

# TRV Statistical Annex

ESMA Report on Trends, Risks and Vulnerabilities

No. 1, 2021

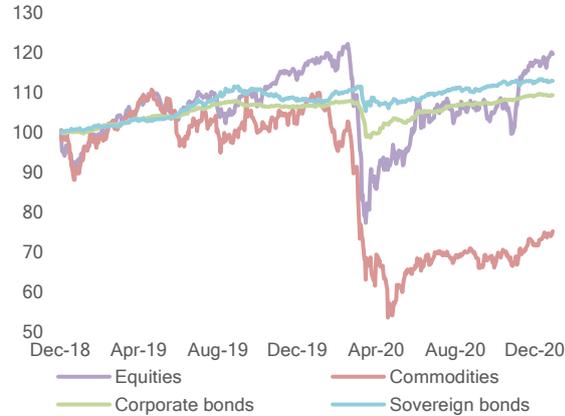


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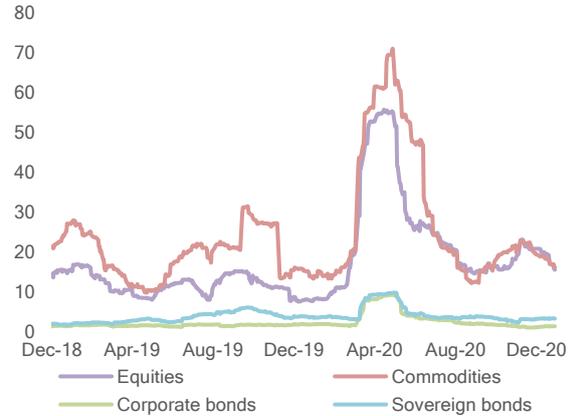
# Market environment

**A.1**  
**Market price performance**



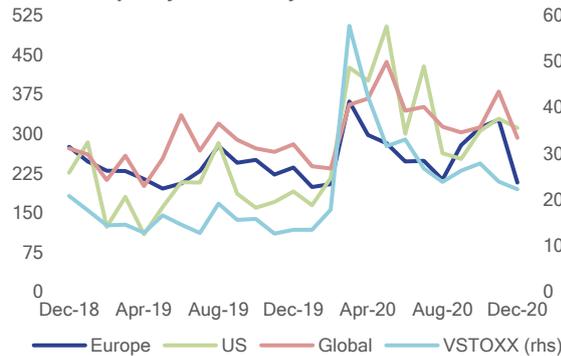
Note: Return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), 01/12/2018=100.  
Sources: Refinitiv Datastream, ESMA.

**A.2**  
**Market volatilities**



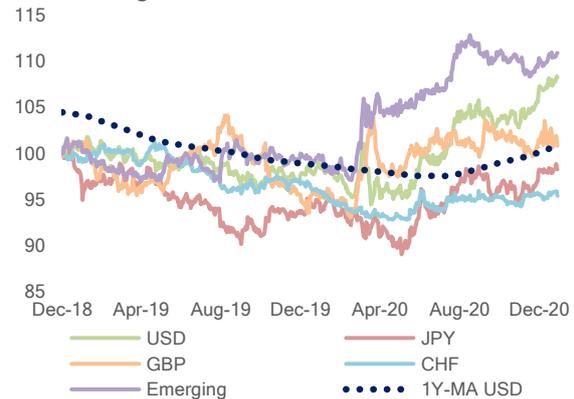
Note: Annualised 40D volatility of return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), in %.  
Sources: Refinitiv Datastream, ESMA.

**A.3**  
**Economic policy uncertainty**



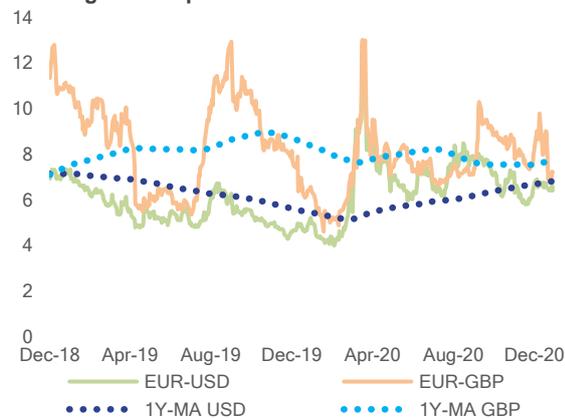
Note: Economic Policy Uncertainty Index (EPU), developed by Baker et al. (www.policyuncertainty.com), based on the frequency of articles in European newspapers that contain the following triple: "economic" or "economy", "uncertain" or "uncertainty" and one or more policy-relevant terms. Global aggregation based on PPP-adjusted GDP weights. Implied volatility of EURO STOXX 50 (VSTOXX), monthly average, on the right-hand side.  
Sources: Baker, Bloom, and Davis 2015; Refinitiv Datastream, ESMA.

**A.4**  
**EUR exchange rates**



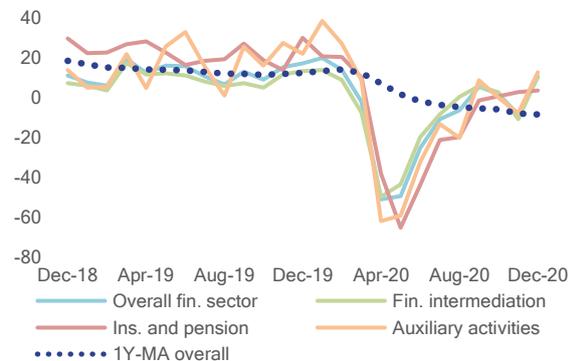
Note: Spot exchange rates to Euro. Emerging is a weighted average (2016 GDP) of spot exchange rates for CNY, BRL, RUB, INR, MXN, IDR and TRY. 01/12/2018=100. Increases in value represent an appreciation of EUR. 1Y-MA USD=one-year moving average of the USD exchange rate.  
Sources: ECB, IMF, ESMA.

**A.5**  
**Exchange rate implied volatilities**



Note: Implied volatilities for 3M options on exchange rates, in %. 1Y-MA USD (resp. 1Y-MA GBP) is the one-year moving average of the implied volatility for 3M options on EUR-USD (resp. EUR-GBP) exchange rate.  
Sources: Refinitiv EIKON, ESMA.

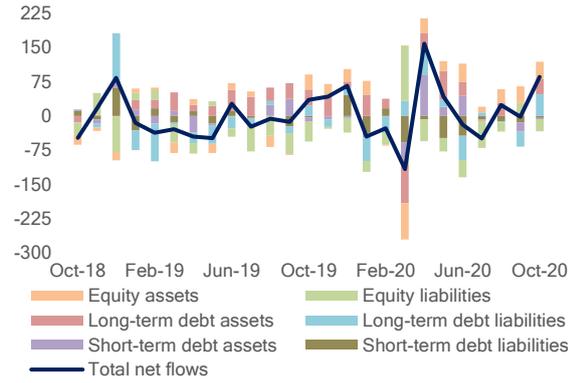
**A.6**  
**Market confidence**



Note: European Commission survey of EU27 financial services sector and subsectors (NACE Rev.2 64, 65, 66). Confidence indicators are averages of the net balance of responses to questions on development of the business situation over the past three months, evolution of demand over the past three months and expectation of demand over the next three months, in % of answers received. Fin.=financial. Ins.=insurance.  
Sources: European Commission, ESMA.

**A.7**

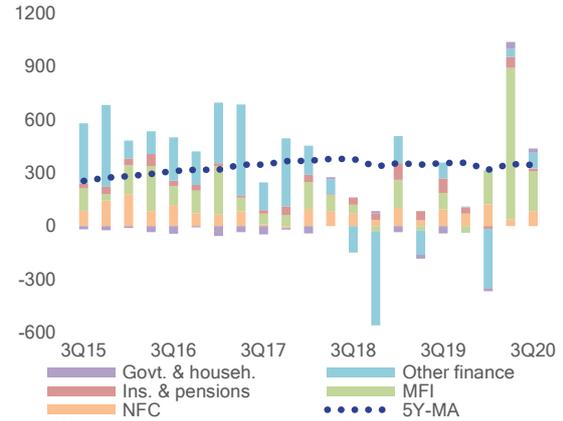
**Portfolio investment flows by asset class**



Note: Balance of Payments statistics, financial accounts, portfolio investments by asset class, EUR bn, Assets=net purchases (net sales) of non-EA securities by EA investors. Liabilities=net sales (net purchases) of EA securities by non-EA investors. Total net flows=net outflows (inflows) from (into) the EA.  
Sources: ECB, ESMA.

**A.8**

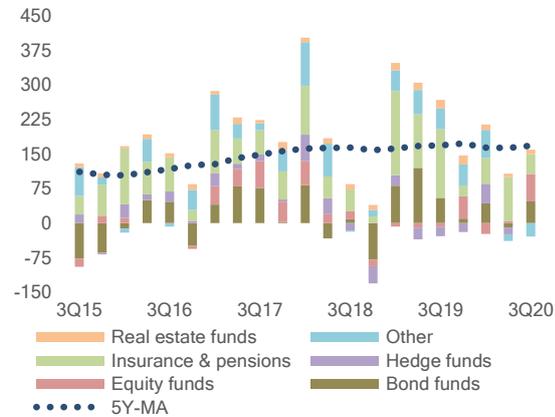
**Investment flows by resident sector**



Note: Quarterly Sector Accounts. Investment flows by EA resident sector in equity (excluding investment fund shares) and debt securities, EUR bn. 5Y-MA=five-year moving average of all investment flows.  
Sources: ECB, ESMA.

**A.9**

**Institutional investment flows**



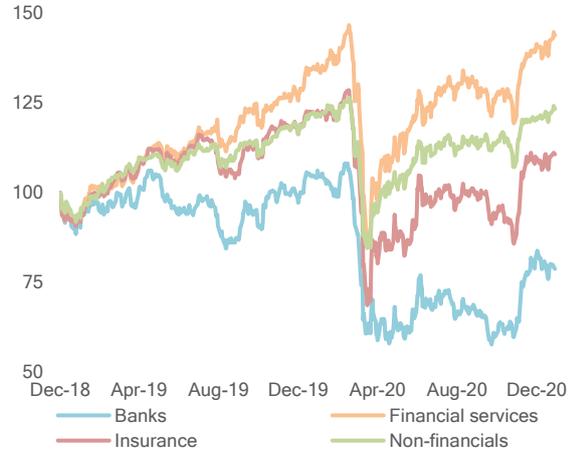
Note: EA institutional investment flows by type of investor, EUR bn. Other=financial vehicle corporations, mixed funds, other funds. 5Y-MA=five-year moving average of all investment flows.  
Sources: ECB, ESMA.

# Securities markets

## Equity markets

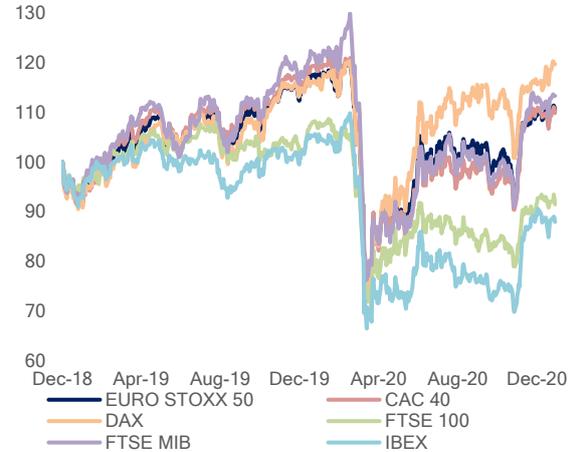
**A.10**

**Equity prices by sector**



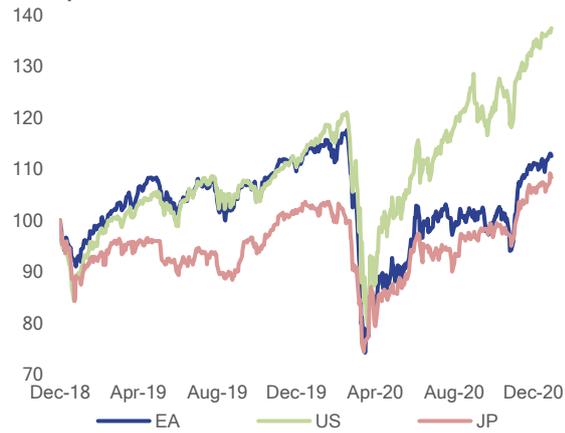
**A.11**

**Price performance of national indices**



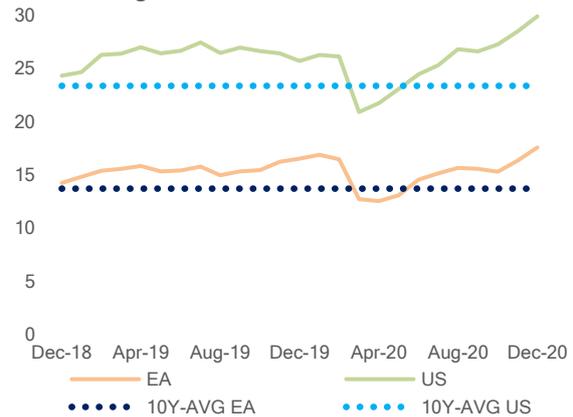
**A.12**

**Price performance**



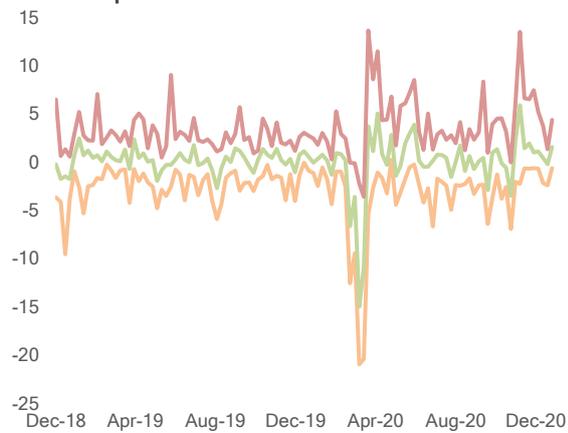
**A.13**

**Price-earnings ratios**



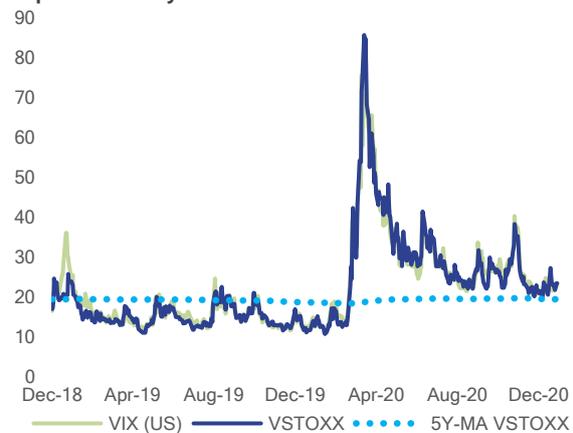
**A.14**

**Return dispersion**

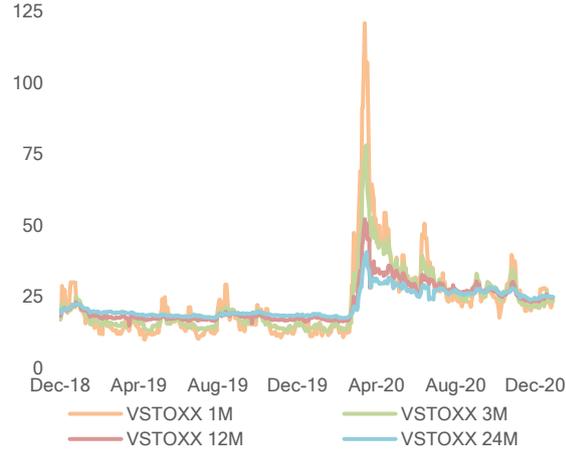


**A.15**

**Implied volatility**

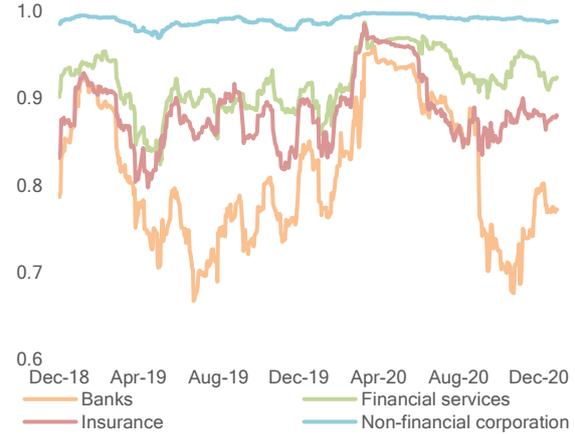


**A.16**  
Implied volatility by option maturity



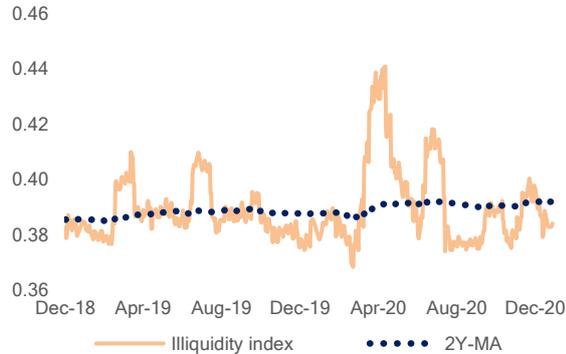
Note: EURO STOXX 50 implied volatilities, measured as price indices, in %.  
Sources: Refinitiv Datastream, ESMA.

**A.17**  
Correlation STOXX Europe 600 and sectoral indices



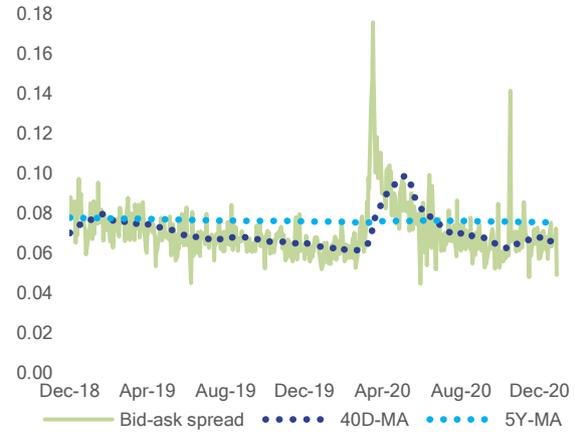
Note: Correlations between daily returns of the STOXX Europe 600 and STOXX Europe 600 sectoral indices. Calculated over 60-day rolling windows.  
Sources: Refinitiv Datastream, ESMA.

**A.18**  
ESMA composite equity liquidity index



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: Refinitiv Datastream, ESMA.

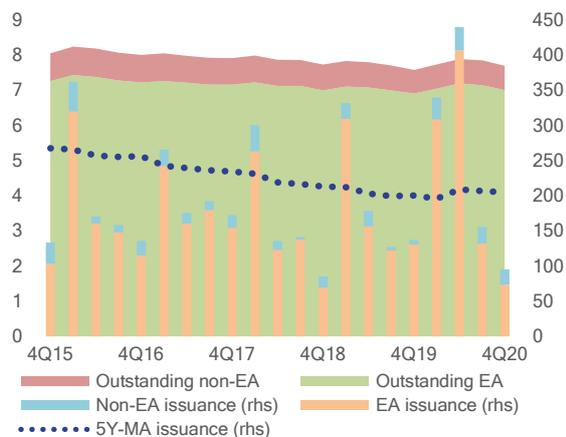
**A.19**  
Bid-ask spread



Note: Liquidity measure as median of the bid-ask price percentage difference for the current EEA30 constituents of STOXX Europe Large 200, in %.  
Sources: Refinitiv Datastream, ESMA.

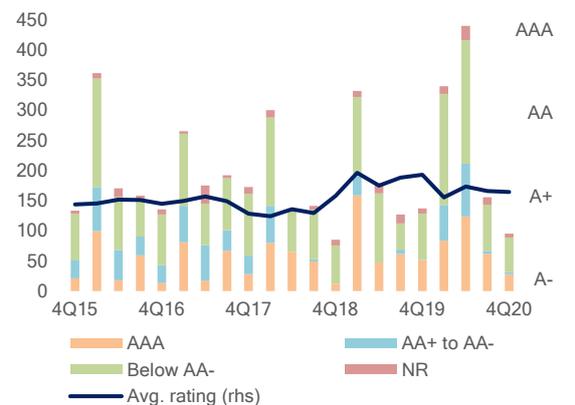
## Sovereign-bond markets

**A.20**  
Issuance and outstanding



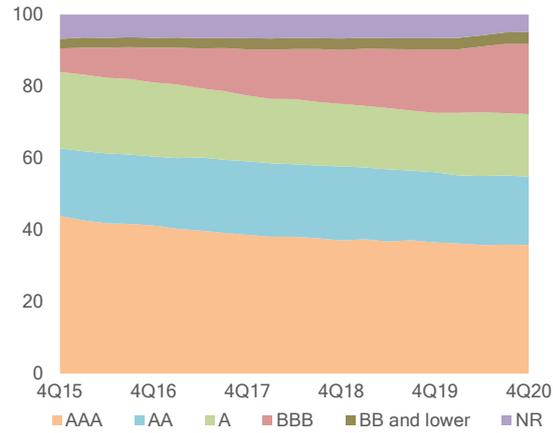
Note: Sovereign bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn. Maturities < 12 months are excluded.  
Sources: Refinitiv EIKON, ESMA.

**A.21**  
Issuance by credit rating



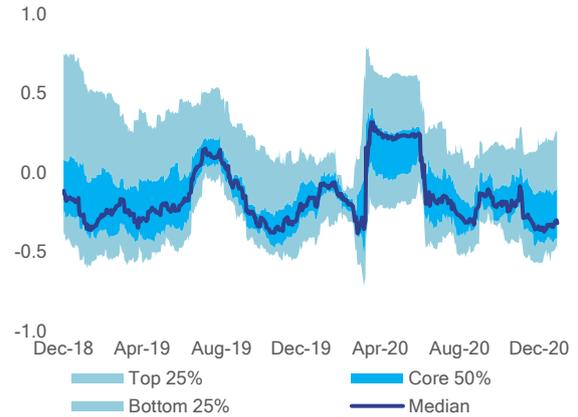
Note: Sovereign bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA+=2, etc.) excluding non-rated bonds. Maturities < 12 months are excluded.  
Sources: Refinitiv EIKON, ESMA.

**A.22**  
Rating distribution



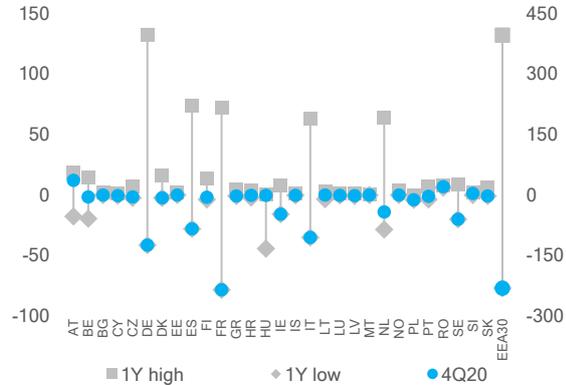
Note: Outstanding amount of sovereign bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

**A.23**  
Equity-sovereign bond correlation dispersion



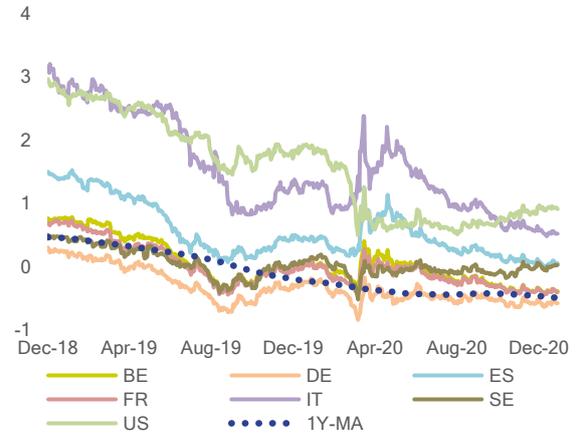
Note: Dispersion of the correlation between daily returns of national equity indices and national sovereign debt return index, for 16 countries in the EU27, over a 60-day rolling window. Sources: Refinitiv Datastream, ESMA.

**A.24**  
Net issuance by country



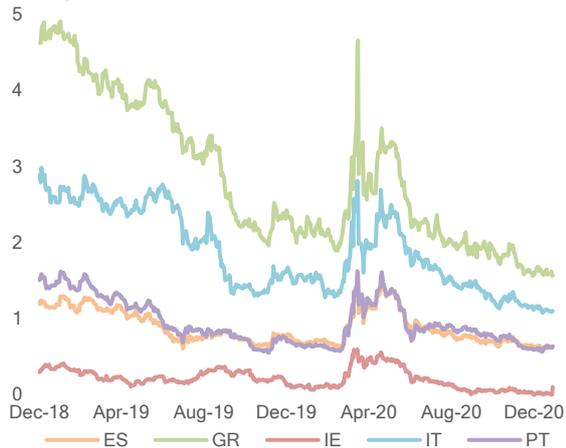
Note: Quarterly net issuance of EEA30 sovereign debt by country, EUR bn. Net issuance calculated as the difference between new issuance over the quarter and outstanding debt maturing over the quarter. Highest and lowest quarterly net issuance in the past year are reported. EEA30 total on right-hand scale. All maturities are included. Sources: Refinitiv EIKON, ESMA.

**A.25**  
10Y yields



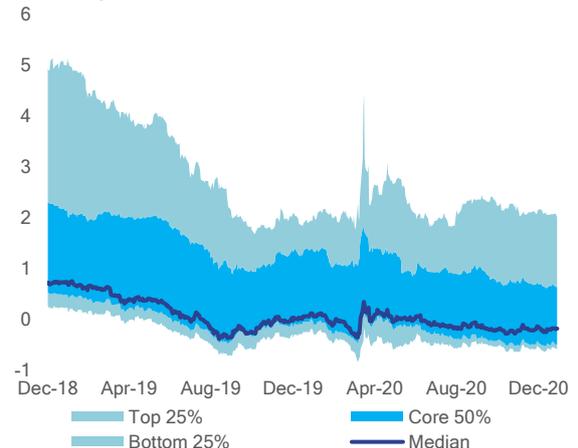
Note: Yields on 10Y sovereign bonds, selected countries, in %. 1Y-MA=one-year moving average of EA 10Y bond indices computed by Datastream. Sources: Refinitiv Datastream, ESMA.

**A.26**  
10Y spreads



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

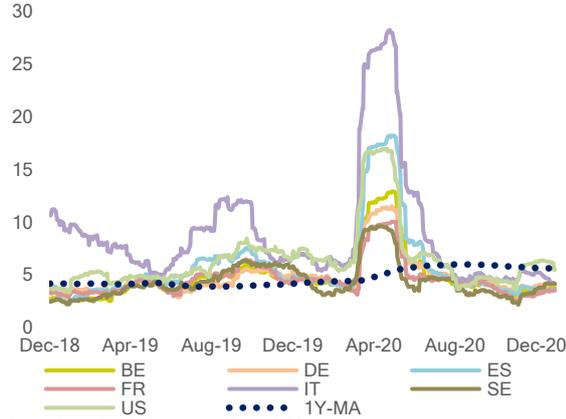
**A.27**  
Yield dispersion



Note: Yield dispersion on 10Y sovereign bonds of 16 EU27 countries, in %. Sources: Refinitiv Datastream, ESMA.

