

TRV Statistical Annex

ESMA Report on Trends, Risks and Vulnerabilities

No. 2, 2020

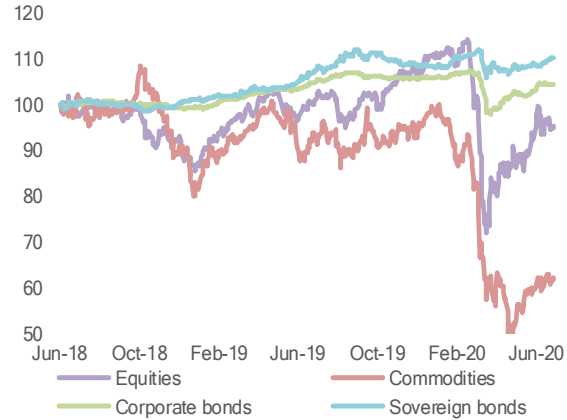


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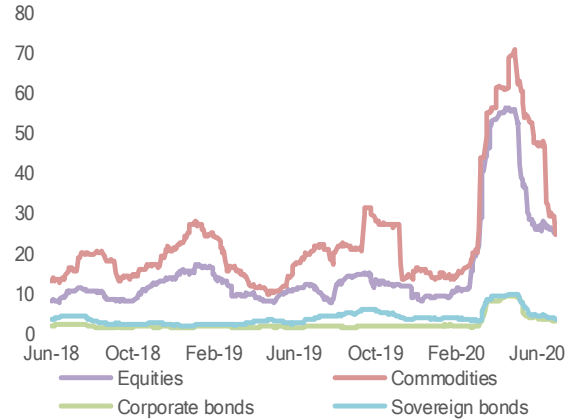
Market environment

A.1
Market price performance



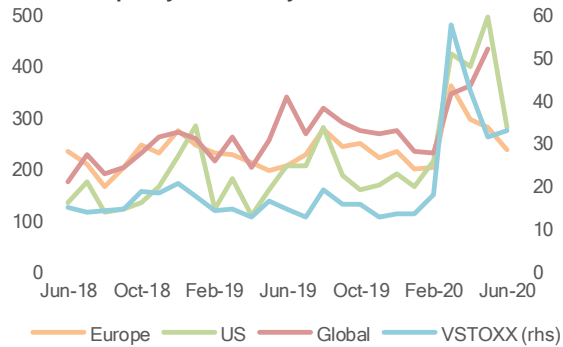
Note: Return indices on EU28 equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities). 01/05/2018=100.

A.2
Market volatilities



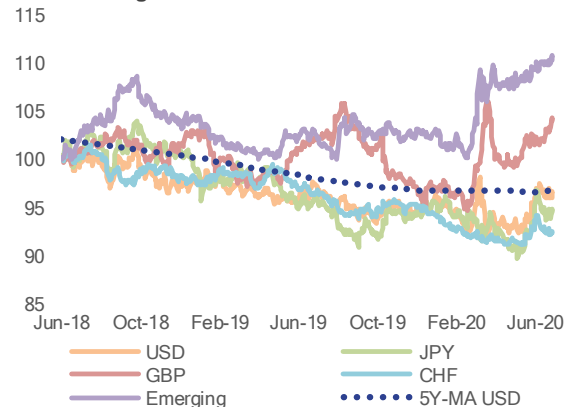
Note: Annualised 40D volatility of return indices on EU28 equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), in %.

A.3
Economic policy uncertainty



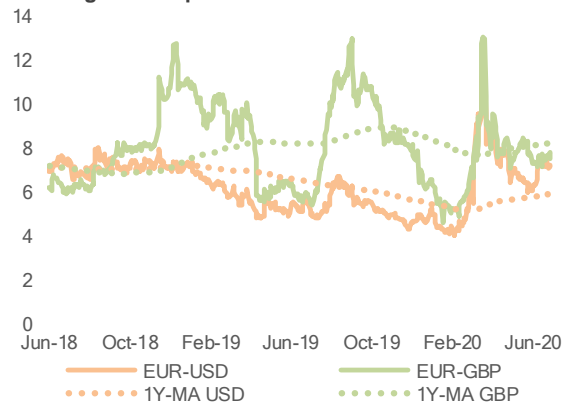
Note: Economic Policy Uncertainty Index (EPU), developed by Baker et al. (www.policyuncertainty.com), based on the frequency of articles in European newspapers that contain the following triple: "economic" or "economy", "uncertain" or "uncertainty" and one or more policy-relevant terms. Global aggregation 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



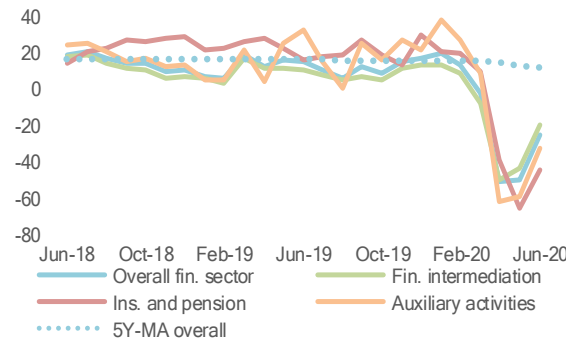
Note: Spot exchange rates to Euro. Emerging is a weighted average (2016 GDP) of spot exchange rates for CNY, BRL, RUB, INR, MXN, IDR and TRY. 01/05/2018=100. Increases in value represent an appreciation of EUR. 5Y-

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.

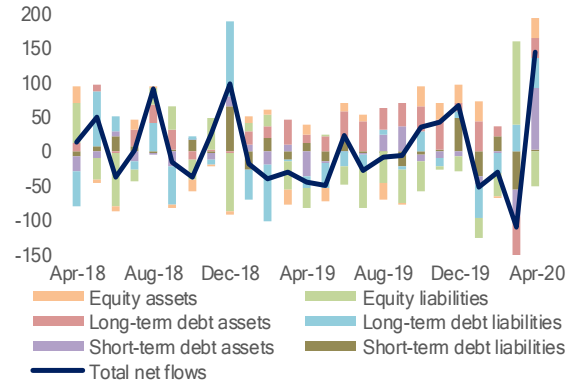
A.6
Market confidence



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

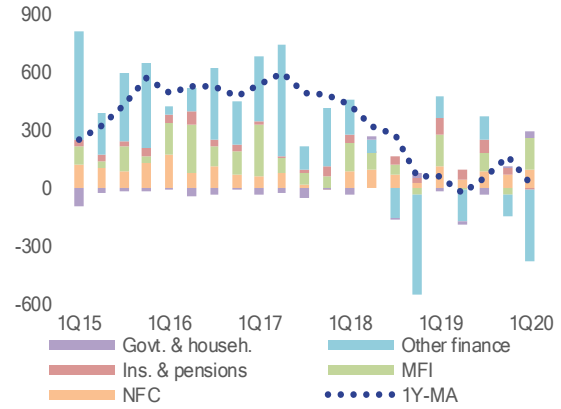
Portfolio investment flows by asset class



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

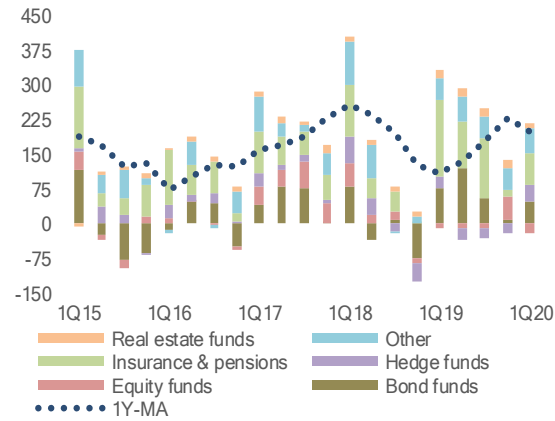
Investment flows by resident sector



Note: Quarterly Sector Accounts. Investment flows by EA resident sector in equity (excluding investment fund shares) and debt securities, EUR bn. 1Y-MA=one-year moving average of all investment flows. Sources: ECB, ESMA.

A.9

Institutional investment flows



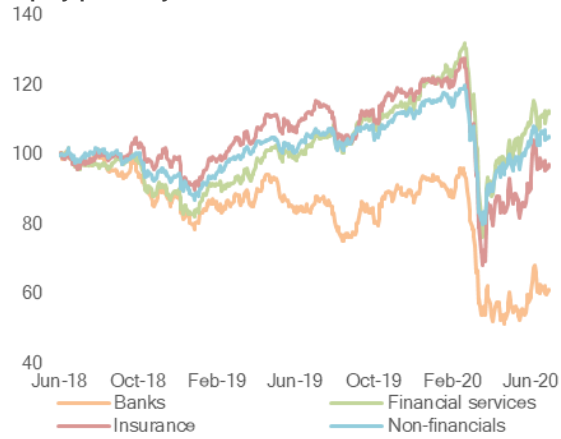
Note: EA institutional investment flows by type of investor, EUR bn. Other=financial vehicle corporations, mixed funds, other funds. 1Y-MA=one-year moving average of all investment flows. Sources: ECB, ESMA.

Securities markets

Equity markets

A.10

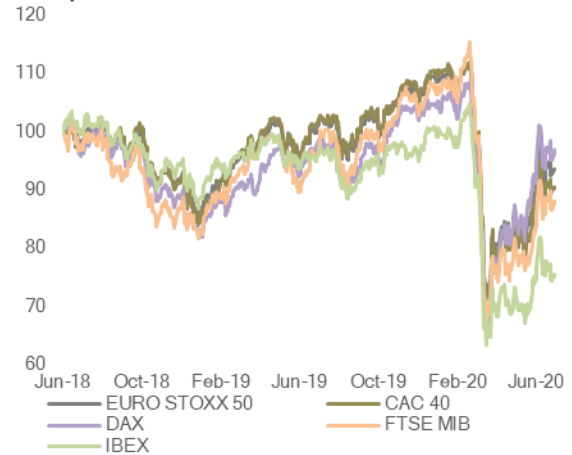
Equity prices by sector



Note: STOXX Europe 600 sectoral return indices. 01/05/2018=100.
Sources: Refinitiv Datastream, ESMA

A.11

Price performance of national indices



Note: National equity indices from selected EU27 countries. 01/06/2018=100.
Sources: Refinitiv Datastream, ESMA

A.12

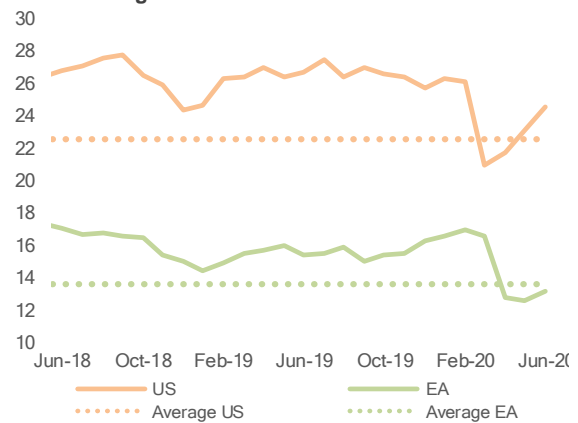
Price performance



Note: Datastream regional equity indices for the EU28 (in EUR), the US (in USD) and Japan (in JPY). 01/05/2018=100.
Sources: Refinitiv Datastream, ESMA

A.13

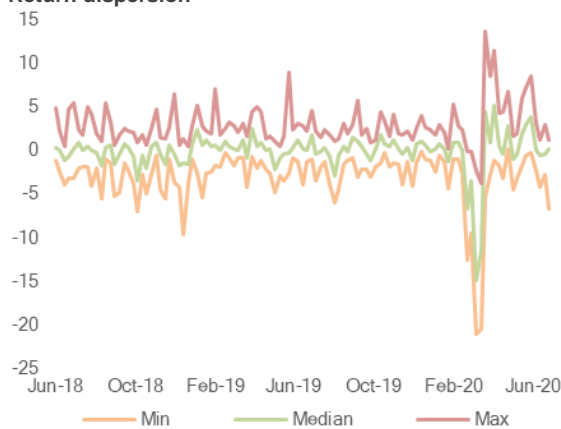
Price-earnings ratios



Note: Price Earning Ratios based on average inflation-adjusted earnings from the previous 10 years (Cyclically Adjusted PE Ratio).
Sources: Thomson Reuters Datastream, ESMA.

A.14

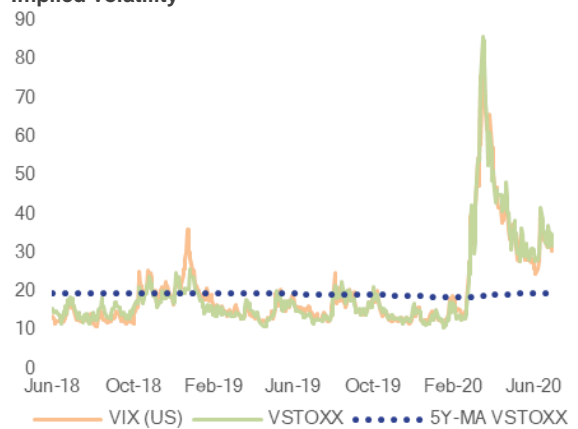
Return dispersion



Note: Dispersion of the weekly returns on the main equity indices in the EU28.
Sources: Refinitiv Datastream, ESMA

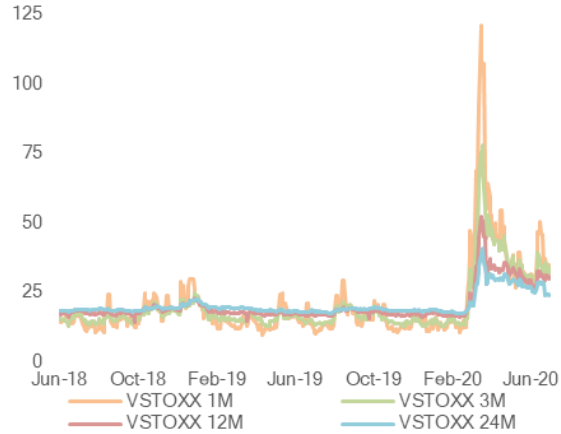
A.15

Implied volatility



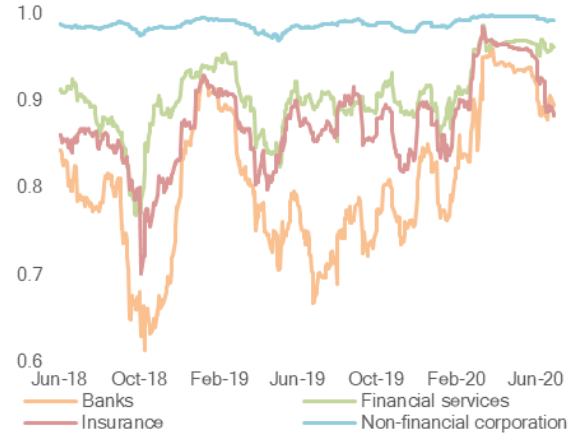
Note: Implied volatility of EURO STOXX 50 (VSTOXX) and S&P 500 (VIX), in %.
Sources: Refinitiv Datastream, ESMA

A.16
Implied volatility by option maturity



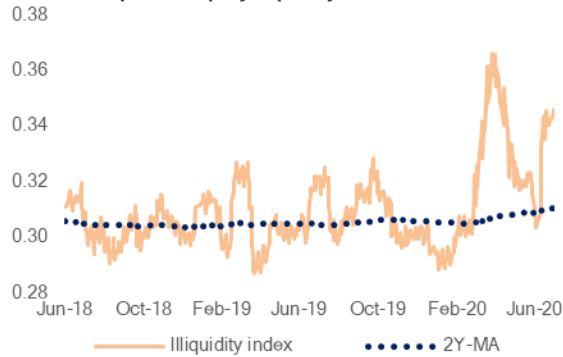
Note: EURO STOXX 50 implied volatilities, measured as price indices, in %.
Sources: Refinitiv Datastream, ESMA

A.17
Correlation STOXX Europe 600 and sectoral indices



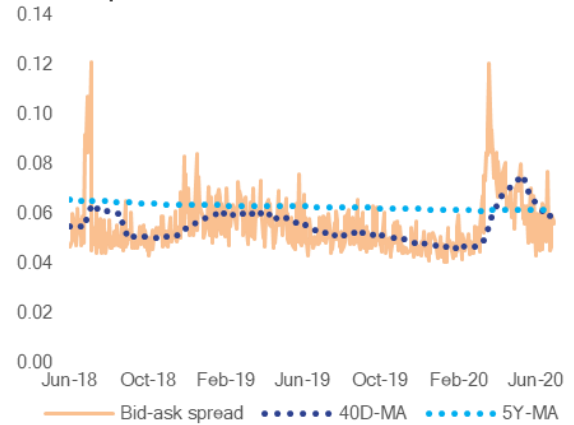
Note: Correlations between daily returns of the STOXX Europe 600 and STOXX Europe 600 sectoral indices. Calculated over 60-day rolling windows.
Sources: Refinitiv Datastream, ESMA

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

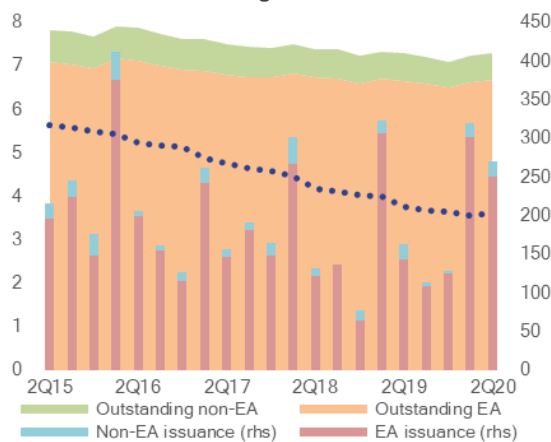
A.19
Bid-ask spread



Note: Liquidity measure as median of the bid-ask price percentage difference for the current EU28 constituents of STOXX Europe Large 200, in %.
Sources: Refinitiv Datastream, ESMA

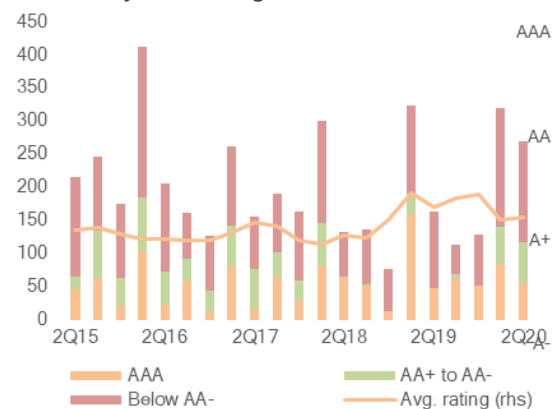
Sovereign-bond markets

A.20
Issuance and outstanding



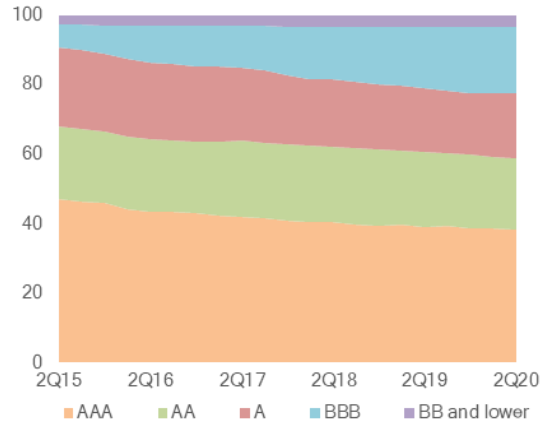
Note: Sovereign bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn.
Sources: Refinitiv EIKON, ESMA

A.21
Issuance by credit rating



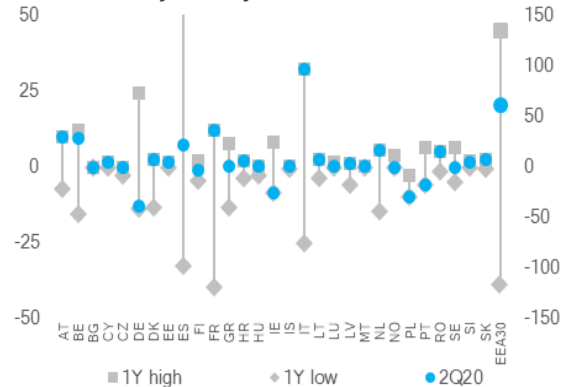
Note: Sovereign bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA+=2, etc.).
Sources: Refinitiv EIKON, ESMA

A.22
Rating distribution



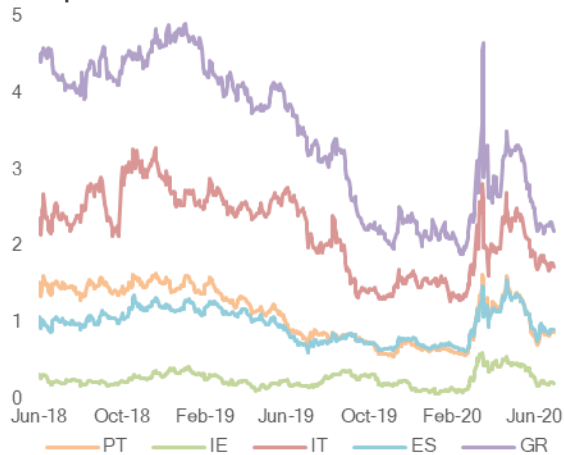
Note: Outstanding amount of sovereign bonds in the EEA30 as of issuance date by rating category, in % of the total.
Sources: Refinitiv EIKON, ESMA.

A.24
Net issuance by country



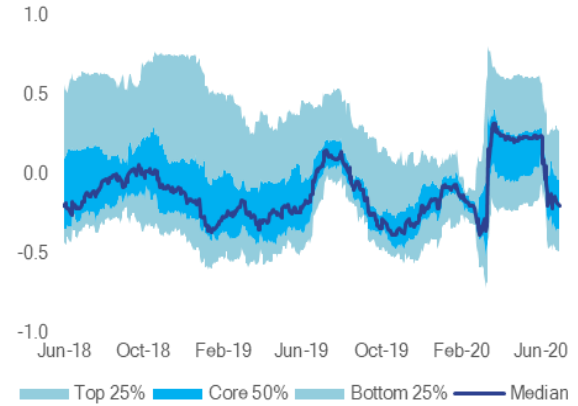
Note: Quarterly net issuance of EEA30 sovereign debt by country, EUR bn. Net issuance calculated as the difference between new issuance over the quarter and outstanding debt maturing over the quarter. Highest and lowest quarterly net issuance in the past year are reported. EEA30 total on right-hand scale.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

A.26
10Y spreads



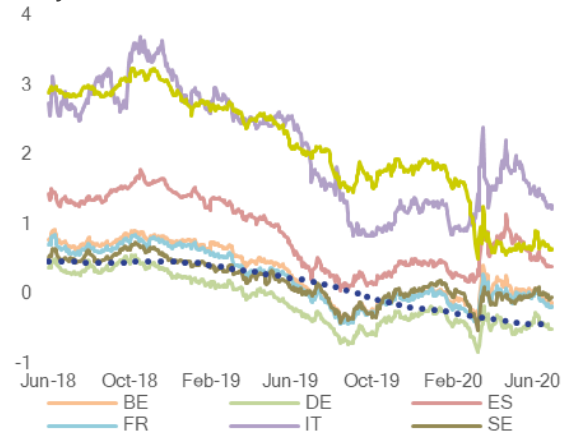
Note: Selected 10Y EA sovereign bond risk premia (vs. DE Bunds), in %.
Sources: Refinitiv Datastream, ESMA.

