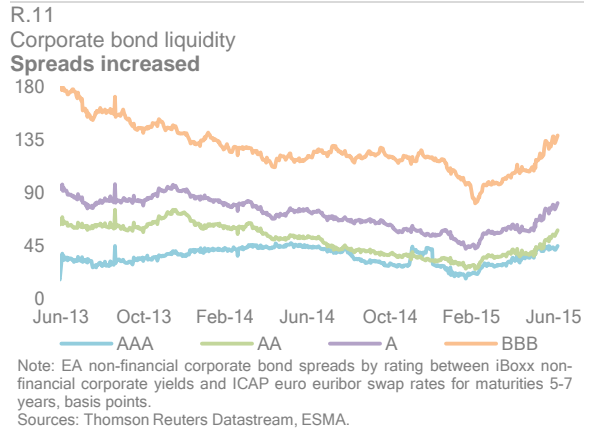
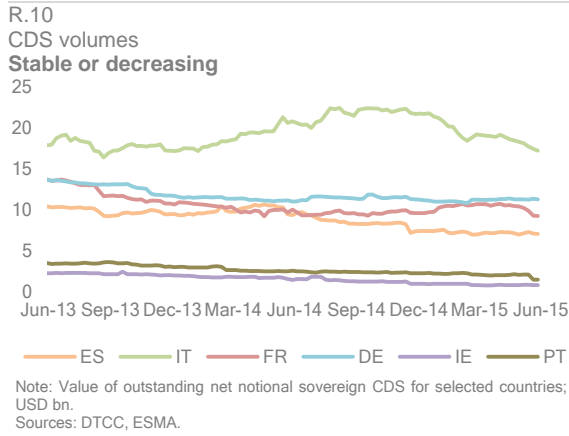
R.9

## Sovereign liquidity

### Bid-ask spreads broadly stable



Note: Liquidity measured as difference of ask and bid yields for 10Y sovereign bonds, in basis points. EU Average computed using data for 22 countries. Logarithmic scale. Sources: Bloomberg, ESMA.

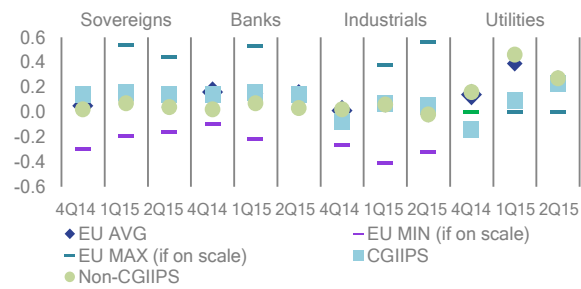




R.18

Debt maturity

Stable or lengthened maturity profiles

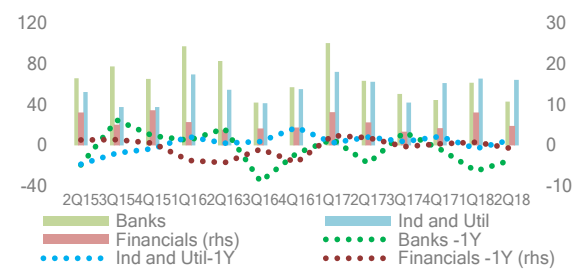


Note: Quarterly change in maturity of outstanding debt by sector and country groups in the EU, years. CGIIPS include CY, GR, IT, IE, PT and ES. Min and Max may not be displayed where they are out of the scale provided in the graph. Sources: Dealogic, ESMA.

R.19

Debt redemption profile

Reduced medium-long term redemption profiles



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.20

## Risk summary

Risk level ●

Risk change from 1Q15 ➔

Outlook for 3Q15 ➔



## Risk drivers

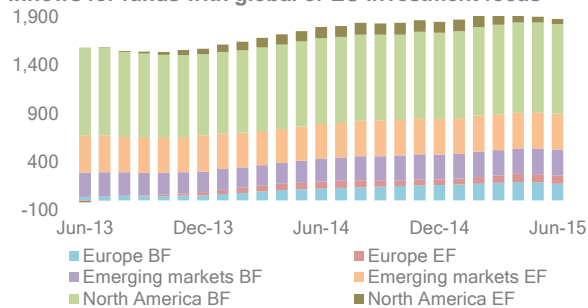
- Elevated risk as role of asset managers in capital markets increases
- Increasing risk outlook as risk aversion is low and search for yield strategies sustained
- Increased leverage and volatilities of returns across fund types