**A.28**

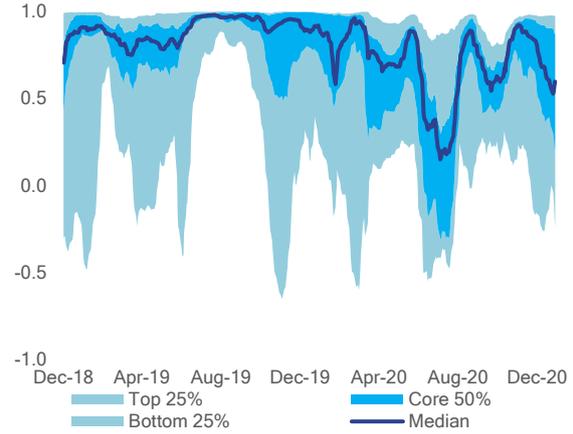
**Volatility**



Note: Annualised 40-day volatility of 10Y sovereign bonds, selected countries, in %. 1Y-MA=one-year moving average of EA 10Y bond indices computed by Datastream.  
Sources: Refinitiv Datastream, ESMA.

**A.29**

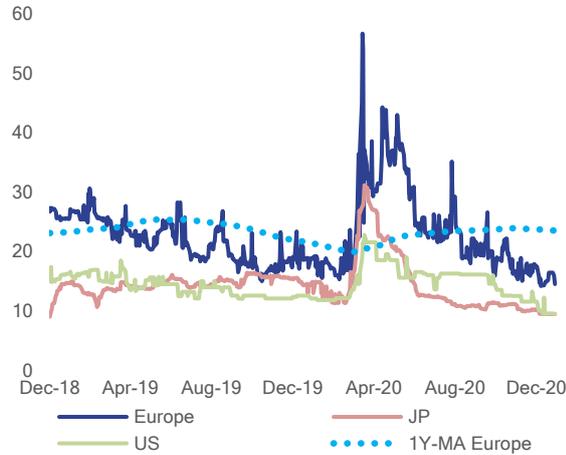
**Yield correlation dispersion**



Note: Dispersion of correlations between 10Y DE Bunds and 15 other EU27 countries' sovereign bond redemption yields over a 60-day rolling window.  
Sources: Refinitiv Datastream, ESMA.

**A.30**

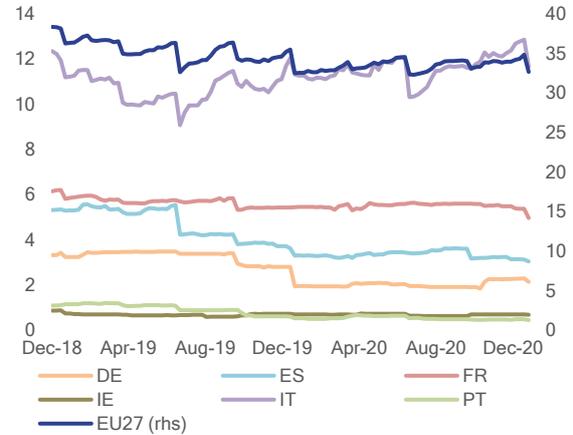
**CDS spreads**



Note: Datastream CDS sovereign indices (5 years, mid-spread), in bps.  
Sources: Refinitiv Datastream, ESMA.

**A.31**

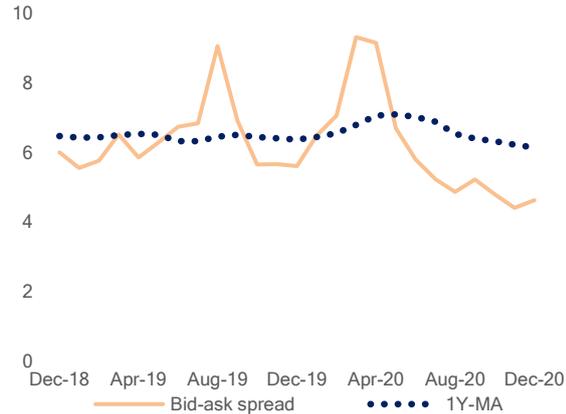
**CDS notional**



Note: Value of outstanding net notional sovereign CDS for selected EU27 countries, in USD bn.  
Sources: DTCC, ESMA.

**A.32**

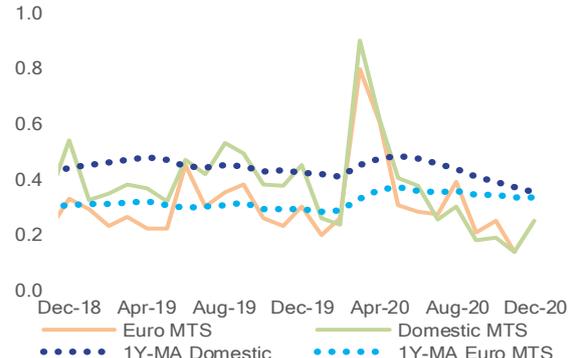
**Bid-ask spreads**



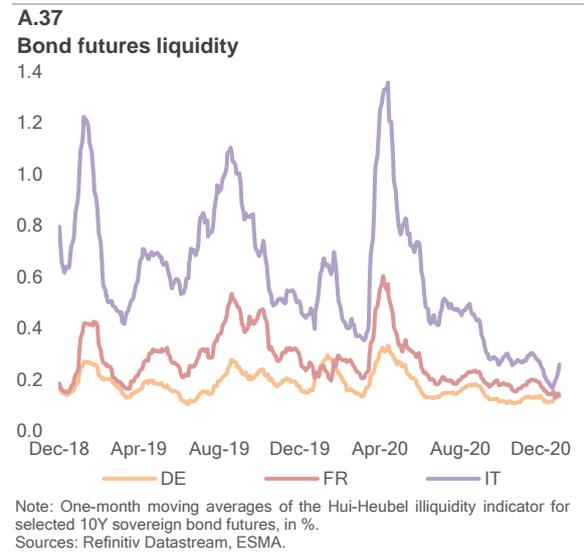
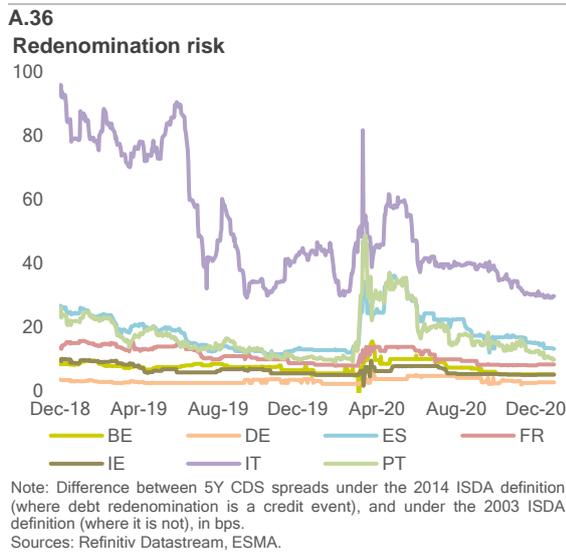
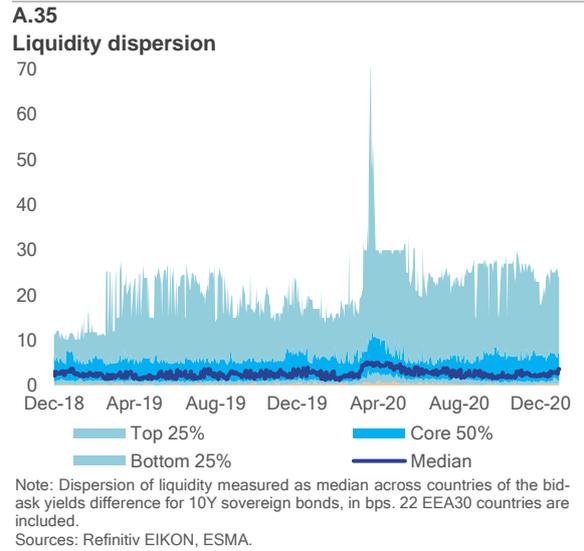
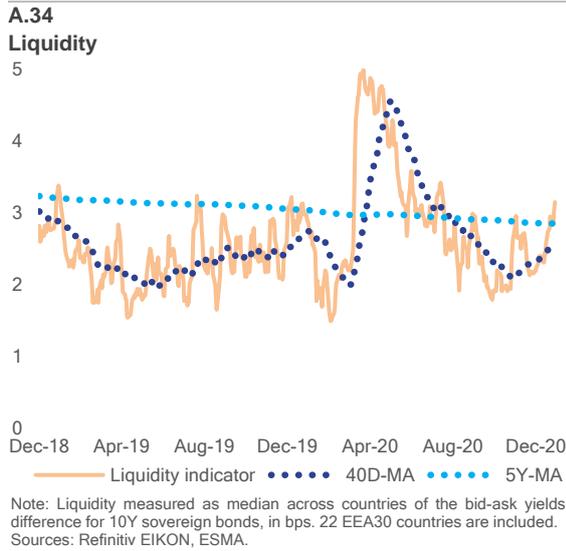
Note: Bid-ask spread as weighted average of bid-ask spreads throughout a month weighted by trading volume across 10 EU27 domestic markets (AT, BE, DE, ES, FI, FR, IE, IT, NL and PT) and Euro MTS, in EUR.  
Sources: MTS, ESMA.

**A.33**

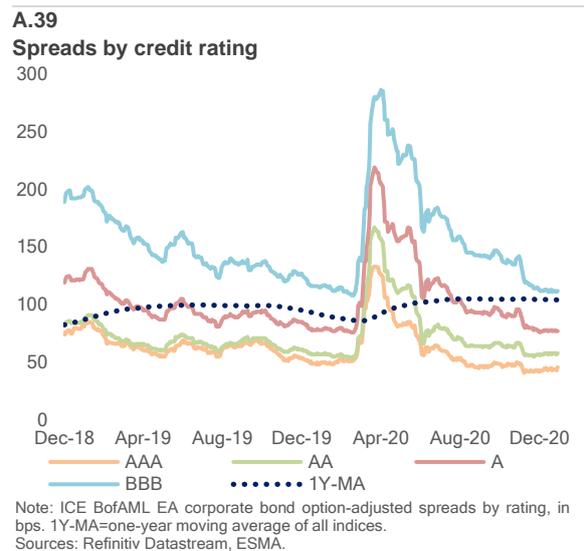
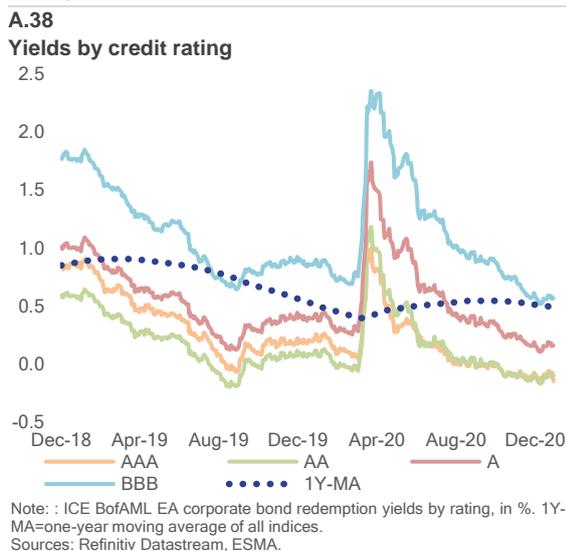
**ESMA composite sovereign bond liquidity index**



Note: Composite indicator of market liquidity in the sovereign bond market for the domestic and Euro MTS platforms, computed by applying the principal component methodology to four input liquidity measures (Amihud illiquidity coefficient, Bid-ask spread, Roll illiquidity measure and Turnover). The indicator range is between 0 (higher liquidity) and 1 (lower liquidity).  
Sources: MTS, ESMA.

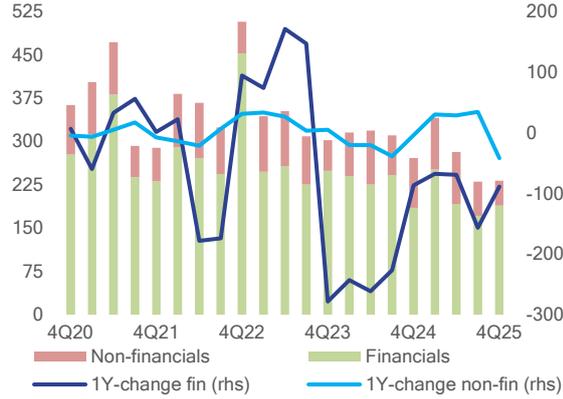


**Corporate-bond markets**



**A.40**

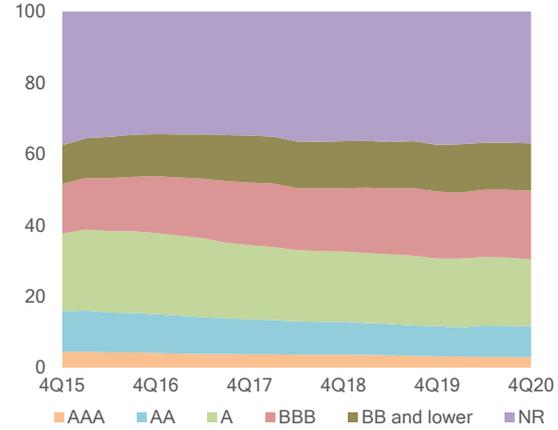
**Debt redemption profile by sector**



Note: Quarterly redemptions over 5Y-horizon by EEA30 private financial and non-financial corporates, EUR bn. 1Y-change=difference between the sum of this year's (four last quarters) and last year's (8th to 5th last quarters) redemptions. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

**A.41**

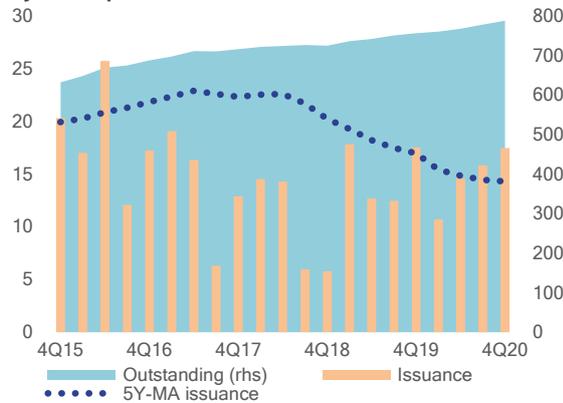
**Rating distribution**



Note: Outstanding amount of corporate bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded. Sources: Refinitiv EIKON, ESMA.

**A.42**

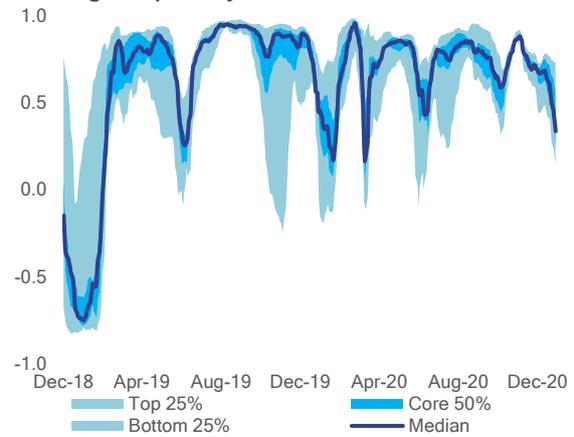
**Hybrid capital instruments**



Note: Hybrid capital instruments gross issuance in the EEA30, EUR bn, and outstanding amounts (rhs), EUR tn. Maturities < 12 months are excluded. According to Refinitiv EIKON classification, hybrid capital refers to bonds having the qualities of both an interest-bearing security (debt) and equity. Sources: Refinitiv EIKON, ESMA.

**A.43**

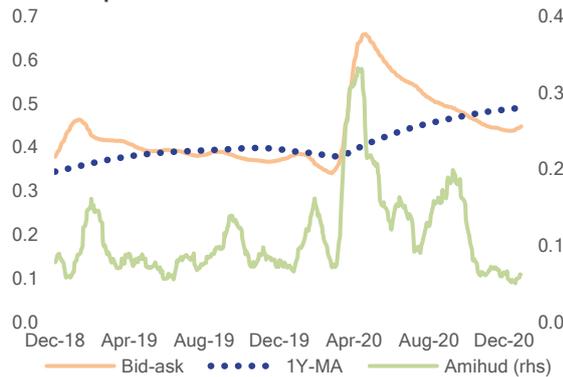
**Sovereign-corporate yield correlation**



Note: Dispersion of correlation between Barclays Aggregate for corporate and 10Y sovereign bond redemption yields for AT, BE, ES, FI, FR, IT and NL. Sources: Refinitiv Datastream, ESMA.

**A.44**

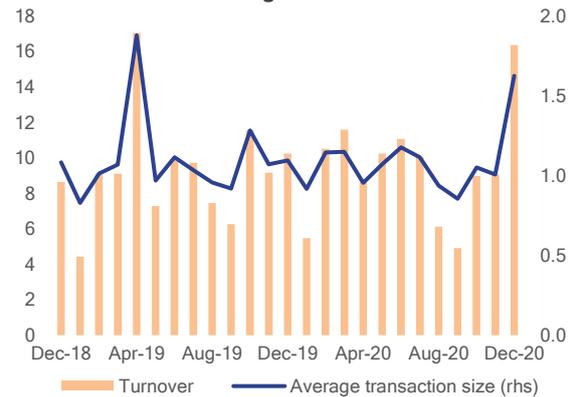
**Bid-ask spreads and Amihud indicator**



Note: Markit iBoxx EUR Corporate bond index bid-ask spread, in %, computed as a one-month moving average of the iBoxx components in the current composition. 1Y-MA=one-year moving average of the bid-ask spread. Amihud liquidity coefficient index between 0 and 1. Highest value indicates less liquidity. Sources: IHS Markit, ESMA.

**A.45**

**Turnover ratio and average trade size**

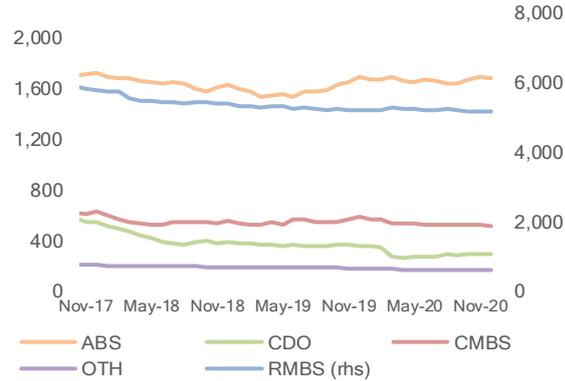


Note: Average transaction size for the corporate bond segment as the ratio of nominal amount of settlement instructions to number of settled instructions, in EUR mn. Turnover is the one-month moving average of the ratio of trading volume over outstanding amount, in %. Sources: IHS Markit, ESMA.

## Credit quality

**A.46**

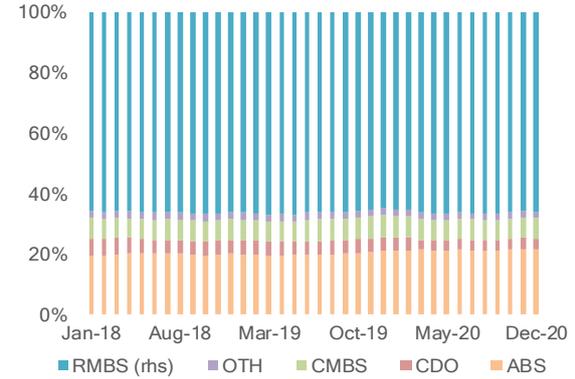
### SFI ratings issued by collateral type



Note: Number of rated structured finance instruments by asset class. ABS=Asset-backed securities; CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=Other; RMBS=Residential mortgage-backed securities. Sources: RADAR, ESMA.

**A.47**

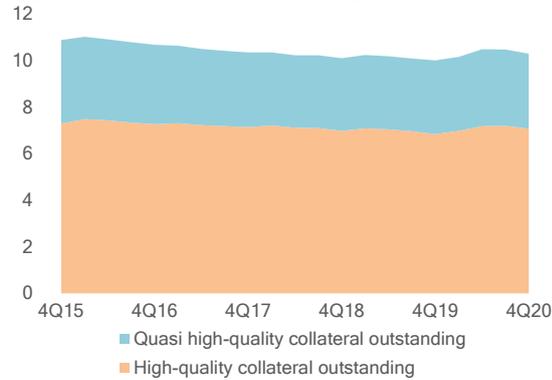
### SFI ratings outstanding by collateral type



Note: Outstanding EU ratings of structured finance instruments by asset class, in % of total. ABS=Asset-backed securities; CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=other; RMBS=Residential mortgage-backed securities. Sources: RADAR, ESMA.

**A.48**

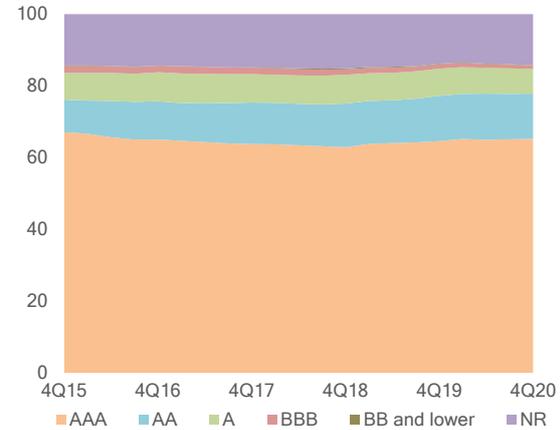
### High-quality collateral outstanding



Note: Outstanding amount of high-quality collateral in the EEA30, EUR tn. High-quality collateral is the sum of outstanding debt securities issued by EEA30 governments with a rating equal to or higher than BBB-. Quasi high-quality collateral is the outstanding corporate debt with a rating equal to or higher than AA-. Maturities < 12 months are excluded. Sources: Thomson Reuters EIKON, ESMA.

**A.49**

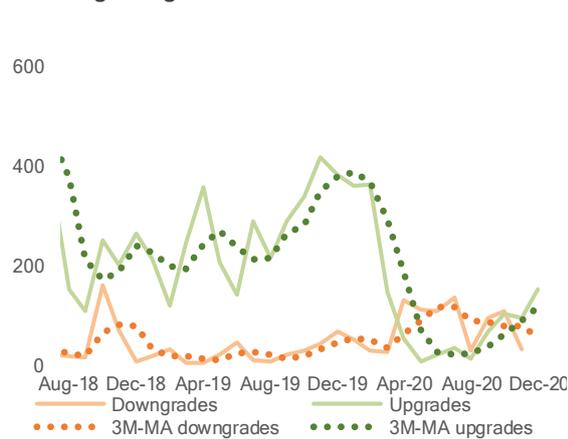
### Rating distribution of covered bonds



Note: Outstanding amount of covered bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded. Sources: Thomson Reuters EIKON, ESMA.

**A.50**

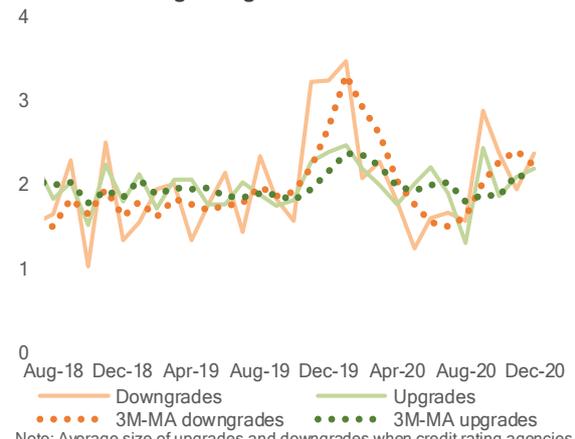
### SFI rating changes



Note: Number of rating changes on securitised assets. Sources: RADAR, ESMA.

**A.51**

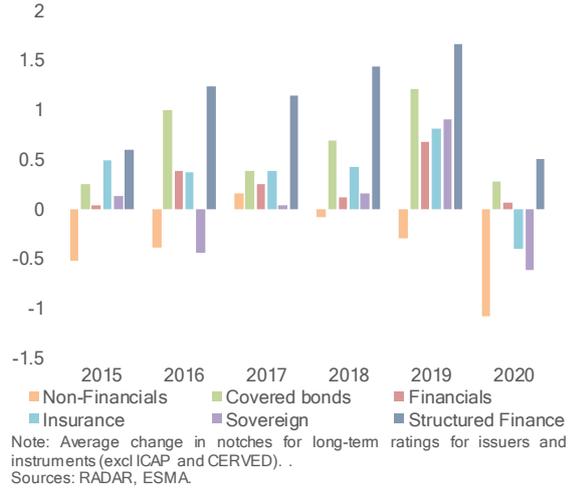
### Size of SFI rating changes



Note: Average size of upgrades and downgrades when credit rating agencies took rating actions on securitised assets, number of buckets traversed. Sources: RADAR, ESMA.