A.23
Equity-sovereign bond correlation dispersion



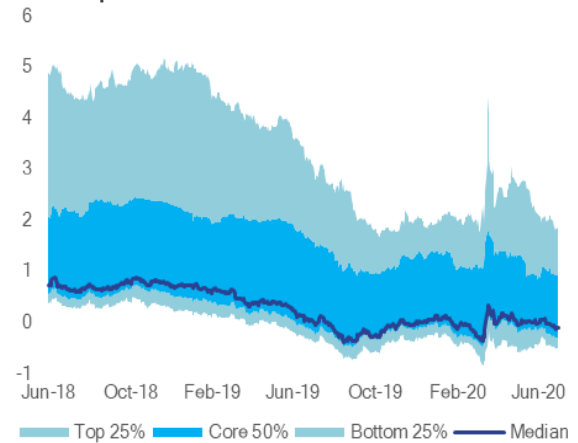
Note: Dispersion of the correlation between daily returns of national equity indices and national sovereign debt return index, for 16 countries in the EU27, over a 60-day rolling window.
Sources: Refinitiv Datastream, ESMA.

A.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.

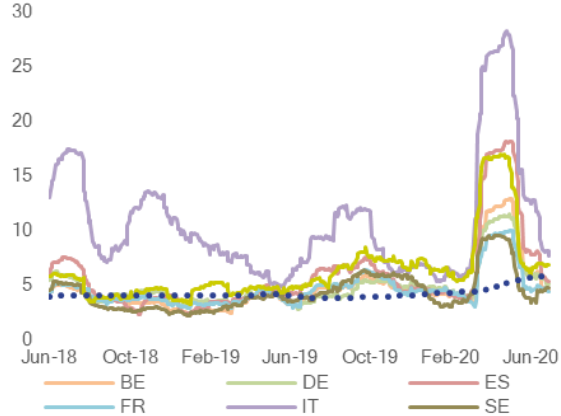
A.27
Yield dispersion



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

A.28

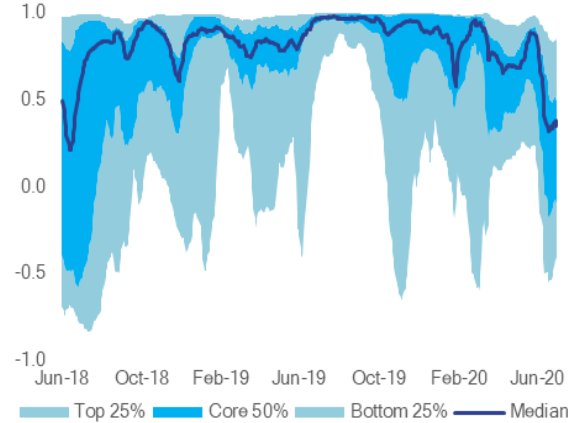
Volatility



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

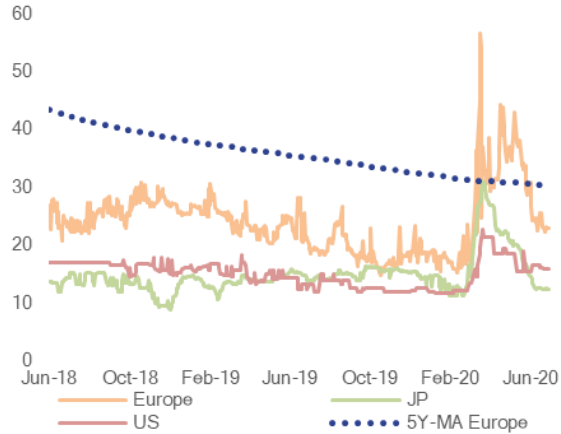
Yield correlation dispersion



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

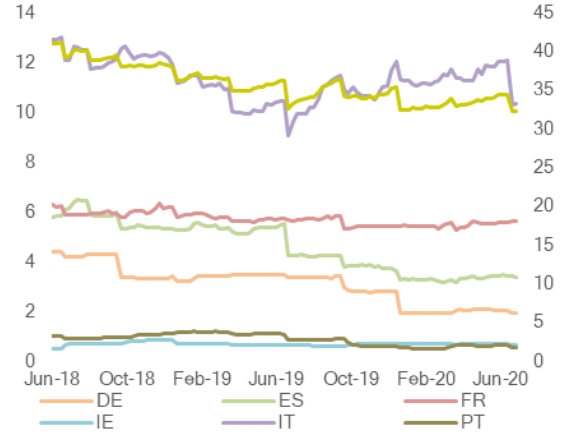
CDS spreads



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

A.31

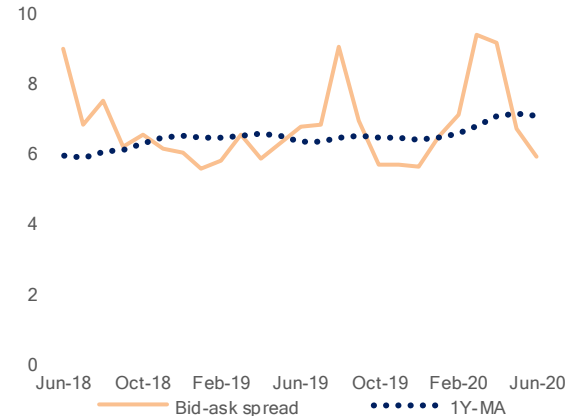
CDS notional



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

A.32

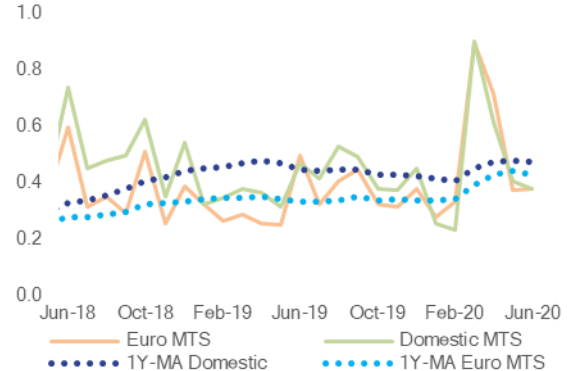
Bid-ask spreads



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 bps.
Sources: MTS, ESMA

A.33

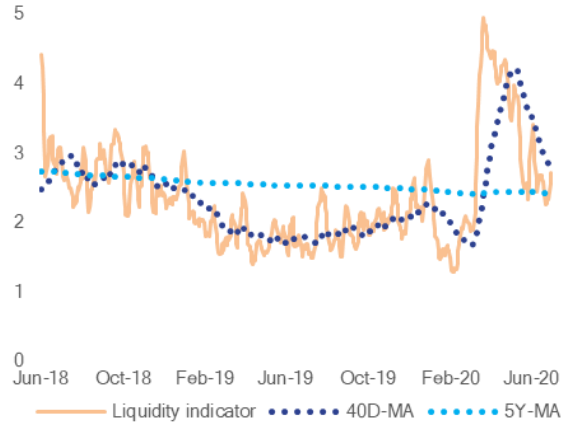
ESMA composite sovereign bond liquidity index



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

A.34

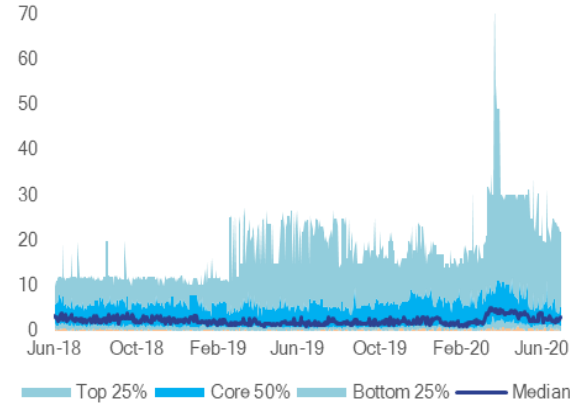
Liquidity



Note: Liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in bps. 20 EU27 countries are included. Sources: Refinitiv EIKON, ESMA.

A.35

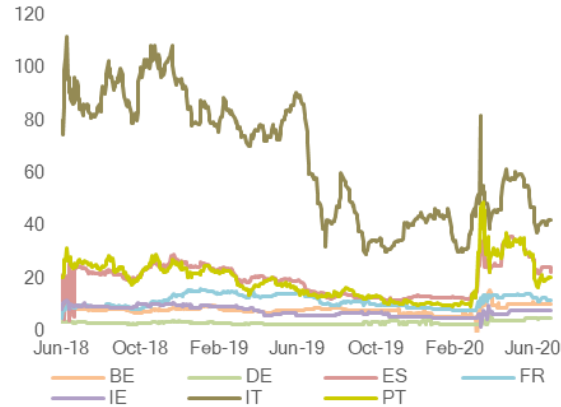
Liquidity dispersion



Note: Dispersion of liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in bps. 20 EU27 countries are included. Sources: Refinitiv EIKON, ESMA.

A.36

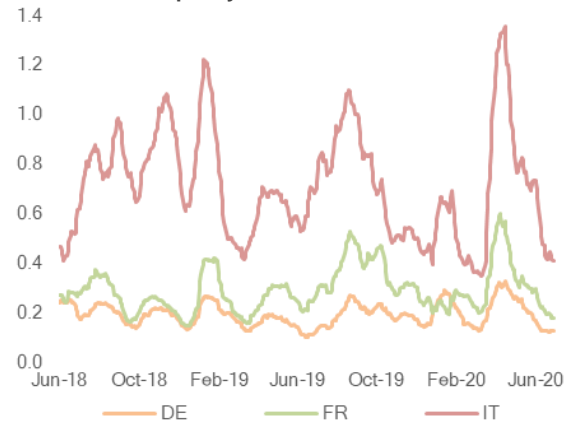
Redenomination risk



Note: Difference between 5Y CDS spreads under the 2014 ISDA definition (where debt redenomination is a credit event), and under the ISDA definition (where it is not), in bps. Sources: Refinitiv Datastream, ESMA.

A.37

Bond futures liquidity

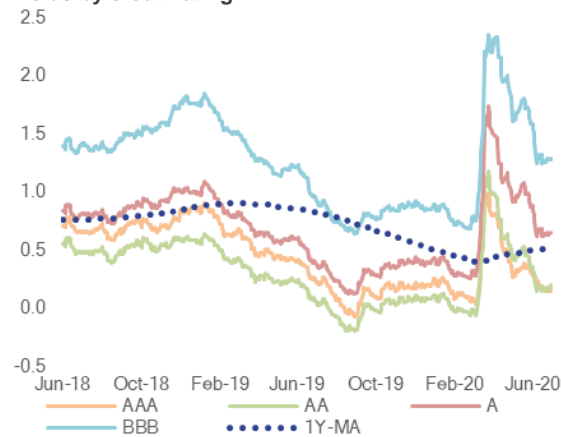


Note: One-month moving averages of the Hui-Heubel illiquidity indicator for selected 10Y sovereign bond futures, in %. Sources: Refinitiv Datastream, ESMA.

Corporate-bond markets

A.38

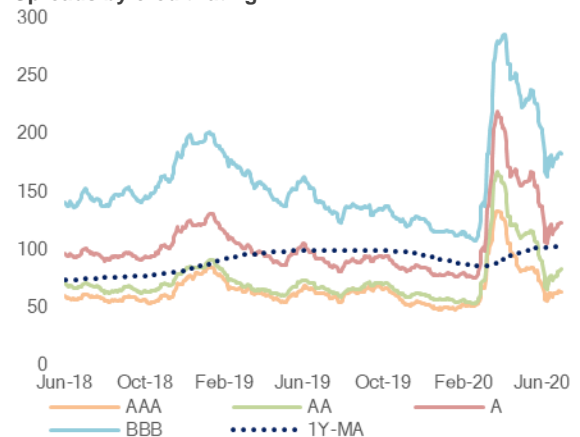
Yields by credit rating



Note: ICE BofAML EA corporate bond redemption yields by rating, in %. 1Y-MA=one-year moving average of all indices. Sources: Refinitiv Datastream, ESMA.

A.39

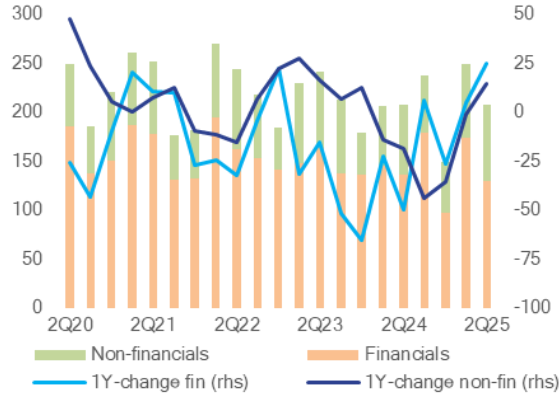
Spreads by credit rating



Note: ICE BofAML EA corporate bond option-adjusted spreads by rating, in bps. 1Y-MA=one-year moving average of all indices. Sources: Refinitiv Datastream, ESMA.

A.40

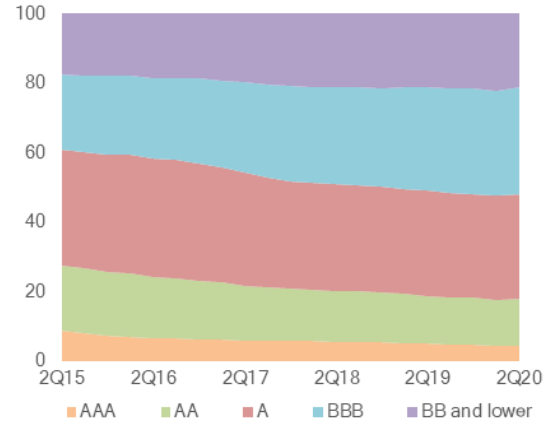
Debt redemption profile by sector



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.
Sources: Refinitiv EIKON, ESMA.

A.41

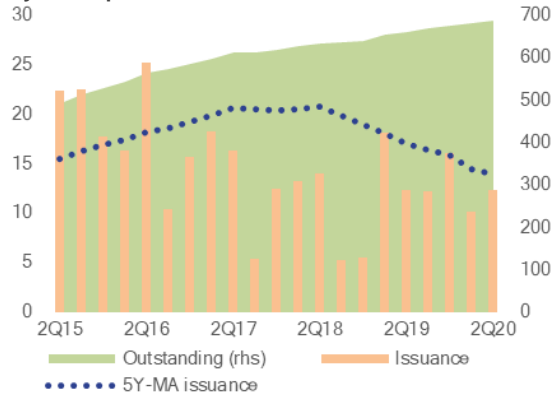
Rating distribution



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

A.42

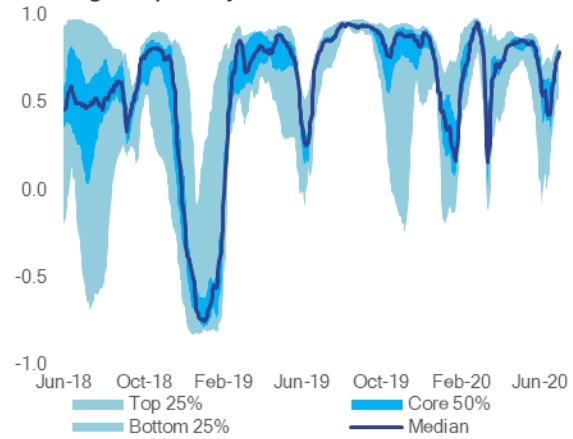
Hybrid capital instruments



Note: Hybrid capital instruments gross issuance in the EEA30, EUR bn, and outstanding amounts (rhs), EUR tn. 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

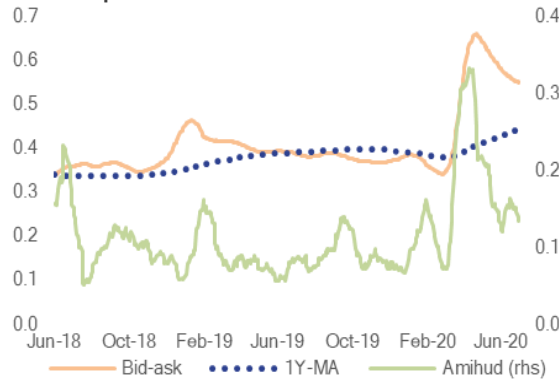
Sovereign-corporate yield correlation



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

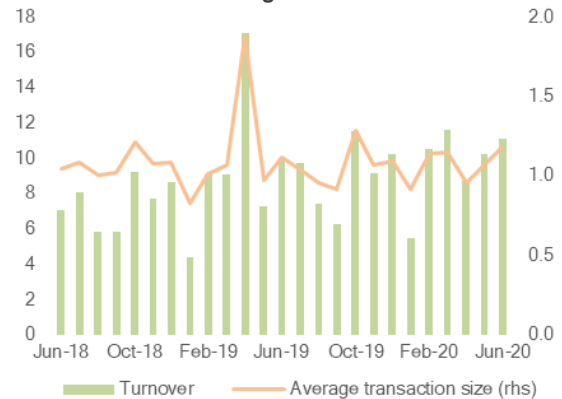
Bid-ask spreads and Amihud indicator



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

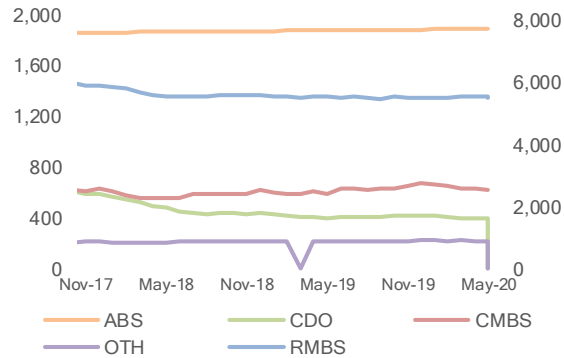


Note: Average transaction size for the corporate bond segment as the ratio of nominal amount of settlement instructions to number of settled instructions, in EUR mn. Turnover is the one-month moving average of the ratio of trading volume over outstanding amount, in %.
Sources: IHS Markit, ESMA.

Credit quality

A.46

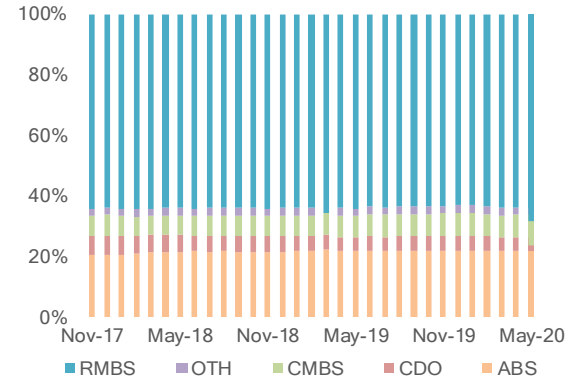
SFI ratings issued by collateral type



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

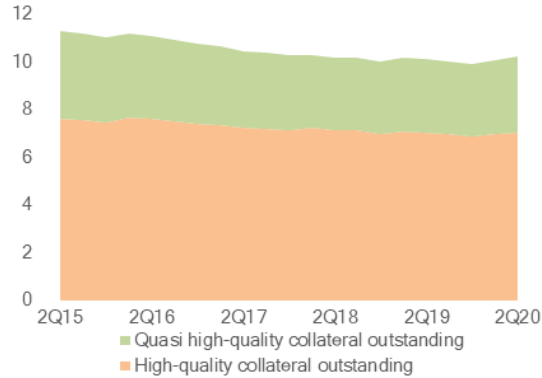
SFI ratings outstanding by collateral type



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

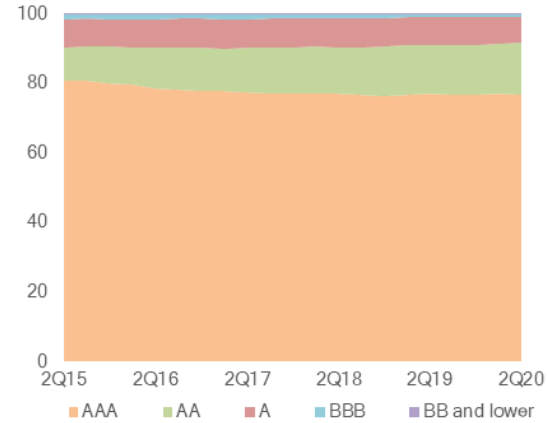
High-quality collateral outstanding



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-. Sources: Thomson Reuters EIKON, ESMA.

