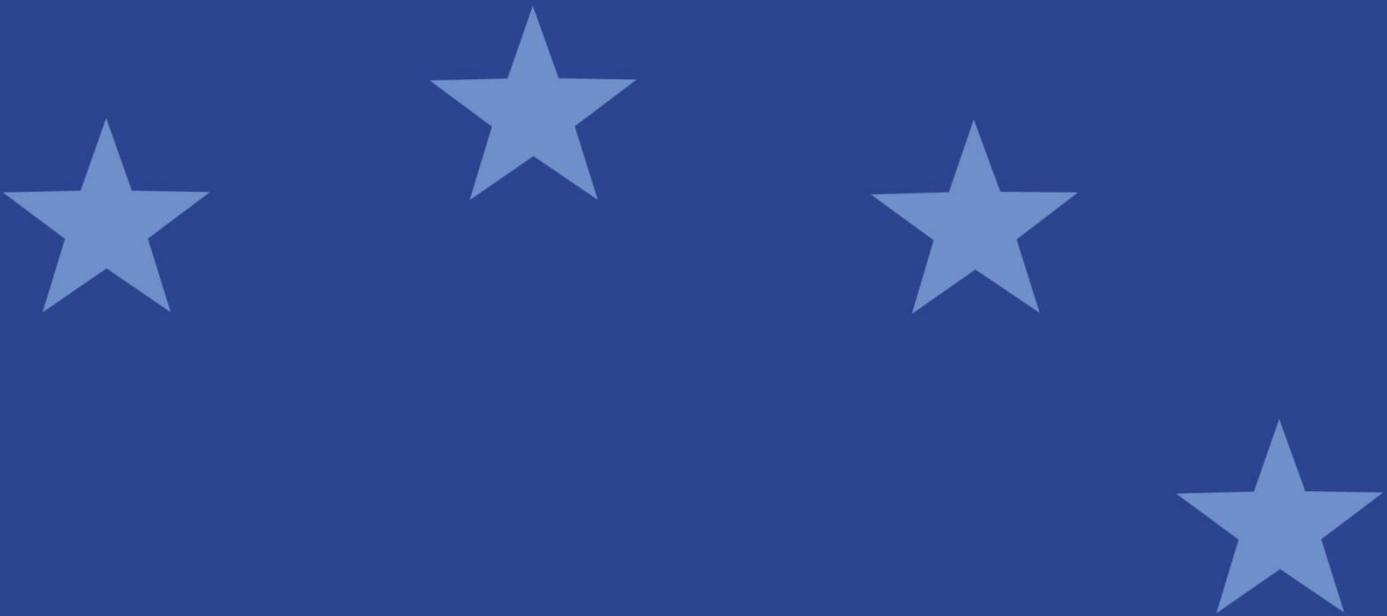




European Securities and  
Markets Authority

# ESMA Risk Dashboard

No. 2, 2019



15 May 2019  
ESMA50-165-822

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ESMA Risk Dashboard  
No. 2, 2019

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# ESMA Risk Dashboard

R.1

## Main risks

Risk segments	Level Outlook		Risk categories		Risk sources	Outlook	
	Level	Outlook	Level	Outlook			
Overall ESMA remit	Orange	→	Liquidity	Orange	→	Macroeconomic environment	↗
Systemic stress	Yellow	→	Market	Red	→	Interest rate environment	→
Securities markets	Red	→	Contagion	Orange	→	EU sovereign debt markets	→
Investors	Yellow	→	Credit	Orange	→	Infrastructure disruptions, incl. cyber risks	→
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.

The risk landscape in 1Q19 remains largely unchanged compared with 4Q18. In 1Q19 EU financial markets were characterised by stock market recovery, combined with higher liquidity in bond markets and low volatility levels. Securities markets remain the key risk area based on a still substantive overvaluation, as the significant correction that occurred at the end of 2018 has been annulled in 1Q19. Asset price movements continue to be correlated and market confidence may be subject to abrupt changes linked to event risk. Investors' long-standing expectations on interest rate rises have been adjusted according to recent announcements by key central banks. Although the 10 April EU Council conclusions around the UK exit from the EU mitigated key no-deal Brexit risks in the short term, uncertainty about the terms of the UK exit from the EU still lingers. Going forward, the subdued growth prospects for the EU and the global economy, global trade tensions, uncertainty surrounding the outcome of Brexit and the fading expectations of monetary policy normalisation continue as the most important drivers of risk in the coming months.

## Risk summary

In 1Q19, risks in the markets under ESMA remit remained at high levels, reflecting very high risk in securities markets and elevated risks for investors, infrastructures and services. Our assessment of the individual risk categories did not change from 4Q18, with market risk remaining very high due to the expectation over a persisting low interest rate environment, subdued economic growth prospects and geopolitical developments, the flattening of yield curves and the risk of renewed build-up of financial asset price overvaluations. The level of credit risk is stable, however deteriorating quality of outstanding corporate debt needs to be monitored, especially regarding the increasing share of BBB-rated bonds. Operational risk was elevated as cyber threats and Brexit-related risks to business operations remain major concerns. Investor risks persist across a range of products, and under the MiFIR product intervention powers ESMA extended the prohibition of Binary Options and the restrictions on the distribution of contracts for differences (CFDs) to retail investors, and released a supportive opinion regarding BaFin's recent ban on short selling for an individual stock. Going forward, EU financial markets can be expected to remain sensitive to ongoing political and economic uncertainty from

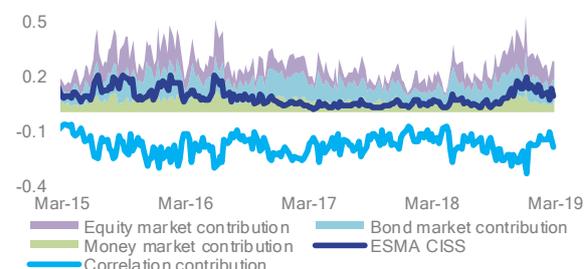
Brexit, but also from other sources, such as global trade discussions and emerging market capital flows.