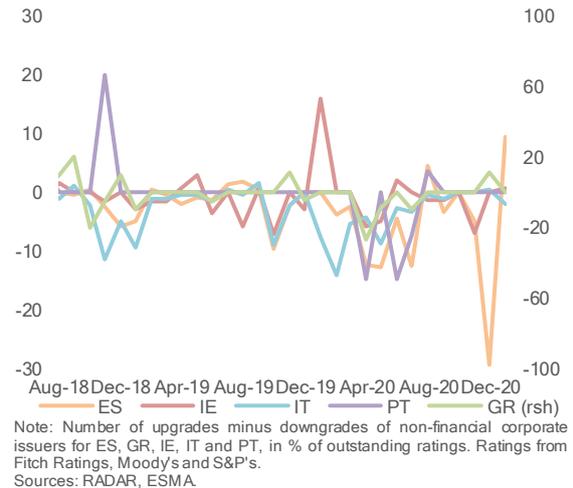
**A.52**

**Size of rating changes**



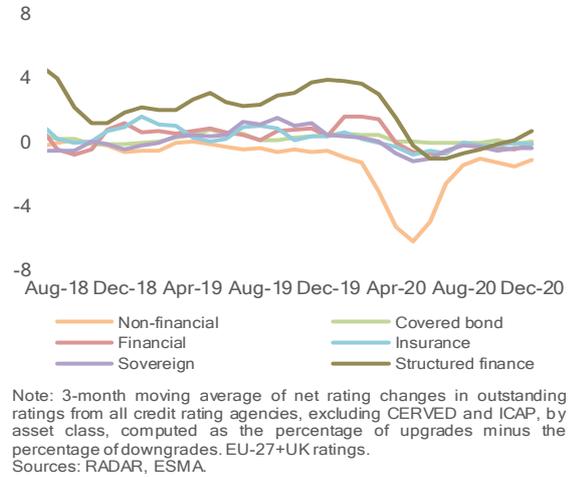
**A.53**

**Non-financial corporate rating changes**



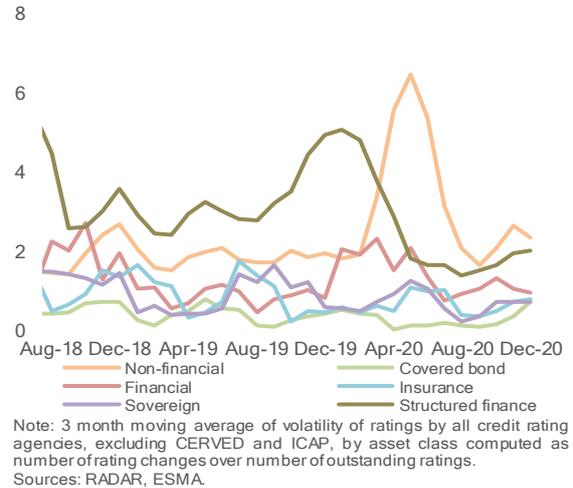
**A.54**

**Ratings drift**



**A.55**

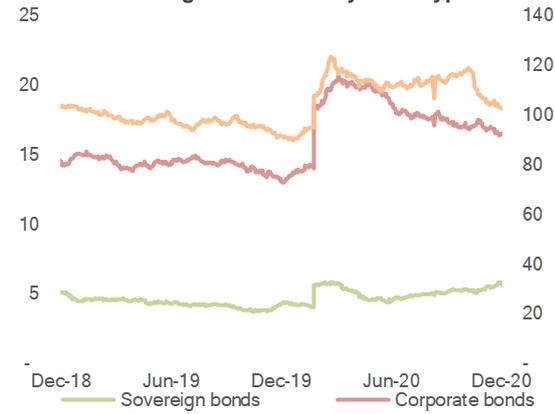
**Ratings volatility**



## Securities lending

**A.56**

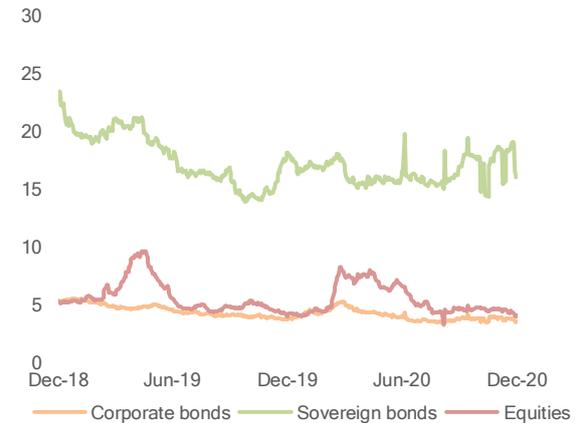
### Securities lending transactions by asset type



Note: number of daily transactions, in thousands, in securities lending markets for instruments primarily traded in the EEA30. Equities on the rhs.  
Sources: FIS Astec Analytics, Quandl, ESMA.

**A.57**

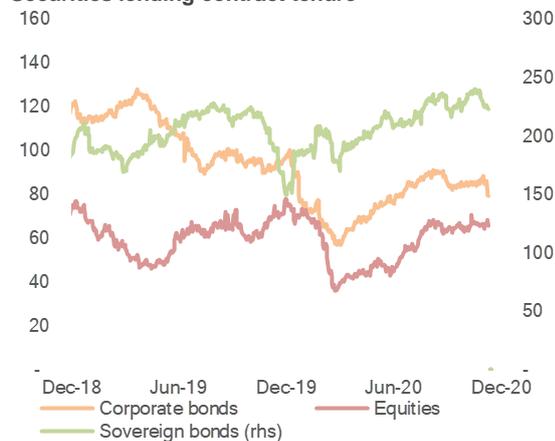
### Securities utilisation rate



Note: Utilisation rate in percent, the ratio of the market value of securities lent over the market value of securities available for lending.  
Sources: FIS Astec Analytics, Quandl, ESMA.

**A.58**

### Securities lending contract tenure

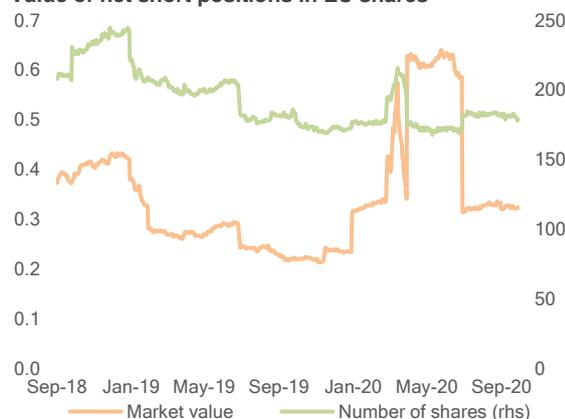


Note: average tenure of loans for instruments primarily traded in the EEA30. Tenure is measured in days and weighted by the market value of the loan.  
Source: FIS Astec Analytics, Quandl, ESMA.

## Short selling

**A.59**

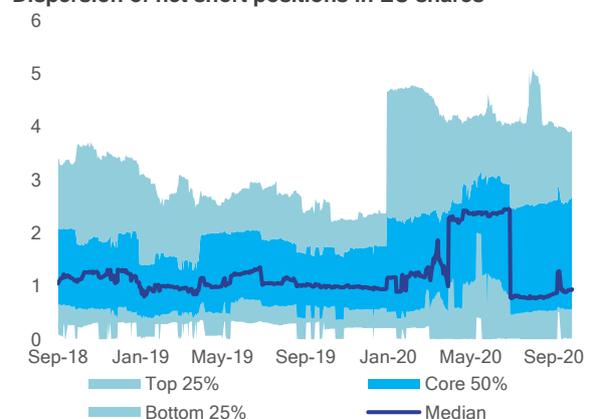
### Value of net short positions in EU shares



Note: Market value of net short selling positions as percentage of total market value in the EEA30. Number of shares part of a main national index on which short positions were reported by NCAs under the Short Selling Regulation.  
Sources: National Competent Authorities, Refinitiv Datastream, ESMA.

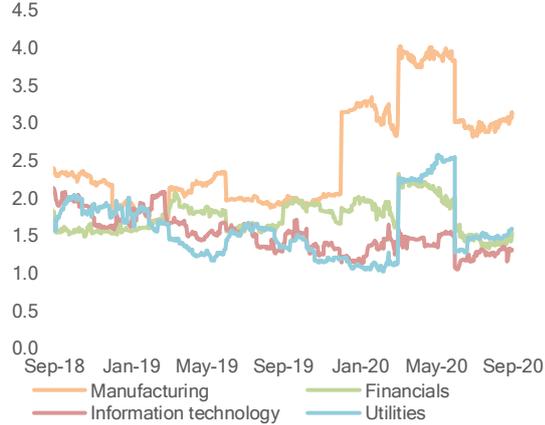
**A.60**

### Dispersion of net short positions in EU shares



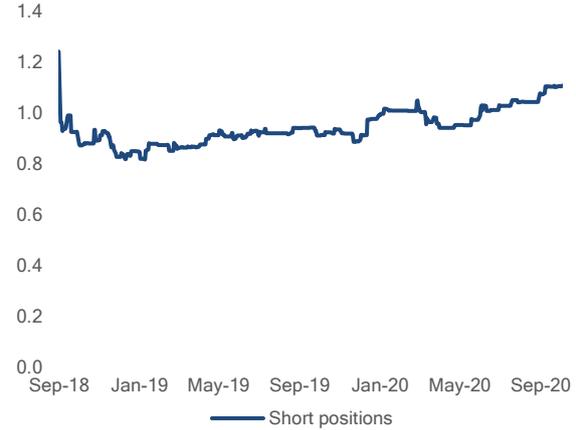
Note: Dispersion of net short selling positions by country in the EEA30 as percentage of market value of those positions relative to each country's blue-chip index market value.  
Sources: National Competent Authorities, Refinitiv Datastream, ESMA.

**A.61**  
Value of net short positions in EU shares by sector



Note: Average of net short positions in EEA30 shares for manufacturing, financial, information technology and utilities, in % of issued share capital. Sources: National Competent Authorities, ESMA.

**A.62**  
Value of net short positions in EU sovereign debt



Note: Duration-adjusted net short selling positions held in EEA30 sovereign debt, EUR tn. Sources: National Competent Authorities, ESMA.

**A.63**  
Net short positions in industrial shares and equity prices



Note: Average of net short positions in EEA30 manufacturing shares, in % of issued share capital, and EEA30 industrial equity benchmark, 01/03/2018=100. Sources: National Competent Authorities, Refinitiv Datastream, ESMA.

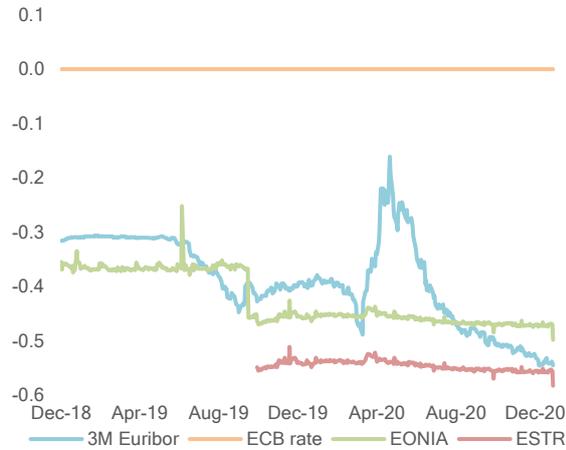
**A.64**  
Net short positions in financial shares and equity prices



Note: Average of net short positions in EEA30 financial shares, in % of issued share capital, and EEA30 financial equity benchmark, 01/03/2018=100. Sources: National Competent Authorities, Refinitiv Datastream, ESMA.

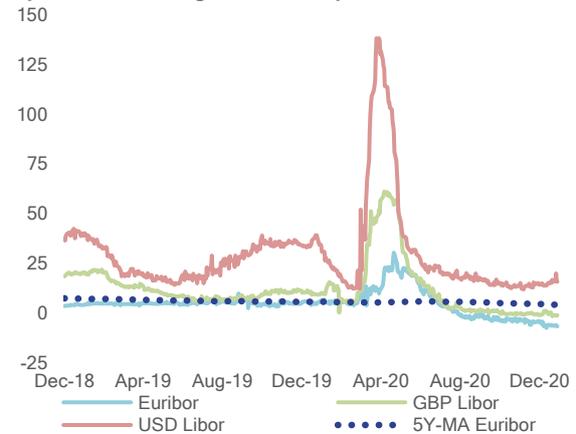
## Money markets

**A.65**  
Interest rates



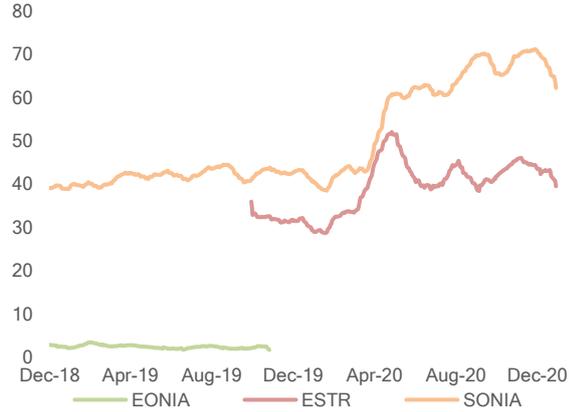
Note: Money market rates, in %. Sources: Refinitiv Datastream, ESMA.

**A.66**  
Spreads to overnight index swap



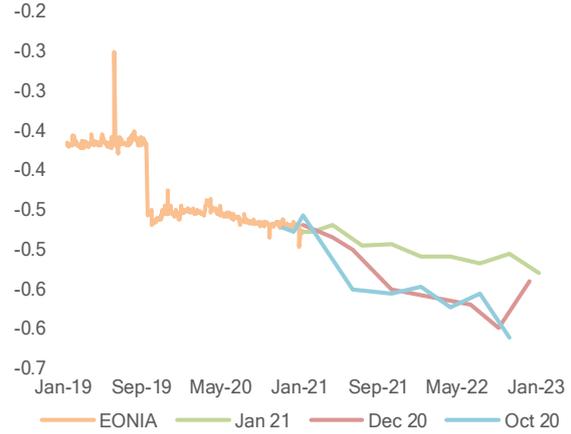
Note: Spreads between 3M interbank rates and 3M overnight index swap, in bps. Sources: Refinitiv Datastream, ESMA.

**A.67**  
**Interbank overnight activity**



Note: 1M-MA of daily lending volumes on Euro Overnight Index Average (EONIA), EUR bn, Euro short-term rate (€STR), and Sterling Overnight Index Average (SONIA), GBP bn.  
Sources: ECB, Refinitiv EIKON, ESMA.

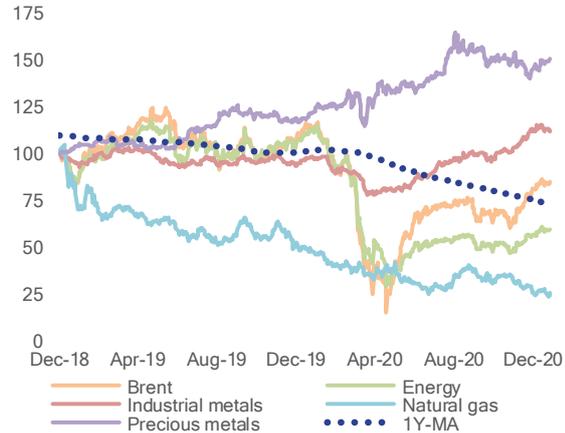
**A.68**  
**EONIA forwards**



Note: Euro overnight index swap forwards, in %.  
Sources: Refinitiv EIKON, ESMA.

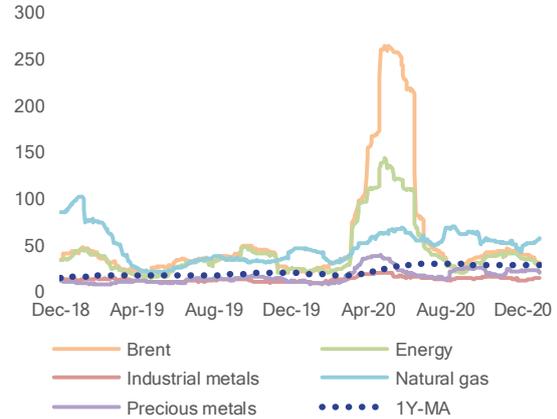
**Commodity markets**

**A.69**  
**Prices**



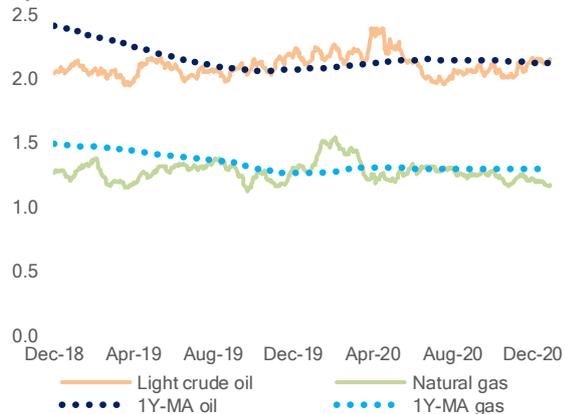
Note: S&P GSCI commodity indices and Brent price. 01/12/2018=100. 1Y-MA=one-year moving average computed using S&P GSCI.  
Sources: Refinitiv Datastream, ESMA.

**A.70**  
**Volatility**



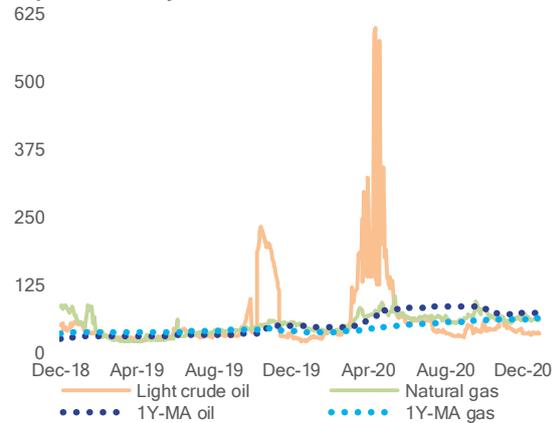
Note: Annualised 40-day volatility of S&P GSCI commodity indices and Brent price, in %. 1Y-MA=one-year moving average computed using S&P GSCI.  
Sources: Refinitiv Datastream, ESMA.

**A.71**  
**Open interest**



Note: Continuous future open interests on number of barrels, in million of contracts. 1Y-MA oil (gas)=one-year moving average of light crude oil futures (natural gas futures).  
Sources: Refinitiv Datastream, ESMA.

**A.72**  
**Implied volatility**

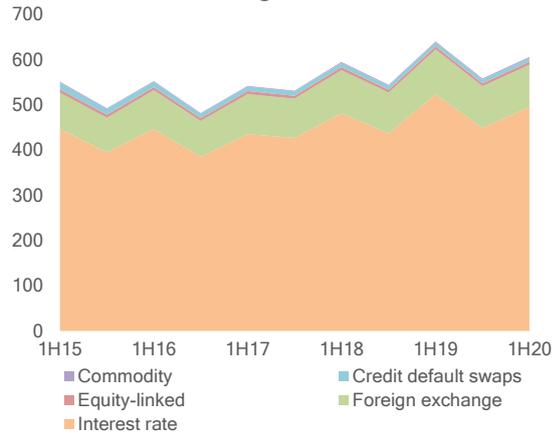


Note: One-month implied volatility of at-the-money options, in %. 1Y-MA oil (gas)=one-year moving average of light crude oil (natural gas).  
Sources: Refinitiv Datastream, ESMA.

## Derivatives markets

**A.73**

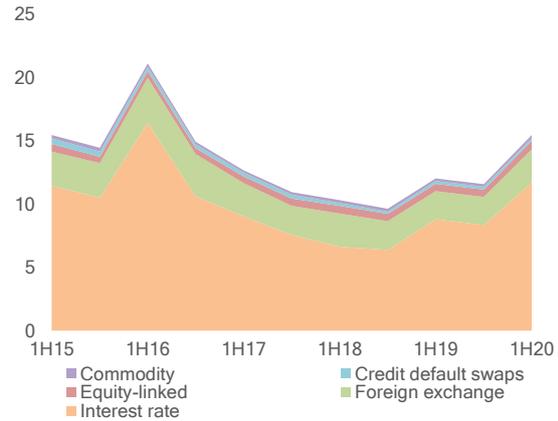
### OTC notional outstanding



Note: Gross notional amounts of outstanding OTC derivatives by product category, USD tn.  
Sources: Bank for International Settlements, ESMA.

**A.74**

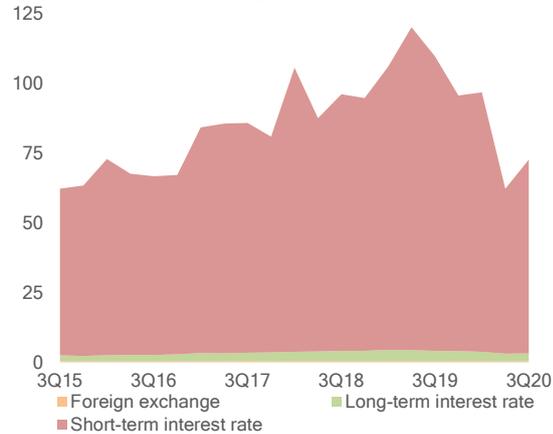
### OTC market value



Note: Gross market values of outstanding OTC derivatives by category, USD tn. Gross market values represent the cost of replacing all open contracts at the prevailing market prices.  
Sources: Bank for International Settlements, ESMA.

**A.75**

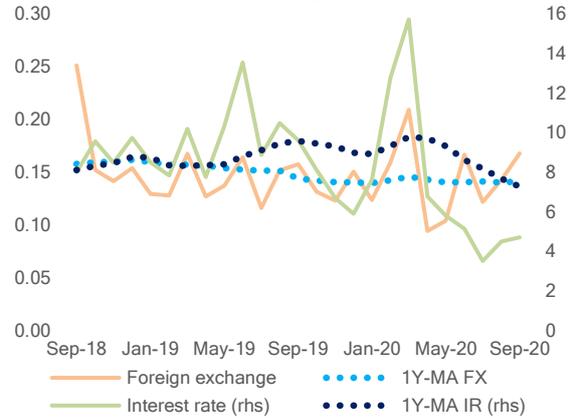
### ETD notional outstanding by product category



Note: Open interest in exchange-traded derivatives by product category, in USD tn.  
Sources: Bank for International Settlements, ESMA.

**A.76**

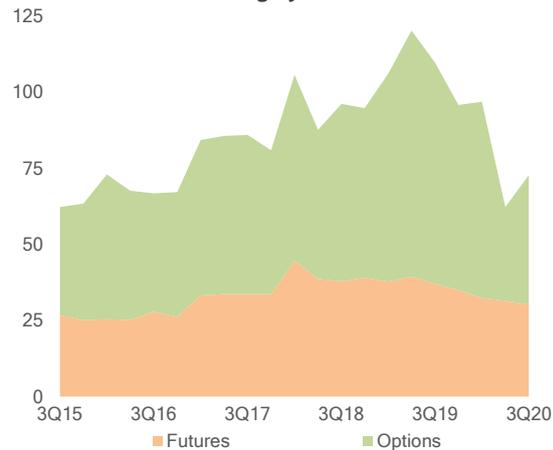
### ETD turnover by product category



Note: Global average daily turnover in exchange-traded derivatives by product category, in USD tn. 1Y-MA IR=one-year moving average for interest rate, 1Y-MA FX=one-year moving average for foreign exchange.  
Sources: Bank for International Settlements, ESMA.

**A.77**

### ETD notional outstanding by asset class



Note: Open interest in exchange-traded derivatives by asset class, in USD tn.  
Sources: Bank for International Settlements, ESMA.

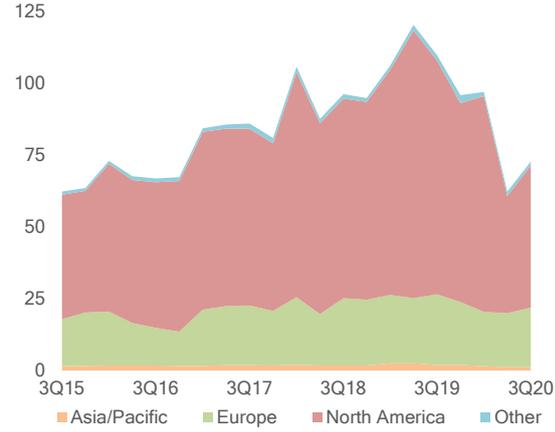
**A.78**

### ETD turnover by asset class



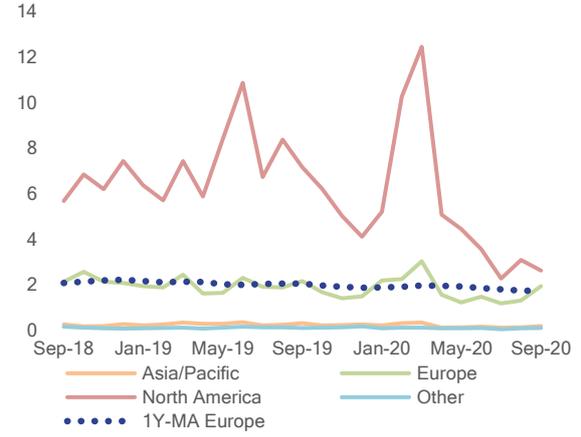
Note: Global average daily turnover in exchange-traded derivatives by asset class, in USD tn.  
Sources: Bank for International Settlements, ESMA.

**A.79**  
**ETD notional outstanding by exchange location**



Note: Open interest in exchange-traded derivatives by exchange location, in USD tn.  
 Sources: Bank for International Settlements, ESMA.

**A.80**  
**ETD turnover by exchange location**



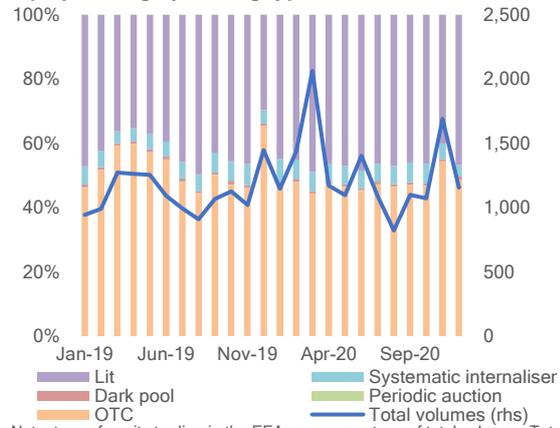
Note: Global average daily turnover in exchange-traded derivatives by exchange location, in USD tn. "Europe" as defined by BIS.  
 Sources: Bank for International Settlements, ESMA.