A.49

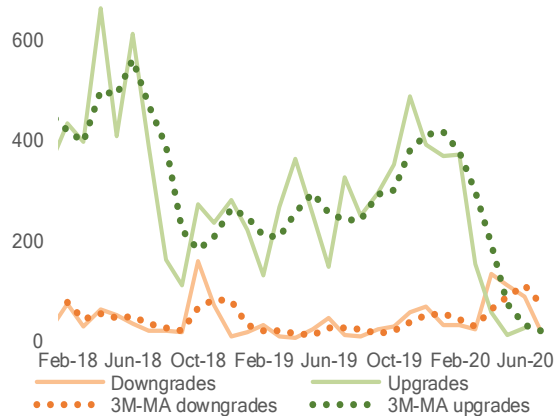
Rating distribution of covered bonds



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

A.50

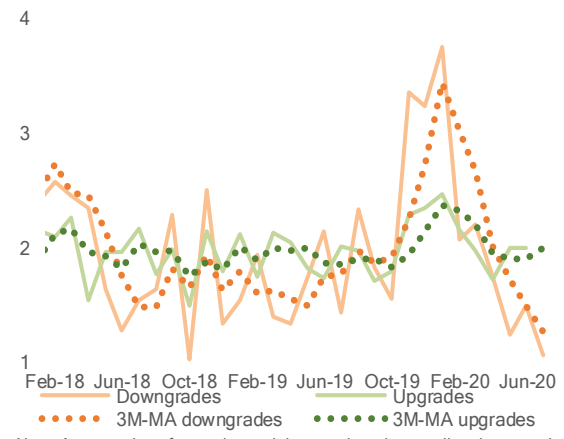
SFI rating changes



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

A.51

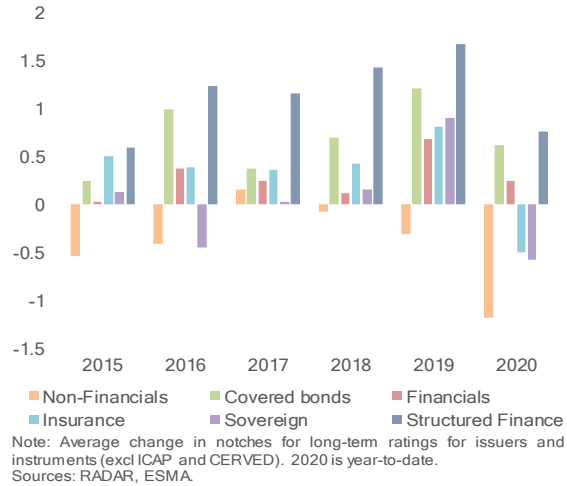
Size of SFI rating changes



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

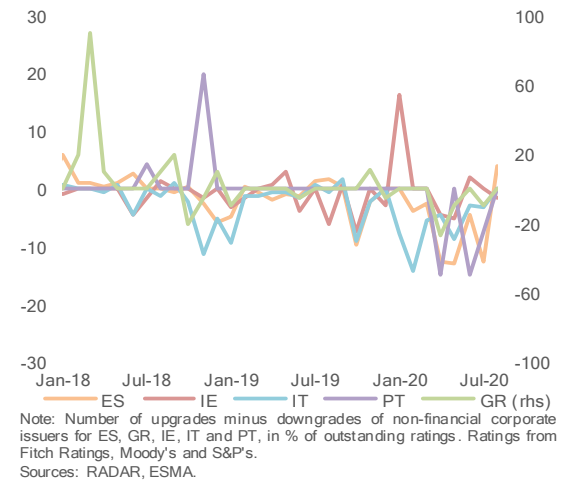
A.52

Size of rating changes



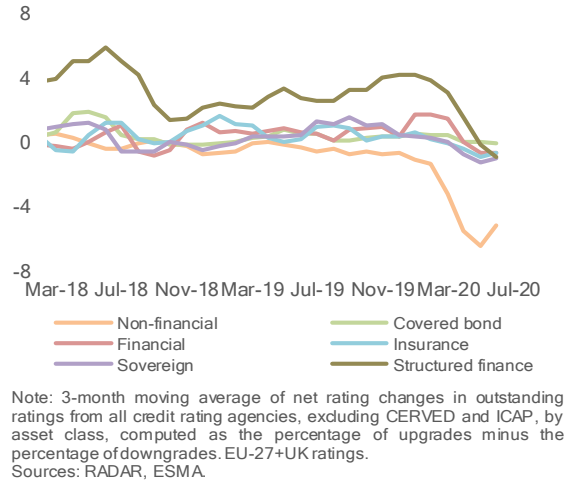
A.53

Non-financial corporate rating changes



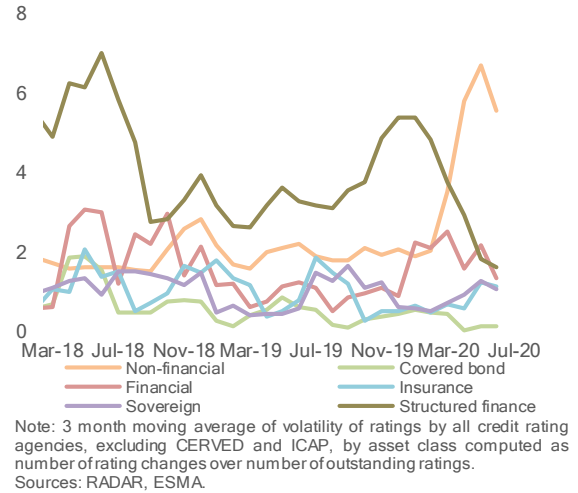
A.54

Ratings drift



A.55

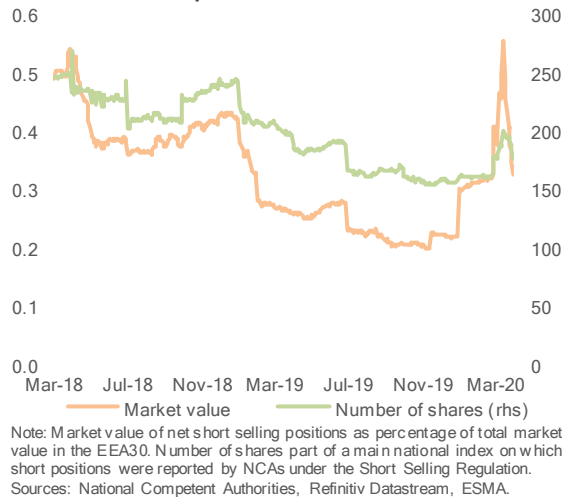
Ratings volatility



Short selling

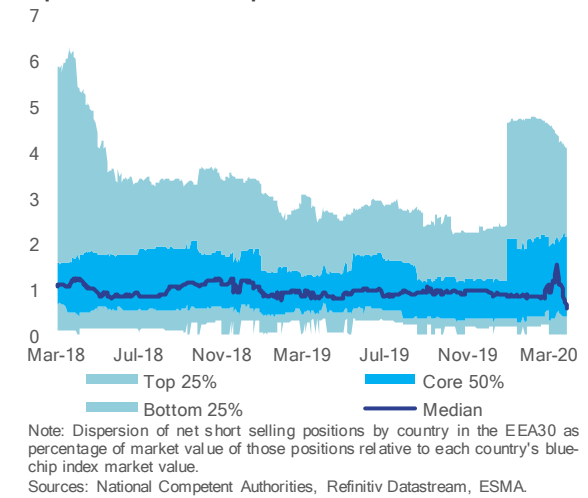
A.56

Value of net short positions in EU shares

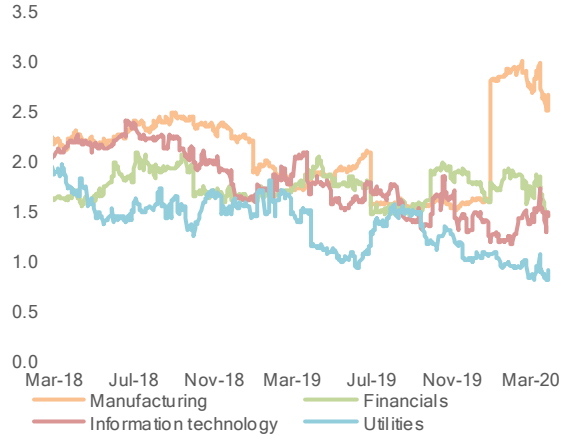


A.57

Dispersion of net short positions in EU shares

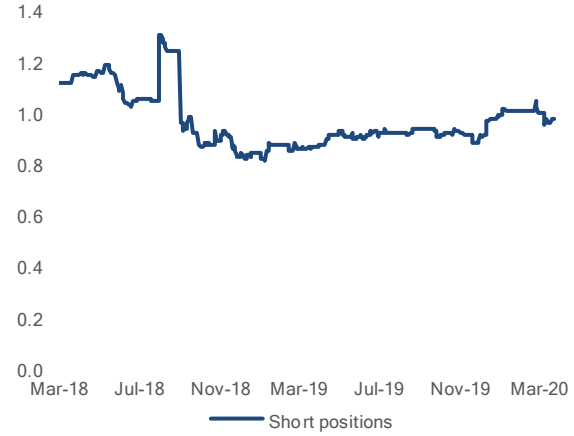


A.58
Value of net short positions in EU shares by sector



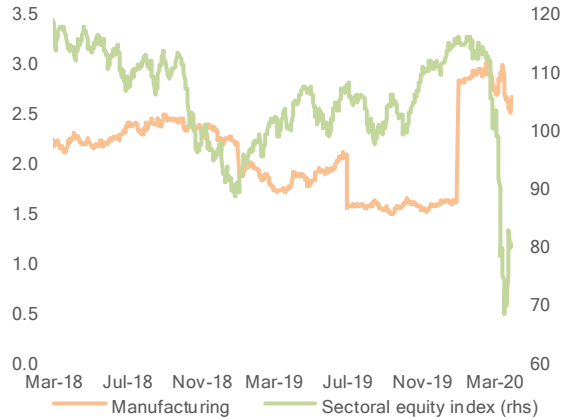
Note: Average of net short positions in EEA30 shares for manufacturing, financial, information technology and utilities, in % of issued share capital.
Sources: National Competent Authorities, ESMA.

A.59
Value of net short positions in EU sovereign debt



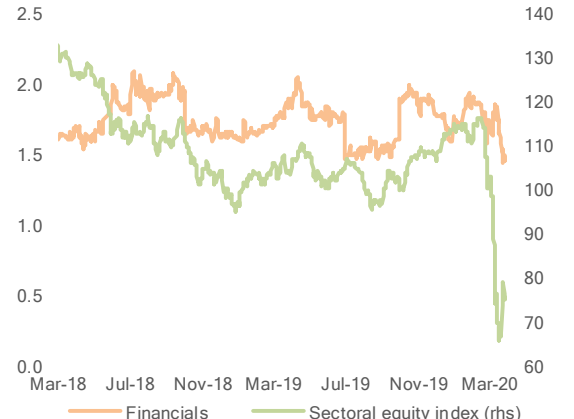
Note: Duration-adjusted net short selling positions held in EEA30 sovereign debt, EUR tn.
Sources: National Competent Authorities, ESMA.

A.60
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.

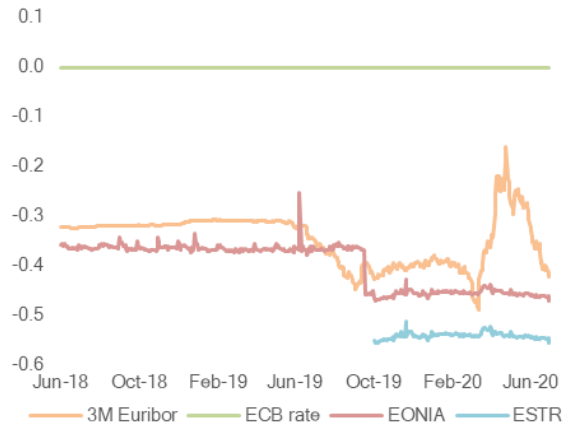
A.61
Net short positions in financial shares and equity prices



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.

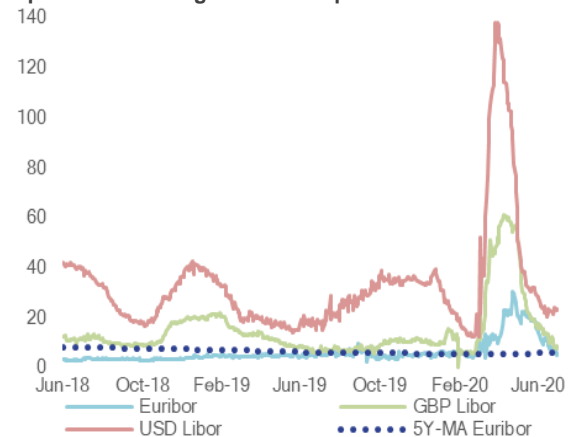
Money markets

A.62
Interest rates



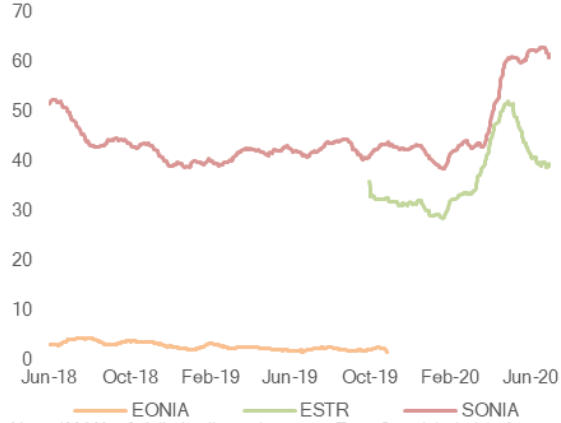
Note: Money market rates, in %.
Sources: Refinitiv Datastream, ESMA.

A.63
Spreads to overnight index swap



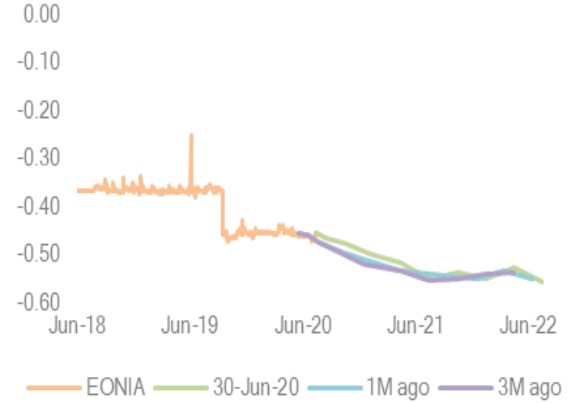
Note: Spreads between 3M interbank rates and 3M overnight index swap, in bps.
Sources: Refinitiv Datastream, ESMA.

A.64
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.

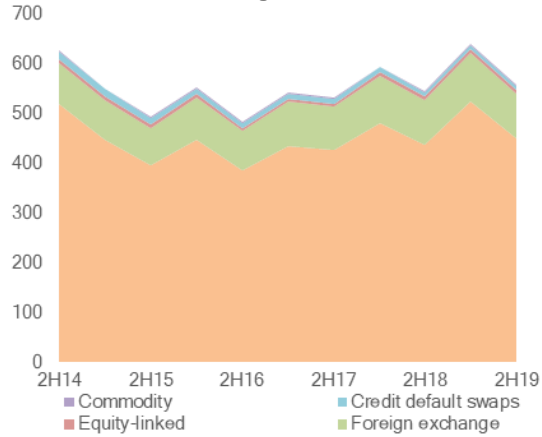
A.65
EONIA forwards



Note: Euro overnight index swap forwards, in %.
Sources: Thomson Reuters Datastream, ESMA

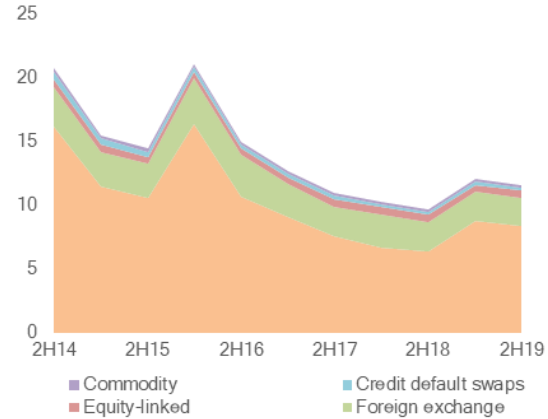
Derivatives markets

A.66
OTC notional outstanding



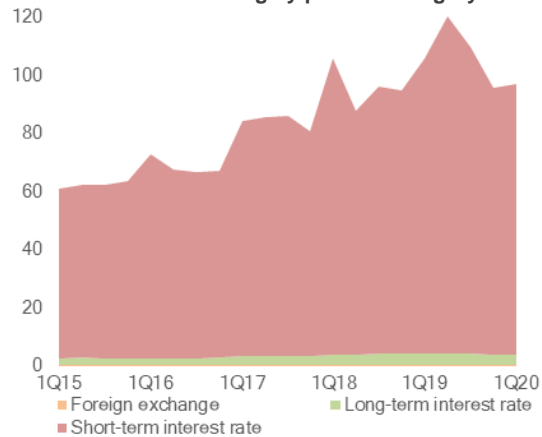
Note: Gross notional amounts of outstanding OTC derivatives by product category, USD tn.
Sources: Bankfor International Settlements, ESMA

A.67
OTC market value



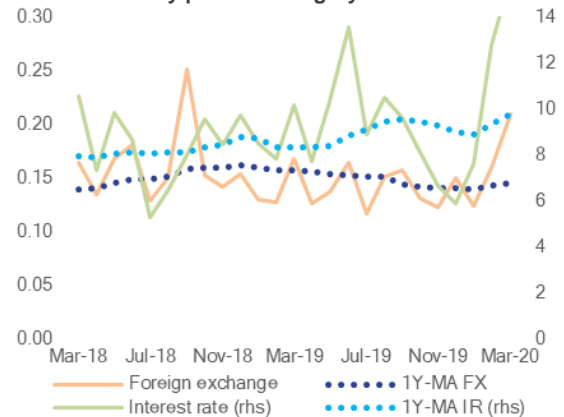
Note: Gross market values of outstanding OTC derivatives by category, USD tn. Gross market values represent the cost of replacing all open contracts at the prevailing market prices.
Sources: Bankfor International Settlements, ESMA

A.68
ETD notional outstanding by product category



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

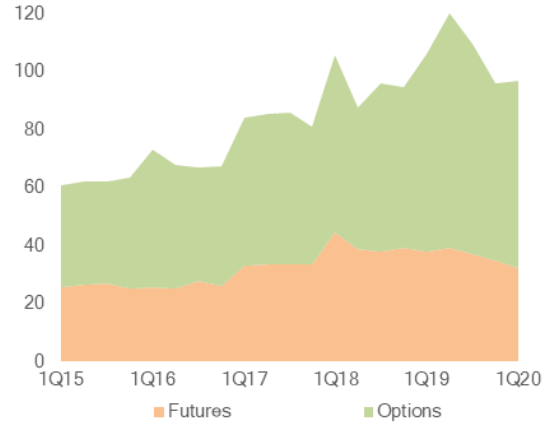
A.69
ETD turnover by product category



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: Bankfor International Settlements, ESMA

A.70

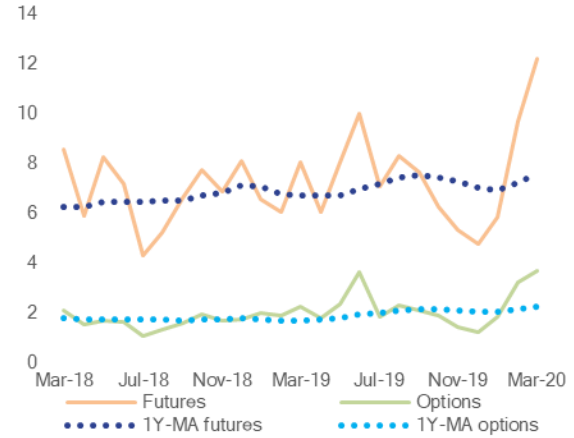
ETD notional outstanding by asset class



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

A.71

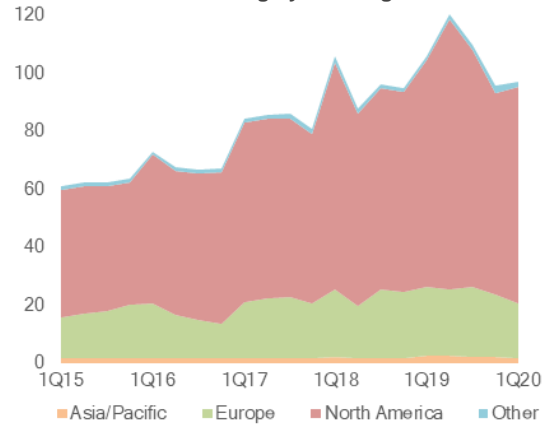
ETD turnover by asset class



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

A.72

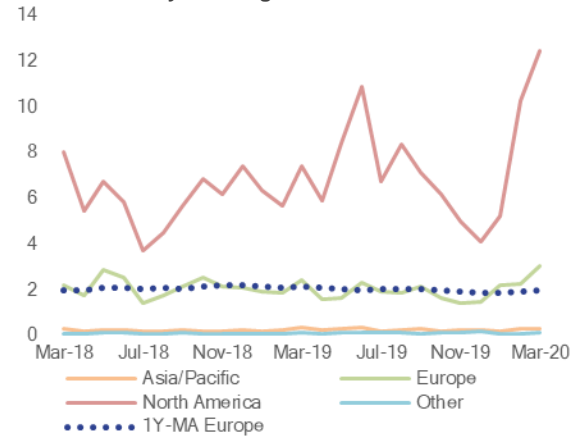
ETD notional outstanding by exchange location



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

A.73

ETD turnover by exchange location



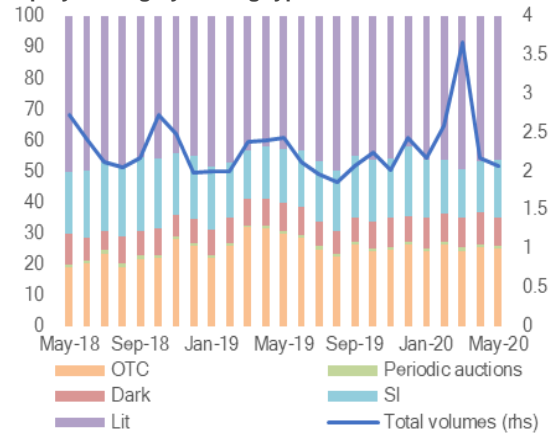
Note: Global average daily turnover in exchange-traded derivatives by exchange location, in USD tn. "Europe" as defined by BIS. Sources: Bankfor International Settlements, ESMA

Infrastructures and services

Trading venues and MiFID entities

A.74

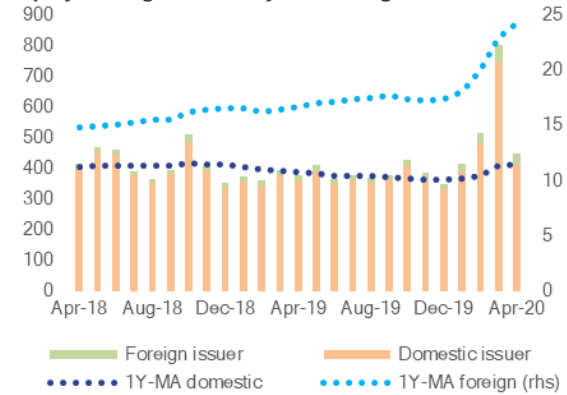
Equity trading by trading type



Note: Type of equity trading in the EU as a percentage of total volumes. Total equity trading volumes in EUR trillion (right axis)
Sources: FIRDS, FITRS, ESMA

A.75

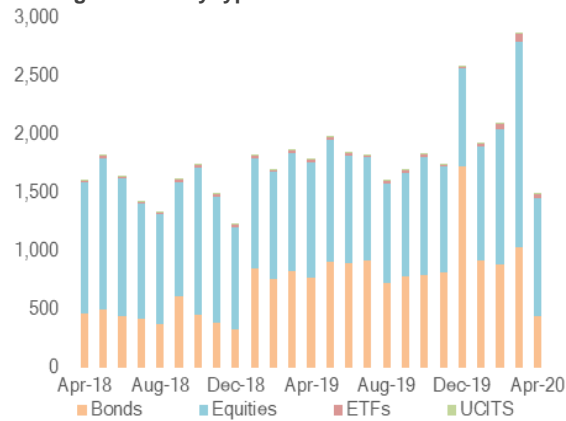
Equity trading turnover by issuer origin



Note: Monthly equity turnover on EEA31 trading venues by origin of the traded equity, in EUR bn. Data for Aquis Exchange, CBOE Europe Equities, Equiduct, London Stock Exchange and Turquoise are not reported. Foreign equities are issued in a country other than that of the trading venue.
Sources: FESE, ESMA

A.76

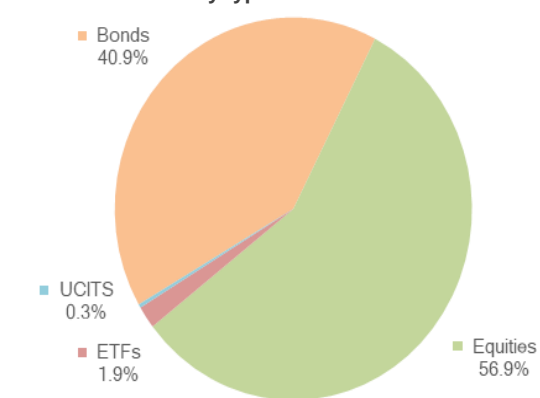
Trading turnover by type of assets



Note: Monthly turnover on EEA31 trading venues by type of assets, in EUR bn. Data for Aquis Exchange, CBOE Europe Equities, Equiduct, London Stock Exchange and Turquoise are not reported for bonds, ETFs and UCITS.
Sources: FESE, ESMA