**Systemic Risk** stood at relatively high levels in 1Q19, with bond markets registering the highest contribution to the systemic stress measure. Risks linked to the macroeconomic environment (GDP) and to political events could bring additional uncertainty to financial markets (Brexit, trade tensions).

R.2

ESMA composite systemic stress indicator

### Systemic stress driven by bonds



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:** Growth in the Euro Area decreased to 0.2% in the second half of 2018 and the latest data suggest that this weak momentum continued in early 2019. The European Commission's growth forecasts for 2019 were revised downward, with EU GDP growth expected at 1.5% (down from 2.1%) in 2019. The global growth outlook outside the EU for this year remains broadly unchanged, at 3.8%.<sup>1</sup> Global trade tensions and the uncertainty surrounding their evolution still pose risks for the global economy and continue to be reflected in market volatility.

**Interest-rate environment:** The pace of quantitative easing tapering has been a key driver of market expectations in the last quarters. The ECB and the US Federal Reserve have now signalled that they would momentarily put interest rate increases on hold. This may have reignited search for yield behaviour by market participants as suggested by recent signs of risk premia recompression on sovereign and corporate bond markets as well as with increasing equity prices. Equity prices have increased by 13% in the EU over 1Q19, while risk premia on corporate bond markets have started to decrease again across the rating spectrum, by 20bps on average (R.15), a potential sign of risk premia compression. Covered bond spreads have experienced parallel developments over the quarter (R.18). The outlook for this risk category is stable due to the potential for a longer-than-anticipated tapering of monetary policy, and the concurrent search-for-yield behaviour. The ongoing global -IBORs reform embeds a spectrum of risks that might impact on the EU financial system. These risks are mainly associated with the long-term sustainability of -IBORs and transition to the new risk-free rates as the euro-denominated ESTER.

**EU sovereign debt markets:** Deteriorating growth prospects are posing a risk to sovereign debt sustainability while leading to a flattening in sovereign yield curves. The yield compression on sovereign bond markets continued in 1Q19, with Germany's benchmark bond yield falling below zero for the first time since 2016. On average, the ten-year sovereign yields decreased by 0.3 percentage points.

**Market functioning:** Market functioning may be impaired by Brexit-related risks, in particular in the case of a disorderly UK exit from the EU. This continues to be a possibility even if the extension of Article 50(3) of the Treaty on the European Union (TEU) until 31 October 2019 has postponed the exit date. Market participants should therefore continue to prepare for all outcomes, including a possible no-deal UK exit and the impact this would have on their activities

and business operations. ESMA has taken a series of measures to mitigate risks related to a no-deal Brexit and avoid a potential negative impact on EU financial stability. In order to limit the risk of disruption ESMA has recognised UK CCPs as third-country CCPs and the UK CSD as a third-country CSD. These recognition decisions would allow continued access to UK CCPs and the UK CSD and would take effect on the date following Brexit, under a no-deal scenario. Beyond Brexit risks, markets operated without major interruptions over the reporting period. The number of circuit breakers triggered in 1Q19 (54 per week on average) was at low levels compared to previous quarters. Cyber threats continue to be a significant source of operational risk. Reflecting the severity of such threats, ESMA has recently, together with the other ESAs, published two pieces of Advice to the European Commission setting out proposals that aim to enhance cyber resilience for financial sector entities. In derivatives markets, ESMA launched the 2019 CCP stress test exercise which will be conducted on an EU-wide basis.

**Political and event risk:** The European Council's decision on 11 April extending Article 50(3) TEU until 31 October 2019 has given more time for the parties to agree on an orderly withdrawal. Notwithstanding the longer time horizon, political discussions in the UK continue and outcomes remain uncertain. At the same time, political tensions in some member states could in the future have repercussions on EU markets, for example on sovereign bonds through the outlook on debt sustainability. Trade tensions may continue to weigh on market expectations.

## Risk categories

**Market risk – very high, outlook stable:** In 1Q19 equity markets started to recover losses reported after stocks had steeply sold off in December 2018, with financials, insurances and non-financials shares rising by up to 13% (R.6). Bank equities underperformance (+6%) was likely driven by the flattening in sovereign yield curves. Market sentiment and volatility were driven by political developments in Europe, together with geo-political events and discussions over international trade agreements. The near-term volatility VSTOXX1M decreased by 50% compared to the levels seen at the end of the 2018. At the end of 1Q19 the Euro-Euribor one-month to ten-year swap peaked as yield curves flattened and then bounced back (R.7). These elements signal that market expectations remain event-driven and investor reactions may give rise to episodes of high volatility. The three-month GBP/EUR implied volatility initially pulled back from all-time high levels reached at the end of

<sup>1</sup> European Commission, Winter (interim) 2019 forecast.