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.21

## Cumulative investment fund flows

### Inflows for funds with global or EU investment focus

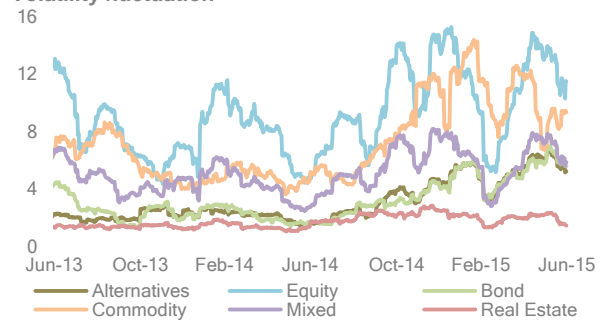


Note: Cumulative net flows into bond and equity funds (BF and EF) over time since 2004 by regional investment focus, EUR bn. Sources: Thomson Reuters Lipper, ESMA

R.22

## RoR volatilities by fund type

### Volatility fluctuation

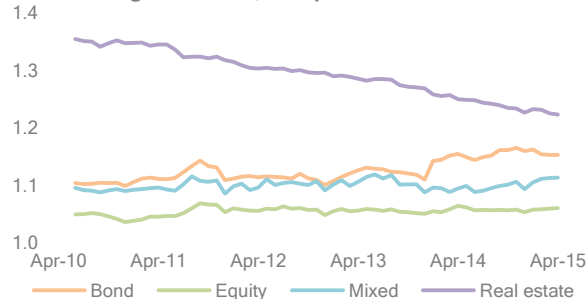


Note: Annualised 40D historical return volatility of EU domiciled mutual funds, %. Sources: Thomson Reuter Lipper, ESMA.

R.23

## Leverage by fund type excluding HFs

### Stable or slight increase, except for real estate

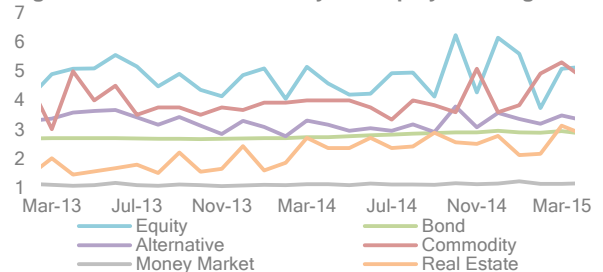


Note: EA Investment funds' leverage by fund type computed as the AuM/NAV ratio. Sources: ECB, ESMA.

R.24

## Retail fund synthetic risk and reward indicator

### Highest risks in the commodity and equity fund segments

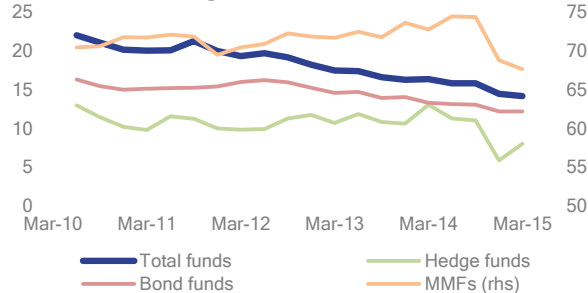


Note: The calculated Synthetic Risk and Reward Indicator is based on ESMA SRRI guidelines. It is computed via a simple 5 year annualised volatility measure which is then translated into categories 1-7 (with 7 representing higher levels of volatility). Sources: Thomson Reuters Lipper, ESMA.

R.25

## Financial market interconnectedness

### Stable or decreasing

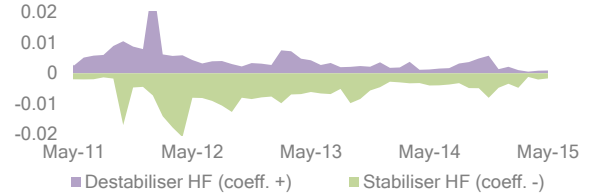


Note: Loan and debt securities vis-à-vis MFI counterparts, as a share of total assets. EA investment funds and MMFs, in %. Sources: ECB, ESMA.

R.26

## Hedge fund interconnectedness

### HF interconnectedness at low levels.



Note: Systemic stress indicator based on products of fractions of regressions with positive (negative) estimated coefficient of individual fund return's impact on average return of sector significant at 99% level and respective average estimators. Coefficients stem from VAR models regressing individual fund returns on lags and general financial markets indices. Measures aggregated across individual regressions. Destabiliser HF (Stabiliser HF) is the fraction of EU hedge funds having a positive (negative) impact on future hedge-fund industry returns. Data until May 2015. Sources: Barclayhedge, Eurekahedge, TASS, HFR, ESMA.