A.77

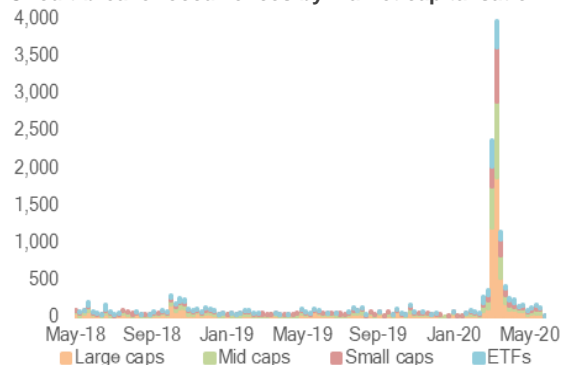
Share of turnover by type of assets



Note: Share of turnover on EEA31 trading venues by asset class, in % of total turnover over the reporting period. Data for Aquis Exchange, CBOE Europe Equities, Equiduct, London Stock Exchange and Turquoise are not reported for bonds, ETFs and UCITS.
Sources: FESE, ESMA

A.78

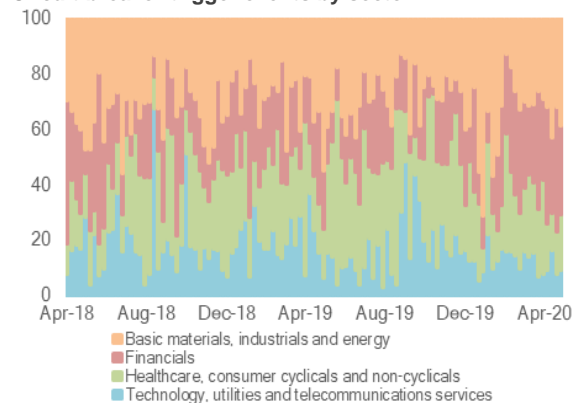
Circuit-breaker occurrences by market capitalisation



Note: Number of daily circuit-breaker trigger events by type of financial instrument and by market cap registered on 34 EEA31 trading venues for all constituents of the STOXX Europe Large/Mid/Small 200 and a large sample of ETFs tracking these indices or some of their subindices. Results displayed as weekly aggregates.
Sources: Morningstar Real-Time Data, ESMA

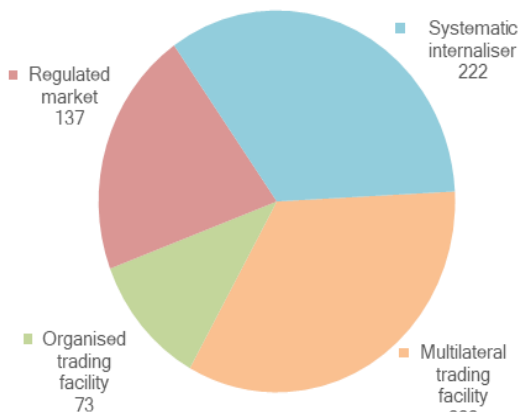
A.79

Circuit-breaker-trigger events by sector



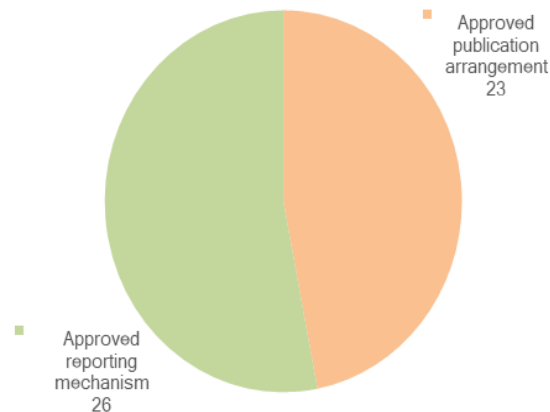
Note: Percentage of circuit-breaker trigger events by economic sector registered on 34 EEA31 trading venues for all constituents of the STOXX Europe Large/Mid/Small 200 and a large sample of ETFs tracking these indices or some of their subindices. Results displayed as weekly aggregates.
Sources: Morningstar Real-Time Data, ESMA

A.80
Number of trading venues and systematic internalisers



Note: Number of trading venues registered under MiFID II/MiFIR by EEA31 National Competent Authorities and notified to ESMA, by type.
Sources: ESMA Registers.

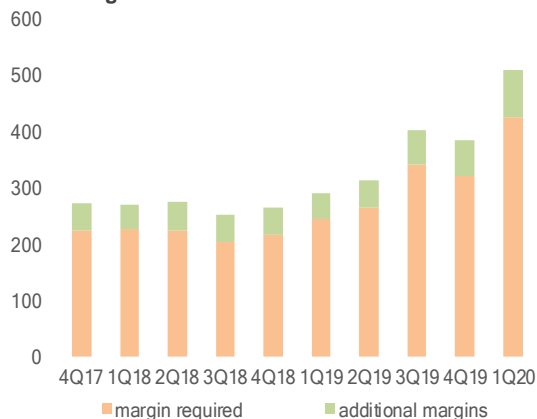
A.81
Data reporting services providers



Note: Number of data reporting services providers registered under MiFID II/MiFIR by EEA31 National Competent Authorities and notified to ESMA, by type.
Sources: ESMA Registers.

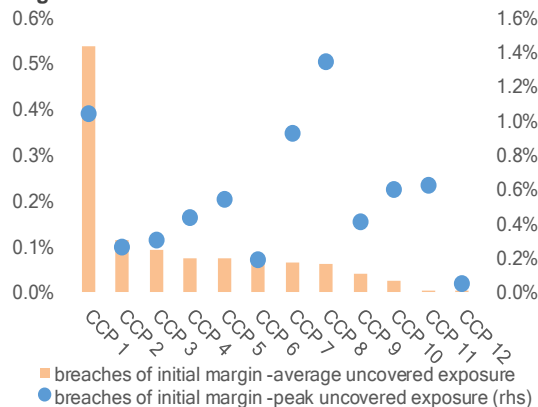
Central counterparties

A.82
Initial Margins held at EU CCPs



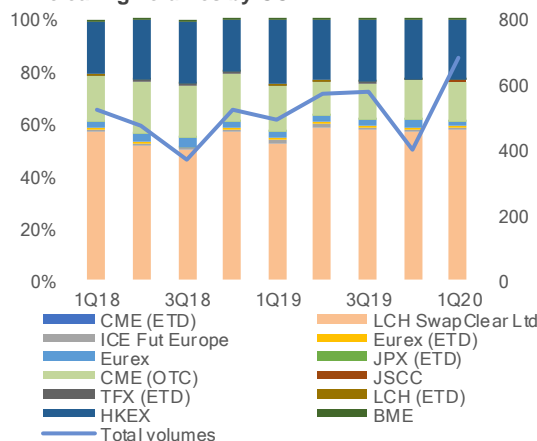
Note: Initial margin required as well as additional margin posted by EU CCP, in EUR bn.
Sources: Clarus Financial Technology, CPM-IOSCO PQD, ESMA.

A.83
Margin breaches



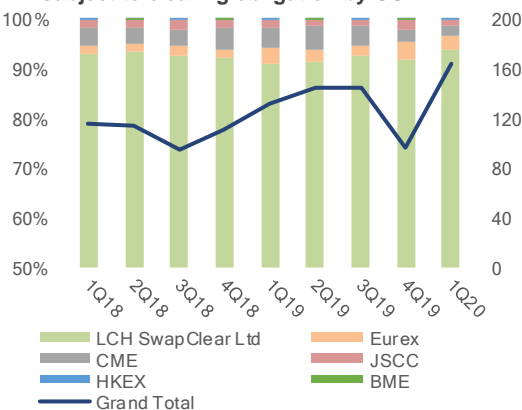
Note: Average and maximum margin breach size over the past 12 month at selected EU CCPs, as a percentage of the total margin held, as of 31 March 2020.
Sources: Clarus Financial Technology, PQD, ESMA.

A.84
IRD clearing volumes by CCP

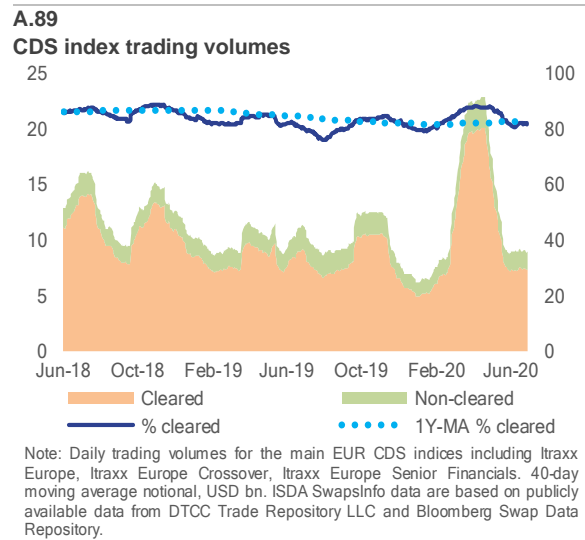
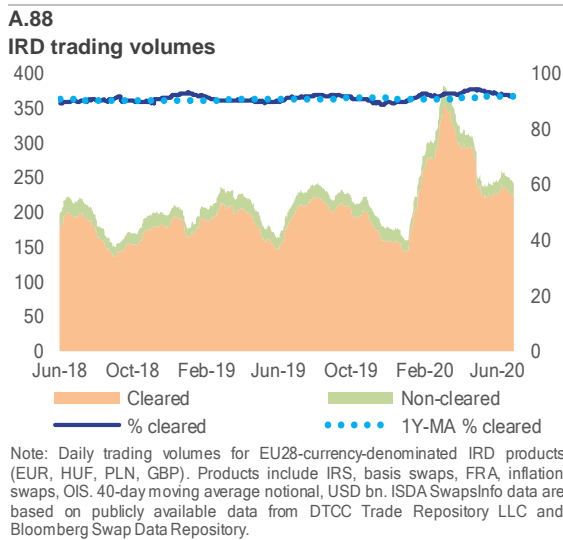
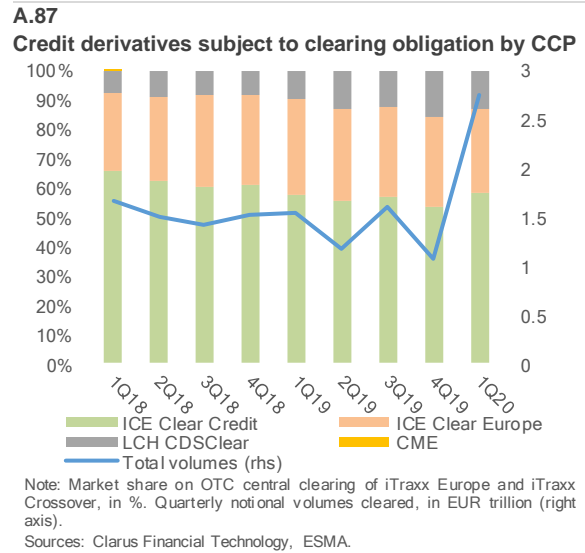
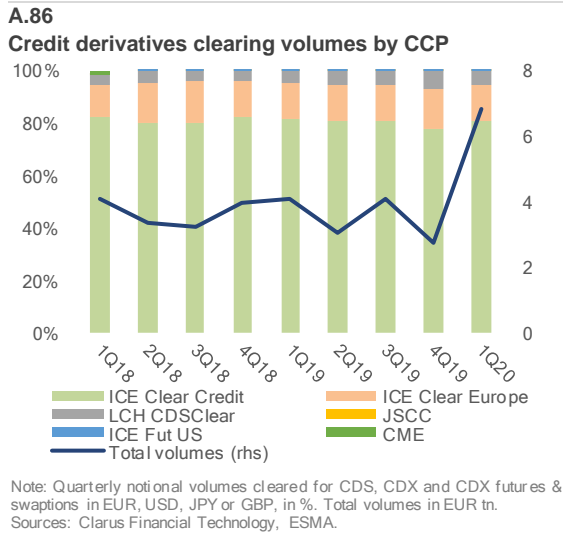


Note: Quarterly notional volumes cleared for OTC and ETD IRDs in EUR, USD, JPY or GBP, in %. Total volumes in EUR tn.
Sources: Clarus Financial Technology, ESMA.

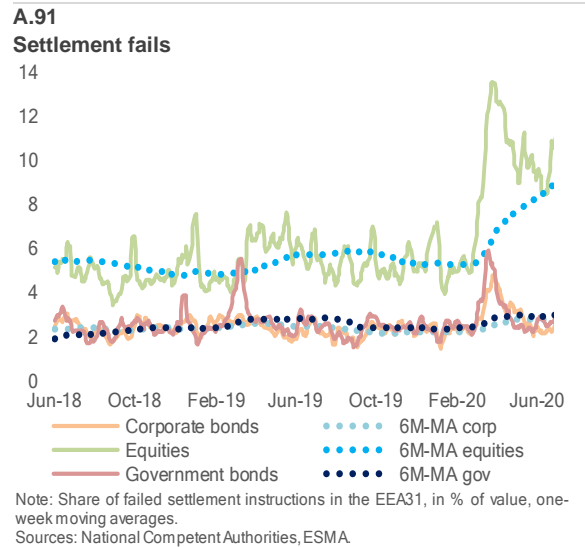
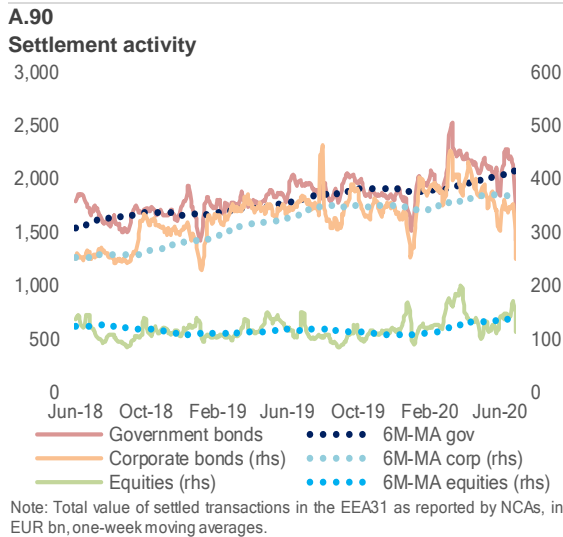
A.85
IRD subject to clearing obligation by CCP

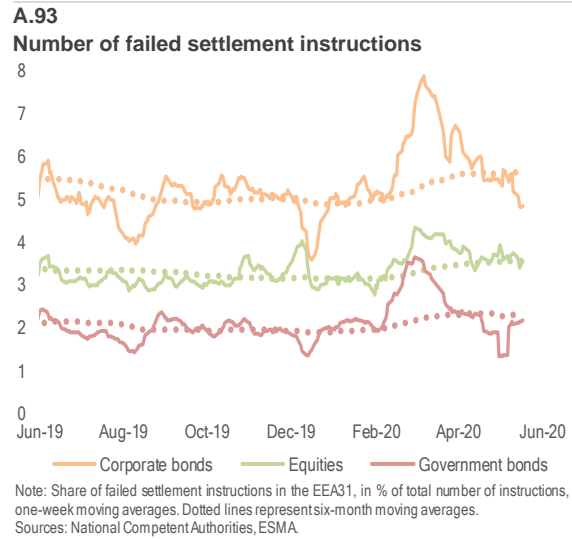
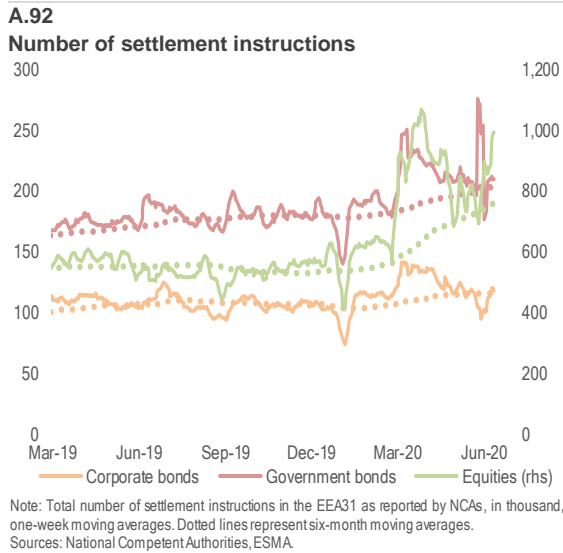


Note: Market share on OTC central clearing of basis swaps, fixed-to-float swaps, Forward rate agreements and overnight indexed swaps in EUR, USD, JPY or GBP, in %. Quarterly notional volumes cleared, in EUR tn (rh axis).
Sources: Clarus Financial Technology, ESMA.

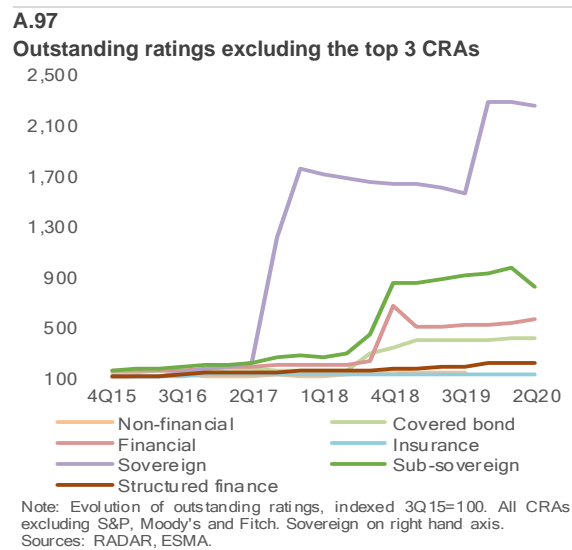
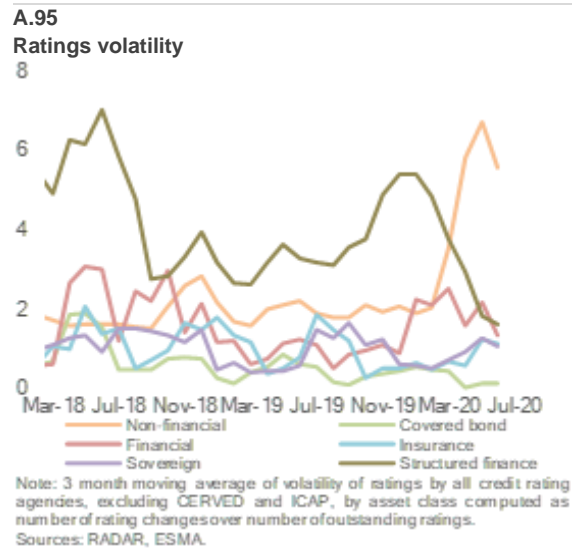
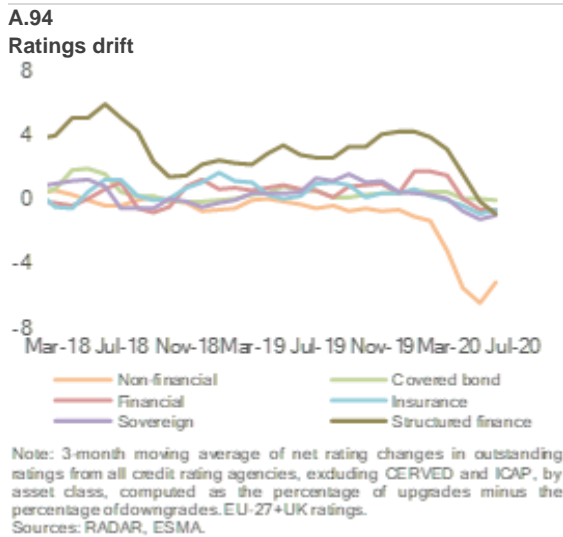


Central securities depositories

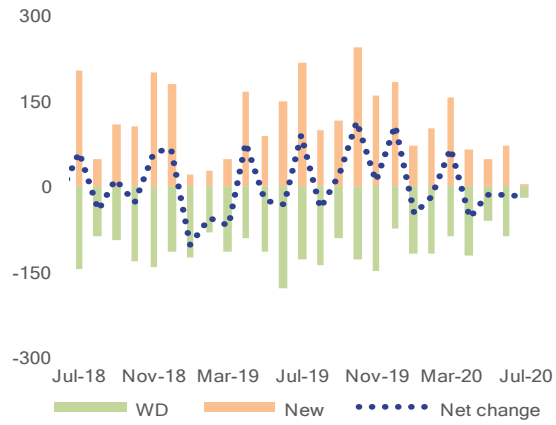




Credit rating agencies

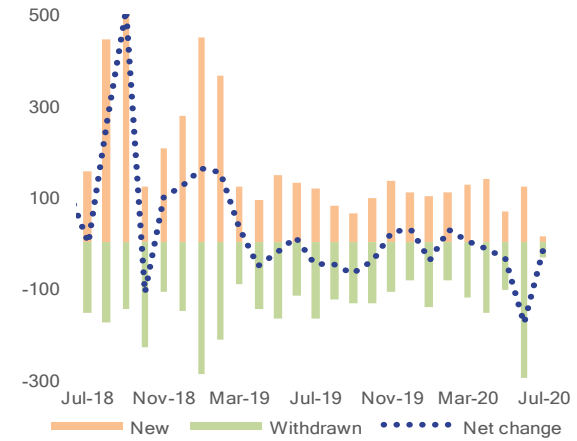


A.98
Changes in outstanding structured finance ratings



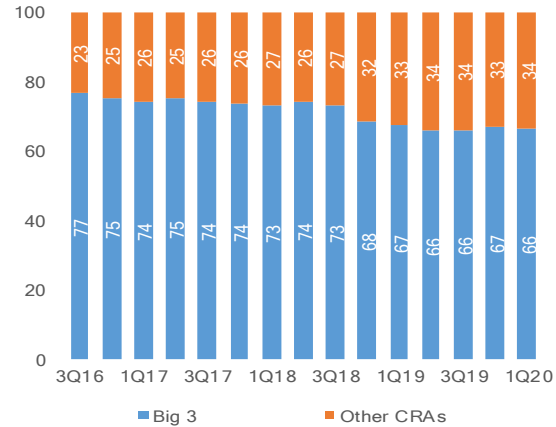
Note: Number of withdrawn and new ratings for structured finance instruments. EU-27+UK ratings.
Sources: RADAR, ESMA.

A.99
Changes in outstanding covered bond ratings



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

A.100
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.

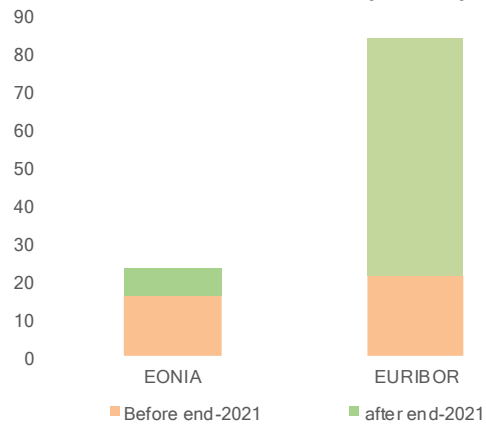
Financial benchmarks

A.101
EURIBOR rates



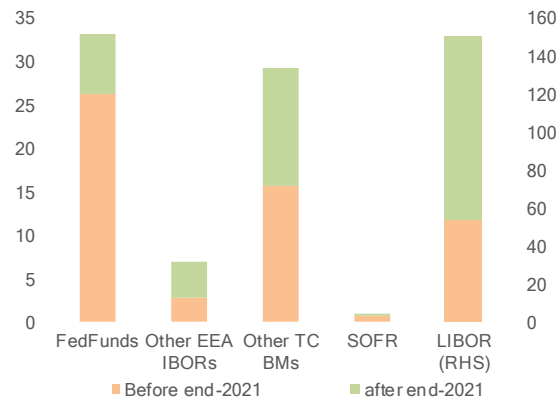
Note: EURIBOR fixing for 3, 6 and 12 month maturities.
Sources: EMMI, ESMA.