November 2018. However, it then returned to these levels, with temporary increases around Brexit votes. These dynamics highlight the continued risk of volatile price swings amid continued unclarity on Brexit outcomes. The EUR continued trading in a tight range against the USD with realised volatility near historical lows. The rebound in stock markets and the low reactivity in currency markets could reflect muted investor expectations towards more accommodative monetary policies and favourable market liquidity conditions.

**Liquidity risk – high, outlook stable:** In 1Q19 liquidity on equity markets fluctuated around its long-term average levels, with the ESMA composite equity illiquidity indicator deteriorating in February but reverting in March (R.4). EU corporate bond markets registered ameliorated liquidity conditions over the reporting period, with narrowing bid-ask spreads and the Amihud illiquidity indicator signalling a smaller impact of exchanged volumes on prices (R.16). A similar pattern could be observed on sovereign bond markets after the illiquidity spikes experienced in December 2018 (R.10, R.11). Liquidity of sovereign bonds appeared to be driven by higher turnover levels despite bid-ask spreads slightly widening across EU countries at the end of the quarter. The improved market conditions in 1Q19 were reflected in scarcity premia on EU government bond collateral which were almost 30% lower than in the previous quarter (R.14) and average trading volumes in sovereign repos aligned with 2Q18 levels. Volatility of investment fund returns declined across asset classes, with equity and mixed funds registering the sharpest decrease (-50%). EU bond funds reported a reversal of the record high outflows seen in 2H18 when volatility spurred a year-end sell-off. Emerging bond funds nearly recouped the 2018 drawdown following emerging markets debt soaring, seeing a reversal of sentiment from last year as investors search for determinants of future performance. Overall investors remain exposed to a swift repricing of risky assets.

**Contagion risk – high, stable outlook:** With most yields on ten-year benchmark sovereign bonds slightly decreasing and German bund yields turning negative at the end of the quarter, the correlation between German and other EU countries' bond yields remained high. The dynamics of the dispersion levels potentially reflected the slightly lower degree of differentiation between core and peripheral countries Euro Area amid mounting evidence of the economic slowdown and the political uncertainty spurred by Brexit (R.19). Investment fund interconnectedness with more traditional

banking activities, in particular for MMFs and hedge funds, remained at a high level (R.29).

**Credit risk – high, stable outlook:** Coming off a heavily volatile end of the year, credit spread premia on lower-rated investment grade (BBB) non-financial corporate bonds over single-As remained in 1Q19 at the same level observed in 4Q18. However, this spread differential was still twice as high as in 1Q18, when the signs of shifting risk perceptions linked to risk premia reversals emerged (R.15). Lower-than expected new issuance volumes of high yield bond weighed on yields which decreased from December peaks (R.21). In parallel, the credit quality of outstanding corporate bonds, as reflected in CRA ratings, remained on its long-term trend of deterioration (R.17). With around 30% of EU corporate bonds rated BBB, i.e. at the lowest end of investment grade and an important quality threshold for many investors, further downgrades could potentially trigger sell-offs. The growth of leveraged loans (especially Collateralised Loan Obligations) is becoming a concern, as investors are exposed to high-risk assets while investor protection standards have reportedly been diluted, with covenant-lite contracts now dominating the market (reportedly more than 80% of the market). Even though the leveraged loan market in the EU has remained relatively small, with less than EUR 100bn outstanding, post-crisis record new issuance in 2018 warrants enhanced monitoring.

**Operational risk – elevated, stable outlook:** Brexit remains the main driver for operational risk, because of persisting contingency risks in case of a disorderly UK exit from the EU. Policymakers, including ESMA, have worked intensively on policy mitigation measures aiming to maintain well-functioning markets. ESMA recently identified several significant investor-protection and conduct-risk concerns in the EU. Under ESMA's product intervention powers provided in MiFIR, contracts for differences (CFDs) remain subject to restrictions in their marketing, distribution or sale to retail investors, while the offer of Binary Option to retail investors has been completely prohibited. Finally, on 18 February ESMA released a supporting opinion regarding BaFin's two-month emergency ban on net short position in shares of a company listed on the Frankfurt stock exchange. Regarding cyber risks, concerns are expected to intensify in the medium to long term, especially with respect to business continuity and the integrity of proprietary data as financial data breaches are increasingly frequent in comparison to breaches in other sectors (R.43).

# Securities markets

R.3

## Risk summary

Risk level



Risk change from 4Q18



Outlook for 2Q19



## Risk drivers

- Asset revaluation and risk re-assessment
- Low interest rate environment and excessing risk taking
- Political risk
- Geopolitical and event risks, esp. Brexit

Note: Assessment of main risk categories for markets under ESMA remit since past quarter, and outlook for forthcoming 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 judgment.

R.4

## ESMA composite equity illiquidity index

### Liquidity below long-term trend in March



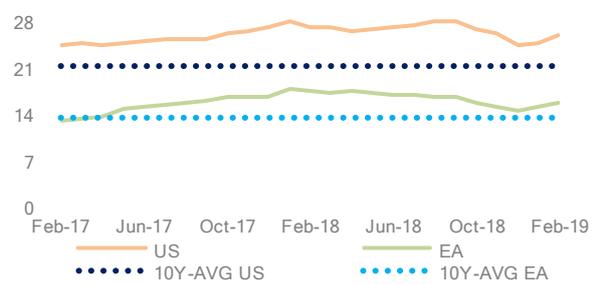
Note: Composite indicator of illiquidity in the equity market for the current STOXX Europe Large 200 constituents, computed by applying the principal component methodology to six input liquidity measures (Amihud illiquidity coefficient, bid-ask spread, Hui-Heubel ratio, turnover value, inverse turnover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

Sources: Thomson Reuters Datastream, ESMA.