# Infrastructures and services

## Trading venues and MiFID entities

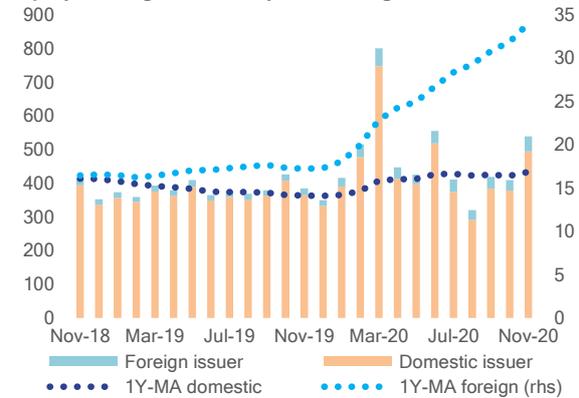
A.81

Equity trading by trading type



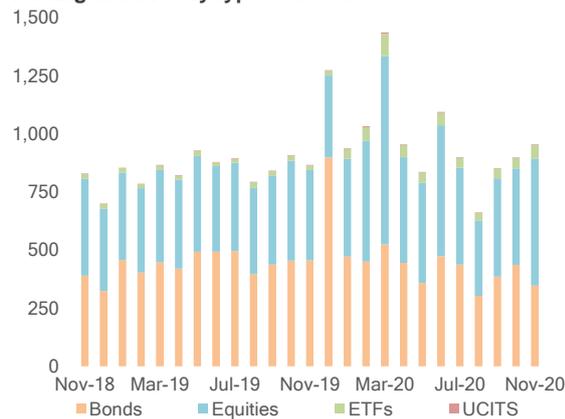
A.82

Equity trading turnover by issuer origin



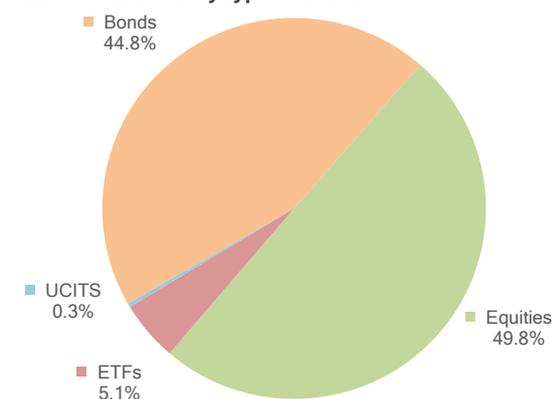
A.83

Trading turnover by type of assets



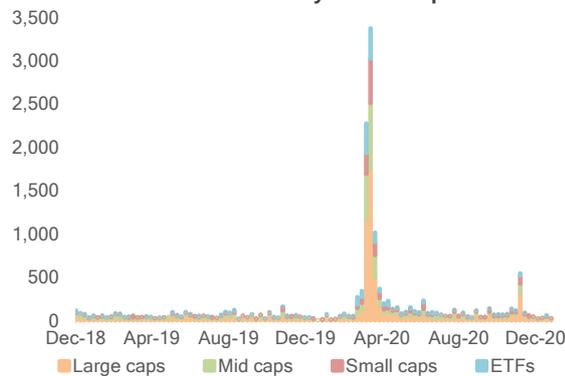
A.84

Share of turnover by type of assets



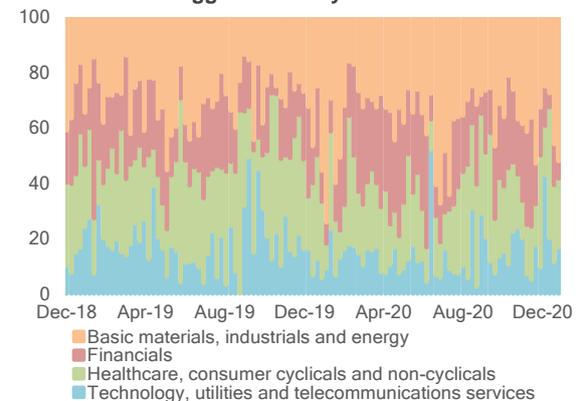
A.85

Circuit-breaker occurrences by market capitalisation

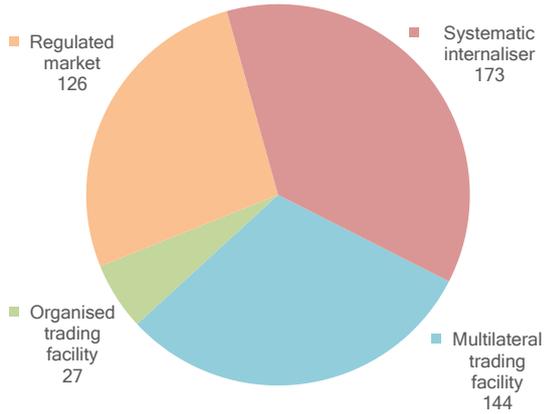


A.86

Circuit-breaker-trigger events by sector

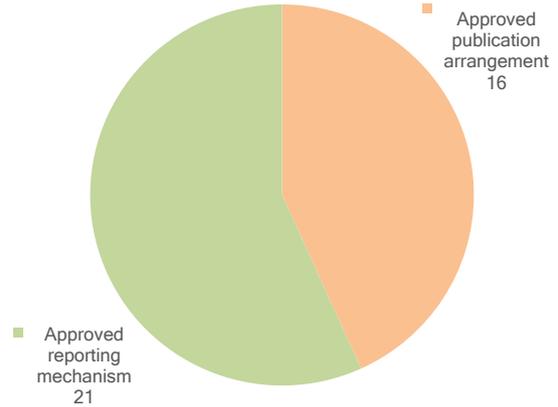


**A.87**  
Number of trading venues and systematic internalisers



Note: Number of trading venues registered under MiFID II/MiFIR by EEA30 National Competent Authorities and notified to ESMA, by type.  
Sources: ESMA Registers.

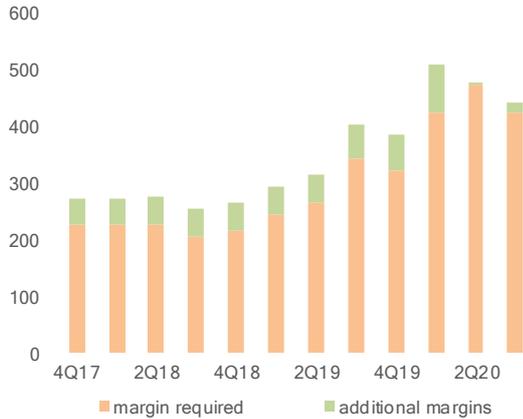
**A.88**  
Data reporting services providers



Note: Number of data reporting services providers registered under MiFID II/MiFIR by EEA30 National Competent Authorities and notified to ESMA, by type.  
Sources: ESMA Registers.

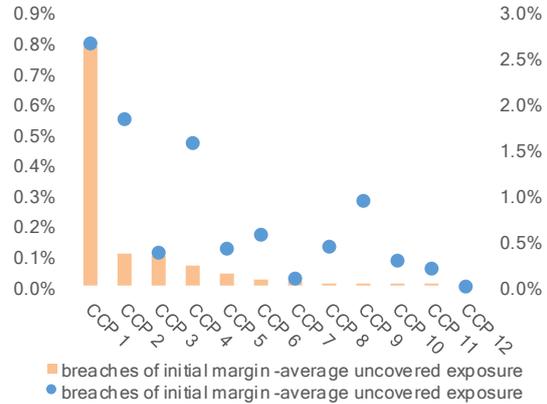
## Central counterparties

**A.89**  
Initial Margins held at EU and UK CCPs



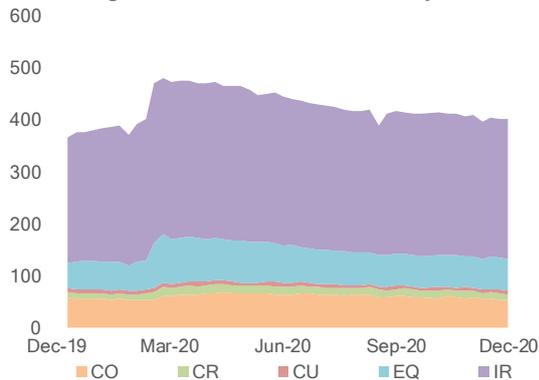
Note: Initial margin required as well as additional margin posted by EU CCP, in EUR bn.  
Sources: Clarus Financial Technology, CPMI-IOSCO PQD, ESMA.

**A.90**  
Margin breaches



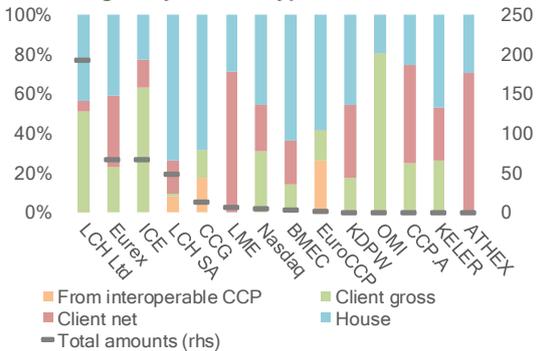
Note: Average and maximum margin breach size over the past 12 month at selected EU CCPs, as a percentage of the total margin held, as of 30 September 2020.  
Sources: Clarus Financial Technology, PQD, ESMA.

**A.91**  
Initial margins held at EU and UK CCPs by asset class



Note: Outstanding amounts of initial margin required and excess collateral received by EU27 and UK CCPs for derivatives (CCP.A, CC&G, European Central Counterparty N.V and KDPW data missing), in EUR bn. Data points for 29 May, 12 June and 16 October incomplete.  
Sources: TRs, ESMA.

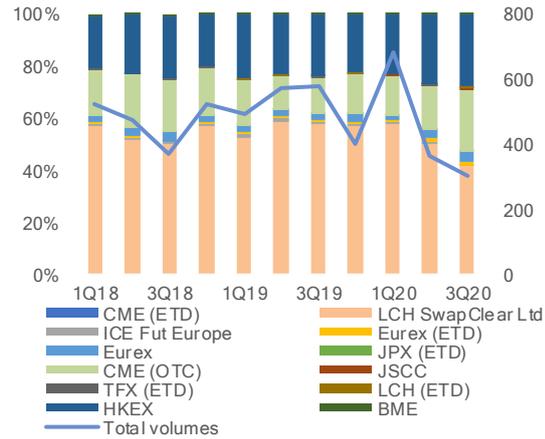
**A.92**  
Initial margins by account type



Note: Total initial margin required, split by house accounts (participants positions on their own account), client gross (when initial margin for the positions of indirect participants must be provided for each indirect participant's own position) and client net (when positions are netted within a group of clients), in %. Total amounts in EUR bn (rhs).  
Sources: Clarus Financial Technology, CPMI-IOSCO PQD, ESMA.

**A.93**

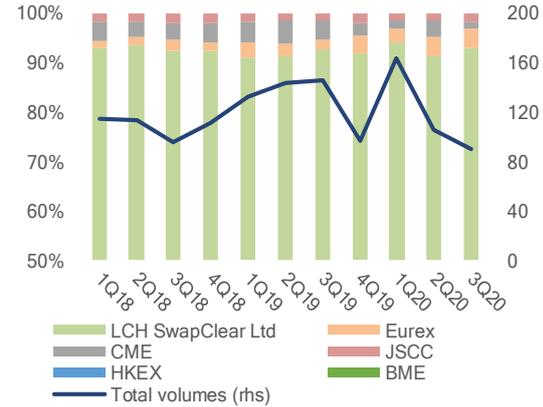
**IRD clearing volumes by CCP**



Note: Quarterly notional volumes cleared for OTC and ETD IRDs in EUR, USD, JPY or GBP, in %. Total volumes in EUR tn.  
Sources: Clarus Financial Technology, ESMA.

**A.94**

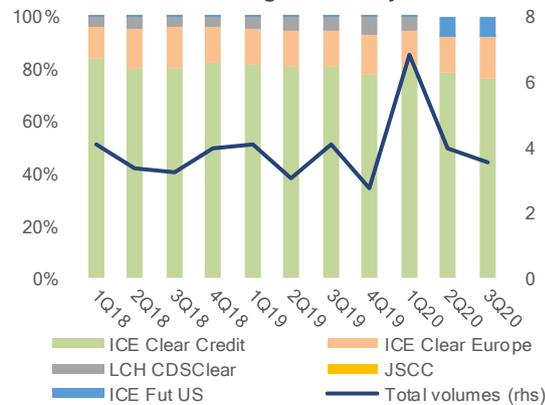
**IRD subject to clearing obligation by CCP**



Note: Market share on OTC central clearing of basis swaps, fixed-to-float swaps, forward rate agreements and overnight indexed swaps in EUR, USD, JPY or GBP, in %. Quarterly notional volumes cleared, in EUR tn (rh axis).  
Sources: Clarus Financial Technology, ESMA.

**A.95**

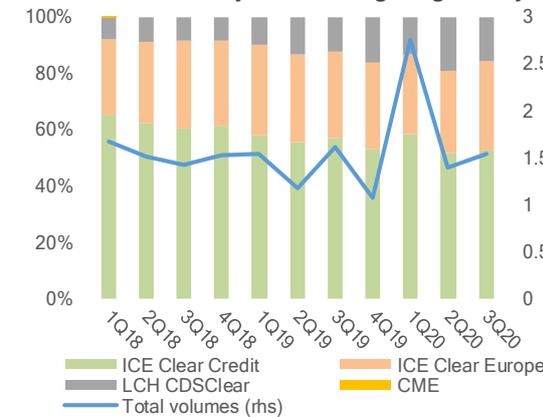
**Credit derivatives clearing volumes by CCP**



Note: Quarterly notional volumes cleared for CDS, CDX and CDX futures & swaptions in EUR, USD, JPY or GBP, in %. Total volumes in EUR tn.  
Sources: Clarus Financial Technology, ESMA.

**A.96**

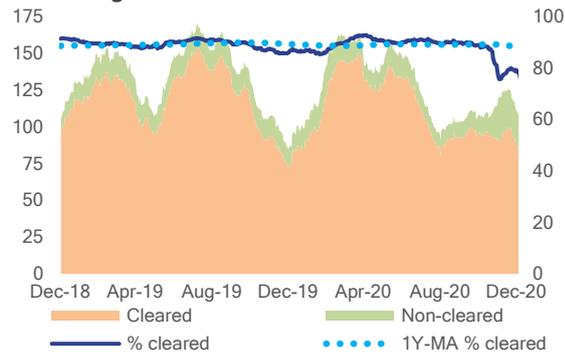
**Credit derivatives subject to clearing obligation by CCP**



Note: Market share of OTC central clearing of iTraxx Europe and iTraxx Crossover, in %. Quarterly notional volumes cleared, in EUR trillion (right axis).  
Sources: Clarus Financial Technology, ESMA.

**A.97**

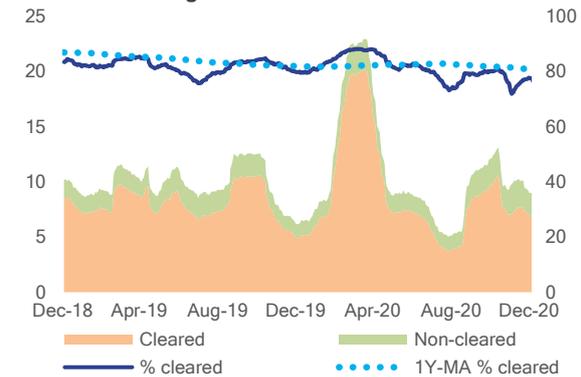
**IRD trading volumes**



Note: Daily trading volumes for EU27-currency-denominated IRD products. Products include IRS, basis swaps, FRA, inflation swaps, OIS. 40-day moving average notional, USD bn. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository. Reporting logic for indicating the cleared status of trades changed for DTCC SDR on 21 Nov 2020.  
Sources: ISDA SwapsInfo, ESMA.

**A.98**

**CDS index trading volumes**

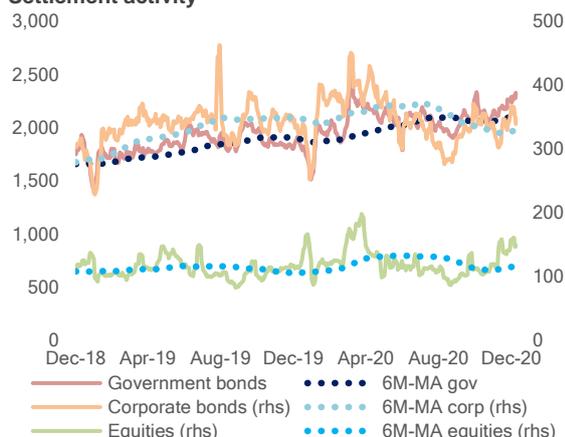


Note: Daily trading volumes for the main EUR CDS indices including Itraxx Europe, Itraxx Europe Crossover, Itraxx Europe Senior Financials. 40-day moving average notional, USD bn. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository.  
Sources: ISDA SwapsInfo, ESMA.

## Central securities depositories

**A.99**

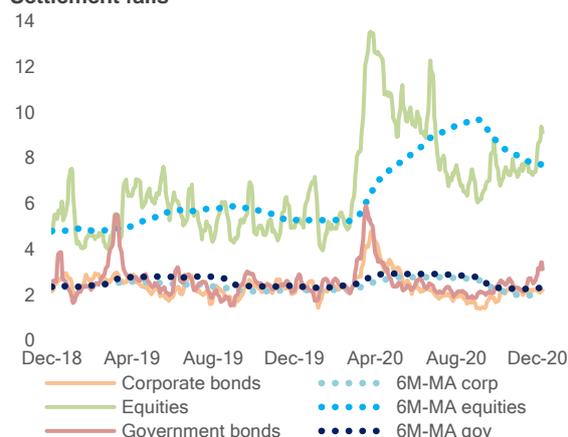
### Settlement activity



Note: Total value of settled transactions in the EEA30 as reported by NCAs, in EUR bn, one-week moving averages.  
Sources: National Competent Authorities, ESMA.

**A.100**

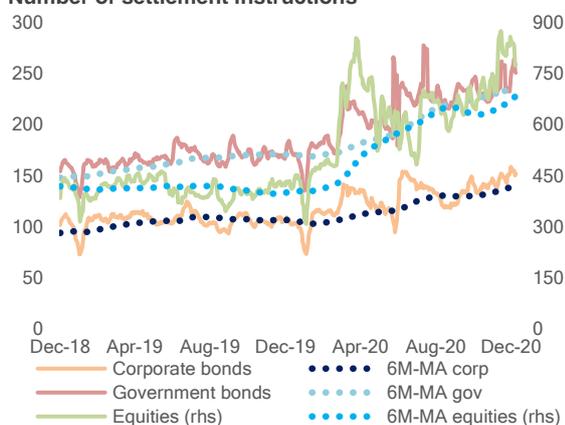
### Settlement fails



Note: Share of failed settlement instructions in the EEA30, in % of value, one-week moving averages.  
Sources: National Competent Authorities, ESMA.

**A.101**

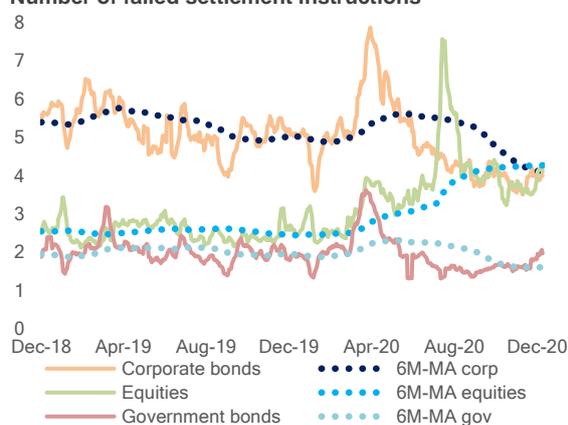
### Number of settlement instructions



Note: Total number of settlement instructions in the EEA30 as reported by NCAs, in thousand, one-week moving averages. Dotted lines represent six-month moving averages.  
Sources: National Competent Authorities, ESMA.

**A.102**

### Number of failed settlement instructions

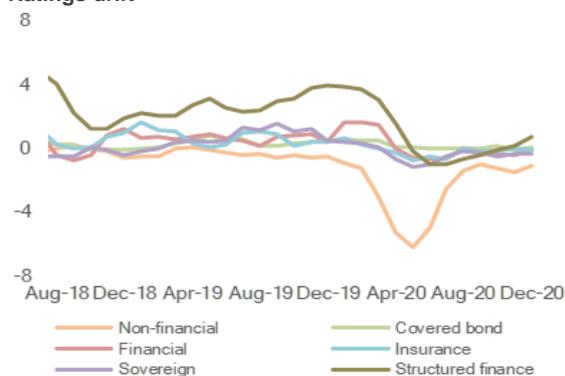


Note: Share of failed settlement instructions in the EEA30, in % of total number of instructions, one-week moving averages. Dotted lines represent six-month moving averages.  
Sources: National Competent Authorities, ESMA.

## Credit rating agencies

**A.103**

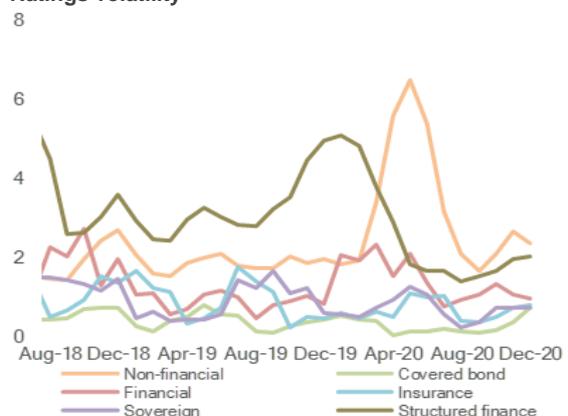
### Ratings drift



Note: 3-month moving average of net rating changes in outstanding ratings from all credit rating agencies, excluding CERVED and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades. EU-27+UK ratings.  
Sources: RADAR, ESMA.

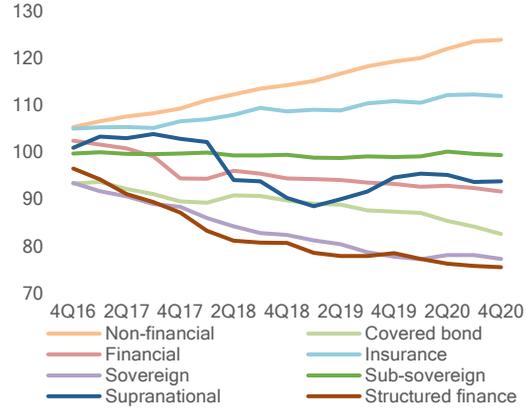
**A.104**

### Ratings volatility



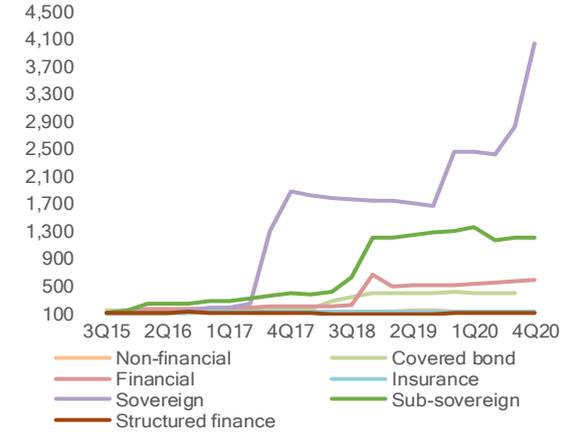
Note: 3 month moving average of volatility of ratings by all credit rating agencies, excluding CERVED and ICAP, by asset class computed as number of rating changes over number of outstanding ratings.  
Sources: RADAR, ESMA.

**A.105**  
**Outstanding ratings issued by the top 3 CRAs**



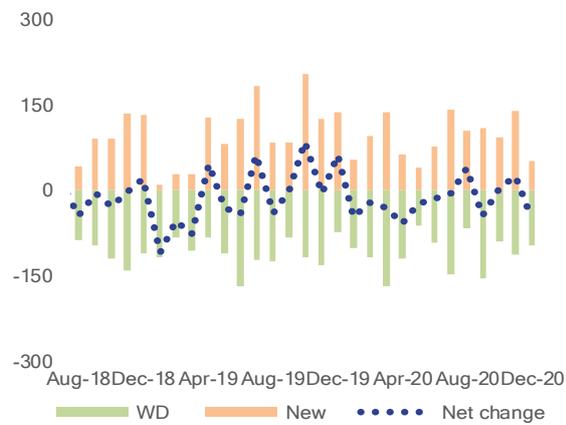
Note: Evolution of outstanding ratings, indexed 3Q15=100. S&P, Moody's and Fitch.  
 Sources: RADAR, ESMA.

**A.106**  
**Outstanding ratings excluding the top 3 CRAs**



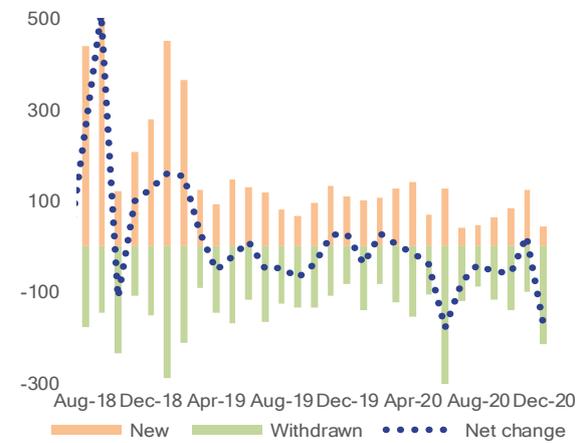
Note: Evolution of outstanding ratings, indexed 3Q15=100. All CRAs excluding S&P, Moody's and Fitch. Sovereign on right hand axis.  
 Sources: RADAR, ESMA.

**A.107**  
**Changes in outstanding structured finance ratings**



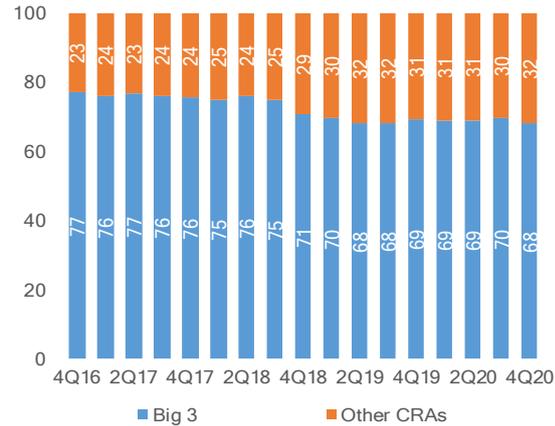
Note: Number of withdrawn and new ratings for structured finance instruments. EU-27+UK ratings.  
 Sources: RADAR, ESMA.

**A.108**  
**Changes in outstanding covered bond ratings**



Note: Number of withdrawn and new ratings for covered bonds.  
 Sources: RADAR, ESMA.

**A.109**  
**Share of outstanding ratings Big 3 CRAs vs. others**

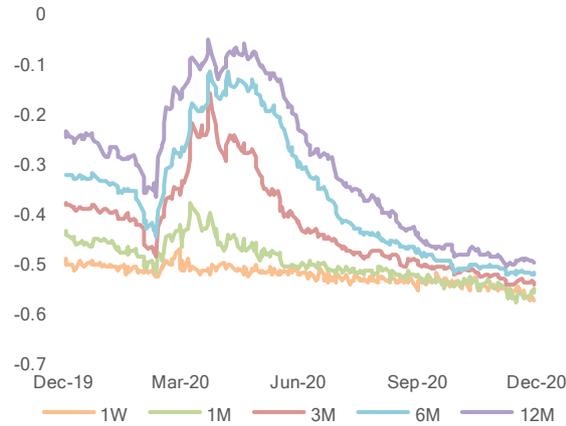


Note: Share of outstanding ratings from S&P, Moody's and Fitch, and ratings from all other CRAs, in %.  
 Sources: RADAR, ESMA.

## Financial benchmarks

### A.110

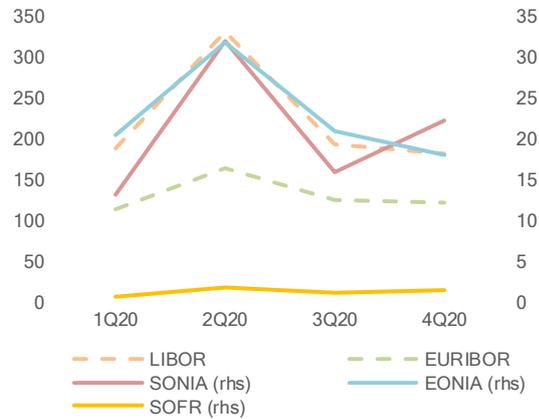
#### EURIBOR rates



Note: EURIBOR across maturities.  
Sources: EMMI, ESMA.