A.102
IRSs linked to EONIA and Euribor by maturity



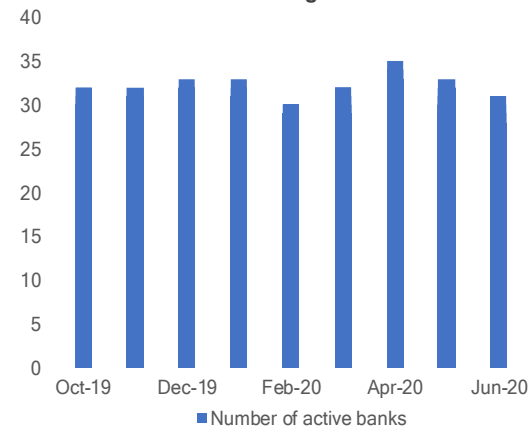
Note: Gross notional amount of IRS outstanding referencing EONIA, EONIA SWAP rate and EURIBOR, by maturities. as of 27 March 2020, EUR tn.

A.103
IRDs linked to reference rates



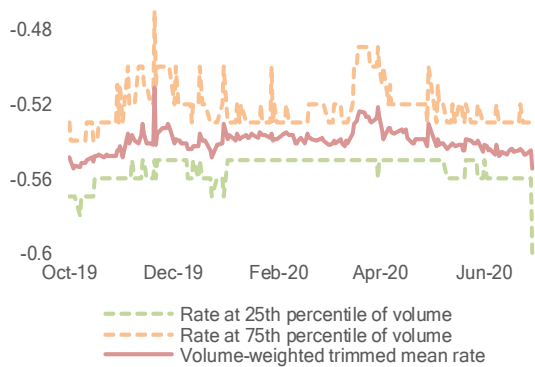
Note: Gross notional amount of IRS outstanding referencing benchmarks, by maturities. Other EEA includes NIBOR, PRIBOR, STIBOR, WIBOR and BUBOR, other Third country benchmarks include BBSW, CDOR, JIBAR, TIBOR, TELBOR and MOSPRIM. As of 27 March 2020, EUR tn.
Sources: TRs, ESMA

A.104
Number of banks contributing to €STR



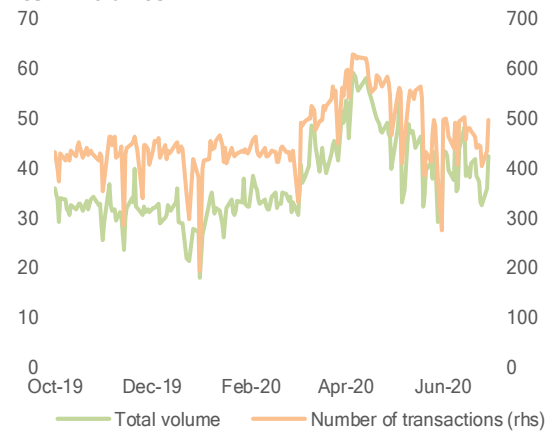
Note: Number of banks reporting transactions before trimming
Sources: ECB, ESMA

A.105
€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.106
€STR volumes



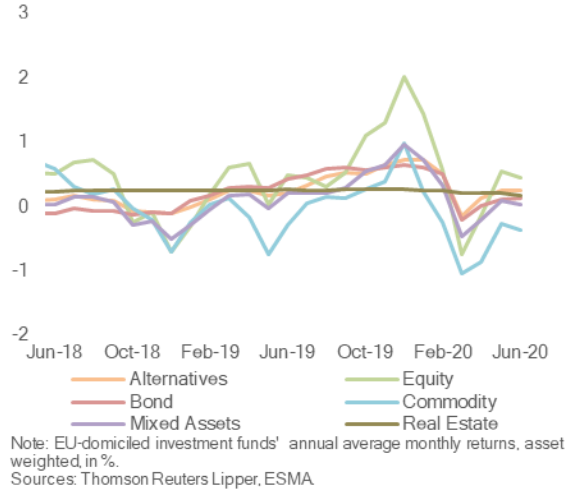
Note: Total nominal value of transactions before trimming, in EUR bn. Number of transactions before trimming.

Asset management

Fund industry

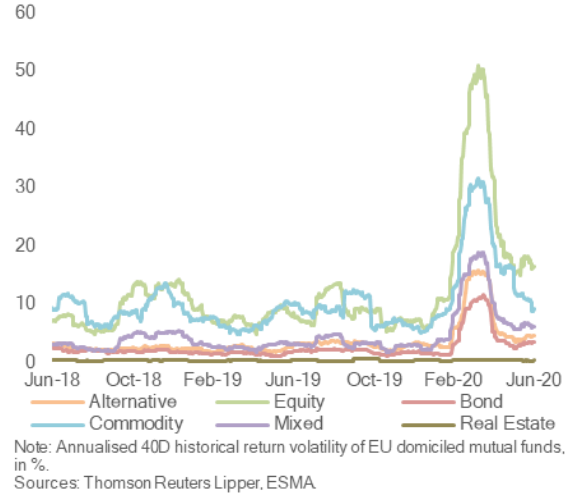
A.107

Fund performance



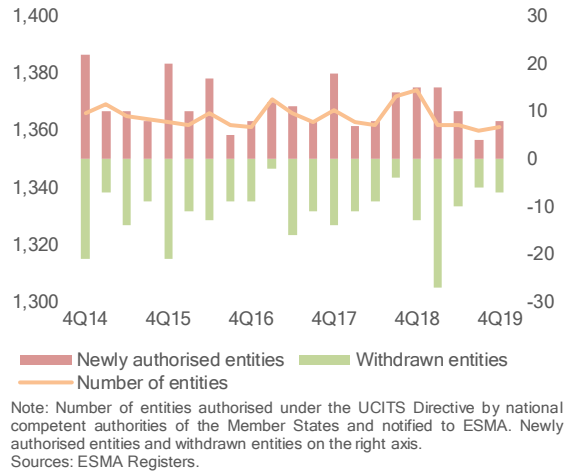
A.108

Fund volatility



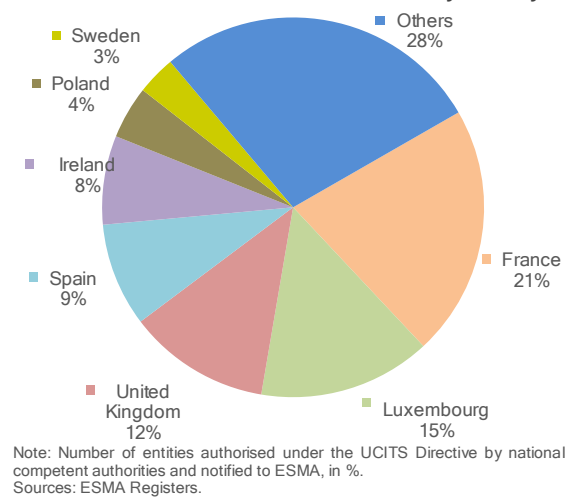
A.109

Entities authorised under UCITS



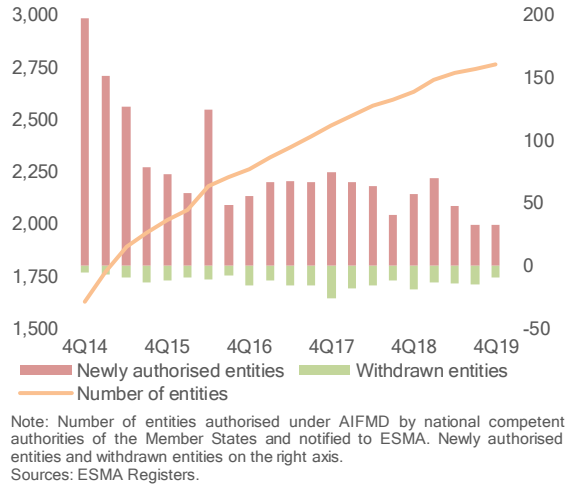
A.110

Share of entities authorised under UCITS by country



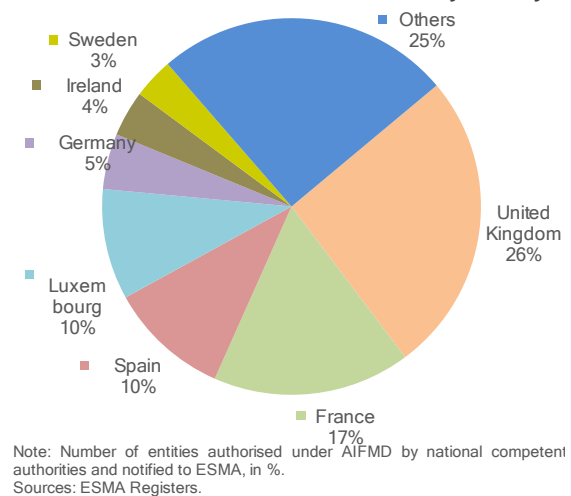
A.111

Entities authorised under AIFMD



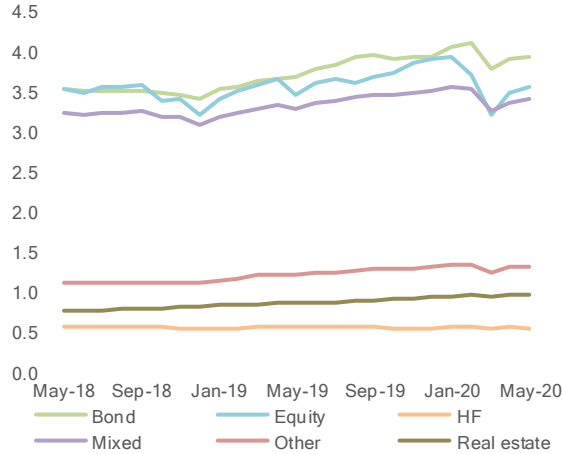
A.112

Share of entities authorised under AIFMD by country



A.113

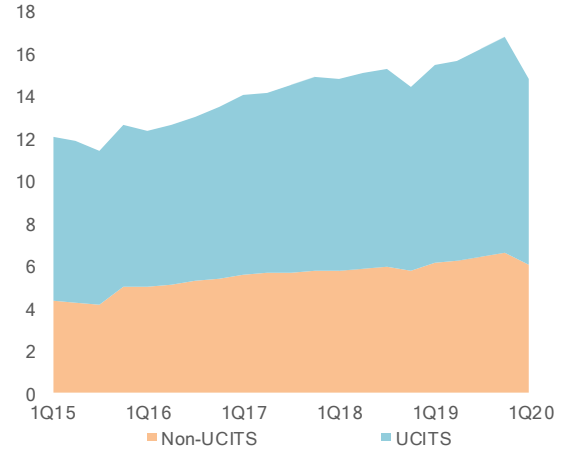
Assets by market segment



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

A.114

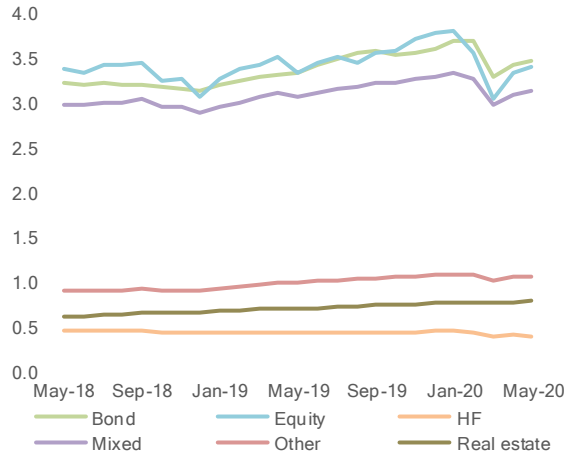
NAV by legal form



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

A.115

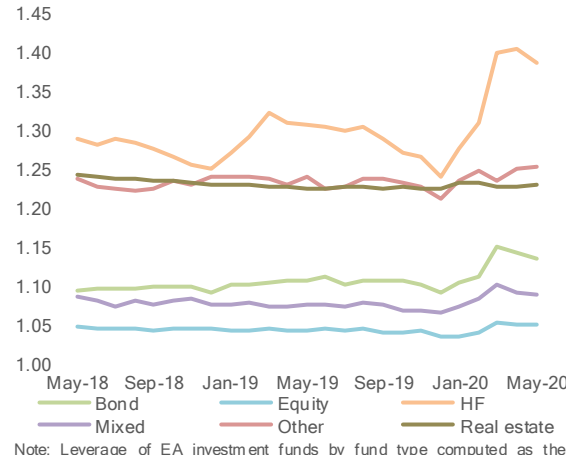
NAV by fund market segment



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

A.116

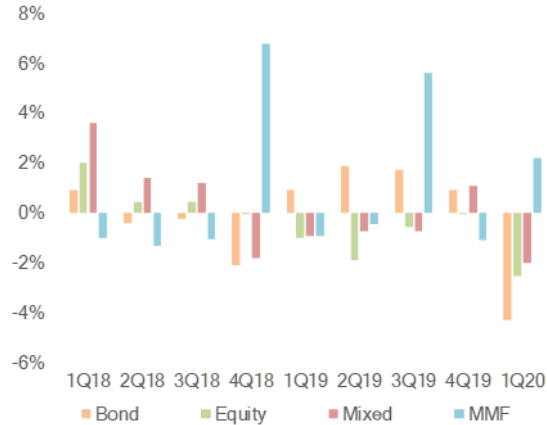
Leverage by market segment



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

A.117

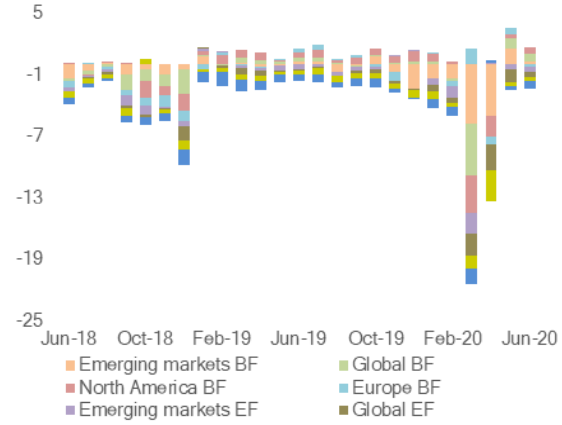
Fund flows by fund type



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

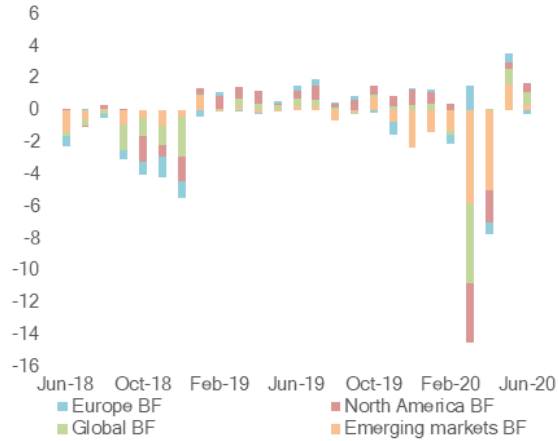
A.118

Fund flows by regional investment focus



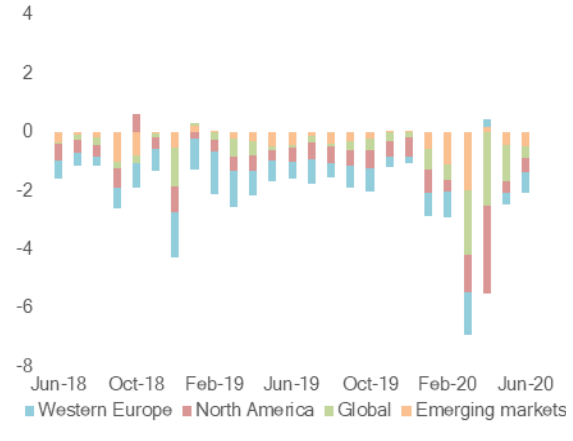
Note: Bond and equity funds (BF and EF) flows over time since 2004 by regional investment focus, in % of NAV.
Sources: REFINITIV Lipper, ESMA.

A.119
Bond fund flows by regional investment focus



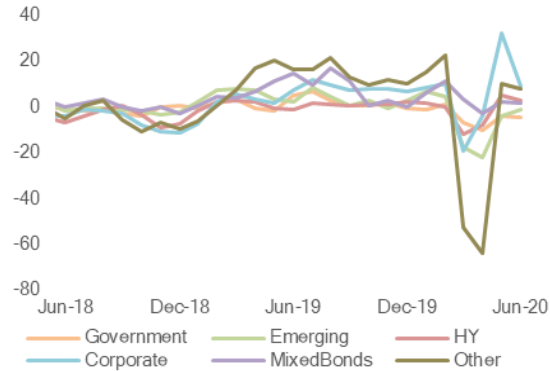
Note: Bond flows by regional investment focus, in % of NAV.
Sources: REFINITIV Lipper, ESMA

A.120
Equity fund flows by regional investment focus



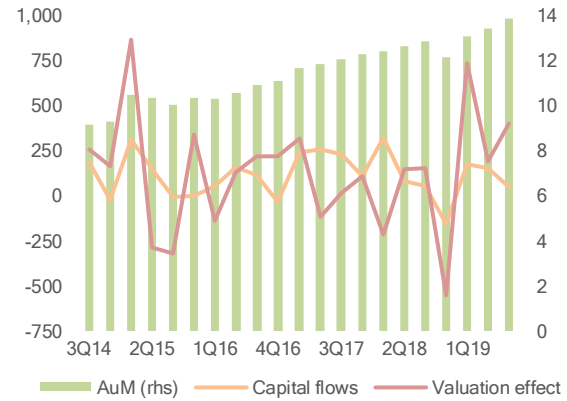
Note: Equity flows by regional investment focus, in % of NAV.
Sources: REFINITIV Lipper, ESMA

A.121
Net flows for bond funds



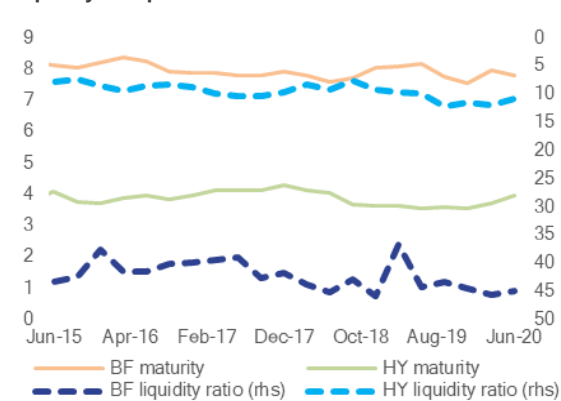
Note: Two-month cumulative net flows for bond funds, EUR bn. Funds investing in corporate and government bonds that qualify for another category are only reported once e.g. funds investing in emerging government bonds reported as Emerging; funds investing in HY corporate bonds reported as HY).
Sources: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

A.122
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.123
Liquidity risk profile of EU bond funds



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

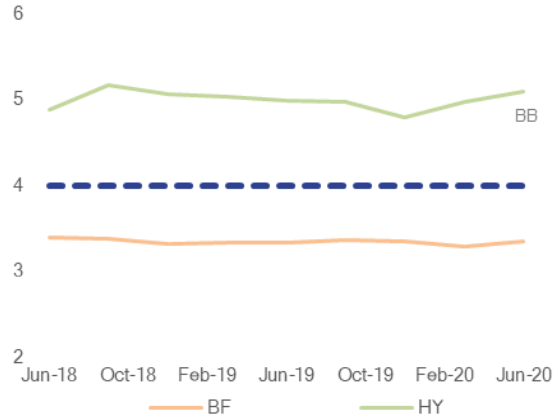
A.124
Cash as percentage of assets



Note: Cash held by EU corporate bond funds, in % of portfolio holdings (%). Short positions can have a negative value.
Sources: Refinitiv Lipper, ESMA.

A.125

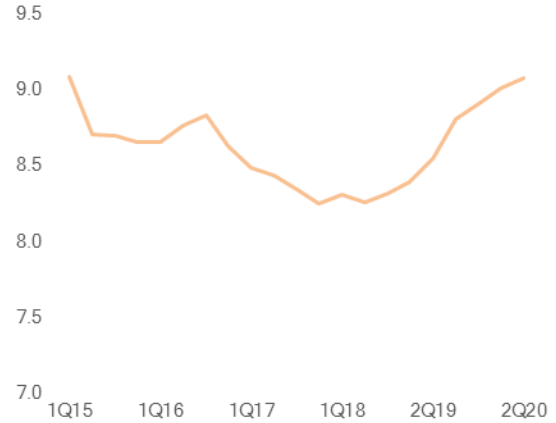
Credit quality of bond funds' assets



Note: Average credit quality (S&P ratings; 1=AAA; 4=BBB; 10 = D).
Sources: Thomson Reuters Lipper, ESMA

A.126

Maturity of EU bond funds' assets

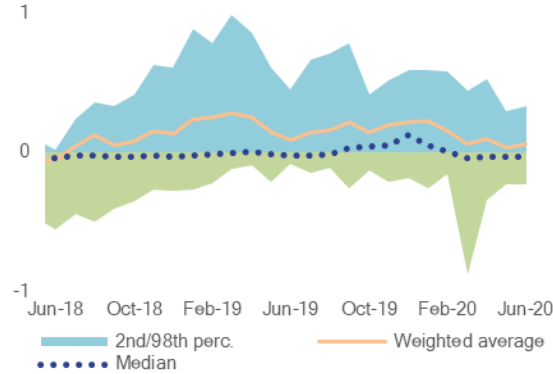


Note: Weighted average effective maturity of EU bond funds' assets, data in years.
Sources: Thomson Reuters Lipper, ESMA

Money market funds

A.127

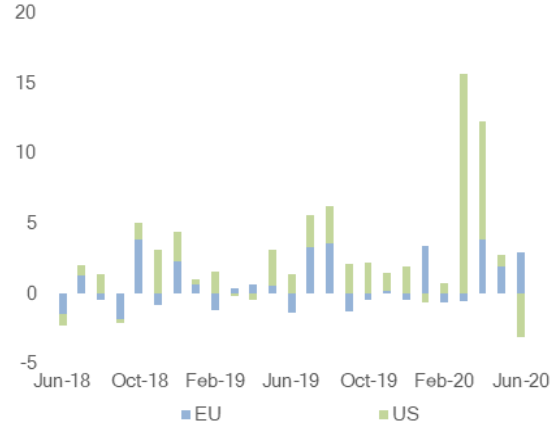
MMF performance



Note: EU-domiciled MMFs' average yearly returns by month, asset-weighted, in %. The graph shows the median and average asset-weighted returns and the difference between the returns corresponding to the 98th and the 2nd percentile (light blue corridor).
Sources: Refinitiv Lipper, ESMA.