R.5

## Equity valuation

### Increase for EA and US in 1Q19



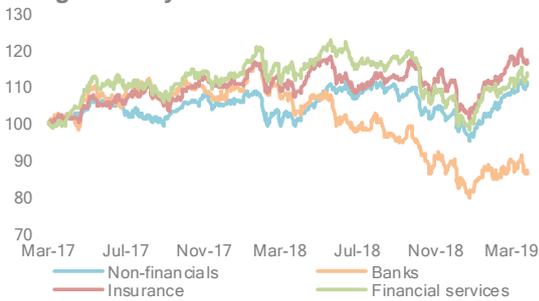
Note: Price-earning ratios based on average inflation-adjusted earnings from the previous 10 years (cyclically adjusted price-earnings ratios). Averages computed from the most recent data point up to 10 years before.

Sources: Thomson Reuters Datastream, ESMA.

R.6

## Equity prices

### Strong recovery after sell-off



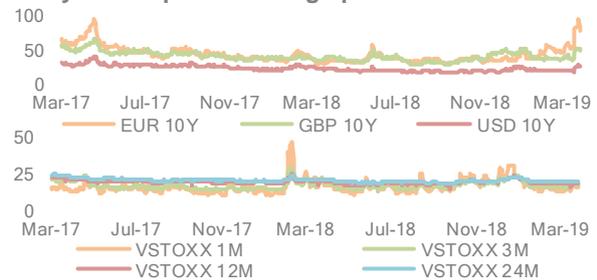
Note: STOXX Europe 600 equity total return indices. 01/03/2017=100.

Sources: Thomson Reuters Datastream, ESMA.

R.7

## Financial instrument volatilities

### Ten-year swaptions ticking up at the end of March



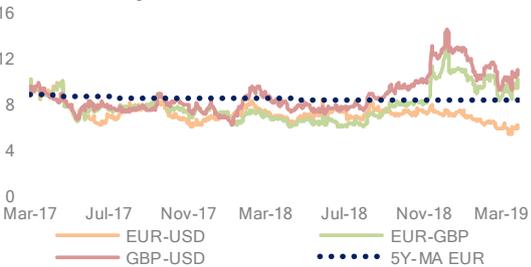
Note: Top panel: implied volatilities on one-month Euro-Euribor, UK Pound Sterling-GBP Libor and US Dollar-USD Libor swaptions measured as price indices, in %; bottom panel: EURO STOXX 50 implied volatilities, measured as price indices, in %.

Sources: Thomson Reuters EIKON, Thomson Reuters Datastream, ESMA.

R.8

## Exchange rate volatilities

### GBP volatility back at end 2018 levels



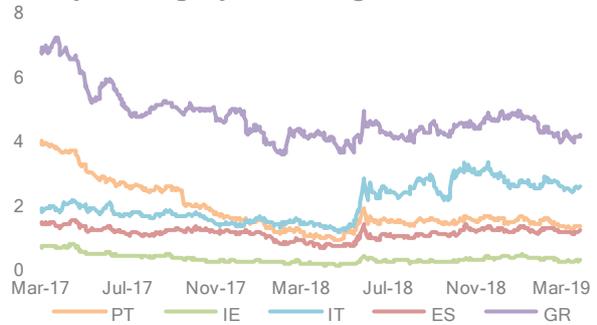
Note: Implied volatilities for 3M options on exchange rates, in %. 5Y-MA EUR is the five-year moving average of the implied volatility for 3M options on EUR-USD exchange rate.

Sources: Thomson Reuters EIKON, ESMA.

R.9

## Sovereign risk premia

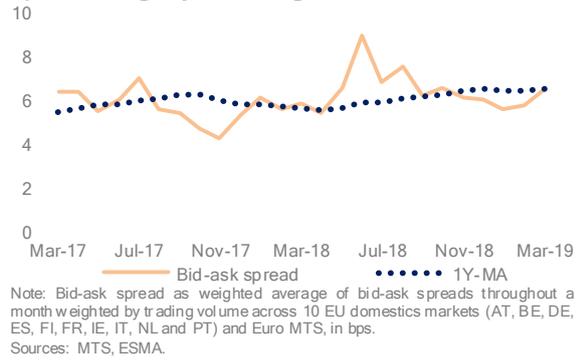
### Most yields slightly decreasing



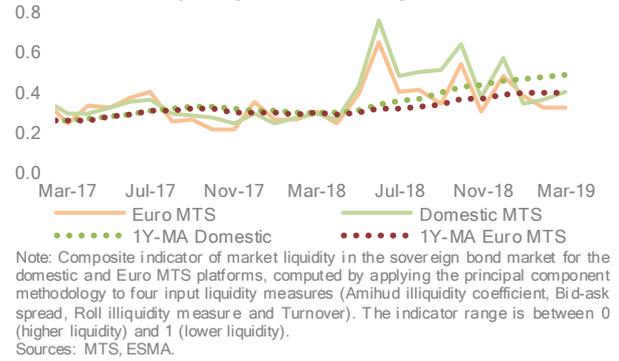
Note: Selected 10Y EA sovereign bond risk premia (vs. DE Bunds), in %.

Sources: Thomson Reuters Datastream, ESMA.