### A.112

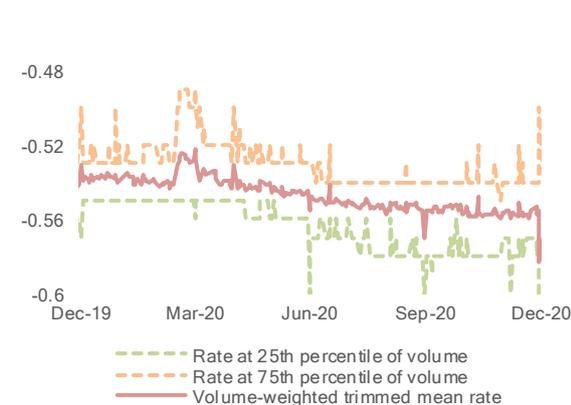
#### IRDs linked to reference rates



Note: Gross notional amount of IRS outstanding referencing benchmarks, EUR tn.  
Sources: TRs, ESMA

### A.114

#### €STR rate



Note: Rates at the 25th and 75th percentiles of total volumes as well as the trimmed one, after removing the top and bottom 25% and calculating the mean of the remaining 50% of the volume-weighted distribution of rates.  
Sources: ECB ESMA

### A.111

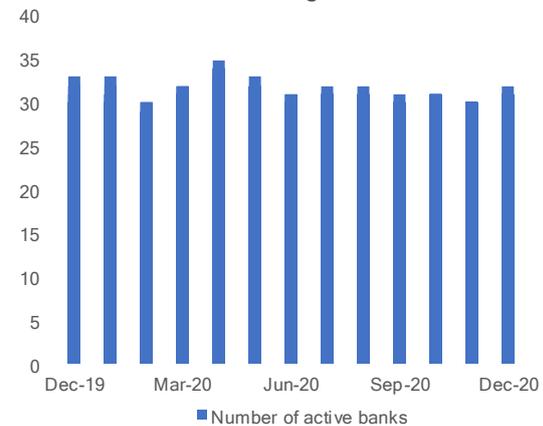
#### IRs linked to EONIA and Euribor by maturity



Note: Gross notional amount of IRS outstanding referencing EONIA, EONIA SWAP rates and EURIBOR by maturity date (before or after end-2021), as of 2 October 2020, EUR tn.  
Sources: TRs, ESMA

### A.113

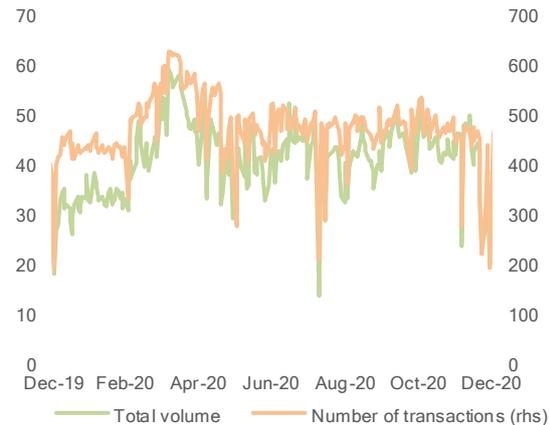
#### Number of banks contributing to €STR



Note: Number of banks reporting transactions before trimming.  
Sources: ECB, ESMA.

### A.115

#### €STR volumes



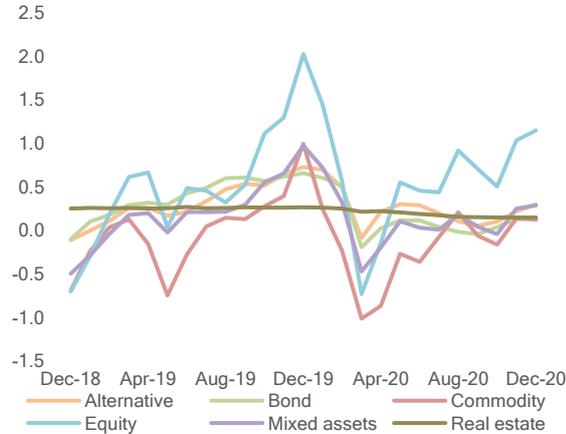
Note: Total nominal value of transactions before trimming, in EUR bn. Number of transactions before trimming.  
Sources: ECB, ESMA.

# Asset management

## Fund industry

**A.116**

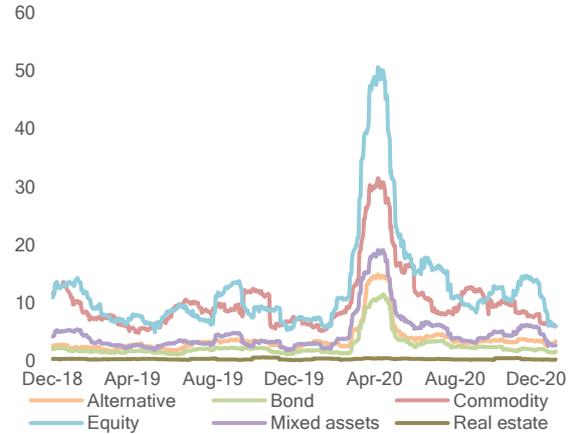
### Fund performance



Note: EU27-domiciled investment fund annual average of monthly returns, asset-weighted, in %.  
Sources: Refinitiv Lipper, ESMA.

**A.117**

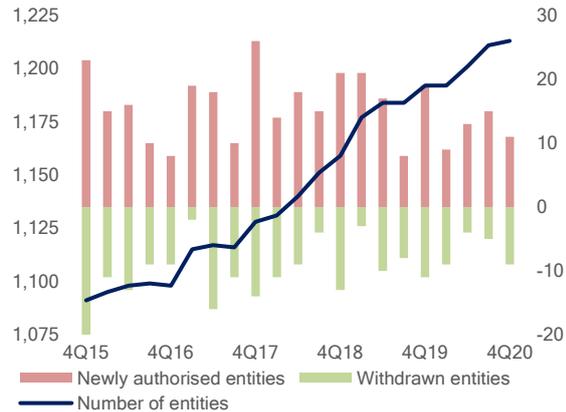
### Fund volatility



Note: Annualised 40-day historical return volatility of EU27-domiciled investment funds, in %.  
Sources: Refinitiv Lipper, ESMA.

**A.118**

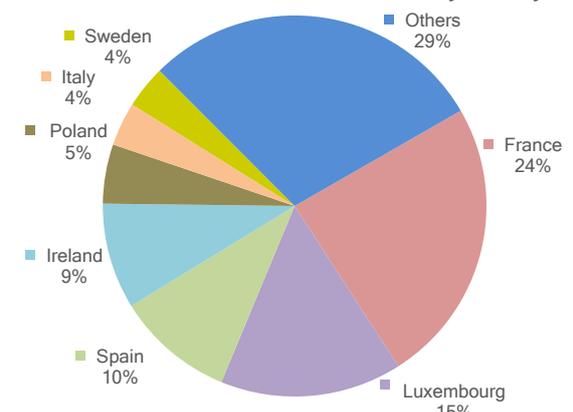
### Entities authorised under UCITS



Note: Number of entities authorised under the UCITS Directive by EEA30 National Competent Authorities and notified to ESMA. Newly authorised entities and withdrawn entities on the right axis.  
Sources: ESMA Registers.

**A.119**

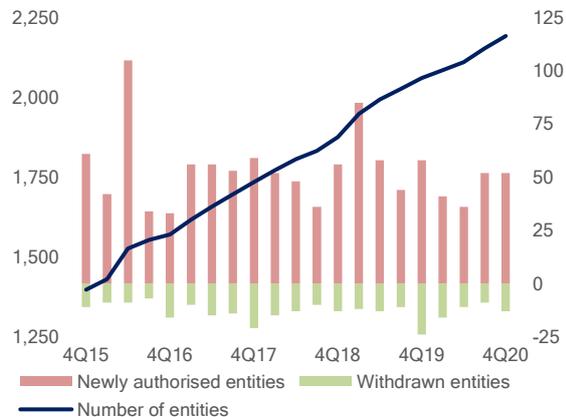
### Share of entities authorised under UCITS by country



Note: Number of entities authorised under the UCITS Directive by EEA30 National Competent Authorities and notified to ESMA, in %.  
Sources: ESMA Registers.

**A.120**

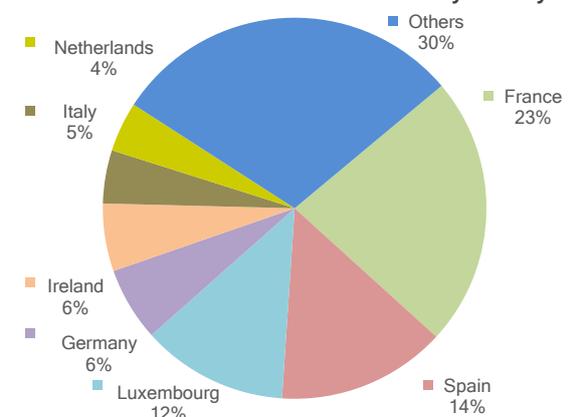
### Entities authorised under AIFMD



Note: Number of entities authorised under AIFMD by EEA30 National Competent Authorities and notified to ESMA. Newly authorised entities and withdrawn entities on the right axis.  
Sources: ESMA Registers.

**A.121**

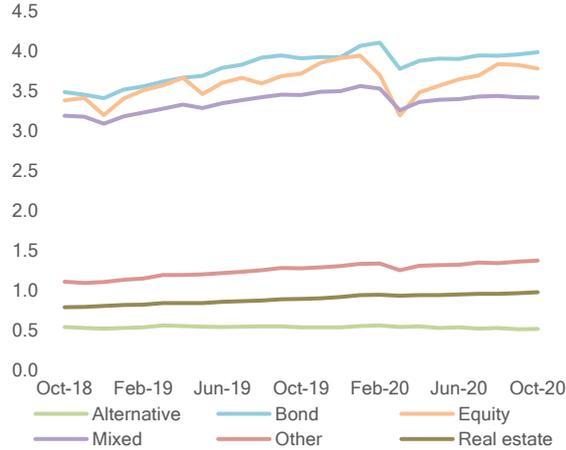
### Share of entities authorised under AIFMD by country



Note: Number of entities authorised under AIFMD by EEA30 National Competent Authorities and notified to ESMA, in %.  
Sources: ESMA Registers.

**A.122**

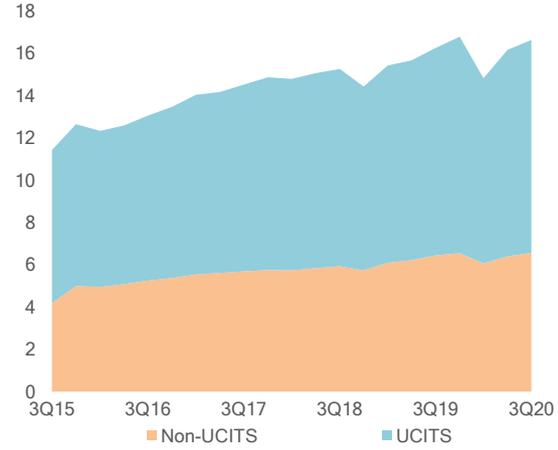
**Assets by market segment**



Note: AuM of EA funds by fund type, EUR tn.  
Sources: ECB, ESMA.

**A.123**

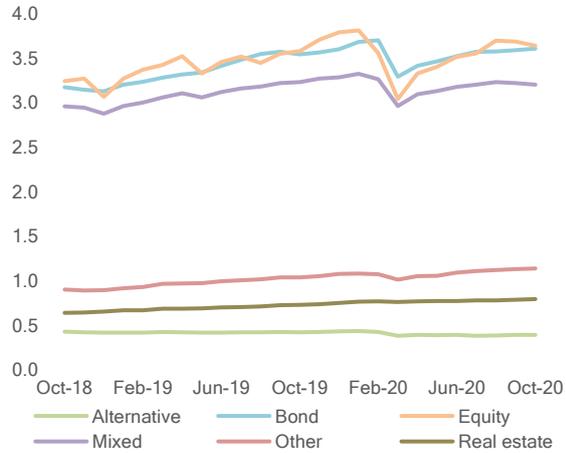
**NAV by legal form**



Note: NAV of EU28 funds, EUR tn.  
Sources: EFAMA, ESMA.

**A.124**

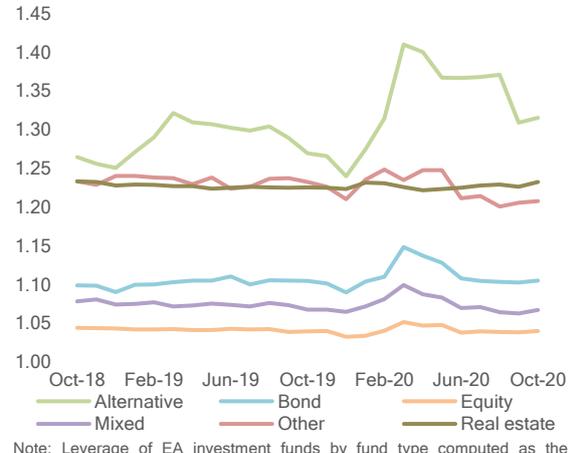
**NAV by fund market segment**



Note: NAV of EA investment funds by fund type, EUR tn.  
Sources: ECB, ESMA.

**A.125**

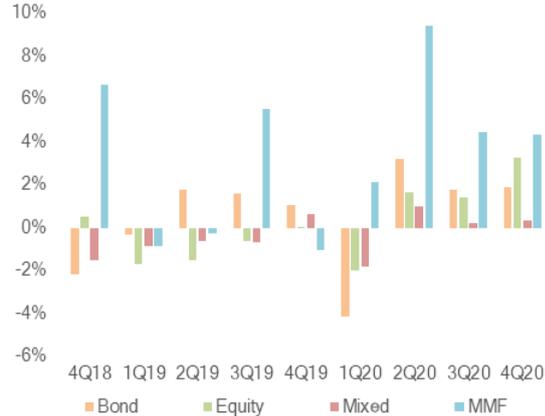
**Leverage by market segment**



Note: Leverage of EA investment funds by fund type computed as the AuM/NAV ratio.  
Sources: ECB, ESMA.

**A.126**

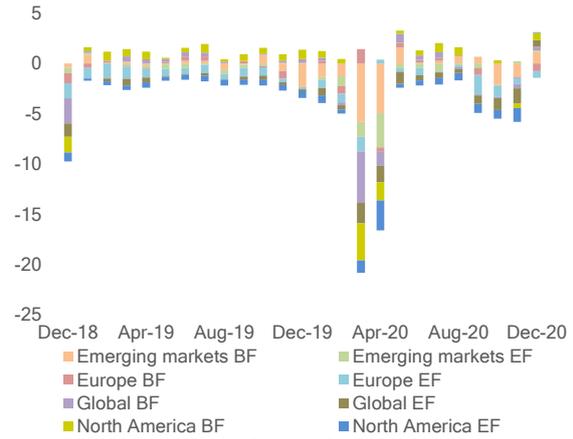
**Fund flows by fund type**



Note: EU27-domiciled funds' quarterly flows, in % of NAV.  
Sources: Refinitiv Lipper, ESMA.

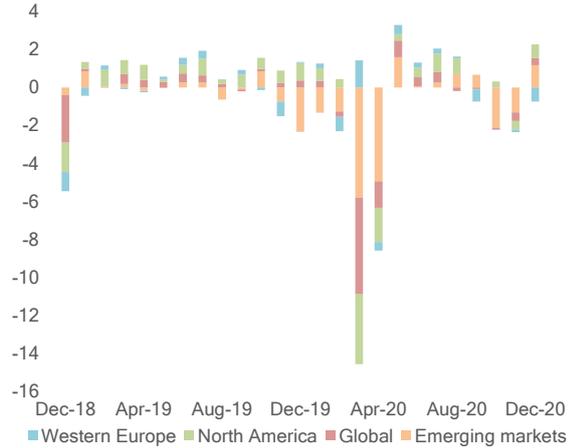
**A.127**

**Fund flows by regional investment focus**



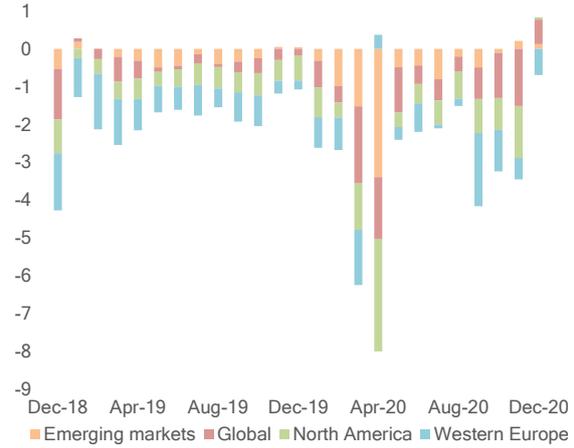
Note: EU27 bond and equity fund net flows (BF and EF) by regional investment focus, in % of NAV.  
Sources: Refinitiv Lipper, ESMA.

**A.128**  
Bond fund flows by regional investment focus



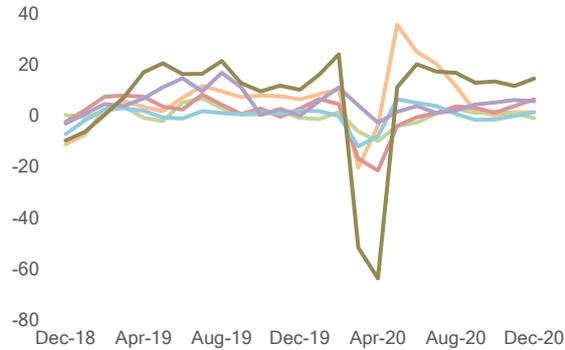
Note: EU27 bond fund net flows by regional investment focus, in % of NAV. Sources: Refinitiv Lipper, ESMA.

**A.129**  
Equity fund flows by regional investment focus



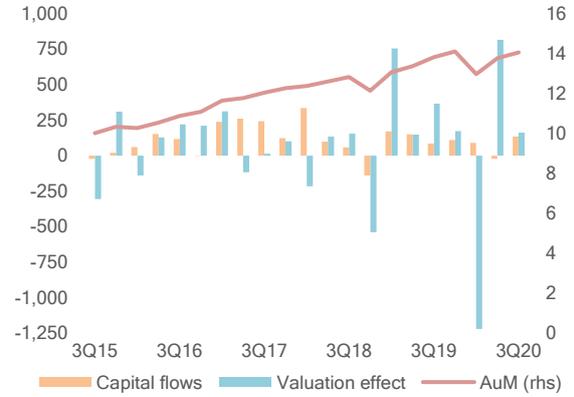
Note: EU27 equity fund net flows by regional investment focus, in % of NAV. Sources: Refinitiv Lipper, ESMA.

**A.130**  
Net flows for bond funds



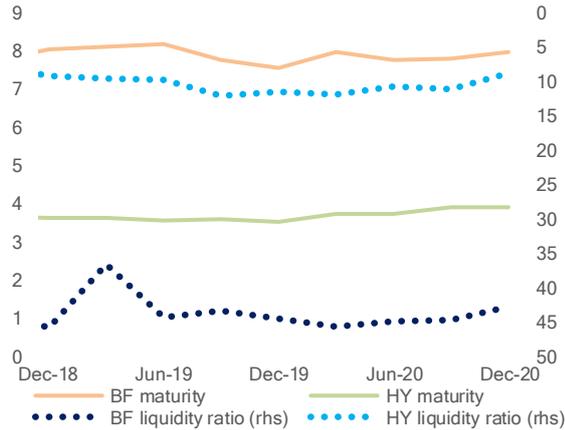
Note: Two-month cumulative net flows for EU27 bond funds, EUR bn. Funds investing in corporate and government bonds that qualify for another category are only reported once (e.g. funds investing in emerging government bonds reported as emerging; funds investing in HY corporate bonds reported as HY). Sources: Refinitiv Lipper, ESMA.

**A.131**  
Net asset valuation



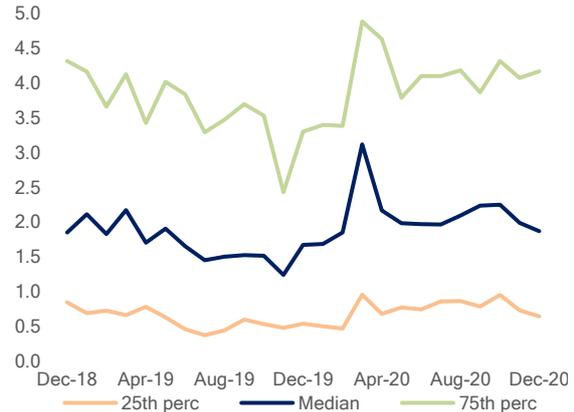
Note: Net valuation effect related to the AuM of EA investment funds, computed as the intraperiod change in AuM, net of flows received in the respective period. Capital flows and valuation effects in EUR bn. AuM expressed in EUR tn. Sources: ECB, ESMA.

**A.132**  
Liquidity risk profile of EU bond funds



Note: Effective average maturity of fund assets in years; ESMA liquidity ratio (rhs, in reverse order). Sources: Refinitiv Lipper, ESMA.

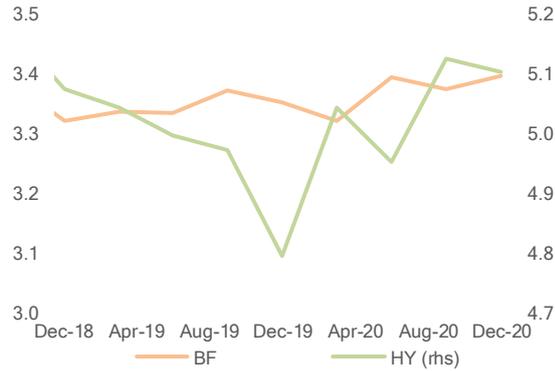
**A.133**  
Cash as percentage of assets



Note: Median, 25th and 75th percentile of the value of cash held by EU27 corporate bond funds, in % of portfolio holdings. Short positions can have a negative value. Sources: Refinitiv Lipper, ESMA.

**A.134**

**Credit quality of bond funds' assets**



Note: Average credit quality of assets held in investment grade bond funds (BF) compared with high yield bond funds (HY) based on S&P ratings; 1= AAA; 4= BBB; 10= D). An increase implies a deterioration of the credit quality. Sources: Refinitiv Lipper, ESMA.

**A.135**

**Maturity of EU bond funds' assets**

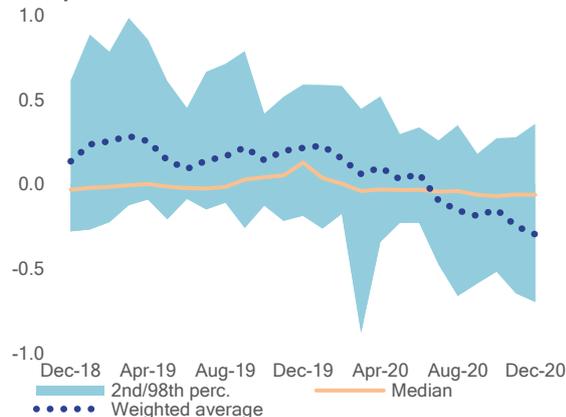


Note: Weighted average effective maturity of EU27-domiciled bond funds assets, data in years. Sources: Thomson Reuters Lipper, ESMA.

**Money market funds**

**A.136**

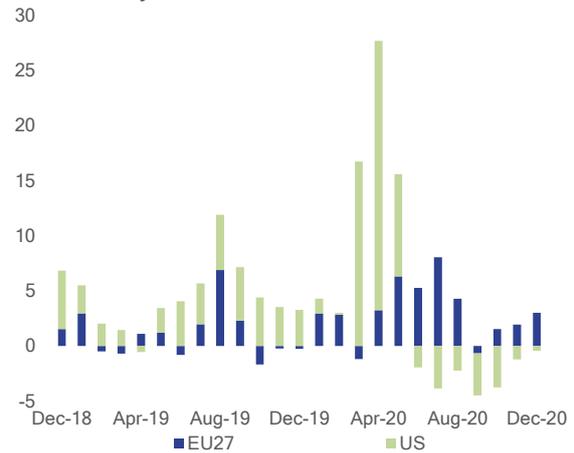
**MMF performance**



Note: EU27-domiciled MMF average yearly returns by month, in %. The graph shows the median and average asset-weighted returns and the difference between the returns corresponding to the 98th and 2nd percentile. Sources: Refinitiv Lipper, ESMA.

**A.137**

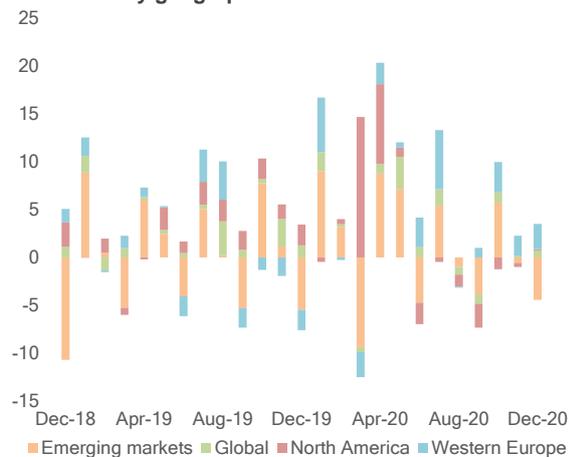
**MMF flows by domicile**



Note: MMF net flows by domicile, in % of NAV. Sources: Refinitiv Lipper, ESMA.

**A.138**

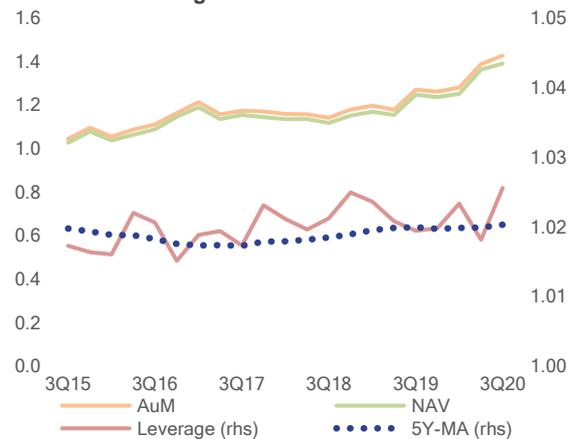
**MMF flows by geographical focus**



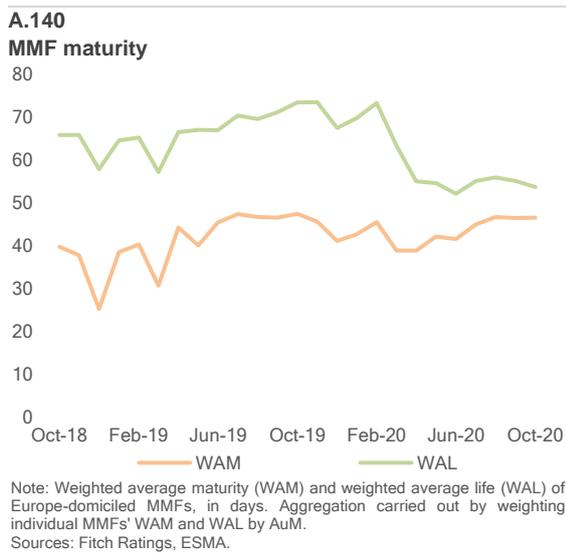
Note: EU27 MMF net flows by geographical focus, in % of NAV. Sources: Refinitiv Lipper, ESMA.