A.128

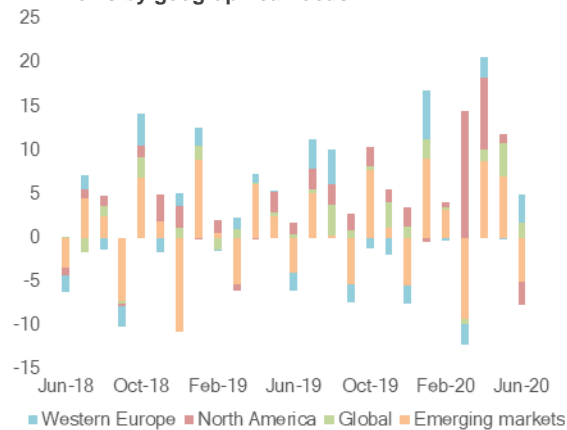
MMF flows by domicile



Note: MMF netflows by domicile, in %.
Sources: Refinitiv Lipper, ESMA.

A.129

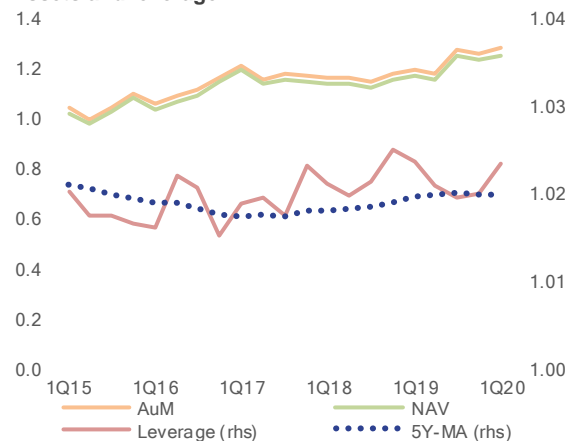
MMF flows by geographical focus



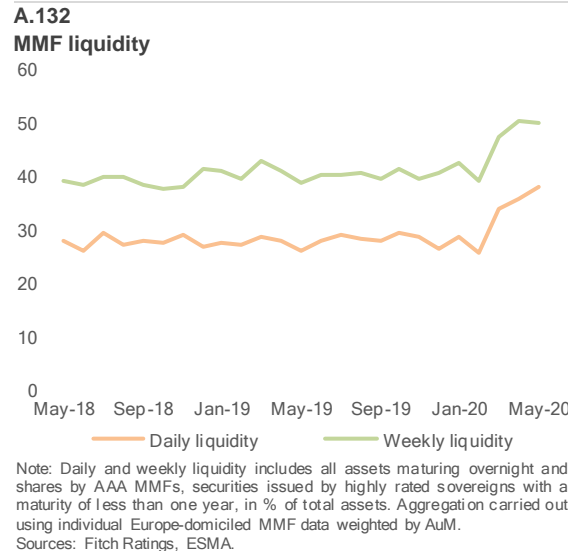
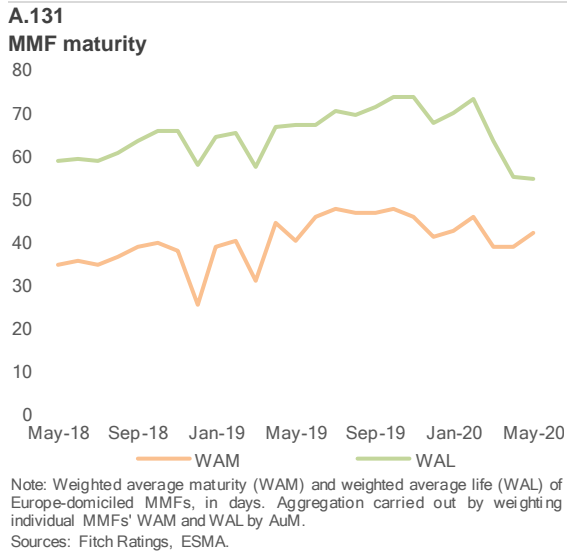
Note: MMF netflows by geographical focus, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.130

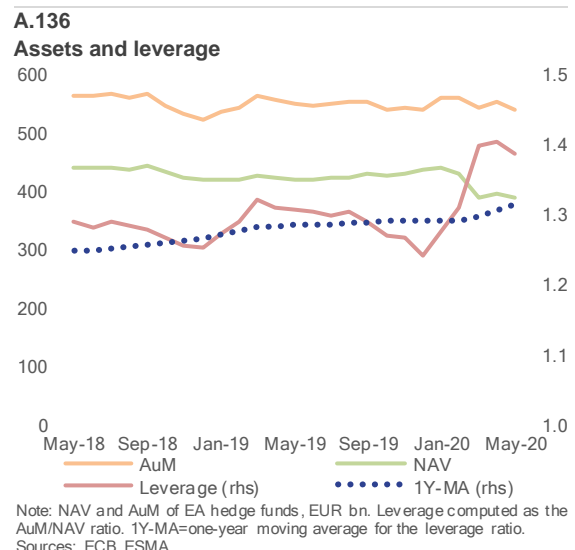
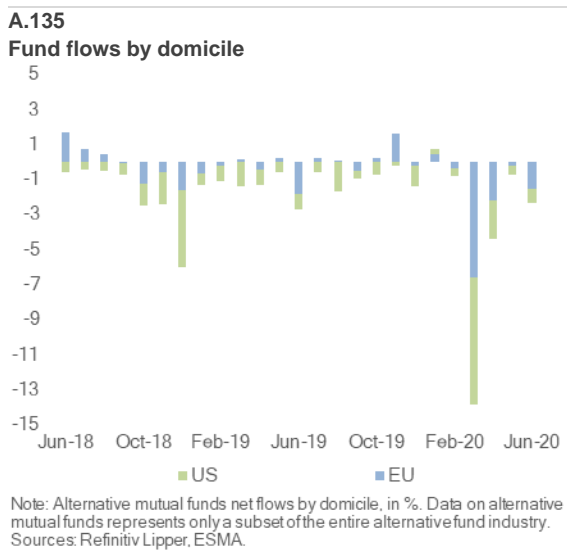
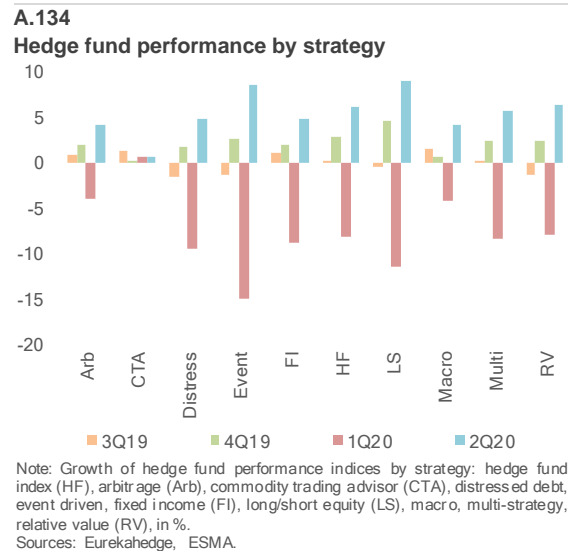
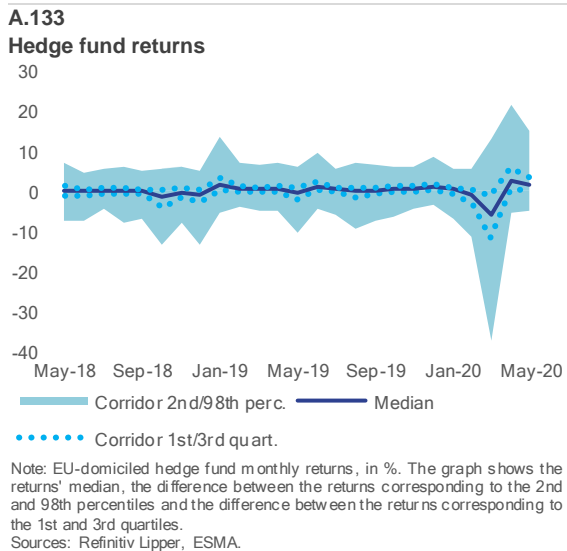
Assets and leverage



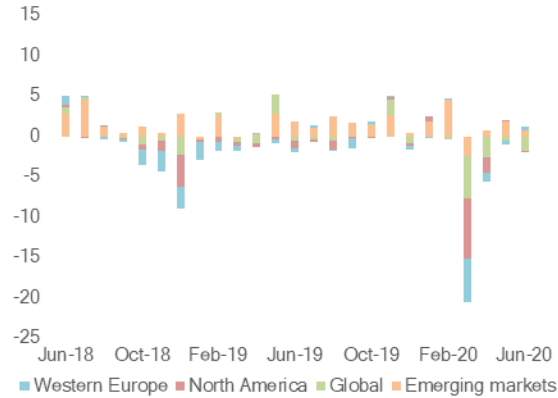
Note: NAV and AuM of EA MMFs, EUR tn. Leverage computed as the AuM/NAV ratio. 5Y-MA=five-year moving average of the leverage ratio.
Sources: ECB, ESMA.



Alternative funds

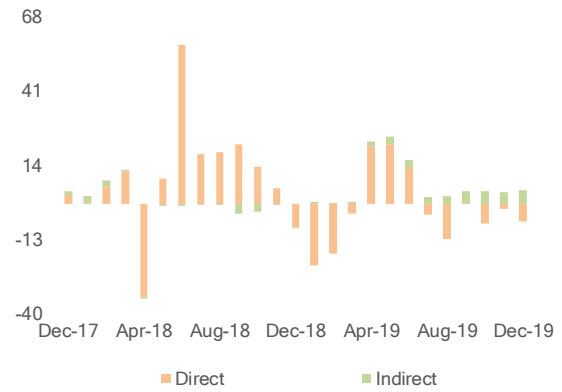


A.137
Alternative fund flows by geographical focus



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

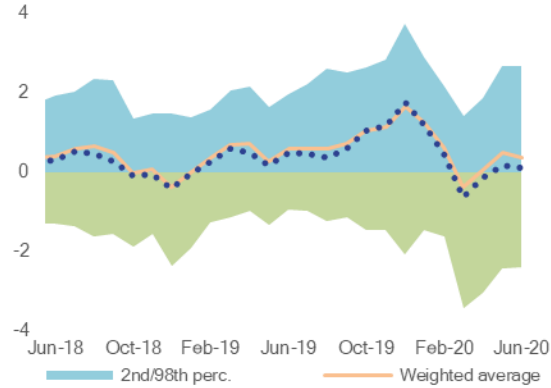
A.138
Direct and indirect property fund flows



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

Exchange-traded funds

A.139
Returns



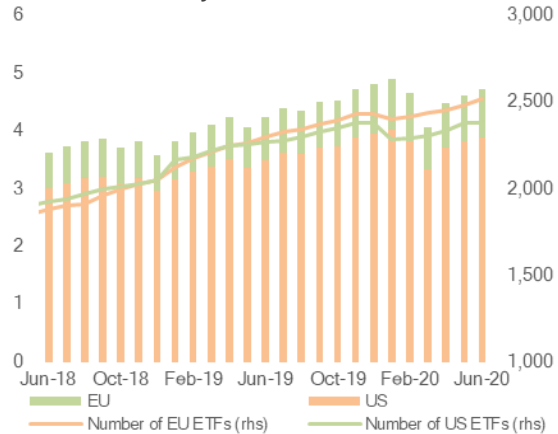
Note: EU-domiciled ETFs' average yearly returns by month, asset-weighted, in %. The graph shows the median and average asset-weighted returns and the difference between the returns corresponding to the 98th and the 2nd percentile (light blue corridor).
Sources: Refinitiv Lipper, ESMA.

A.140
Volatility



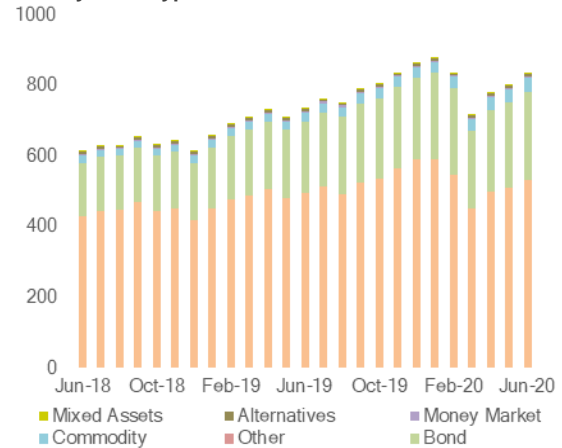
Note: Annualised 40-day historical return volatility of EU-domiciled ETF, in %.
Sources: Refinitiv Lipper, ESMA.

A.141
NAV and number by domicile



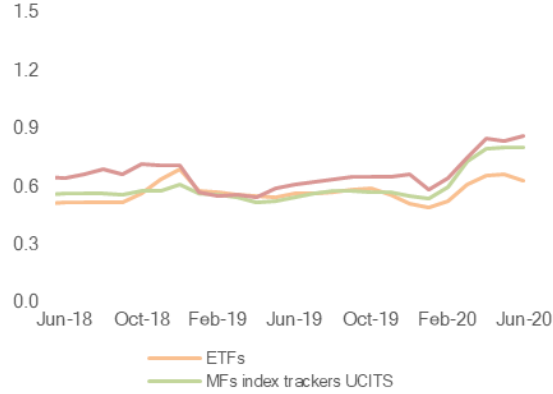
Note: NAV of ETFs, EUR bn, and number of ETFs.
Sources: Refinitiv Lipper, ESMA.

A.142
NAV by asset type



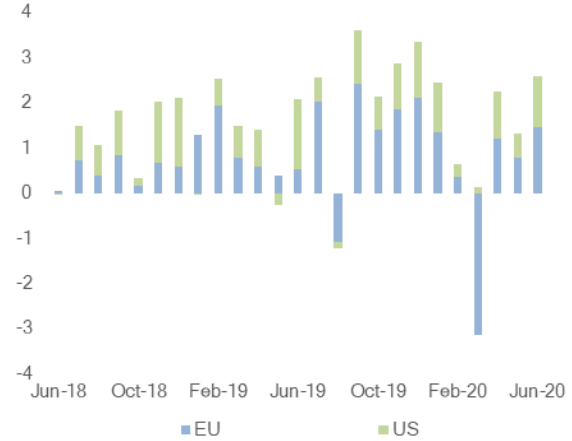
Note: NAV of EU ETFs by asset type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.143
Tracking error



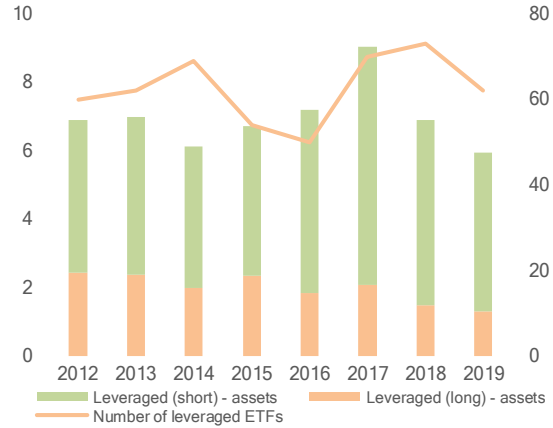
Note: Tracking error defined as standard deviation of fund excess returns compared to benchmark. The graph shows the tracking error for ETF and mutual funds both UCITS and non-UCITS. Yearly standard deviation reported on monthly frequency. End-of-month data.
Sources: Refinitiv Lipper, ESMA

A.144
Flows by domicile



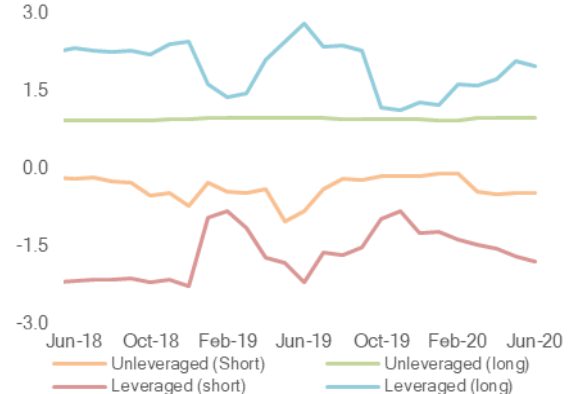
Note: ETF netflows by domicile, in % of NAV.
Sources: Refinitiv Lipper, ESMA

A.145
Assets of leveraged European ETFs



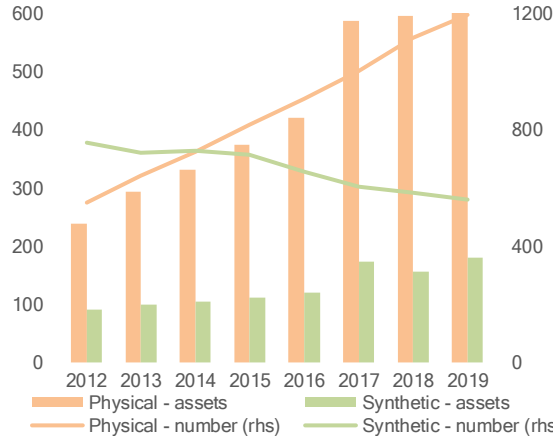
Note: Total assets of leveraged long and leveraged short ETFs with primary listings in Europe, in EUR bn and total number of products (rhs), in thousand.
Sources: ETFGI, ESMA

A.146
Average beta values for European ETFs



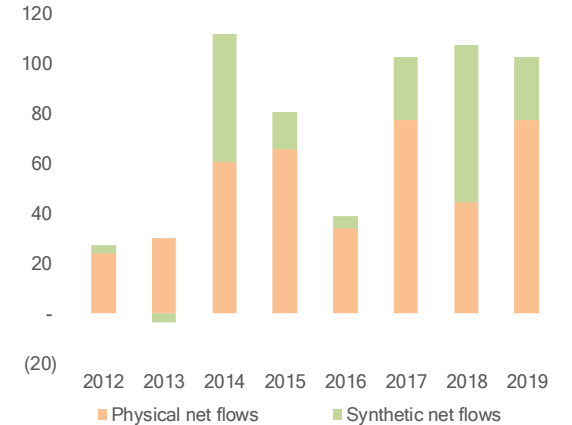
Note: Leveraged ETFs are self-reported. The annual average monthly beta is measured as the volatility of a fund return in comparison to its benchmark. An unleveraged ETF replicating its benchmark will typically have a beta close to 1.0.
Sources: Refinitiv Lipper, ESMA

A.147
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.148
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.149

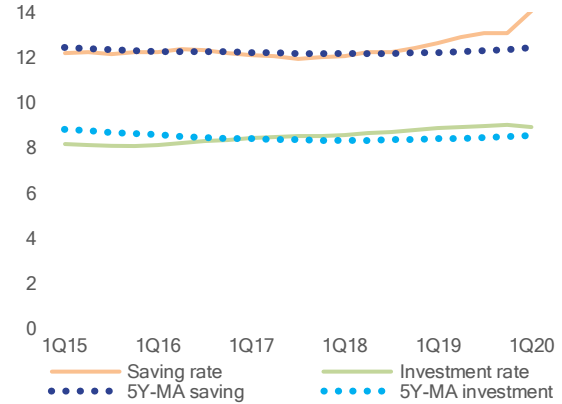
Disposable income



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.150

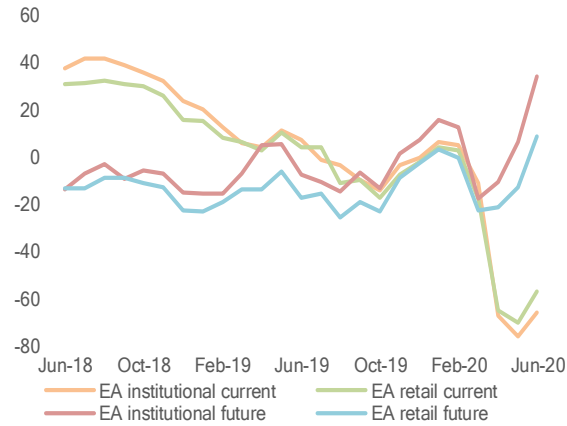
Household saving and investment rates



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.151

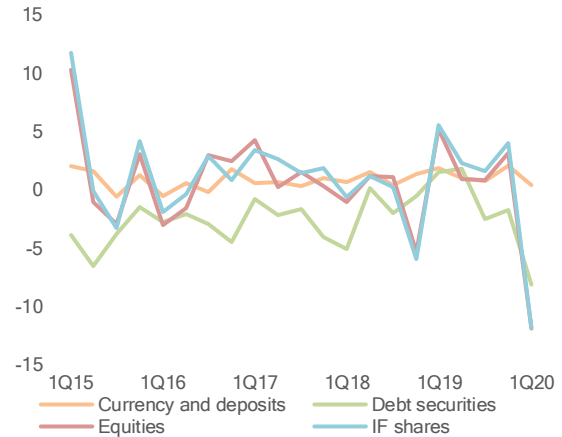
Investor sentiment



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.152

Growth rates in financial assets



Note: Quarterly asset growth rates of financial assets held by EU28 households, in %. IF shares=investment fund shares.
Sources: ECB, ESMA.

Asset allocation by retail investors

A.153

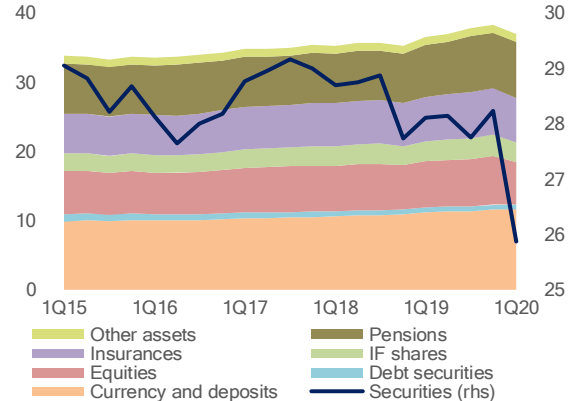
Household assets to liabilities ratio



Note: Financial assets and liabilities of EU28 households, EUR tn. Assets/liabilities ratio in %.
Sources: ECB, ESMA.

A.154

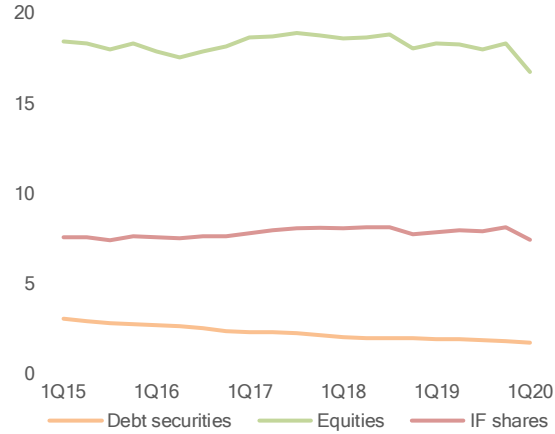
Household financial assets by class



Note: Financial assets of EU28 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.155

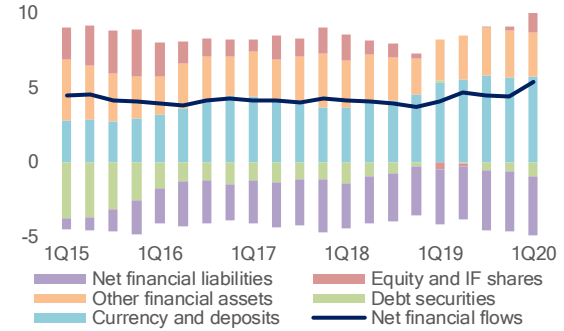
Share of securities investments in household assets



Note: Share of debt securities, equities and IF shares into the financial assets of EU28 households, in %. IF shares=investment fund shares.
Sources: ECB, ESMA.