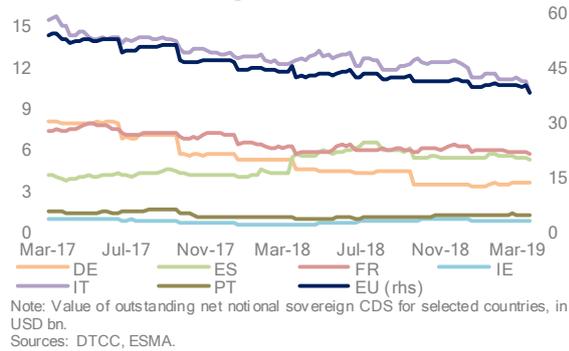
R.10  
Sovereign bond bid-ask spreads  
**Spreads slightly widening at the end of 1Q19**



R.11  
ESMA composite sovereign bond illiquidity index  
**Ameliorated liquidity on secondary markets**



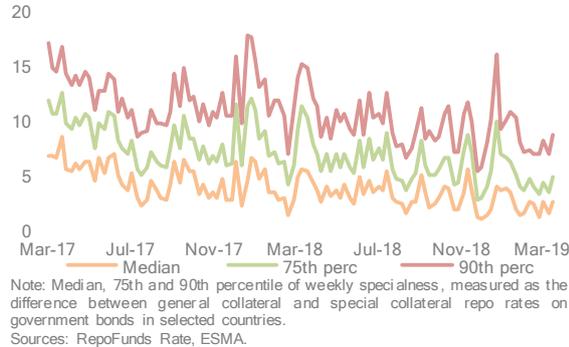
R.12  
Sovereign CDS volumes  
**Stable or decreasing**



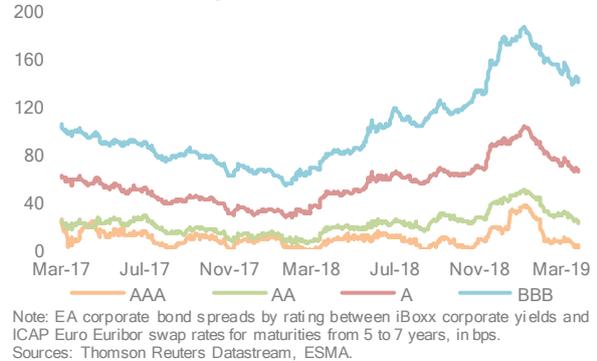
R.13  
Sovereign repo volumes  
**Increasing volumes since January**



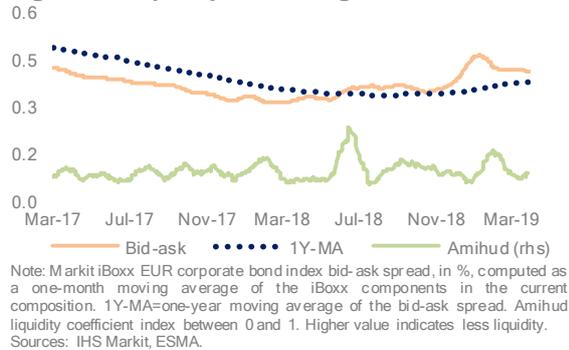
R.14  
Repo market specialness  
**Reduced dispersion**



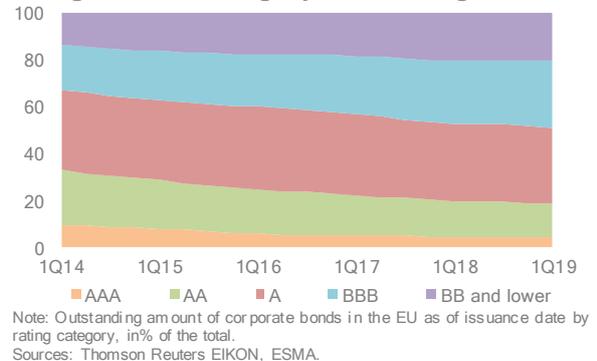
R.15  
Corporate bond spreads  
**Spreads decreasing**