**A.139**

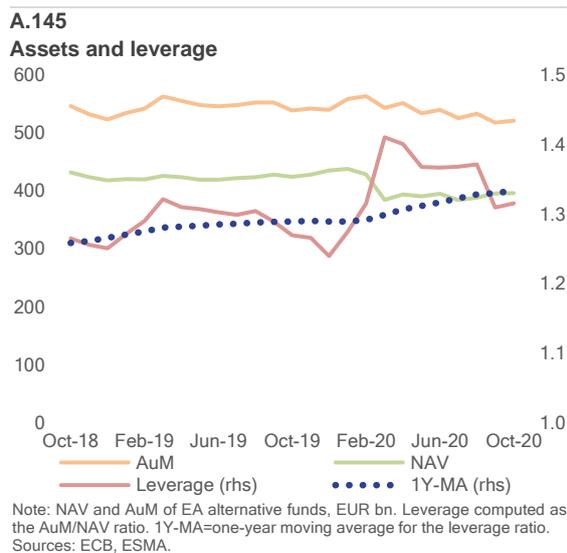
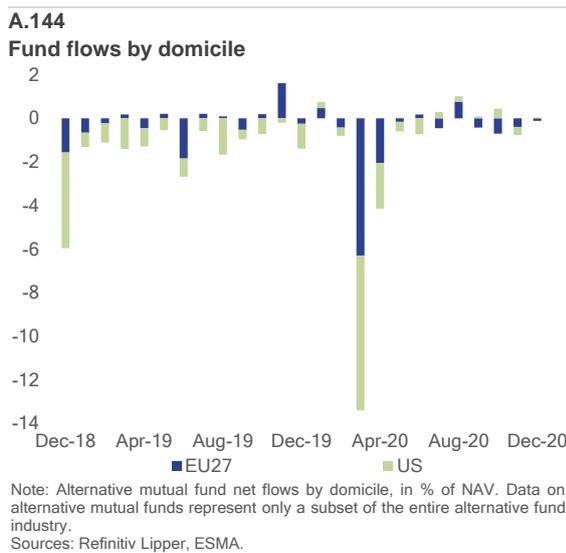
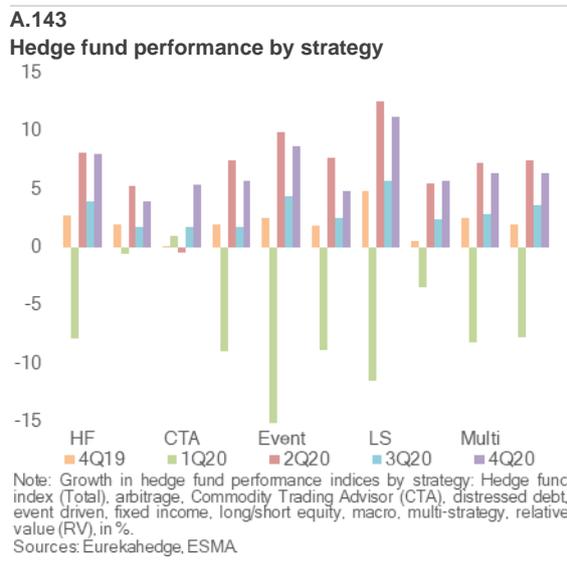
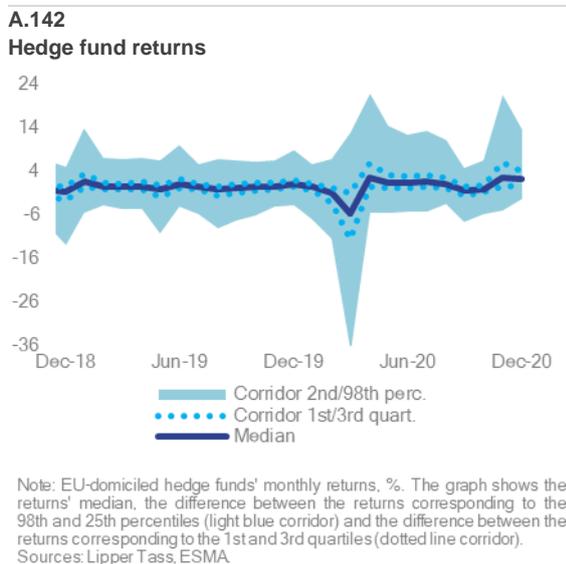
**Assets and leverage**



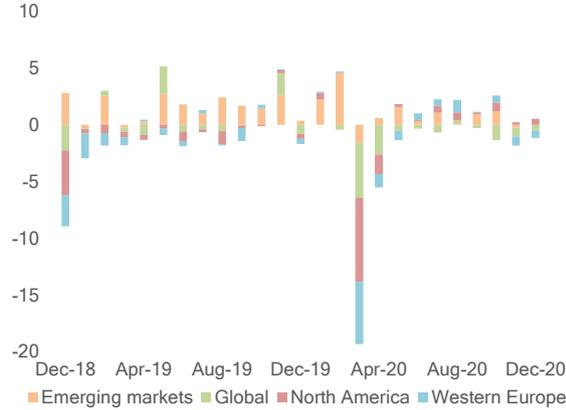
Note: NAV and AuM of EA MMFs, EUR tn. Leverage computed as the AuM/NAV ratio. 5Y-MA=five-year moving average of the leverage ratio. Sources: ECB, ESMA.



**Alternative funds**

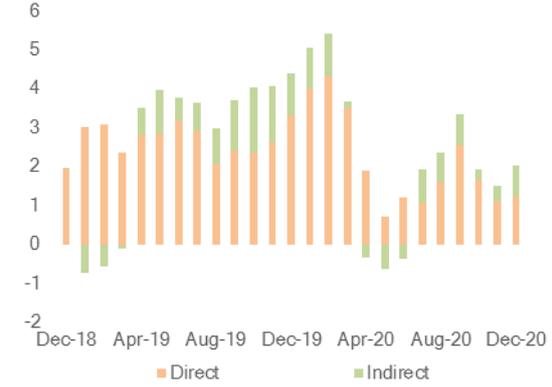


**A.146**  
Alternative fund flows by geographical focus



Note: EU27 alternative mutual fund net flows by geographical focus, in % of NAV. Data on alternative mutual funds represent only a subset of the entire alternative fund industry.  
Sources: Refinitiv Lipper, ESMA.

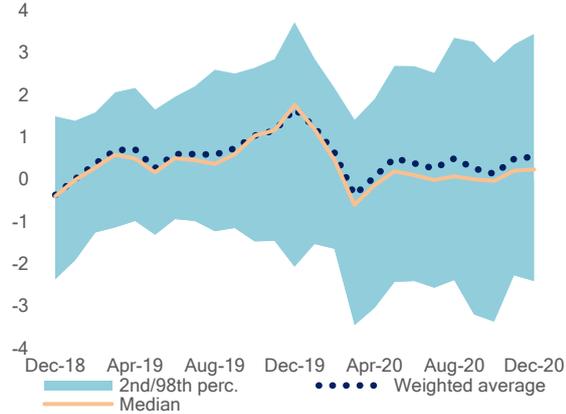
**A.147**  
Direct and indirect property fund flows



Note: Two-month cumulative flows for direct and indirect EU27-domiciled property funds. Indirect property funds invest in securities of real estate companies, including Real Estate Investment Trusts (REITs), in EUR bn.  
Sources: Morningstar, ESMA.

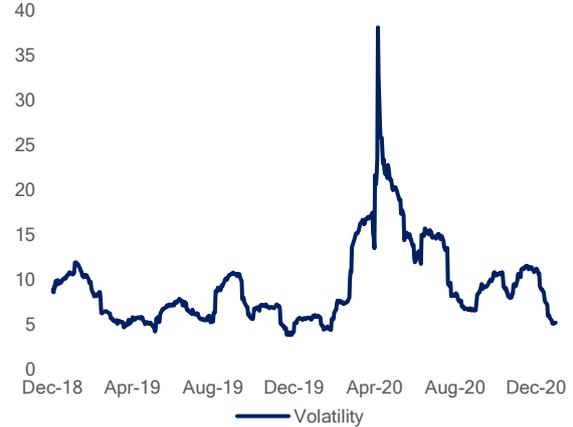
**Exchange-traded funds**

**A.148**  
Returns



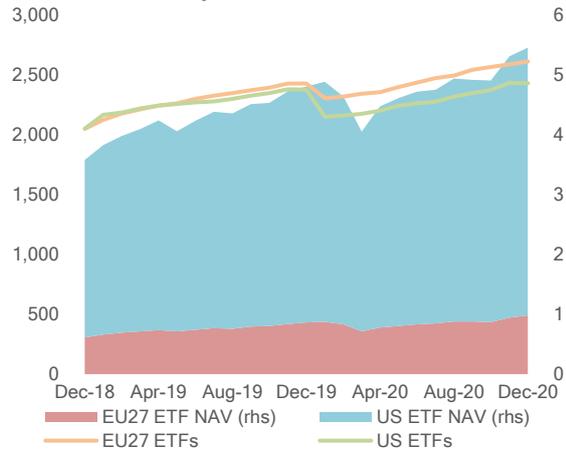
Note: Average yearly returns by month of EU27-domiciled ETFs, in %. The graph shows the median and average asset-weighted returns and the difference between the returns corresponding to the 98<sup>th</sup> and 2<sup>nd</sup> percentile.  
Sources: Refinitiv Lipper, ESMA.

**A.149**  
Volatility



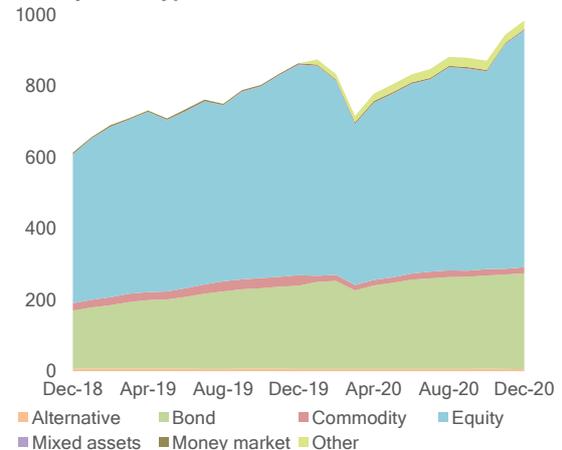
Note: Annualised 40-day historical return volatility of EU27-domiciled ETFs, in %.  
Sources: Refinitiv Lipper, ESMA.

**A.150**  
NAV and number by domicile



Note: NAV, EUR tn, and number of ETFs by domicile.  
Sources: Refinitiv Lipper, ESMA.

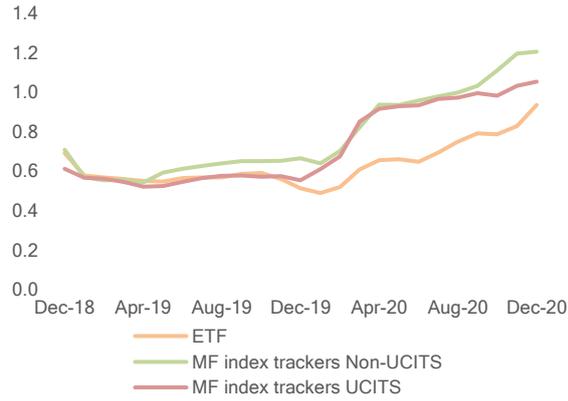
**A.151**  
NAV by asset type



Note: NAV of EU27 ETFs by asset type, EUR bn.  
Sources: Refinitiv Lipper, ESMA.

**A.152**

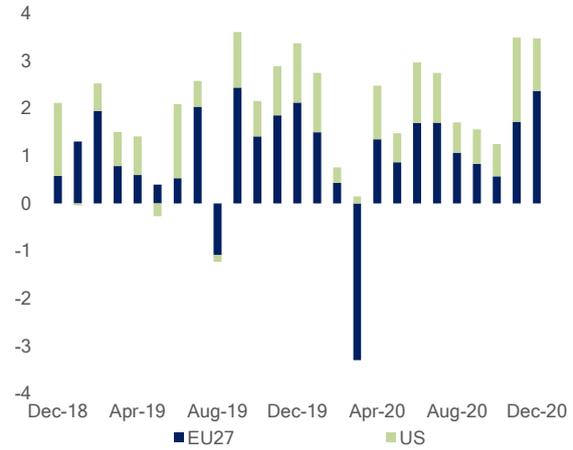
**Tracking error**



Note: Tracking error defined as standard deviation of mutual fund excess returns compared with benchmark. The graph shows the tracking error for EU27 ETFs and mutual funds both UCITS and non-UCITS. Yearly standard deviation reported on monthly frequency. End-of-month data. Sources: Refinitiv Lipper, ESMA.

**A.153**

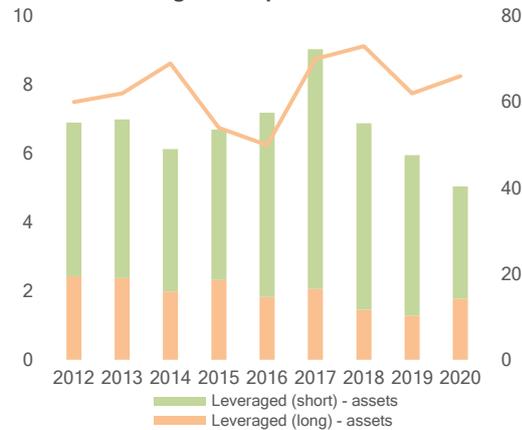
**Flows by domicile**



Note: ETF net flows by domicile, in % of NAV. Sources: Refinitiv Lipper, ESMA.

**A.154**

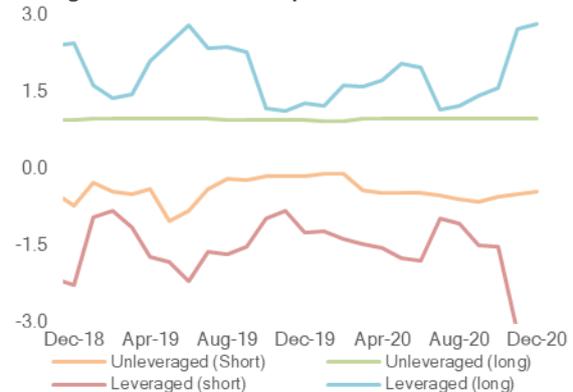
**Assets of leveraged European ETFs**



Note: Total assets of leveraged long and leveraged short ETFs with primary listings in Europe, in EUR bn and total number of products (rhs), in thousand.

**A.155**

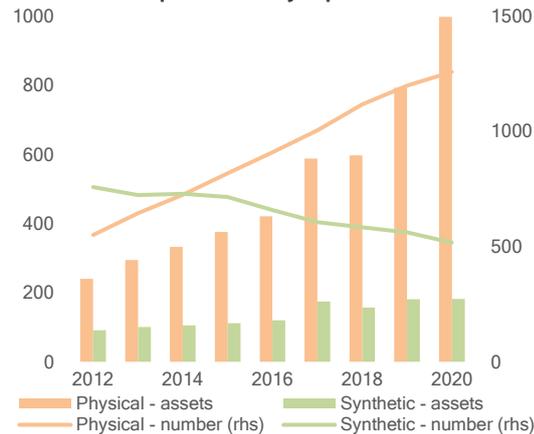
**Average beta values for European ETFs**



Note: Leveraged ETFs are self-reported. The annual average monthly beta is measured as the volatility of a fund return in comparison to its benchmark. An unleveraged ETF replicating its benchmark will typically have a beta close to 1.0. Sources: Refinitiv Lipper, ESMA.

**A.156**

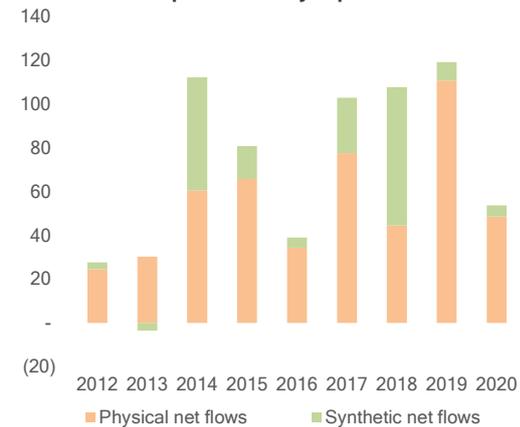
**Assets of European ETFs by replication method**



Note: Total assets of physical and synthetic ETFs with primary listings in Europe, in EUR bn and total number of products (rhs). Sources: ETFGI, ESMA.

**A.157**

**Flows into European ETFs by replication method**



Note: Net flows of physical and synthetic ETFs with primary listings in Europe, in EUR bn. Sources: ETFGI, ESMA.

# Consumers

## Investment resources available to households

A.158

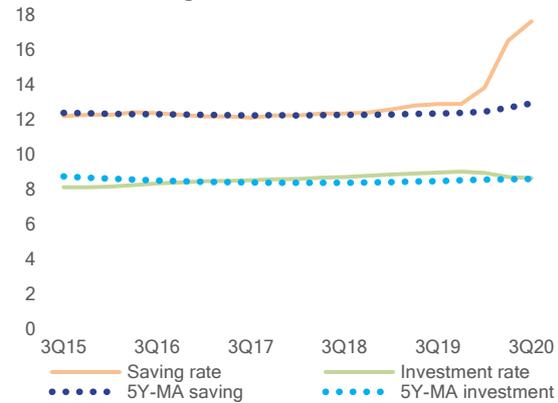
### Disposable income



Note: Annualised growth rate of household gross disposable income adjusted for changes in pension entitlements for 16 EU27 countries (AT, BE, CZ, DE, DK, ES, FI, FR, IE, IT, NL, PL, PT, RO, SE and SI), in %. 5Y-MA=five-year moving average of the growth rate.  
Sources: Eurostat, ESMA.

A.159

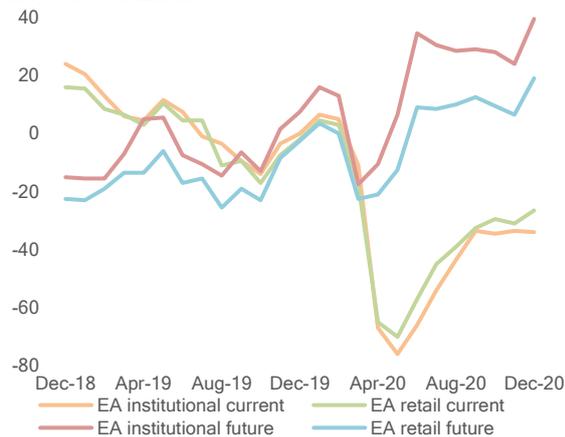
### Household saving and investment rates



Note: EA household annual saving and investment rates, based on four-quarter cumulated transactions, in %. 5Y-MA saving=five-year moving average of the saving rate. 5Y-MA investment=five-year moving average of the investment rate.  
Sources: ECB, ESMA.

A.160

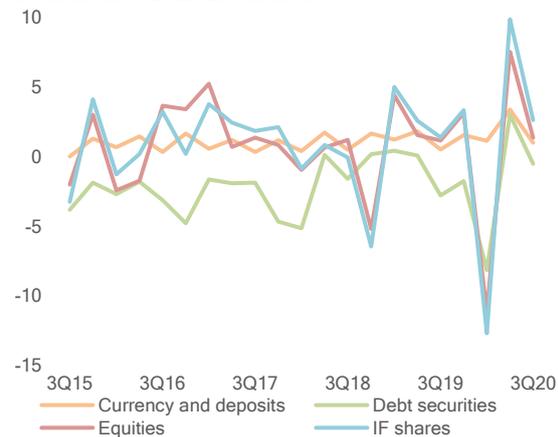
### Investor sentiment



Note: Sentix Sentiment Indicators for the EA retail and institutional investors on a ten-year horizon. The zero benchmark is a risk-neutral position.  
Sources: Refinitiv Datastream, ESMA.

A.161

### Growth rates in financial assets

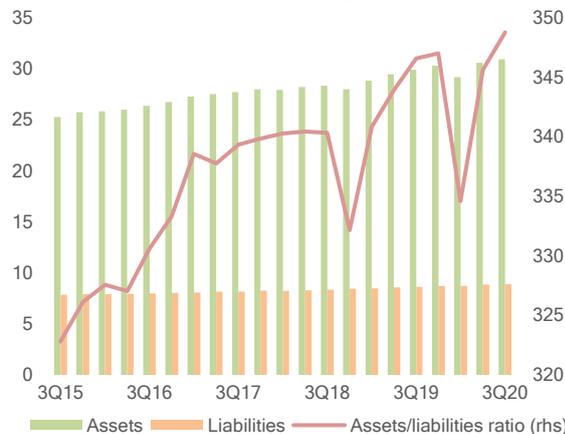


Note: Quarterly asset growth rates of financial assets held by EU27 households, in %. IF shares=investment fund shares.  
Sources: ECB, ESMA.

## Asset allocation by retail investors

A.162

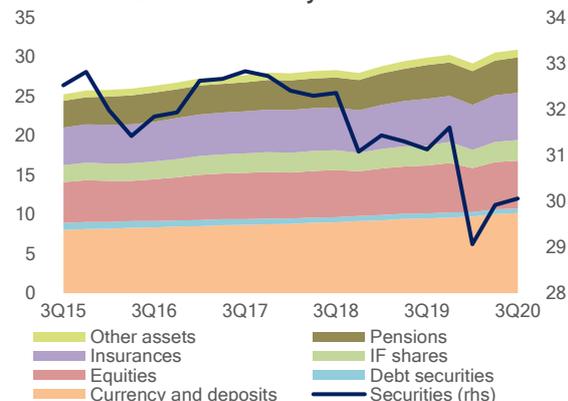
### Household assets to liabilities ratio



Note: Financial assets and liabilities of EU27 households, EUR tn. Assets/liabilities ratio in %.  
Sources: ECB, ESMA.

A.163

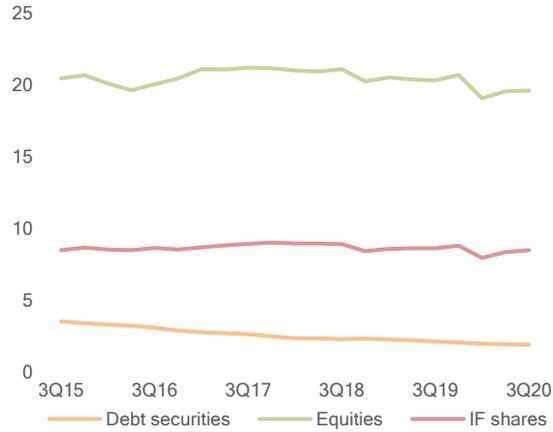
### Household financial assets by class



Note: Financial assets of EU27 households, EUR tn, and share of securities investments (debt securities, equities and IF shares) in total, in %. IF shares=investment fund shares. Other financial assets=insurance technical reserves, financial derivatives, loans granted and other accounts receivable.  
Sources: ECB, ESMA.

**A.164**

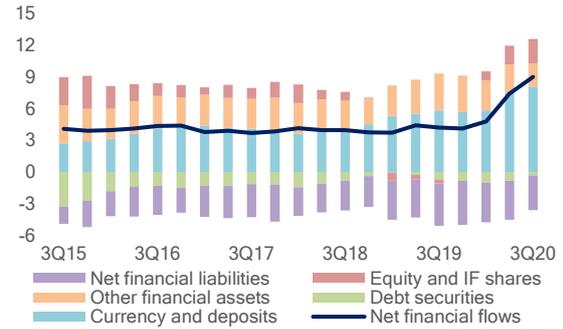
**Share of securities investments in household assets**



Note: Share of debt securities, equities and IF shares into the financial assets of EU27 households, in %. IF shares=investment fund shares.  
Sources: ECB, ESMA.

**A.165**

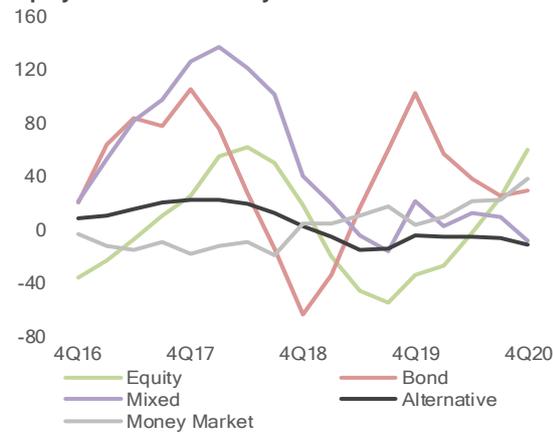
**Net financial asset flows**



Note: Net acquisition of financial assets and net incurrence of liabilities for EA households as a share of their gross disposable income adjusted for changes in pension entitlements, based on a one-year rolling period, in %. IF shares=investment fund shares. Other financial assets=Insurance technical reserves, financial derivatives, loans granted and other accounts receivable. Net financial flows=Net household lending (positive values) or borrowing (negative values) to/from sectoral financial accounts. Liabilities multiplied by -1 to present as outflows.  
Sources: ECB, ESMA.

**A.166**

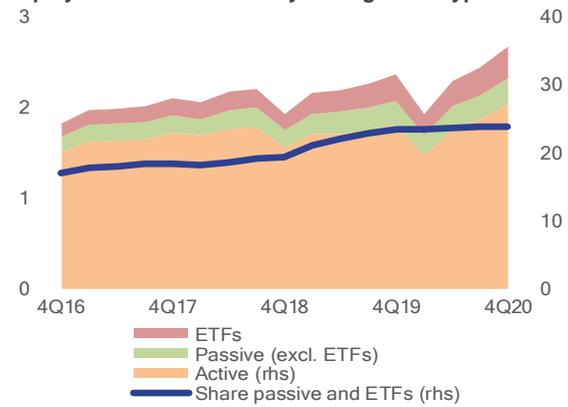
**Equity UCITS net flows by asset class**



Note: EU-27 UCITS annual net flows, retail investors, by asset class, EUR bn.  
Sources: Refinitiv Lipper, ESMA.

**A.167**

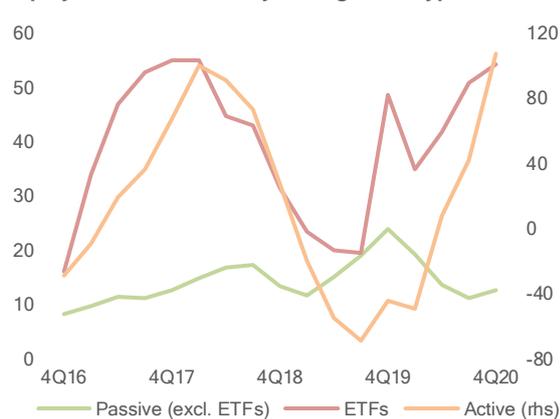
**Equity UCITS market size by management type**



Note: EU equity UCITS market size by management type. All observations for which information on fund value, fund performance, net flows, subscription and redemption fees are available, EUR tn. Share of passive and ETFs in %, right-hand size.  
Sources: Refinitiv Lipper, ESMA.