A.156

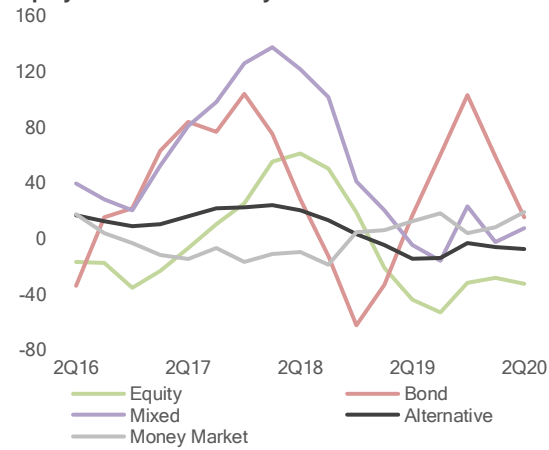
Net financial asset flows



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.157

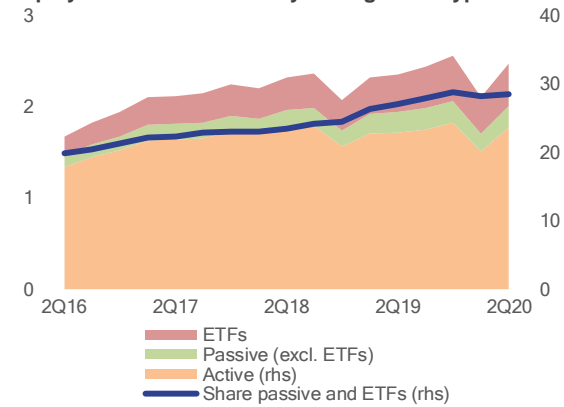
Equity UCITS net flows by asset class



Note: EU-27 UCITS annual netflows, retail investors, by assets class.
Sources: Refinitiv Lipper, ESMA.

A.158

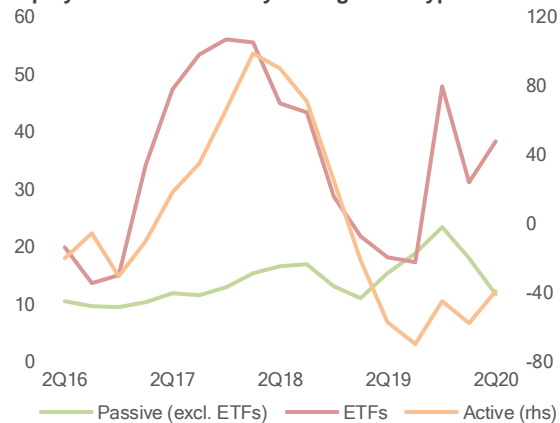
Equity UCITS market size by management type



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.159

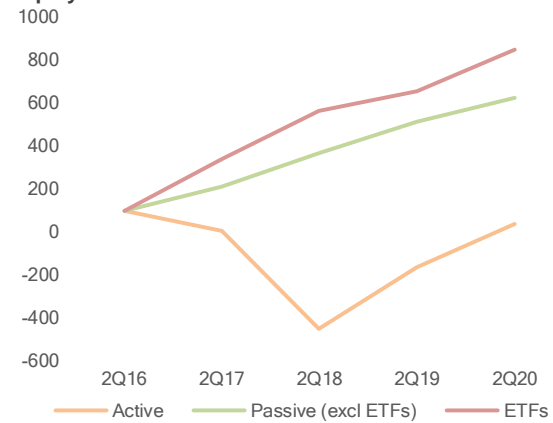
Equity UCITS net flows by management type



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.160

Equity UCITS cumulative net flows

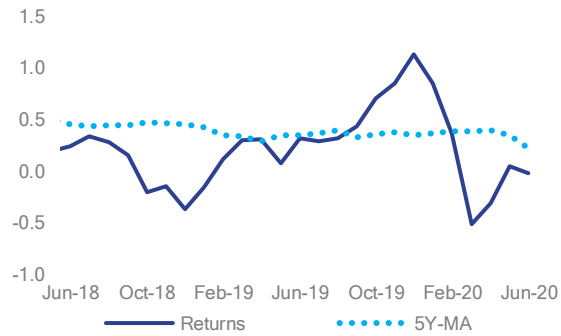


Note: EU equity UCITS cumulative net flows by management type. 2Q16=100.
Sources: Refinitiv Lipper, ESMA.

Costs and performance

A.161

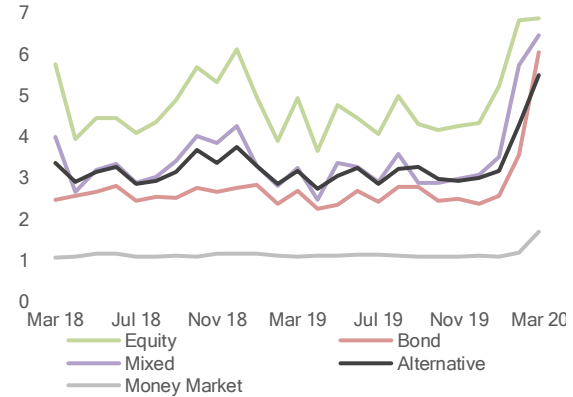
Portfolio returns



Note: Annual average gross returns for a stylized household portfolio, in %. Asset weights, computed using ECB Financial Accounts by Institutional Sectors, are 37% for collective investment schemes (of which 12% mutual funds and 25% insurance and pension funds), 31% for deposits, 22% for equity, 7% debt securities and 3% for other assets. 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.162

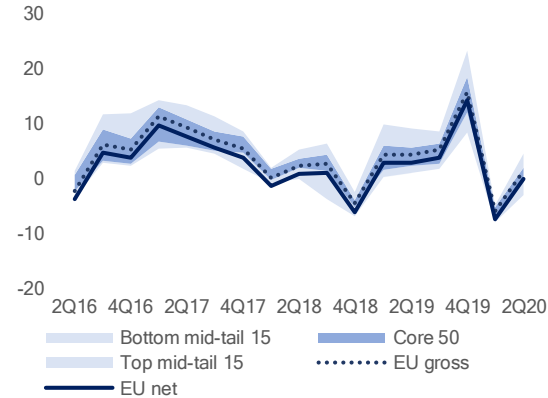
Retail fund synthetic risk and reward indicator



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

A.163

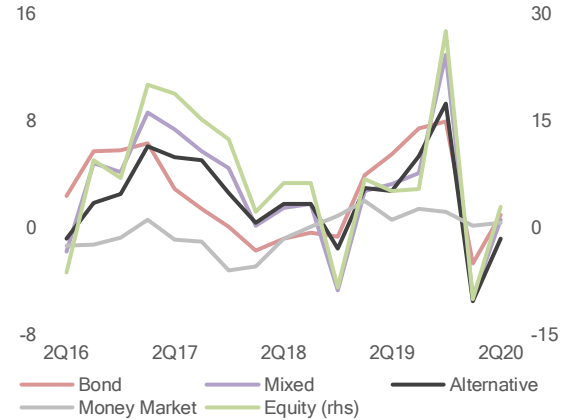
Dispersion of returns all assets



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.164

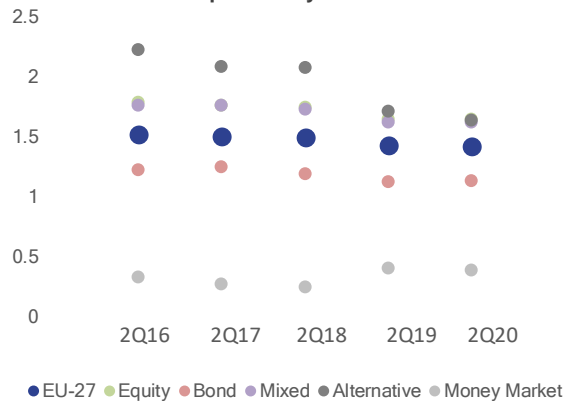
Net returns by asset class



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.165

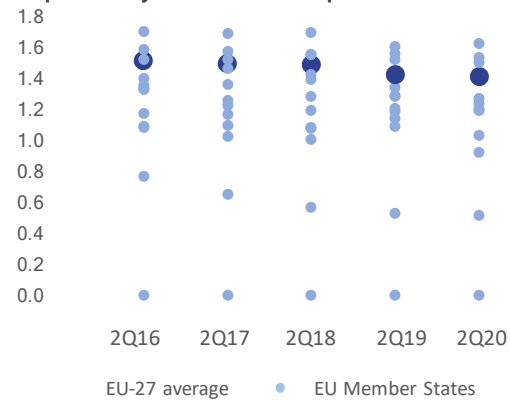
UCITS total cost dispersion by asset class



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.

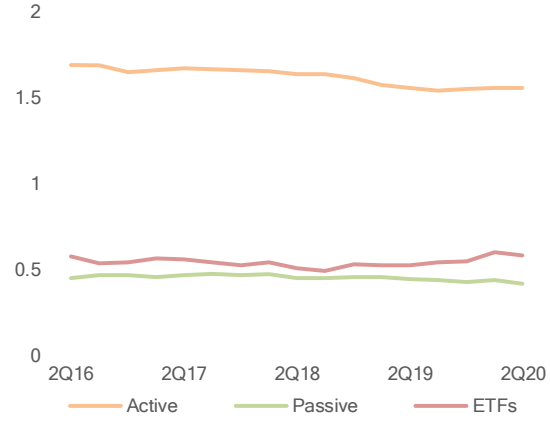
A.166

Dispersion by absolute cost impact



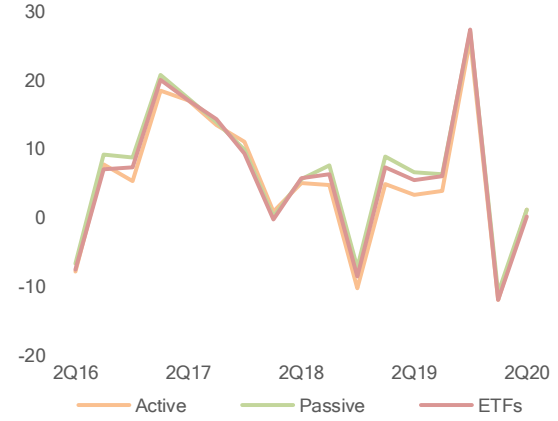
Note: EU-27 UCITS dispersion of total costs (ongoing costs, subscription and redemption fees) of UCITS funds, computed as the difference between gross and net returns, by country, retail investors, %.
Sources: Refinitiv Lipper, ESMA.

A.167
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.168
Equity UCITS net returns by management type

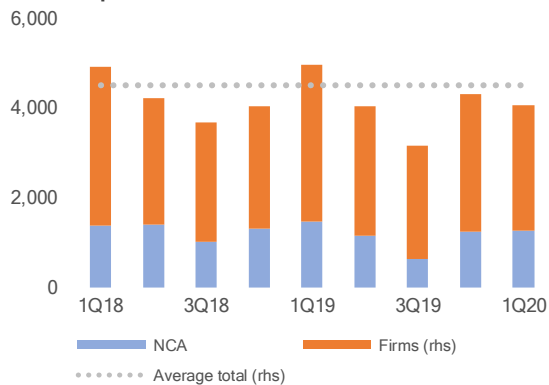


Note: EU equity UCITS evolution of net annual performance, net of ongoing costs (TER), subscription and redemption fees by management type, %.
Sources: Refinitiv Lipper, ESMA.

Complaints

A.169

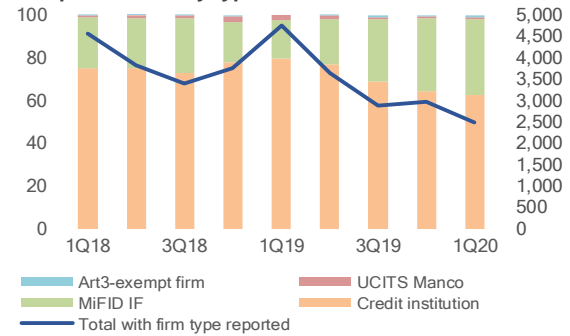
Total complaints



Note: Number of complaints recorded by quarterly-reporting NCAs (n=17) 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 2Q17 to 2Q19.
Sources: ESMA complaints database

A.170

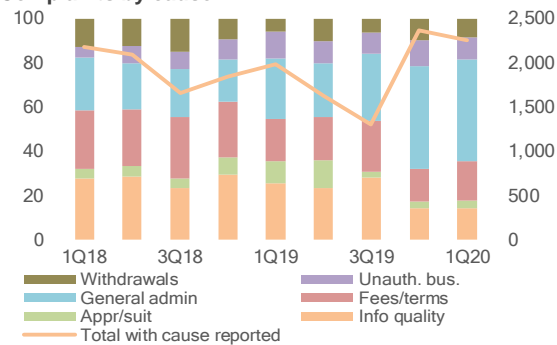
Complaints data by type of firm



Note: Share of complaints for quarterly-reporting NCAs (n=17) 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.171

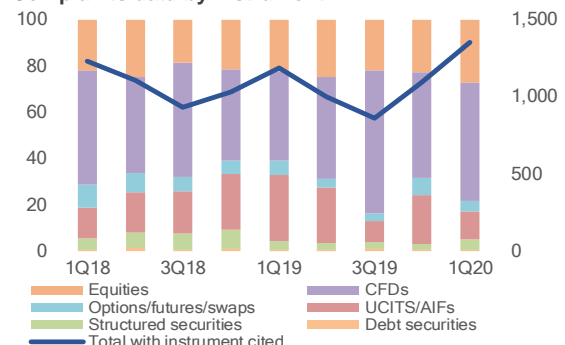
Complaints by cause



Note: Share of complaints for quarterly-reporting NCAs (n=17) 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.172

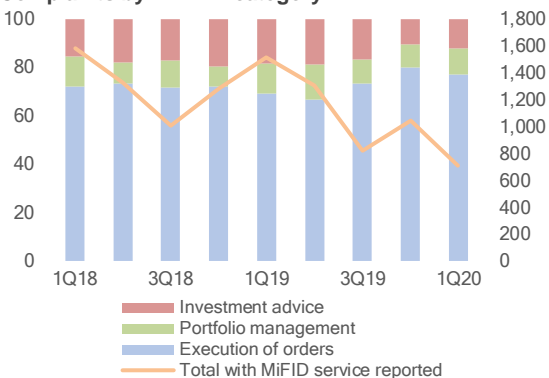
Complaints data by instrument



Note: Share of complaints from quarterly-reporting NCAs (n=17) 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.173

Complaints by MiFID II category



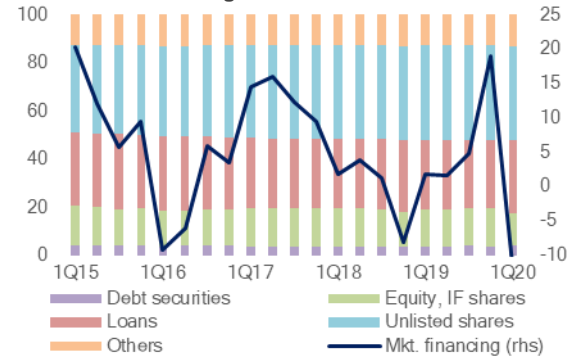
Note: Share of complaints for quarterly-reporting NCAs (n=17) received direct from consumers and via firms recorded as associated with a given MiFID service, excluding complaints with no such category recorded, all reporting channels, %. "Total with MiFID service reported"=Total complaints received via these reporting channels recorded as associated with a MiFID service.
Sources: ESMA complaints database

Market based finance

Capital markets financing

A.174

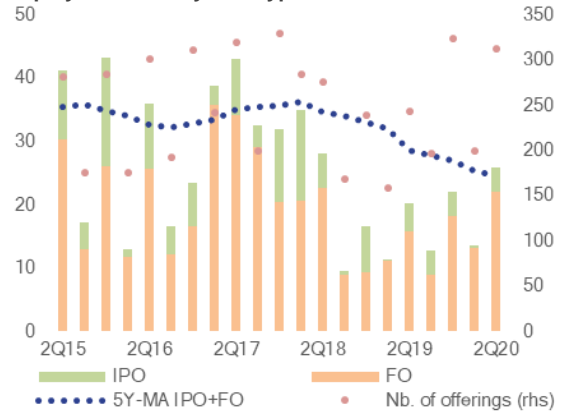
Total market financing



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.175

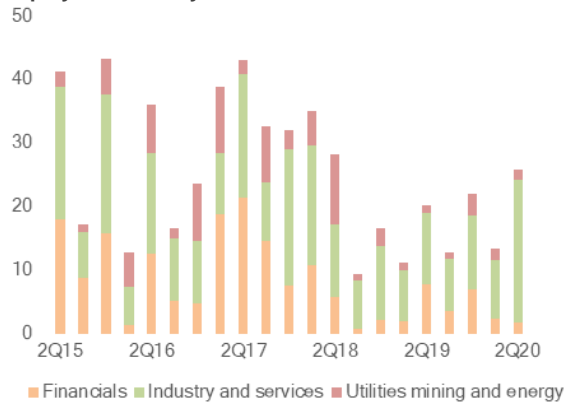
Equity issuance by deal type



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.176

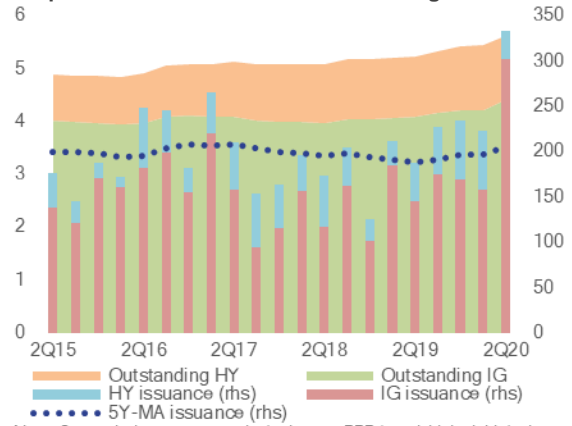
Equity issuance by sector



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.177

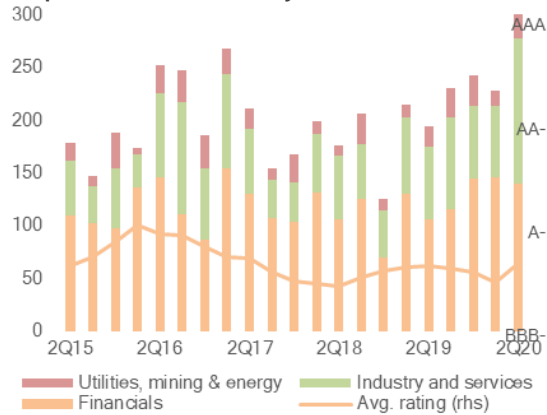
Corporate bond issuance and outstanding



Note: Quarterly investment-grade (rating >= BBB-) and high-yield (rating < BBB-) corporate bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn.
Sources: Refinitiv EIKON, ESMA.

A.178

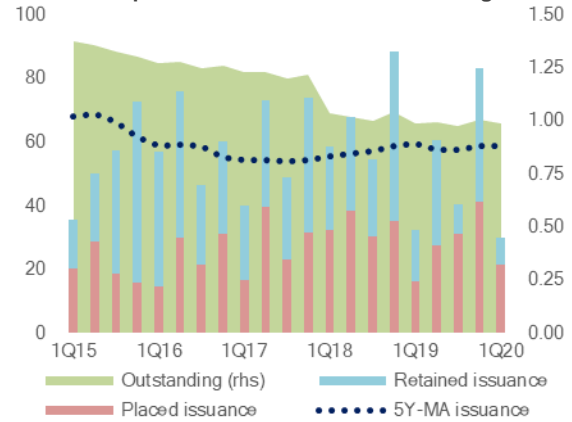
Corporate bond issuance by sector



Note: Quarterly 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.).
Sources: Refinitiv EIKON, ESMA.

