

TRV Statistical Annex

ESMA Report on Trends, Risks and Vulnerabilities No.1, 2023



ESMA Report on Trends, Risks and Vulnerabilities – Statistical Annex
No. 1, 2023

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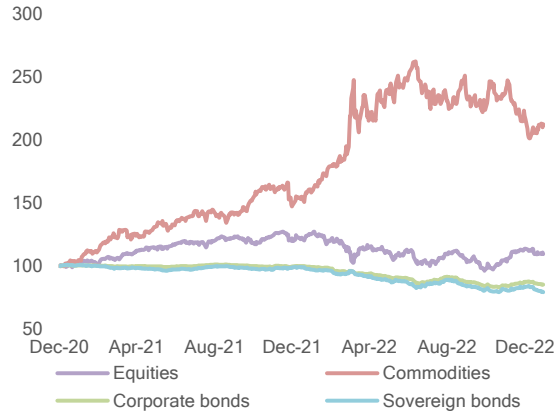
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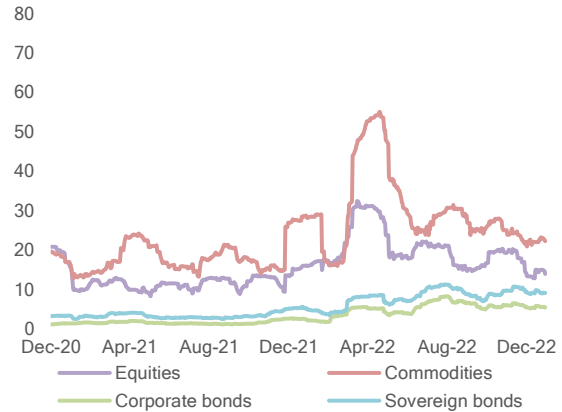
Market environment

A.1 EU market price performance



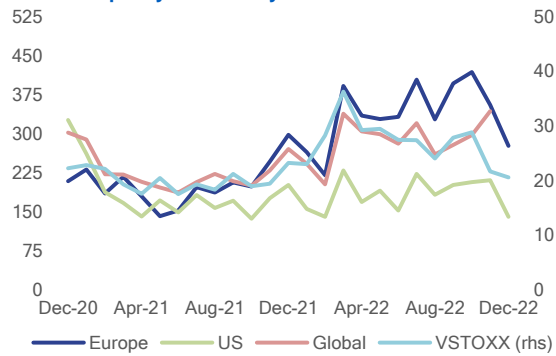
Note: Return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), 01/04/2020=100. Sources: Refinitiv Datastream, ESMA.

A.2 EU market volatilities



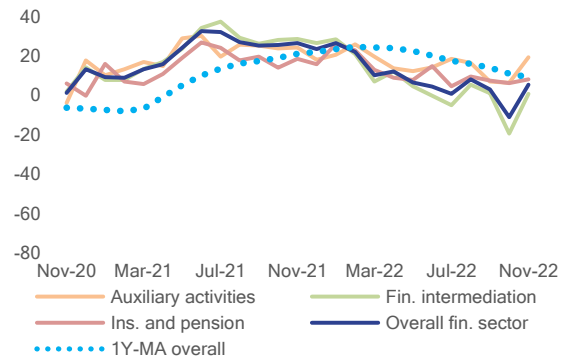
Note: Annualised 40D volatility of return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), in %. Sources: Refinitiv Datastream, ESMA.

A.3 Economic policy uncertainty



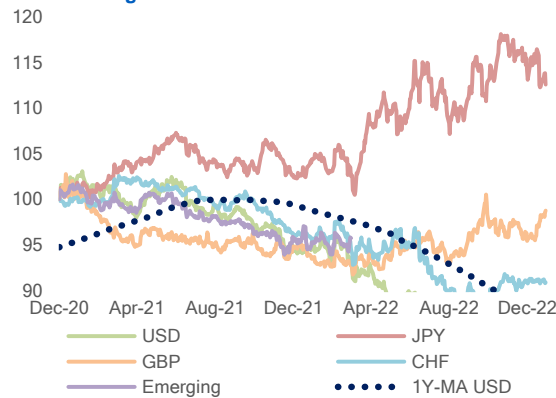
Note: Economic Policy Uncertainty Index (EPU), developed by Baker et al. (www.policyuncertainty.com), based on the frequency of articles in European newspapers that contain the following triple: "economic" or "economy", "uncertain" or "uncertainty" and one or more policy-relevant terms. Global aggregation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