# Infrastructures and services

R.27

## Risk summary

Risk level ●  
 Risk change from 1Q15 ➔  
 Outlook for 3Q15 ➔

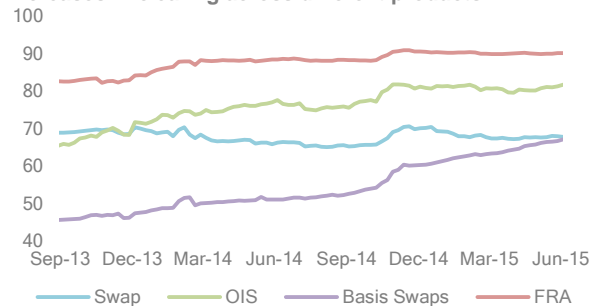
## Risk drivers

- Operational risks, including system outages, interruption of services, cyber-attacks
- Conduct risk, including intentional or accidental behaviour by individuals, market abuse
- Systemic relevance of individual operations, including size, market share, complexity of operations, interconnectedness with other infrastructures or financial activities and entities, substitutability of systems

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.28

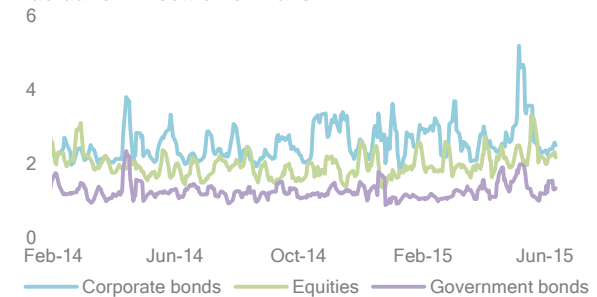
## IRS clearing Increases in clearing across different products



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

R.29

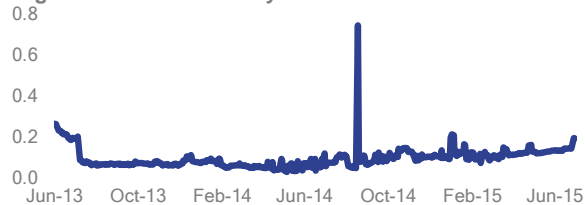
## Settlement fails Fluctuation in settlement fails



Note: Share of failed settlement instructions in EU, % of value, 5D MA. Free-of-payment transactions not considered. Cut-off date 19/06/2015. Sources: National Competent Authorities, ESMA.

R.30

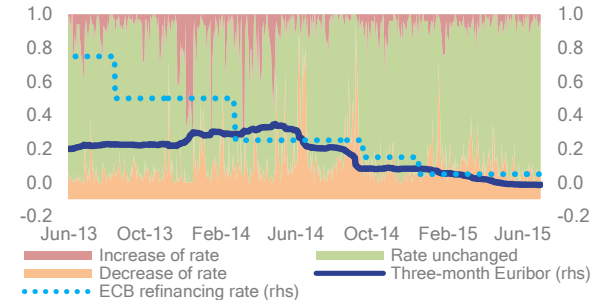
## Euribor contribution: Dispersion Slight increase in volatility



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 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: Euribor-EBF, ESMA.

R.31

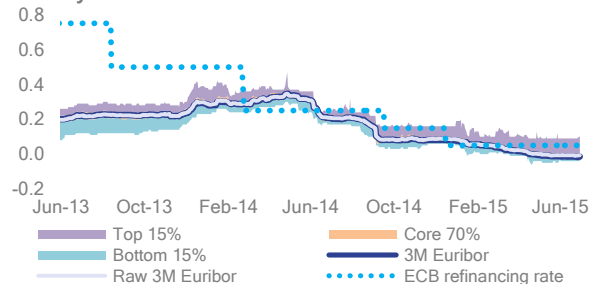
## Euribor – Variation in daily changes Decrease in submission rates



Note: Number of banks changing their three-month Euribor submission from day to day, %. Sources: Euribor-EBF, ESMA.

R.32

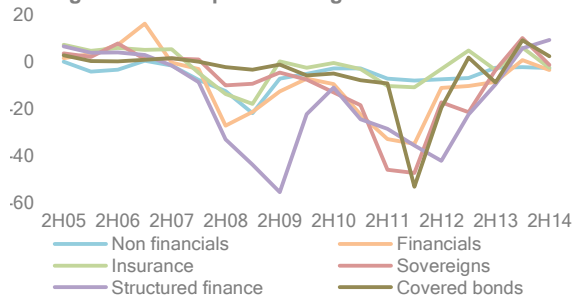
## Dispersion of submission levels Broadly stable



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: Euribor-EBF, ESMA.

R.33

## Rating changes Downgrades for corporate ratings



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



European Securities and  
Markets Authority