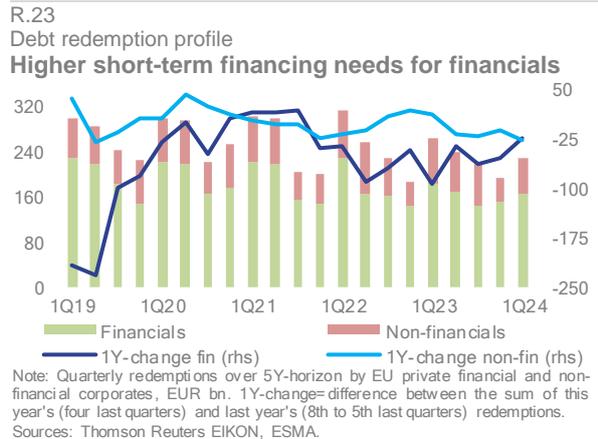
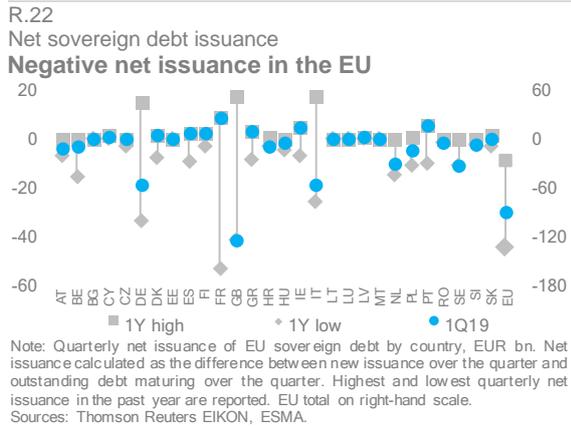
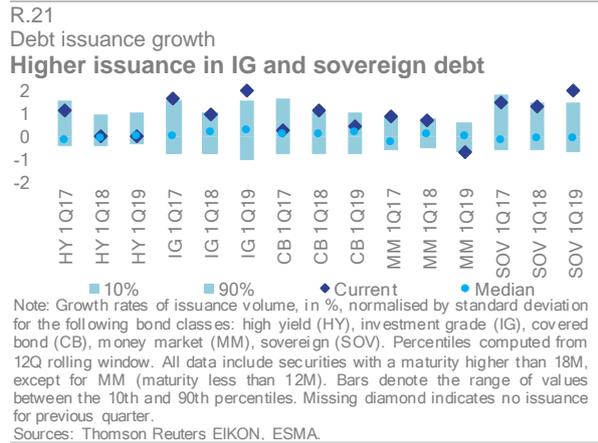
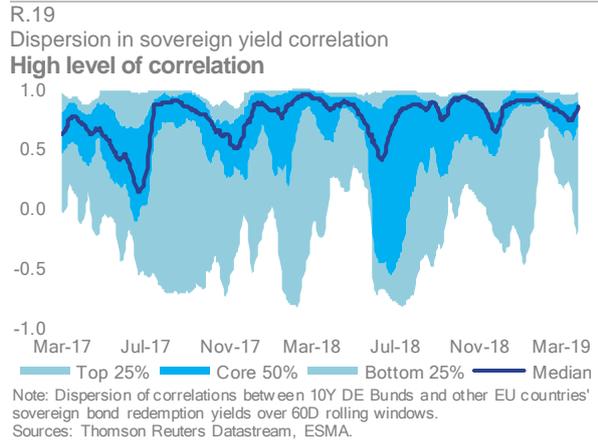
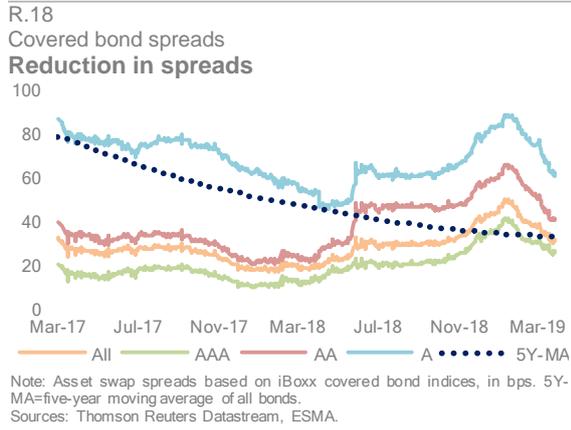


R.16  
Corporate bond bid-ask spreads and Amihud indicator  
**Signals of liquidity recovering**



R.17  
Long term corporate debt outstanding  
**Rating distribution slightly deteriorating**





# Investors

R.24

## Risk summary

Risk level



Risk change from 4Q18



Outlook for 2Q19



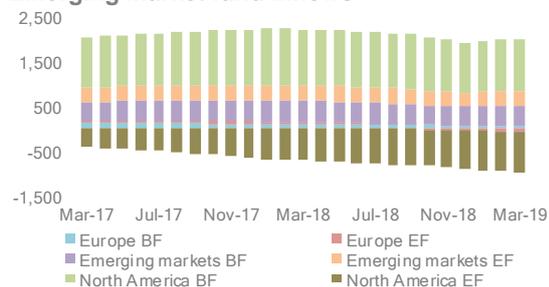
## Risk drivers

- Asset re-valuation and risk re-assessment
- Uncertainty on economic outlook and political developments in EU
- Correlation in asset prices
- Risky market practices: VCs, ICOs

Note: Assessment of main risk categories for markets under ESMA remit since past quarter, and outlook for forthcoming 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 judgment.

R.25

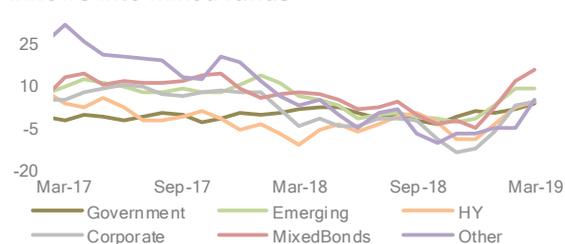
## Cumulative global investment fund Emerging market fund inflows



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 Inflows into mixed funds



Note: Two-month cumulative 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 reported as Emerging; funds investing in HY corporate bonds reported as HY). Sources: Thomson Reuters Lipper, ESMA.