A.4 EU market confidence



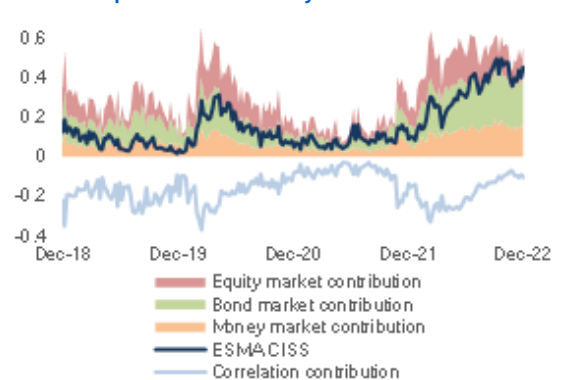
Note: European Commission survey of EU27 financial services sector and subsectors (NACE Rev.2 64, 65, 66). Confidence indicators are averages of the net balance of responses to questions on development of the business situation over the past three months, evolution of demand over the past three months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

A.5 EUR exchange rates



Note: Spot exchange rates to EUR. Emerging is an average of spot exchange rates for CNY, BRL, RUB, INR, MXN, IDR and TRY weighted by GDP as of start date year. 01/04/2020=100. Increases in value represent an appreciation of EUR. 1Y-MA USD=one-year moving average of the USD exchange rate. Sources: ECB, IMF, ESMA.

A.6 ESMA composite indicator of systemic stress

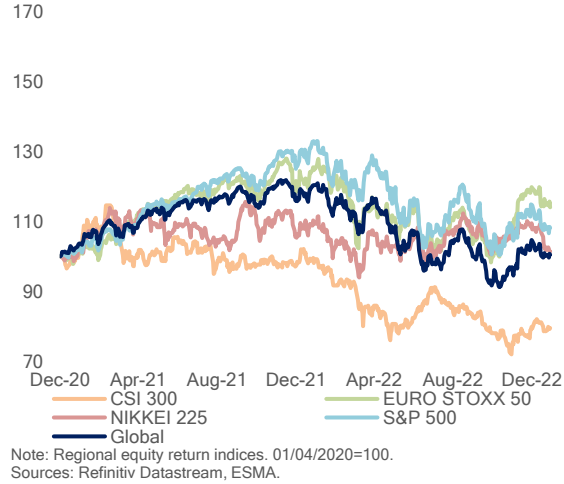


Note: ESMA version of the ECB CISS indicator measuring systemic stress in securities markets. It focuses on three financial market segments: equity, bond and money markets, aggregated through standard portfolio theory. It is based on securities market indicators such as volatilities and risk spreads.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

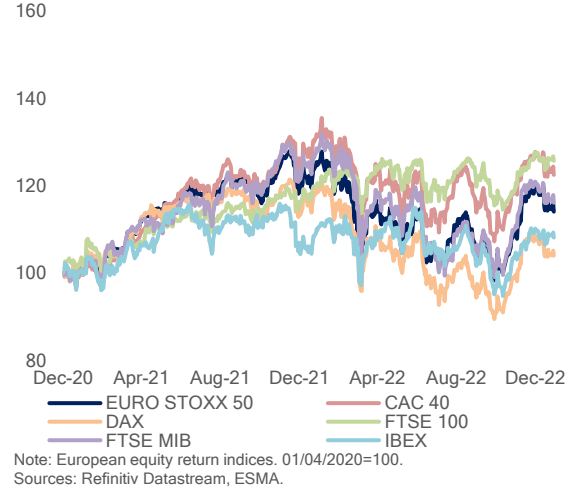
Securities markets

Equity markets

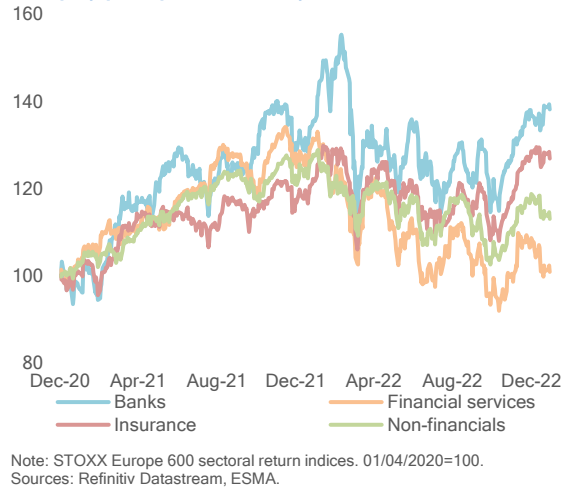
A.7
Global equity price performance by region