A.179

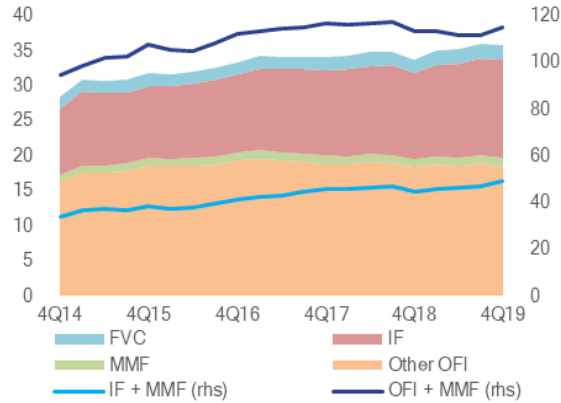
Securitised products issuance and outstanding



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

A.180

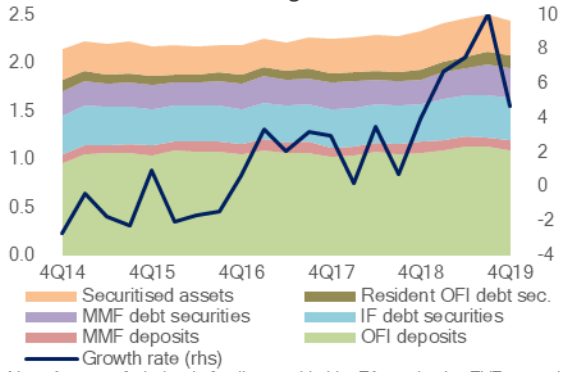
MMFs and other financial institutions



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.181

Non-bank wholesale funding

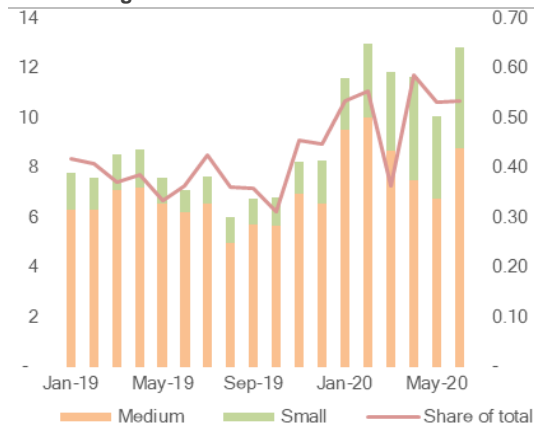


Note: Amount of wholesale funding provided by EA non-banks, EUR tn, and growth rate (rhs), in %. Securitised assets are net of retained securitisations. Resident OFI reflects the difference between the total financial sector and the known sub-sectors within the statistical financial accounts (i.e. assets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

SMEs

A.182

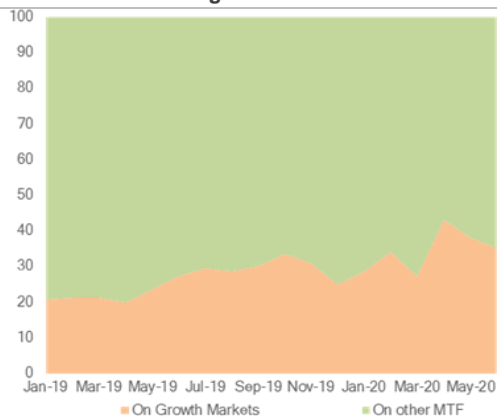
SME trading volumes



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

A.183

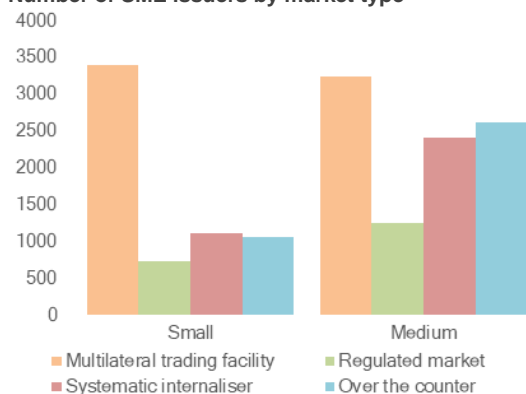
Share of SME trading volumes on Growth Markets



Note: Share of monthly trading volumes on growth markets of small and medium entities that have issued shares publicly available for trading in the EU (lhs, in %). SME categories based on market capitalisation: small cap = less than EUR 20mn; medium cap = from 20mn to 200mn. Sources: FIRDS, FITRS, ESMA

A.184

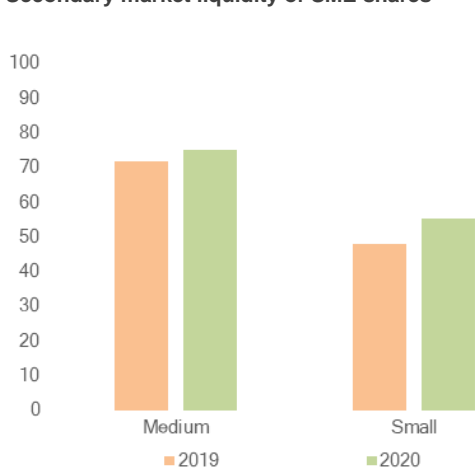
Number of SME issuers by market type



Note: Number of SMEs 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. Small cap = less than EUR 20mn; Medium cap = from EUR 20 mn to 200mn. Sources: FIRDS, FITRS, ESMA

A.185

Secondary market liquidity of SME shares

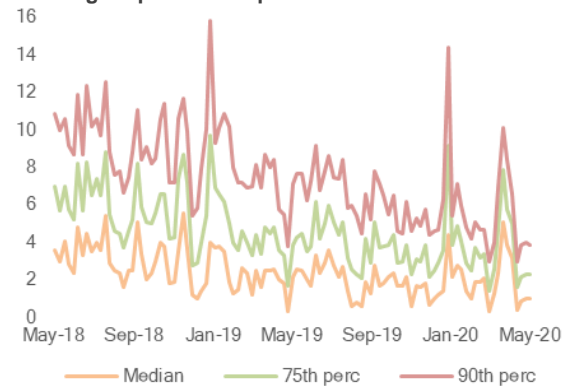


Note: Share of SME equity instruments traded at least once per month by market capitalisation, in %. Sources: FIRDS, FITRS, ESMA

Market-based credit intermediation

A.186

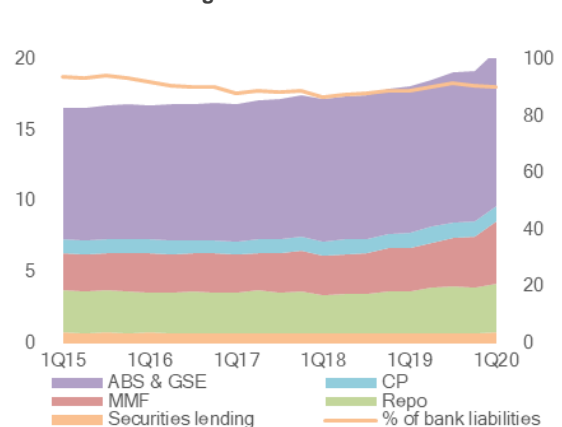
Sovereign repo market specialness



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 seven EUR repo markets (AT, BE, DE, FI, FR, IT and NL).
Sources: RepoFunds Rate, ESMA.

A.187

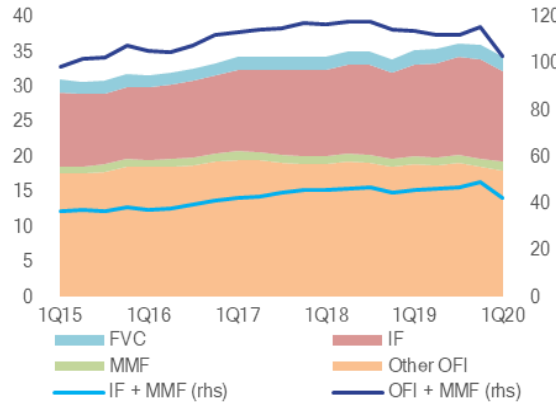
US shadow banking liabilities



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.188

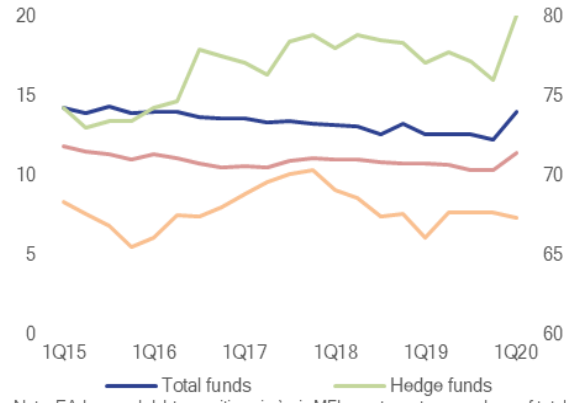
MMFs and other financial institutions



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.189

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.190

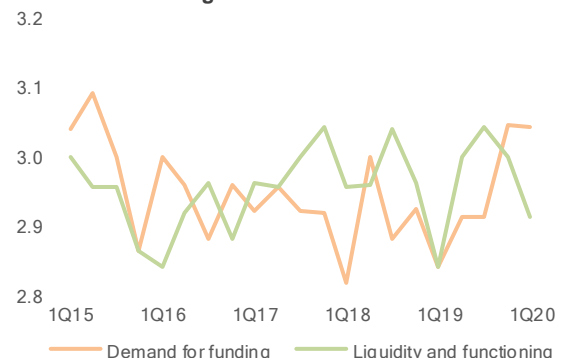
Credit terms in SFT and OTC derivatives



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.191

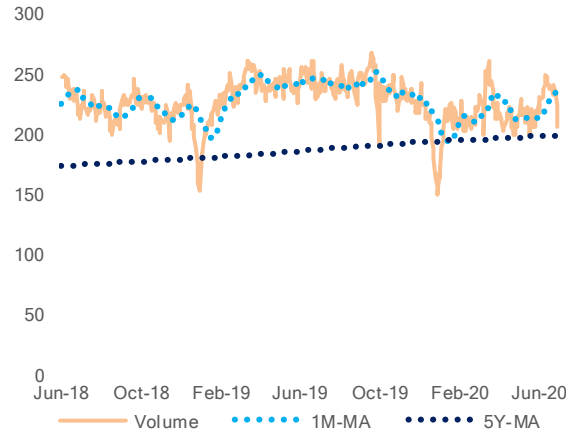
Securities financing conditions



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.192

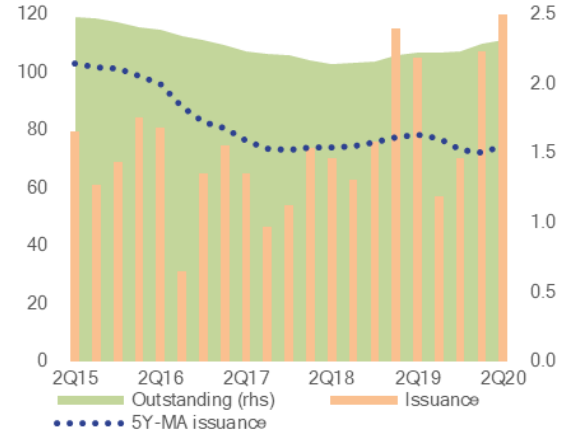
Sovereign repo market turnover



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

A.193

Covered bond issuance and outstanding



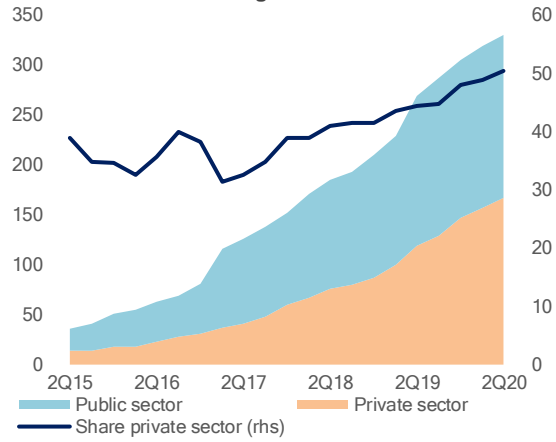
Note: Covered bond gross issuance in the EEA30, EUR bn, and outstanding amounts (rhs), EUR tn.
Sources: Refinitiv EIKON, ESMA.

Sustainable finance

Green finance

A.194

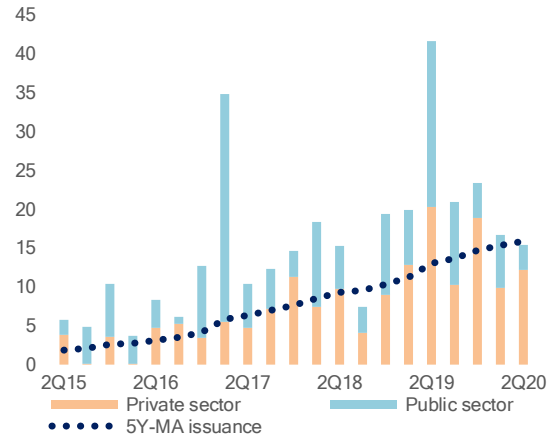
Green bonds outstanding



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.195

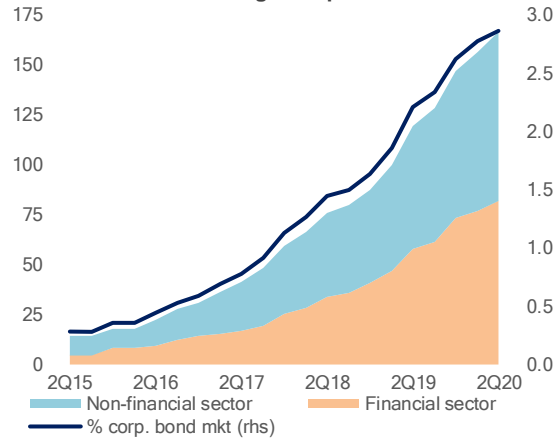
Green bond issuance



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

A.196

Green bonds outstanding from private sector



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

A.197

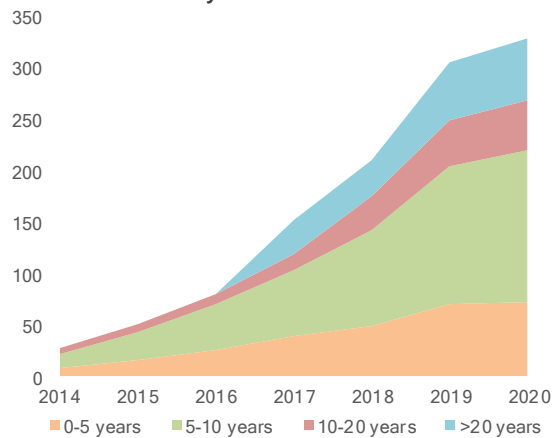
Green bond credit quality



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

A.198

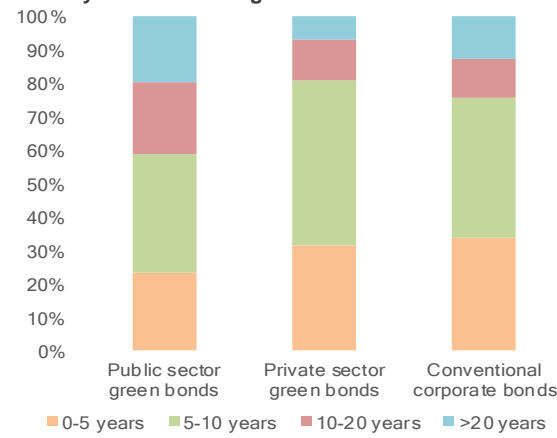
Green bond maturity buckets



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

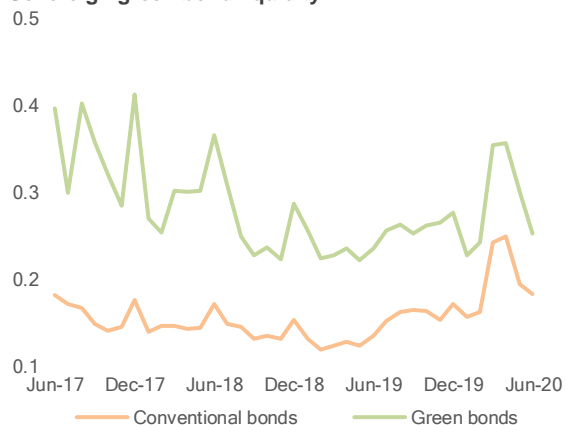
A.199

Maturity distribution of green and conventional bonds



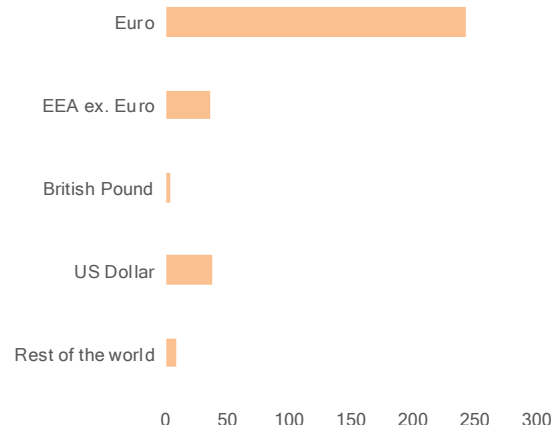
Note: Distribution of green bonds and corporate bonds outstanding in the EU by maturity bucket, in %.
Sources: Climate Bonds Initiative, Refinitiv EIKON, ESMA.

A.200
Sovereign green bond liquidity



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

A.201
Green bond currencies



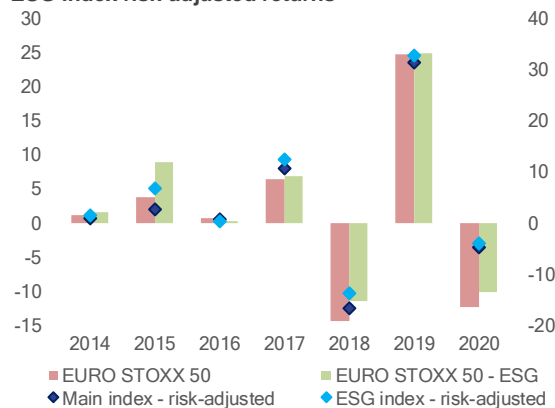
Note: Outstanding amount of green bonds in the EEA30 by currency, EUR bn.
Sources: Refinitiv EIKON, ESMA.

A.202
ESG index performance



Note: Euro Stoxx 50 ESG leaders and broader indices, indexed with 01/06/2018=100.
Sources: Refinitiv Datastream, ESMA.

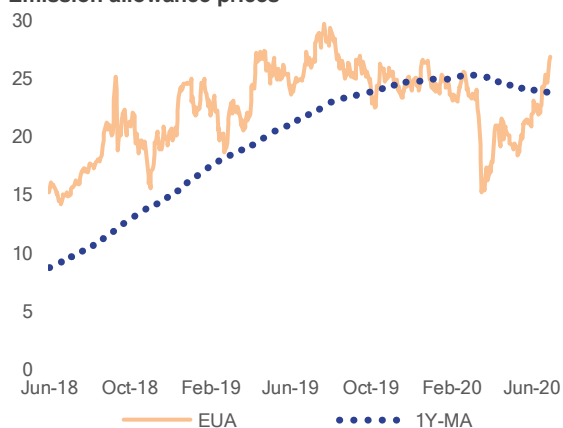
A.203
ESG index risk-adjusted returns



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

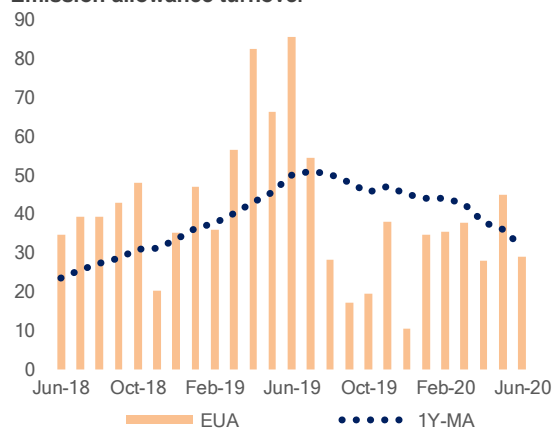
Emissions trading

A.204
Emission allowance prices



Note: Daily settlement price of European Emission Allowances (EUA) on European Energy Exchange spot market, in EUR/tCO₂.
Sources: Refinitiv Datastream, ESMA.

A.205
Emission allowance turnover



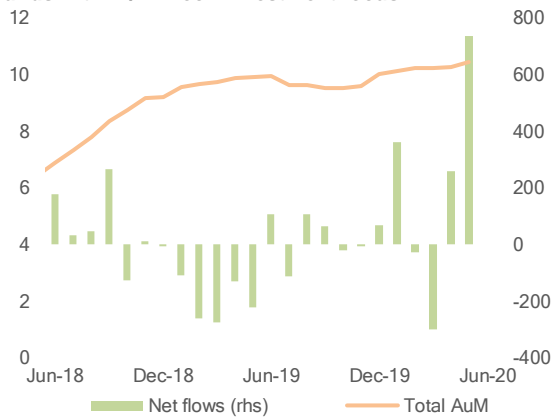
Note: Monthly turnover of European Emission Allowances (EUA) on European Energy Exchange, in EUR mn.
Sources: Refinitiv Datastream, ESMA.

Financial innovation

Financial innovation

A.206

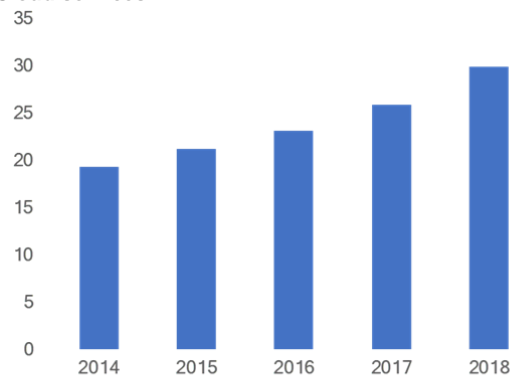
Funds with AI/FinTech investment focus



Note: Total AuM, EUR bn, and monthly net flows, EUR mn, for selected EU-domiciled funds (n=32) whose name includes reference to AI, automation, FinTech or robotics.
Sources: Morningstar Direct, ESMA

A.207

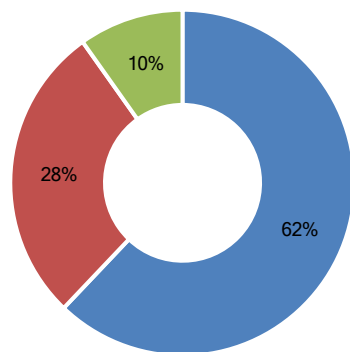
Cloud services



Note: Percentage of businesses purchasing cloud computing services by year in 22 EU countries, %. Countries included: AT, BE, CZ, DE, DK, EE, ES, FR, GR, HU, IE, IT, LV, LT, LU, NL, PL, PT, SI, SK, SE. Firms across the economy with at least 10 employees were surveyed.
Sources: OECD, ESMA

A.208

Type of impact of IT incidents on trade repositories

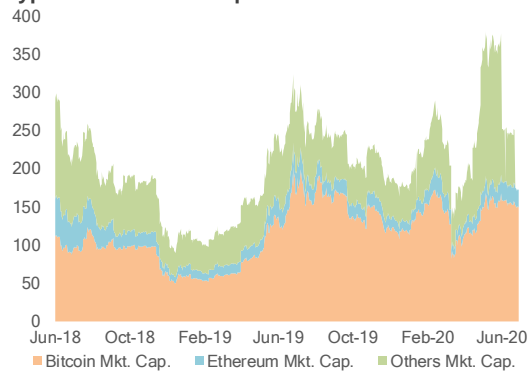


■ Data availability ■ Data integrity/accuracy ■ Data confidentiality

Note: ESMA analysis of impact type of IT incidents reported for trade repositories in the EU, 2018-19
Sources: ESMA

A.209

Crypto-Asset market capitalisation



Note: Market capitalisation of Bitcoin, Ethereum and other crypto-currencies, in EUR bn.

A.210

Crypto-Asset prices



Note: Prices of selected crypto-assets, EUR thousand.

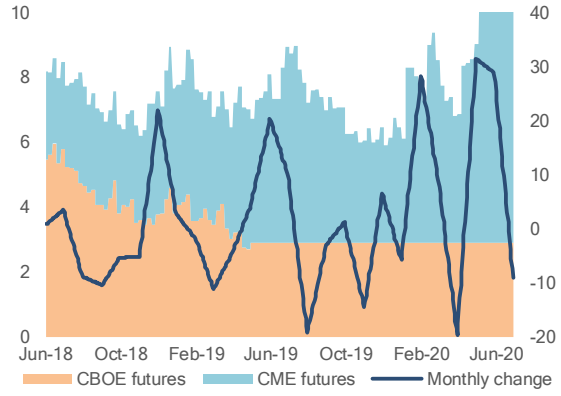
A.211

Crypto-Asset price volatility



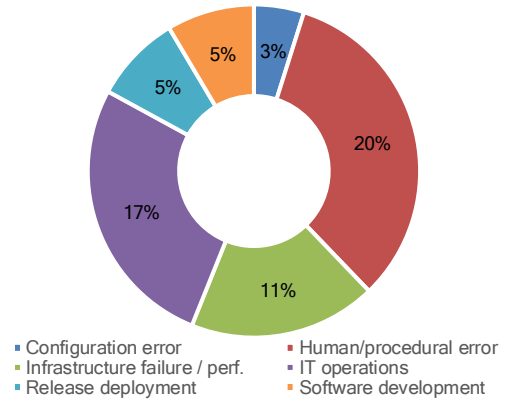
Note: Annualised 30-day historical volatility of EURO STOXX 50, EUR/USD spot rate returns and USD-denominated returns for Bitcoin, Ethereum and gold, in %.
Sources: Refinitiv Datastream, ESMA.

A.212
Bitcoin futures markets



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

A.213
Root cause of IT incidents on trade repositories



Note: ESMA analysis of root cause of IT incidents reported for trade repositories in the EU 2018-19. None of the incidents were classified in the remaining category of IT security. "Perf."=performance.
 Sources: ESMA