R.27

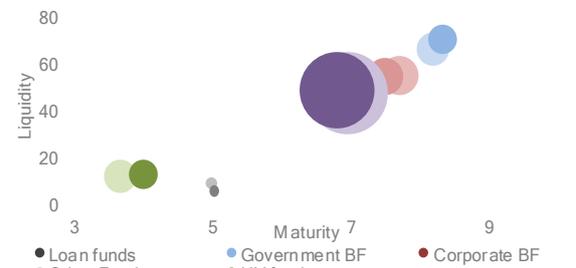
## RoR volatilities by fund type Volatilities decreasing in 1Q19



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

R.28

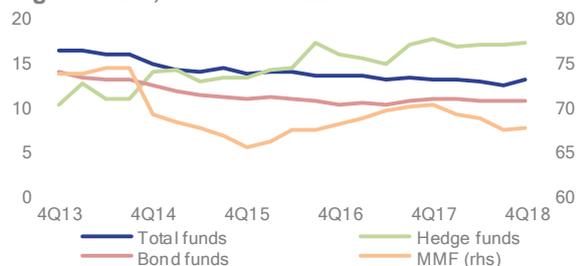
## Liquidity risk profile of EU bond funds Stable liquidity and mixed maturity changes



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. 2017 (bright colours) and 2018 (dark colours). Sources: Thomson Reuters Lipper, ESMA.

R.29

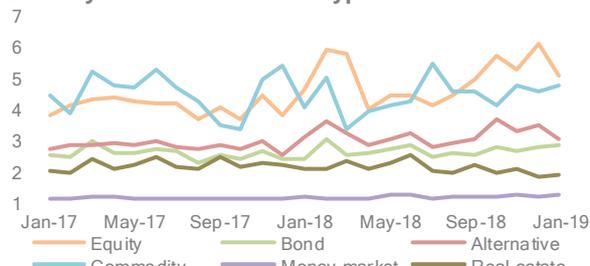
## Financial market interconnectedness High for HFs, stable for MMFs



Note: Loan and debt securities vis-à-vis MFI counterparts, as a share of total assets. EA investment funds and MMF, in %. Total funds includes: bond funds, equity funds, mixed funds, real estate funds, hedge funds, MMFs and other non-MMF investment funds. Sources: ECB, ESMA.

R.30

## Retail fund synthetic risk and reward indicator Broadly stable across fund types



Note: The calculated synthetic risk and reward indicator (SSRI) is based on ESMA SRR1 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.

# Infrastructures and services

R.31

## Risk summary

Risk level



Risk change from 4Q18



Outlook for 2Q19



## Risk drivers

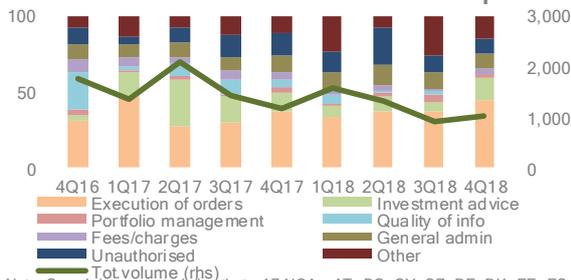
- Operational risks, incl. cyber and Brexit-related risks
- Conduct risk, incl. intentional or accidental behaviour by individuals, market abuse
- Systemic relevance, interconnectedness between infrastructures or financial activities, system substitutability

Note: Assessment of main risk categories for markets under ESMA remit since past quarter, and outlook for forthcoming 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 judgment.

R.32

## Complaints indicator by rationale

### Execution of orders as main cause for complaints



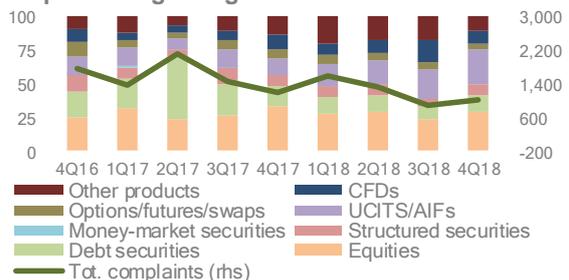
Note: Complaints reported directly to 17 NCAs: AT, BG, CY, CZ, DE, DK, EE, ES, HR, HU, IT, LT, LU, MT, PT, RO, SI. Line shows total volume of these complaints. Bars show % of total volume by cause. Data collected by NCAs. Total volume=Total reported volume.

Source: ESMA complaints database

R.33

## Complaints indicator by instrument

### Complaints regarding debt securities decline



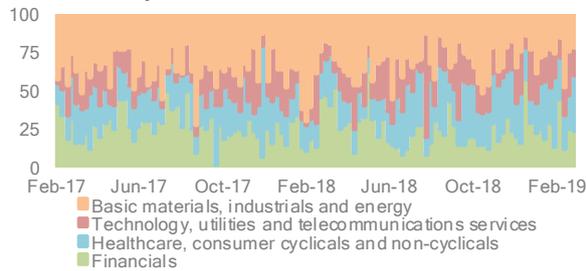
Note: Complaints reported directly to 17 NCAs: AT, BG, CY, CZ, DE, DK, EE, ES, HR, HU, IT, LT, LU, MT, PT, RO, SI. Line shows total number of these complaints. Bars show % of total volume by type of financial instrument. CFDs=Contracts for Differences.

Source: ESMA complaints database

R.34

## Circuit-breaker-trigger events by sector

### No sectorial pattern



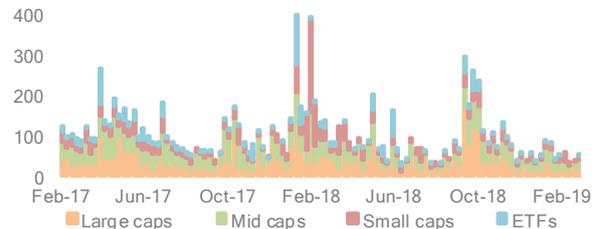
Note: Percentage of circuit-breaker trigger events by economic sector registered on 34 EEA trading venues for all constituents of the STOXX Europe Large/Mid/Small 200 and a large sample of ETFs tracking these indices or some of their subindices. Results displayed as weekly aggregates.