**A.168**

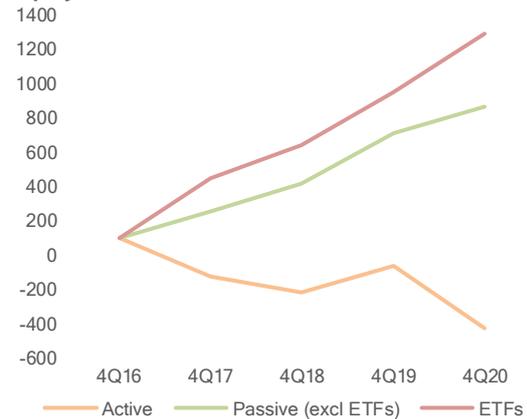
**Equity UCITS net flows by management type**



Note: EU equity UCITS annual net flows at quarterly frequencies, by management type, EUR bn. Active right-hand size (rhs) axis.  
Sources: Refinitiv Lipper, ESMA.

**A.169**

**Equity UCITS cumulative net flows**



Note: EU equity UCITS cumulative annual net flows by management type. 4Q16=100.  
Sources: Refinitiv Lipper, ESMA.

## Costs and performance

### A.170

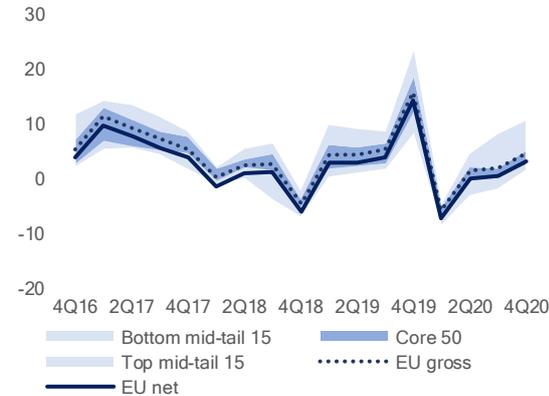
#### Portfolio returns



Note: 12-months trailing average monthly gross returns for a stylised household portfolio, in %. Asset weights, computed using National Financial Accounts by Institutional Sectors, are 36% for collective investment schemes, 39% for deposits, 22% for shares, 3% debt securities. Costs, fees and other charges incurred for buying, holding or selling these instruments are not taken into account.  
Sources: Refinitiv Datastream, Refinitiv Lipper, ECB, ESMA.

### A.172

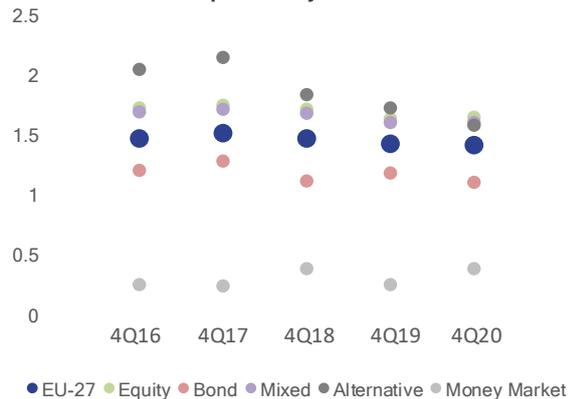
#### Dispersion of returns all assets



Note: Dispersion of net performances of EU UCITS, retail investors, adjusted for total expense ratio and load fees, in %. Distribution represents selected EU markets. Top mid-tail 15=distribution between the 75th and 90th percentile. Bottom mid-tail 15=distribution between the 10th and 25th percentile.  
Sources: Refinitiv Lipper, ESMA.

### A.174

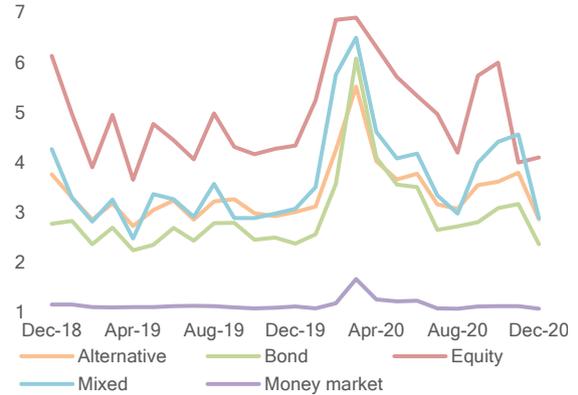
#### UCITS total cost dispersion by asset class



Note: EU-27 UCITS dispersion of total costs (ongoing costs, subscription and redemption fees), computed as the difference between gross and net returns, per asset class, retail investors, %.  
Sources: Refinitiv Lipper, ESMA.

### A.171

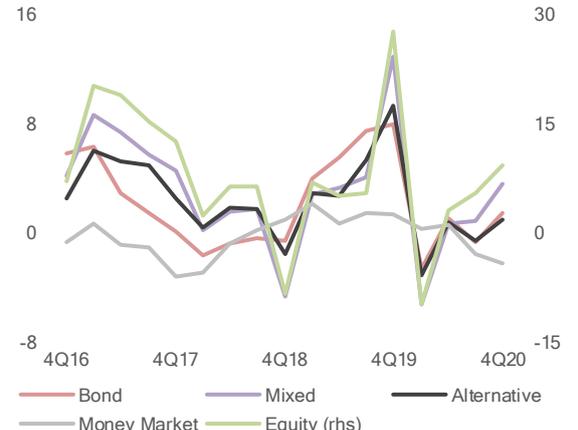
#### Retail fund synthetic risk and reward indicator



Note: The calculated Synthetic Risk and Reward Indicator (SSRI) is based on ESMA SSRI 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: Refinitiv Lipper, ESMA.

### A.173

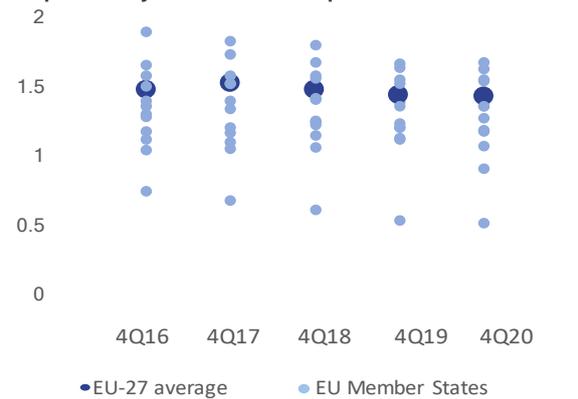
#### Net returns by asset class



Note: EU-27 UCITS evolution of gross annual performance, retail investors, by assets class, %. Equity on the right hand side.  
Sources: Refinitiv Lipper, ESMA.

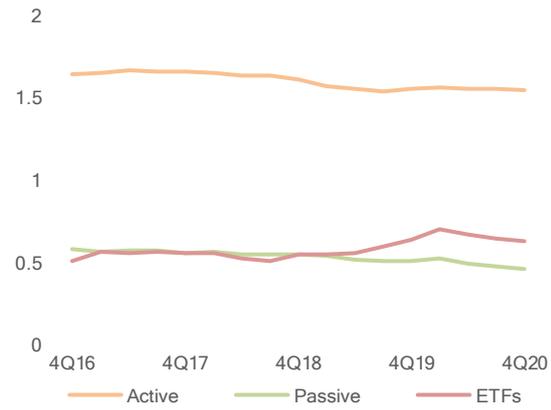
### A.175

#### Dispersion by absolute cost impact



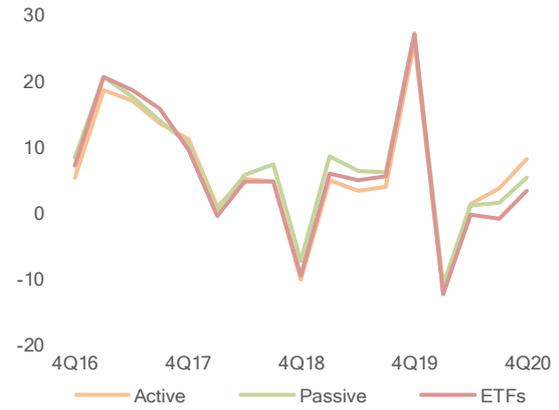
Note: EU-27 UCITS dispersion of total costs (ongoing costs, subscription and redemption fees) of UCITS funds, computed as the difference between gross and net returns, by country, retail investors, %.  
Sources: Refinitiv Lipper, ESMA.

**A.176**  
**Equity UCITS total costs by management type**



Note: EU equity UCITS, evolution of total costs, ongoing costs (TER), subscription and redemption fees by management type, %.  
 Sources: Refinitiv Lipper, ESMA

**A.177**  
**Equity UCITS net returns by management type**

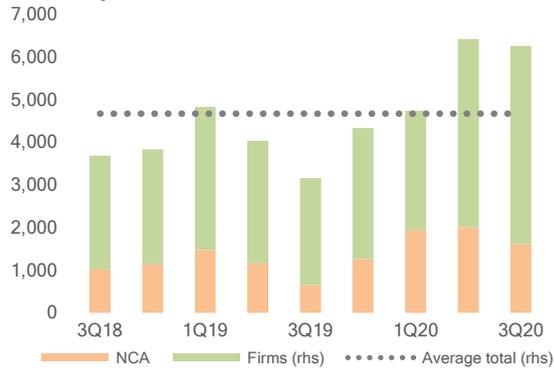


Note: EU equity UCITS evolution of net annual performance, net of ongoing costs (TER), subscription and redemption fees by management type, %.  
 Sources: Refinitiv Lipper, ESMA

## Complaints

### A.178

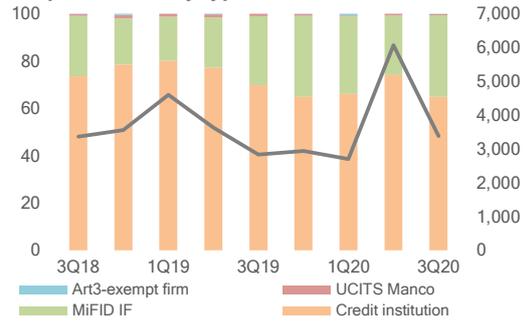
#### Total complaints



Note: Number of complaints recorded by quarterly-reporting NCAs (n=14) via given reporting channels. "NCA"=Reports lodged directly by consumers with NCAs. "Firms"=Complaints recorded by NCAs via firms. "Average total"=average total number from 3Q18 to 3Q20.  
Sources: ESMA complaints database

### A.179

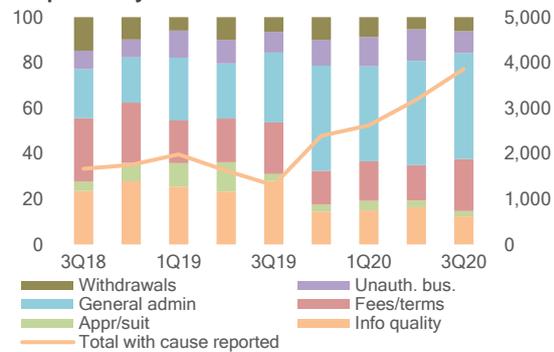
#### Complaints data by type of firm



Note: Share of complaints for quarterly-reporting NCAs (n=14) received direct from consumers and via firms by type of firm involved, excluding complaints with firm type recorded, %. "Total with firm type reported"=Number of complaints via these reporting channels excluding those with no firm type recorded. "MiFID IF"=MiFID investment firm. "UCITS Manco"=UCITS management company. "Art3-exempt firm"=Firm exempt under Article 3 of MiFID.  
Sources: ESMA complaints database

### A.180

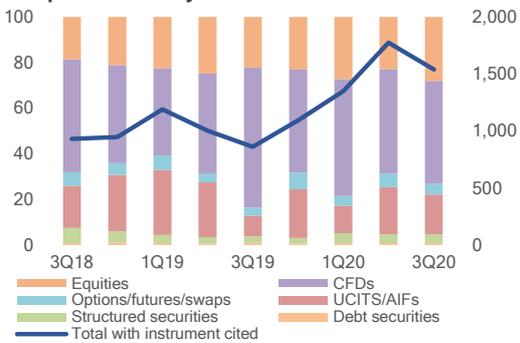
#### Complaints by cause



Note: Share of complaints for quarterly-reporting NCAs (n=14) received direct from consumers and via firms by underlying cause, excluding complaints with no cause recorded, %. "Unauth. bus."=Unauthorised business. "Appr/suit"=Appropriateness or suitability assessment. "Info quality"=Quality or lack of information. "Total with cause reported"=Number of complaints via these reporting channels including those with none of the listed causes recorded.  
Sources: ESMA complaints database

### A.181

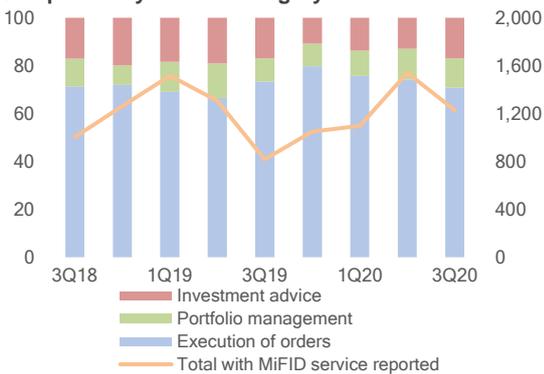
#### Complaints data by instrument



Note: Share of complaints from quarterly-reporting NCAs (n=14) received direct from consumer and via firms by type of financial instrument, where none of the instruments listed was reported. "Total with instrument cited"=number of complaints via these reporting channels excluding those with instrument type not reported or reported as "other" or "N/A". "Total complaints"=number of complaints via these reporting channel whether or not further categorisation possible. "CFDs"=Contracts for Differences.  
Sources: ESMA complaints database

### A.182

#### Complaints by MiFID II category



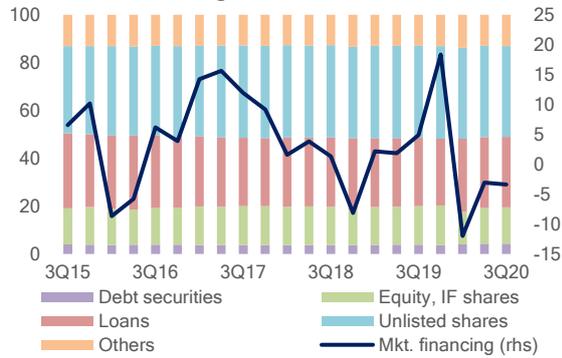
Note: Share of complaints for quarterly-reporting NCAs (n=14) received direct from consumers and via firms recorded as associated with a given MiFID service, excluding complaints with no such category recorded, all reporting channels, %. "Total with MiFID service reported"=Total complaints received via these reporting channels recorded as associated with a MiFID service.

# Market based finance

## Capital markets financing

A.183

Total market financing



Note: Liabilities of EA non-financial corporations (NFC), by debt type as a share of total liabilities. Others include: financial derivatives and employee stock options; insurance, pensions and standardised guarantee schemes; trade credits and advances of NFC; other accounts receivable/payable. Mkt. financing (rhs)= annual growth rate in debt securities, equity and investment fund (IF) shares, in %.  
Sources: ECB, ESMA.

A.184

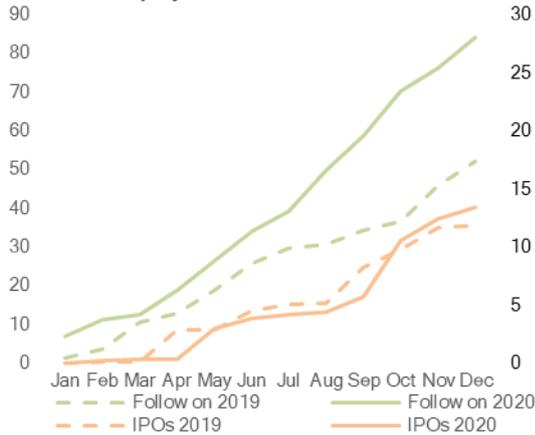
Loans vis-à-vis EA NFCs



Note: Loans vis-à-vis euro area NFC reported by MFI in the euro area. Financial transactions, EUR bn (lhs) and annual growth rate of stock% (rhs).  
Sources: ECB, ESMA

A.185

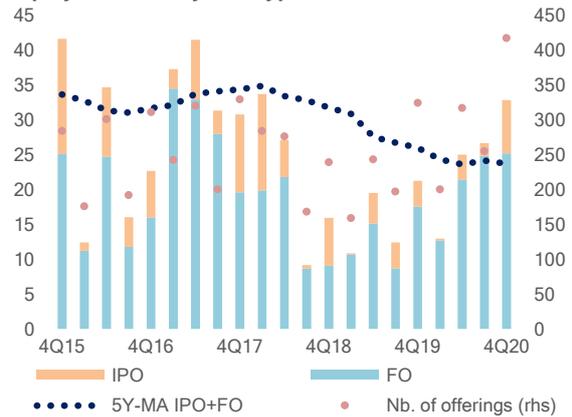
Cumulative equity issuance – IPOs and follow-on



Note: Cumulative amount of Follow-on issuance in the EEA30 (lhs) and IPOs (rhs) in 2019 and 2020. EUR bn.  
Sources: Refinitiv Eikon, ESMA.

A.186

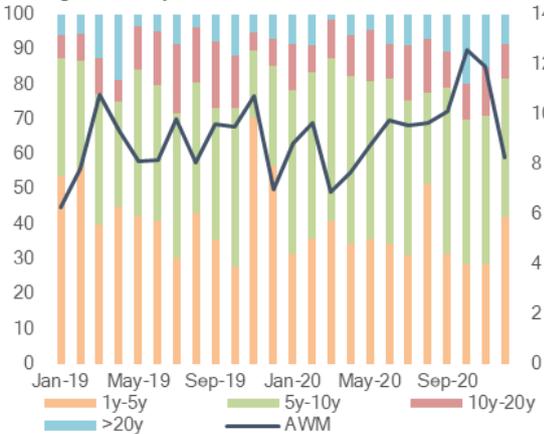
Equity issuance by deal type



Note: Equity gross issuance in the EEA30 by type, EUR bn, and number of equity offerings. 5Y-MA=five-year moving average of the total value of equity offerings.  
Sources: Refinitiv Eikon, ESMA.

A.187

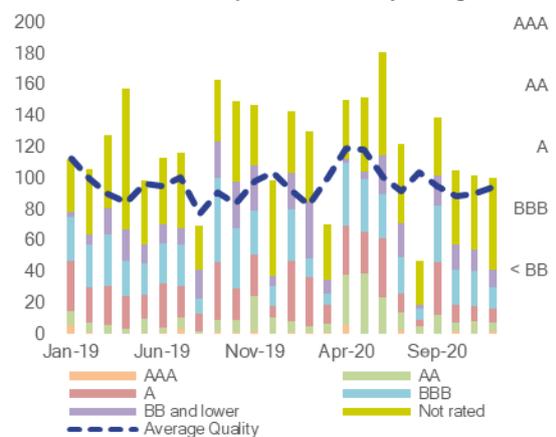
Average maturity at issuance



Note: Weighted average maturity at issuance date of corporate bonds issued in the EEA, in % (lhs), AWM= Average weighted maturity, in years (rhs).  
Sources: Refinitiv Eikon, ESMA.

A.188

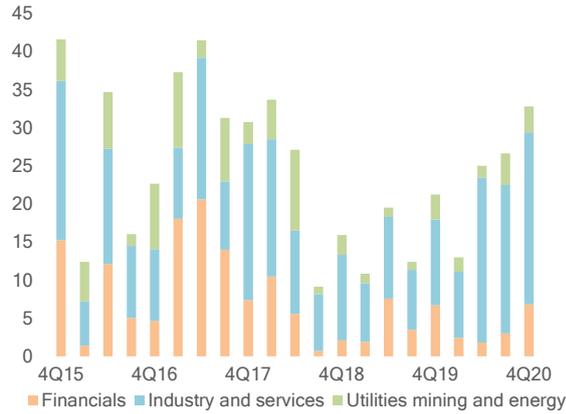
Gross issuance of corporate bonds by rating



Note: Monthly corporate bond issuance in the EEA30 by rating, EUR bn, and average issuance rating (rhs).  
Sources: Refinitiv Eikon, ESMA.

**A.189**

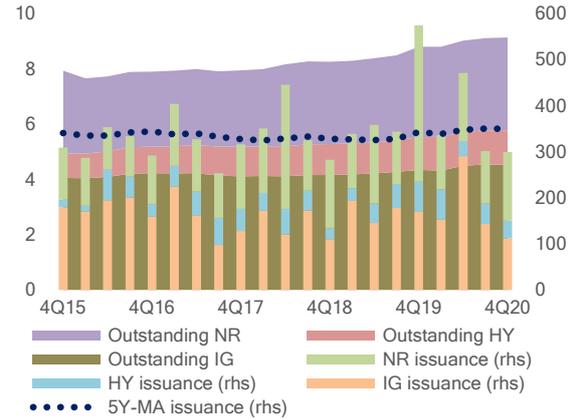
**Equity issuance by sector**



Note: Equity gross issuance in the EEA30 by sector, EUR bn. Financials includes banking & investment services, insurance, investment trusts and real estate.  
Sources: Refinitiv EIKON, ESMA.

**A.190**

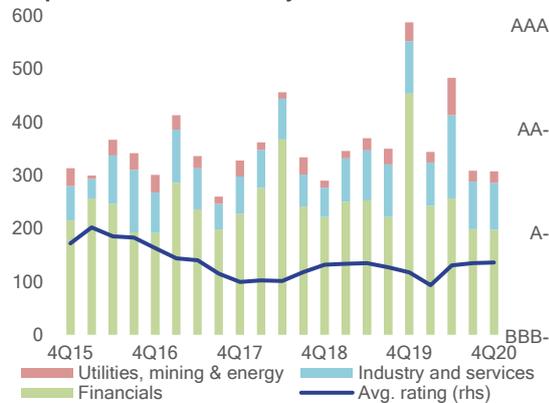
**Corporate bond issuance and outstanding**



Note: Quarterly investment-grade (rating  $\geq$  BBB-), high-yield (rating  $<$  BBB-) and non-rated corporate bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn. Maturities  $<$  12 months are excluded.  
Sources: Refinitiv EIKON, ESMA.

**A.191**

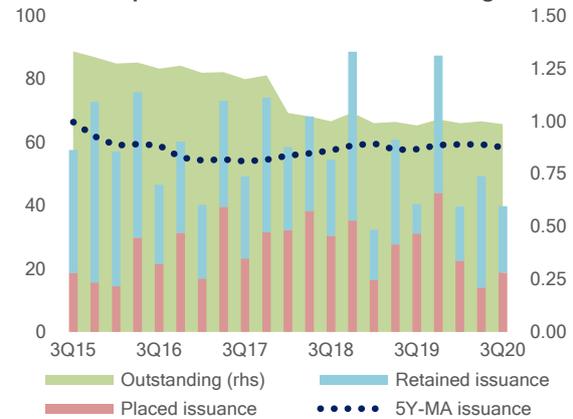
**Corporate bond issuance by sector**



Note: Corporate bond gross issuance in the EEA30 by sector, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted into a numerical scale (AAA=1, AA+=2, etc.). Maturities  $<$  12 months are excluded.  
Sources: Refinitiv EIKON, ESMA.

**A.192**

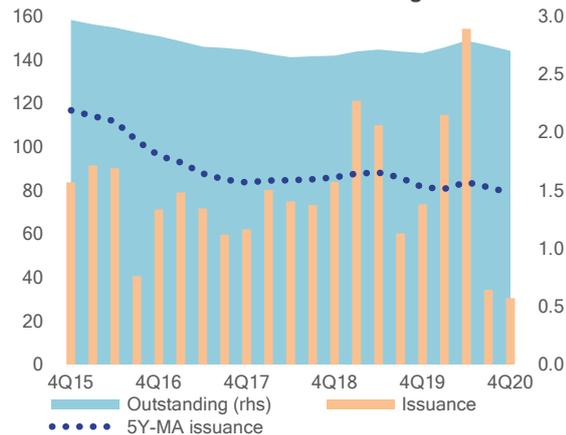
**Securitised products issuance and outstanding**



Note: Retained and placed securitised products gross issuance in Europe, EUR tn, and outstanding amounts (rhs), EUR tn. Data includes ABS, CDO, MBS, SME, WBS.  
Sources: AFME, ESMA.

**A.193**

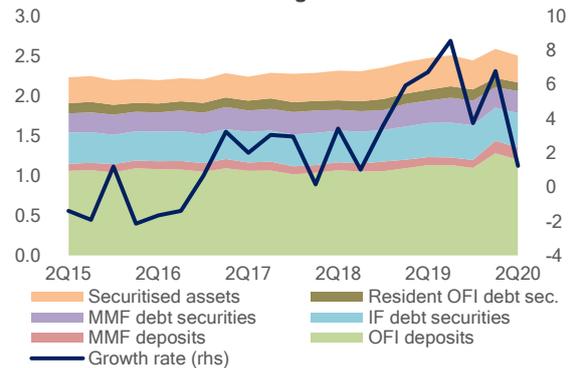
**Covered bond issuance and outstanding**



Note: Covered bond gross issuance in the EEA30, EUR bn, and outstanding amounts (rhs), EUR tn. Maturities  $<$  12 months are excluded.  
Sources: Refinitiv EIKON, ESMA.

**A.194**

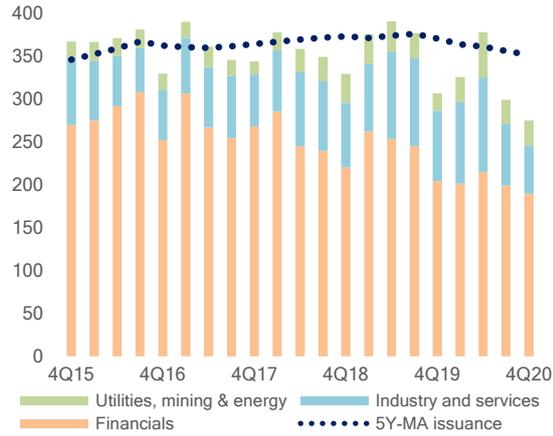
**Non-bank wholesale funding**



Note: Amount of wholesale funding provided by EA non-banks, EUR tn, and growth rate (rhs), in %. Securitised assets are net of retained securitisations. Resident OFI reflects the difference between the total financial sector and the known sub-sectors within the statistical financial accounts (i.e. assets from banking sector, insurances, pension funds, financial vehicle corporations, investment funds and money market funds).  
Sources: ECB, ESMA.