Sources: Morningstar Real-Time Data, ESMA.

R.35

## Circuit-breaker occurrences by market capitalisation

### Low number of CBs triggered in 1Q19



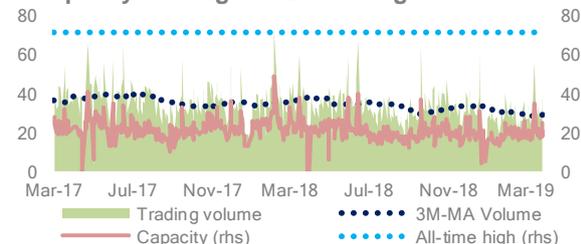
Note: Number of daily circuit-breaker trigger events by type of financial instrument and by market cap registered on 34 EEA trading venues for all constituents of the STOXX Europe Large/Mid/Small 200 and a large sample of ETFs tracking these indices or some of their subindices. Results displayed as weekly aggregates.

Sources: Morningstar Real-Time Data, ESMA.

R.36

## Trading system capacity proxy

### No capacity shortage on EU trading venues



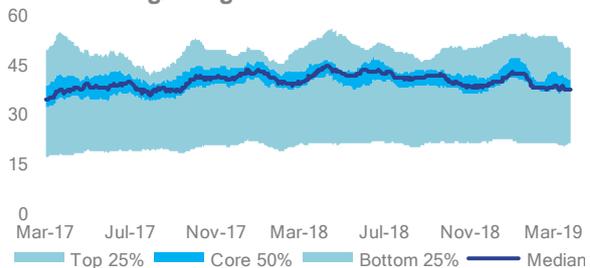
Note: Daily and 3M-MA of trading volumes registered on 34 EEA trading venues for all constituents of the STOXX Europe Large/Mid/Small 200 and a large sample of ETFs tracking these indices or some of their subindices, in EUR bn. Capacity computed as the average across trading venues of the ratio of daily trading volume over maximum volume observed since 31/03/2016, in %.

Sources: Morningstar Real-Time Data, ESMA.

R.37

## Equity market concentration

### Hike at the beginning of 1Q19

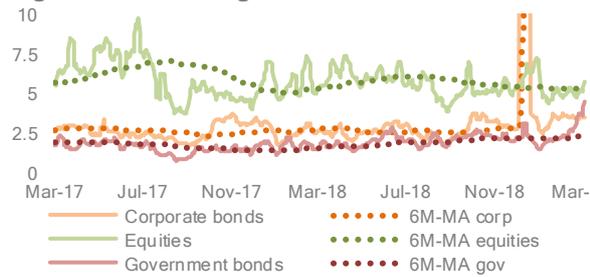


Note: Concentration of notional value of equity trading by national indices computed as a 1M-MA of the Herfindahl-Hirschman Index, in %. Indices included are AEX, ATX, BEL20, CAC 40, DAX, FTSE 100, FTSE MIB, IBEX 35, OMXC20, OMXH25, OMXS30, PSI20.

Sources: BATS, ESMA.

R.38

Settlement fails  
Higher in March for government bonds



Note: Share of failed settlement instructions in the EU, in % of value, one-week moving averages. Jump in December 2018 due to a single transaction of EUR 500 bn instructed on 10 December with settlement requested on the same day, which was finally cancelled on 18 December.  
Sources: National Competent Authorities, ESMA.

R.39

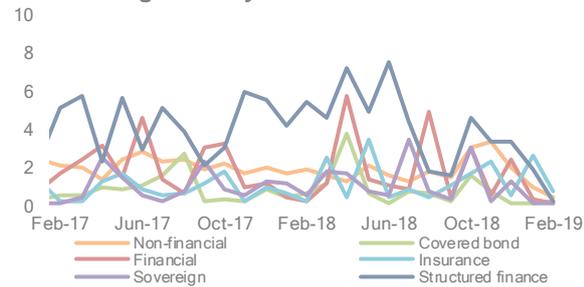
OTC central clearing rates  
Increasing for CD and IRDs in 2017



Note: Share of gross notional amount outstanding for credit derivatives (CD) and interest rate derivatives (IRD), in %.  
Sources: TRs, ESMA.

R.40

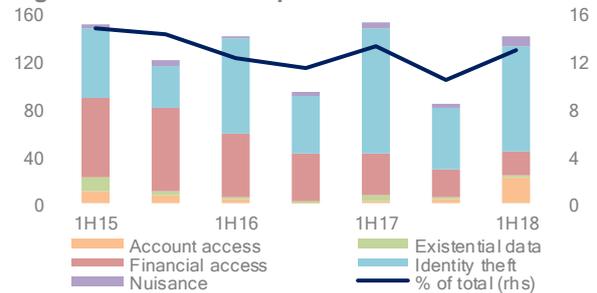
Rating changes  
Lower rating volatility



Note: Volatility of ratings by all credit rating agencies, excluding CERVED and ICAP, by asset class computed as number of rating changes over number of outstanding ratings.  
Sources: RADAR, ESMA.

R.41

Financial services data breaches  
High risk for financials persists



Note: Estimated number of data breaches, financial services only, worldwide, by type. Breaches in financial services sector as % of total data breaches across all sectors on right-hand scale.  
Sources: Gemalto Breach Level Index, ESMA.



European Securities and  
Markets Authority