**A.195**

**Short-term corporate debt issuance by sector**

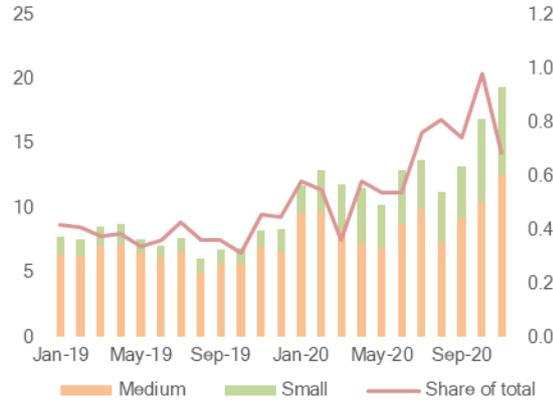


Note: Short-term corporate debt gross issuance in the EEA30 by sector, EUR bn. Short-term=Maturities < 12 months.  
Sources: Refinitiv EIKON, ESMA.

**SMEs**

**A.196**

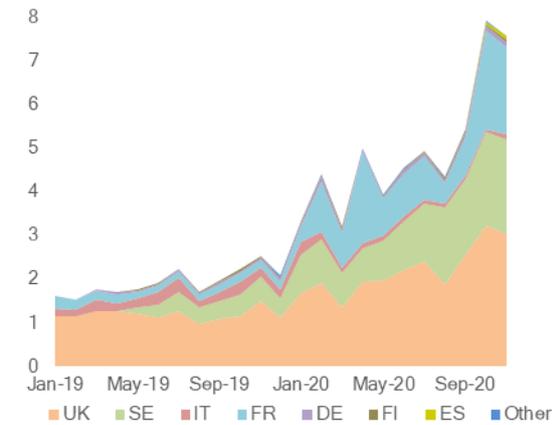
**SME trading volumes**



Note: Monthly trading volumes on EEA30 + UK venues of SME shares in 2019, EUR billion (lhs), and % share in total equity trading (rhs). "Small"=(0,20mn), "Medium"=(20mn,200mn).  
Sources: FIRDS, FITRS, ESMA

**A.197**

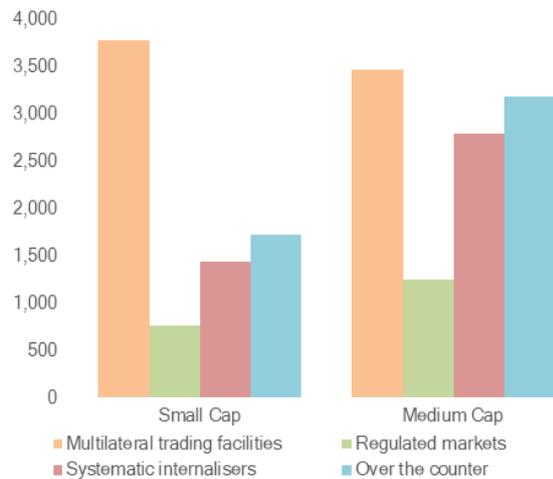
**SME trading volumes on Growth Markets**



Note: SME trading volumes on GMs, by segment MIC domicile, EURbn.  
Sources: FIRDS, FITRS, ESMA

**A.198**

**Number of SME issuers by market type**

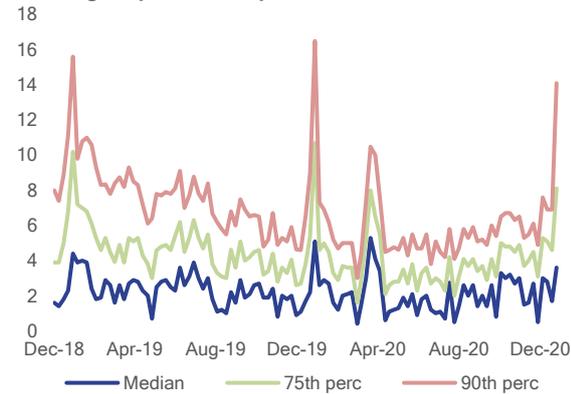


Note: Number of small and medium enterprises that have issued shares publicly available for trading in the EU, by market type. Shares may be available for trading on more than one market type. SME categories based on market capitalisation in 2019. Small cap=less than EUR 20mn; Medium cap=from EUR 20 mn to 200mn.  
Sources: FIRDS, FITRS, ESMA

## Market-based credit intermediation

### A.199

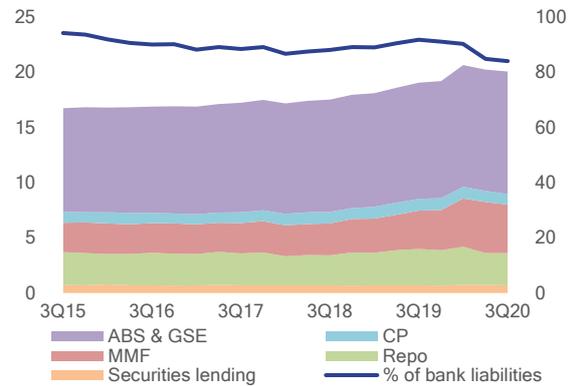
#### Sovereign repo market specialness



Note: Median, 75th and 90th percentile of weekly specialness, measured as the difference between general collateral and special collateral repo rates on government bonds in nine EUR repo markets (AT, BE, DE, ES, FI, FR, IT, NL and PT).  
Sources: RepoFunds Rate, ESMA.

### A.200

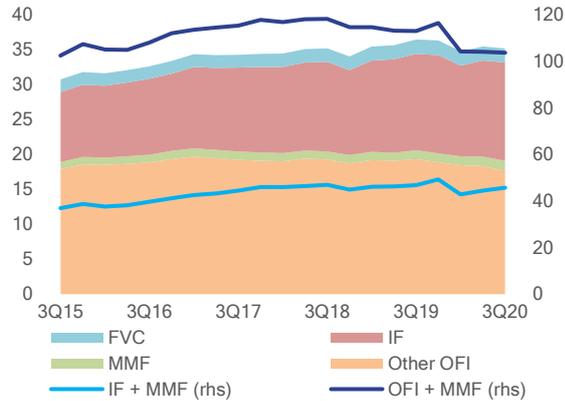
#### US shadow banking liabilities



Note: Size of the US shadow banking system proxied by liabilities of ABS issuers, government-sponsored enterprise (GSE) and pool securities, open commercial paper (CP), size of the US repo and securities lending (collateralised with cash) markets, and liabilities of MMFs, in USD tn. Expressed in % of bank liabilities on rhs.  
Sources: Refinitiv Datastream, ESMA.

### A.201

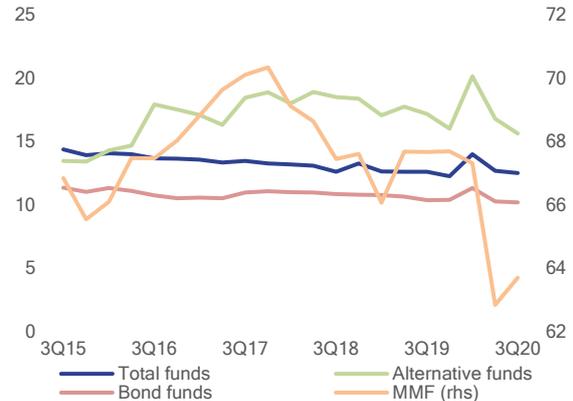
#### MMFs and other financial institutions



Note: Total assets for EA MMFs and other financial institutions (OFI): investment funds (IF), financial vehicle corporations (FVC), Other OFI estimated with ECB Quarterly Sector Accounts, in EUR tn. Expressed in % of bank assets on rhs.  
Sources: ECB, ESMA.

### A.202

#### Financial market interconnectedness



Note: EA loan and debt securities vis-à-vis MFI counterparts, as a share of total assets, investment funds and MMFs, 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.

### A.203

#### Credit terms in SFT and OTC derivatives



Note: Weighted average of responses to the question: "Over the past three months, how have terms offered as reflected across the entire spectrum of EUR-denominated instruments in securities financing and OTC derivatives transaction types changed?" 1=tightened considerably, 2=tightened somewhat, 3=remained basically unchanged, 4=eased somewhat, and 5=eased considerably.  
Sources: ECB, ESMA.

### A.204

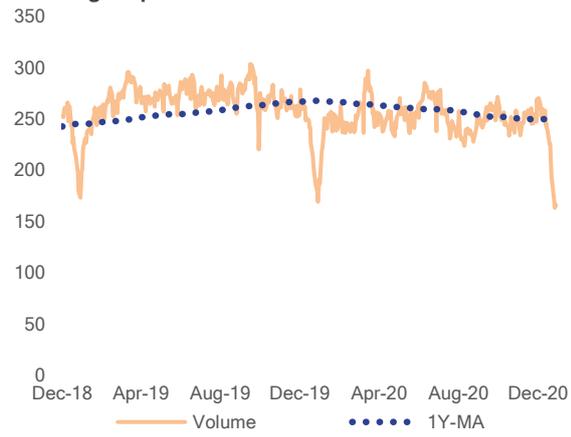
#### Securities financing conditions



Note: Weighted average of responses to the questions "Over the past three months, how has demand for funding/how have liquidity and functioning for all EUR-denominated collateral types changed?" 1=decreased/deteriorated considerably, 2=decreased/deteriorated somewhat, 3=remained basically unchanged, 4=increased/improved somewhat, and 5=increased/improved considerably.  
Sources: ECB, ESMA.

**A.205**

**Sovereign repo market turnover**



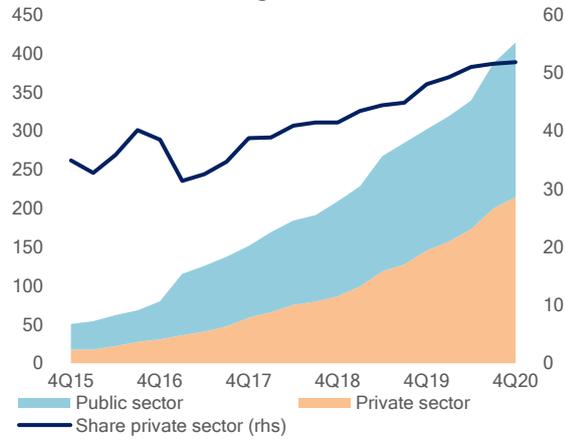
Note: Repo transaction volumes executed through CCPs in nine sovereign EUR repo markets (AT, BE, DE, ES, FI, FR, IT, NL and PT), EUR bn.  
Sources: RepoFunds Rate, ESMA.

# Sustainable finance

## Green finance

**A.206**

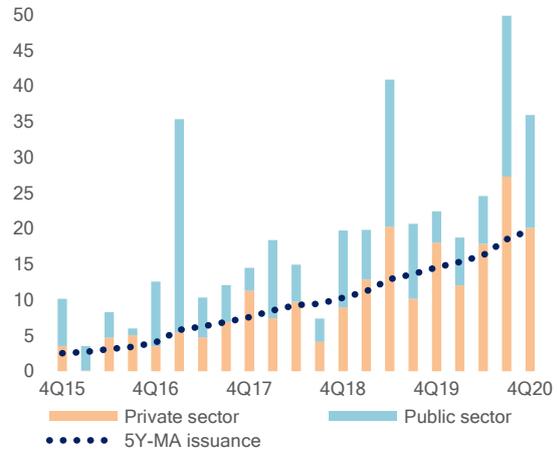
### Green bonds outstanding



Note: Outstanding amount of green bonds in the EEA30 by sector, EUR bn, and share of private sector (rhs), in %.  
Sources: Refinitiv EIKON, ESMA.

**A.207**

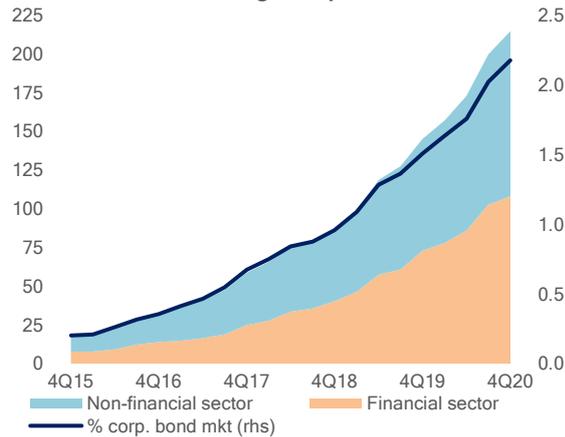
### Green bond issuance



Note: Green bond gross issuance in the EEA30 by sector, EUR bn.  
Sources: Refinitiv EIKON, ESMA.

**A.208**

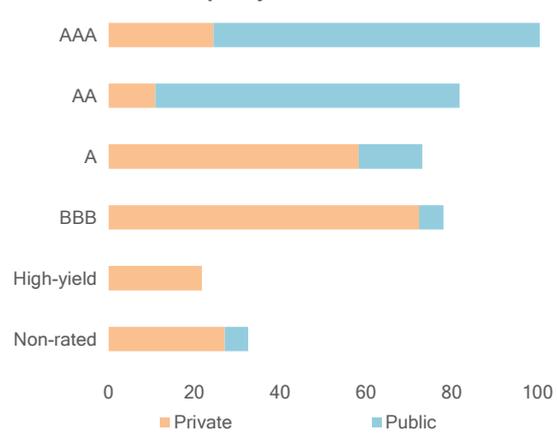
### Green bonds outstanding from private sector



Note: Outstanding amount of corporate green bonds in the EEA30 by sector, EUR bn, and share in the overall corporate bond market (rhs), in %.  
Sources: Refinitiv EIKON, ESMA.

**A.209**

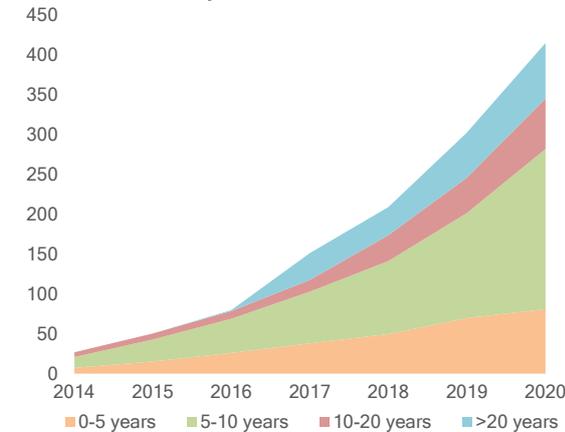
### Green bond credit quality



Note: Outstanding amount of green bonds in the EEA30 by credit rating and sector, EUR bn  
Sources: Refinitiv EIKON, ESMA.

**A.210**

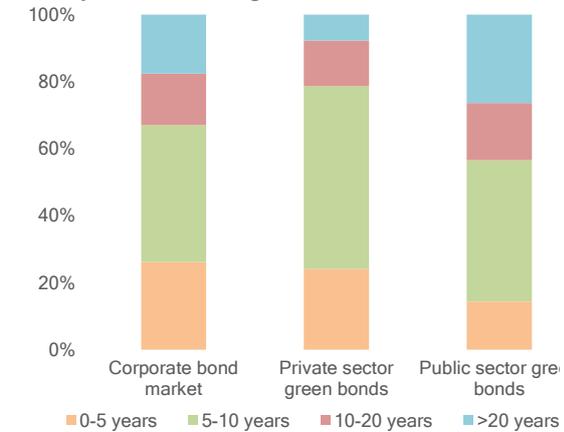
### Green bond maturity buckets



Note: Outstanding amount of green bonds in the EEA30 by maturity bucket, EUR bn.  
Sources: Refinitiv EIKON, ESMA.

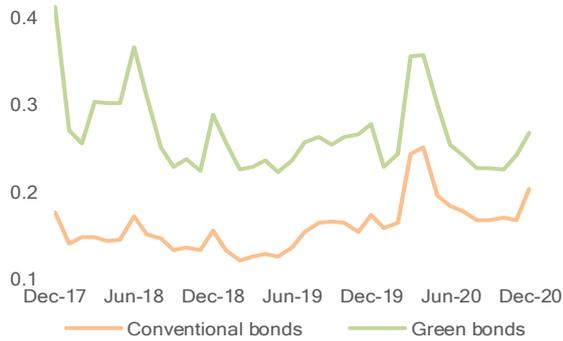
**A.211**

### Maturity distribution of green and conventional bonds



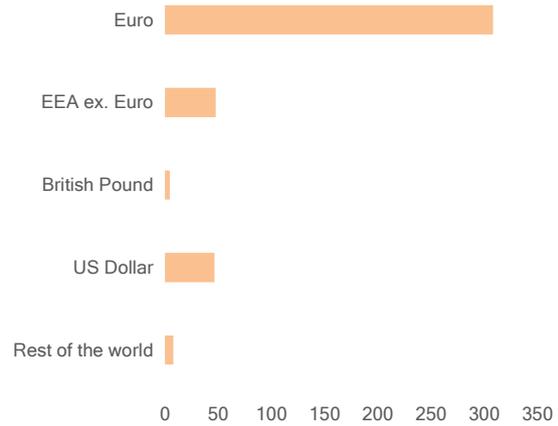
Note: Distribution of outstanding green bonds in the EEA30 by maturity bucket compared with the overall corporate bond market distribution, in %.  
Sources: Refinitiv EIKON, ESMA.

**A.212**  
Sovereign green bond liquidity  
0.5



Note: Average bid-ask spread for green bonds and other bonds issued by the same sovereign issuer traded on EuroMTS, in EUR.  
Sources: MTS, ESMA.

**A.213**  
Green bond currencies



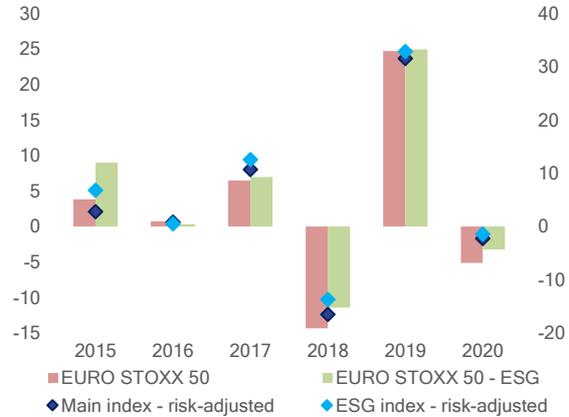
Note: Outstanding amount of green bonds in the EEA30 by currency, EUR bn.  
Sources: Refinitiv EIKON, ESMA.

**A.214**  
ESG index performance  
140



Note: Euro Stoxx 50 ESG leaders and broader indices, indexed with 31/12/2018=100.  
Sources: Refinitiv Datastream, ESMA.

**A.215**  
ESG index risk-adjusted returns



Note: Annual returns of the EURO STOXX 50 and its ESG leaders subindice, in %. Risk-adjusted returns, on rhs, measured as Sharpe ratios. Current year data year-to-date.  
Sources: Refinitiv Datastream, ESMA.

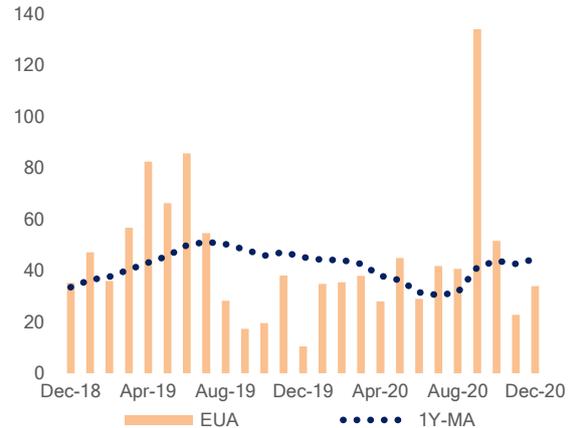
## Emissions trading

**A.216**  
Emission allowance prices  
35



Note: Daily settlement price of European Emission Allowances (EUA) on European Energy Exchange spot market, in EUR/tCO<sub>2</sub>.  
Sources: Refinitiv Datastream, ESMA.

**A.217**  
Emission allowance turnover  
140



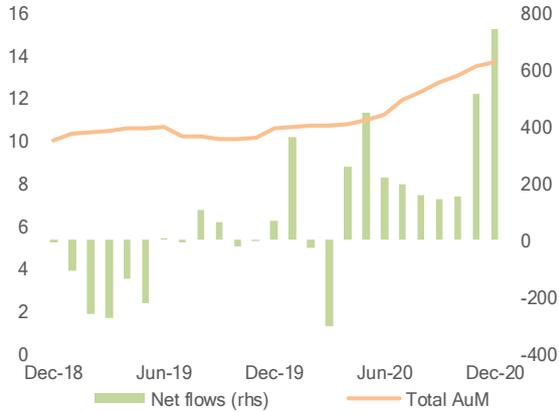
Note: Monthly turnover of European Emission Allowances (EUA) on European Energy Exchange, in EUR mn.  
Sources: Refinitiv Datastream, ESMA.

# Financial innovation

## Financial innovation

**A.218**

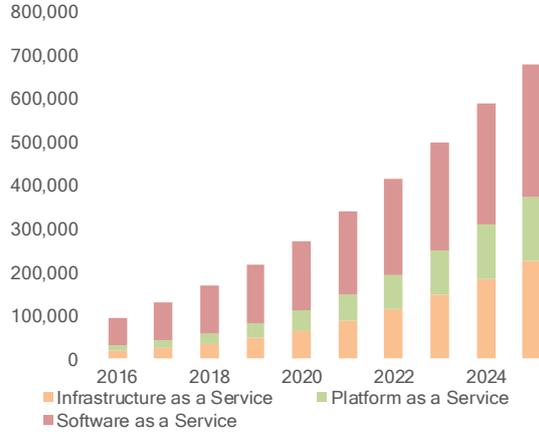
**Funds with AI/FinTech investment focus**



Note: Total AuM, 12-month rolling average, EUR bn, and monthly net flows, EUR mn, for selected EU-domiciled funds (n=41) whose name includes reference to AI, automation, FinTech or robotics.  
Sources: Morningstar Direct, ESMA

**A.219**

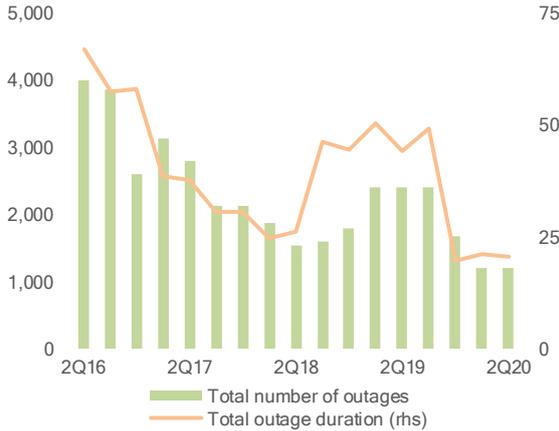
**Cloud services**



Note: Revenue in the Public Cloud in million USD.  
Sources: Statista (Forecast adjusted for expected impact of COVID-19), December 2020

**A.220**

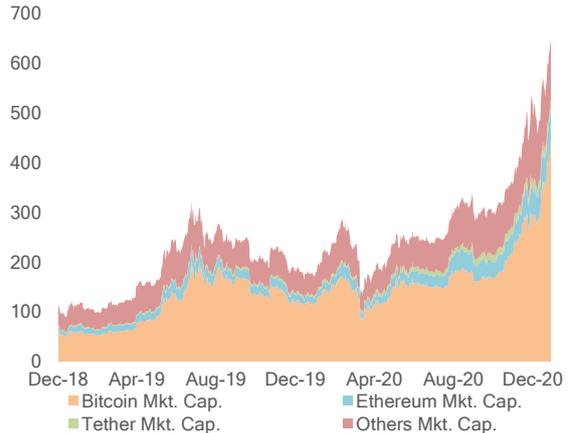
**Digital operational incidents: CCP Outages**



Note: Number of outages and total outage duration in minutes, by quarter, for global sample of CCPs (n=11).  
Sources: Clarus, CCPs, ESMA

**A.221**

**Crypto-Asset market capitalisation**



Note: Market capitalisation of Bitcoin, Ethereum, Tether and other cryptocurrencies, in EUR bn.  
Sources: CoinMarketCap, ESMA.

**A.222**

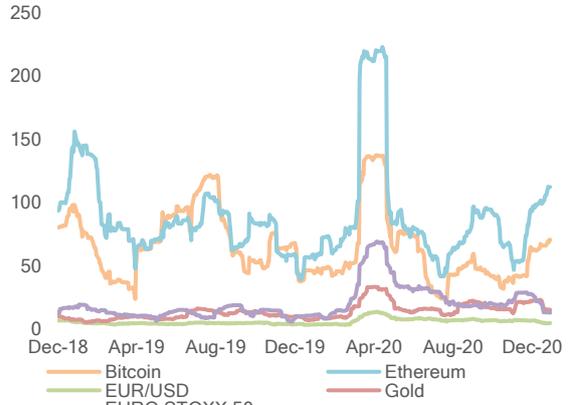
**Crypto-Asset prices**



Note: Prices of selected crypto-assets, EUR thousand.  
Sources: Refinitiv Datastream, ESMA.

**A.223**

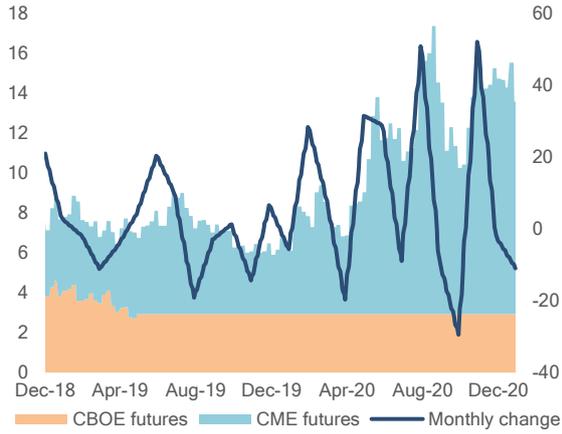
**Crypto-Asset price volatility**



Note: Annualised 30-day historical volatility of EURO STOXX 50, EUR/USD spot rate returns and USD-denominated returns for Bitcoin, Ethereum and gold, in %.  
Sources: Refinitiv Datastream, ESMA.

**A.224**

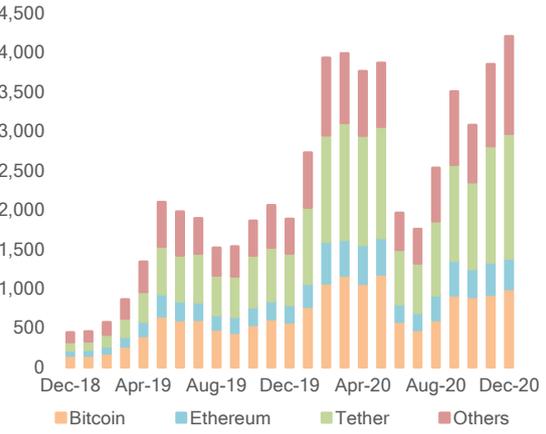
**Bitcoin futures markets**



Note: Total open interest in Bitcoin futures, in thousand of contracts, and change in monthly average total open interest, in %.  
Sources: Refinitiv Datastream, ESMA.

**A.225**

**Crypto-asset trading volumes**



Note: Trading volumes of Bitcoin, Ethereum, Tether and other cryptocurrencies, in EUR bn.  
Sources: CoinMarketCap, ESMA.