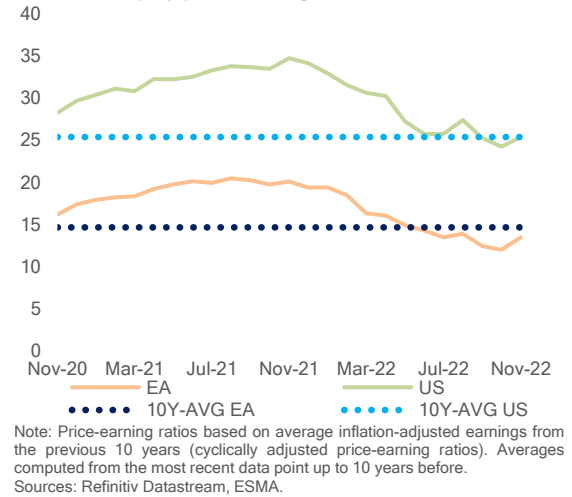
A.8
EU equity price performance of national indices



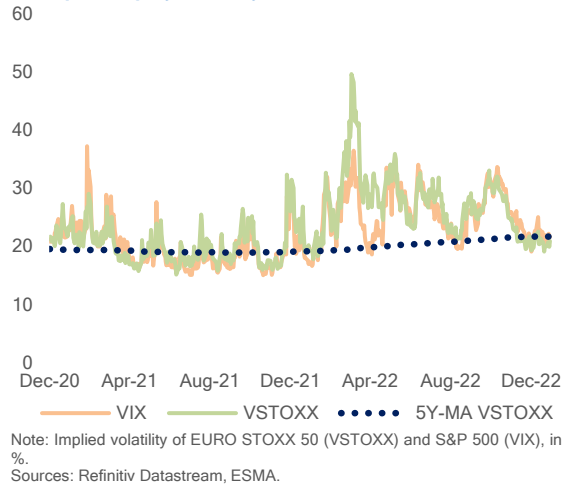
A.9
EU equity price performance by sector



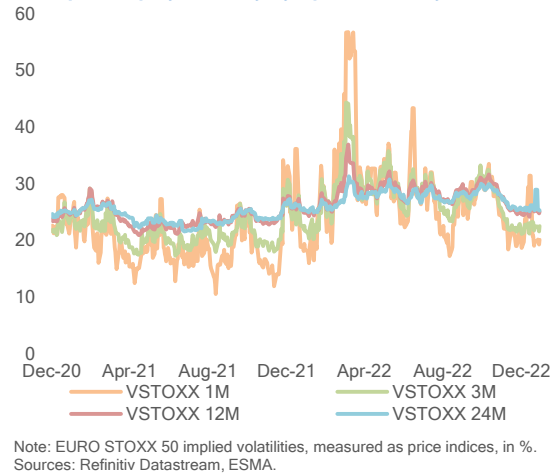
A.10
US and EU equity price-earnings ratios



A.11
EU implied equity volatility

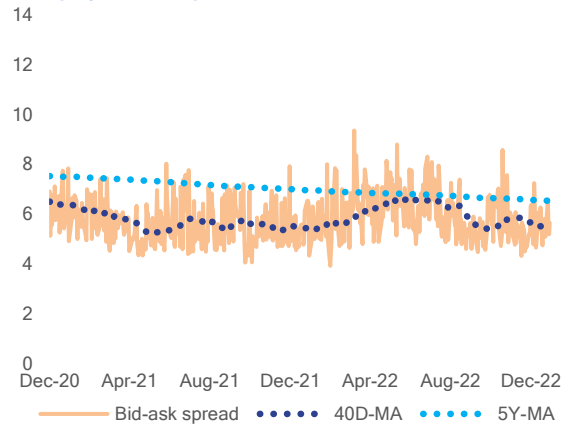


A.12
EU implied equity volatility by option maturity



A.13

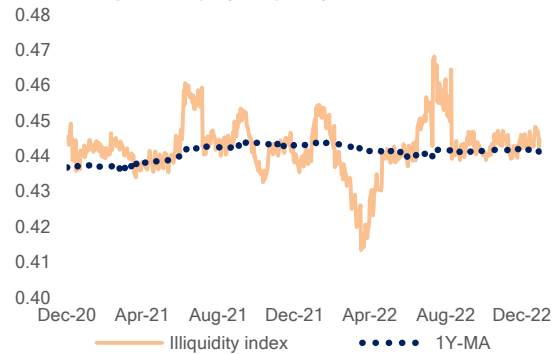
EU equity bid-ask spread



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

A.14

ESMA composite equity illiquidity index

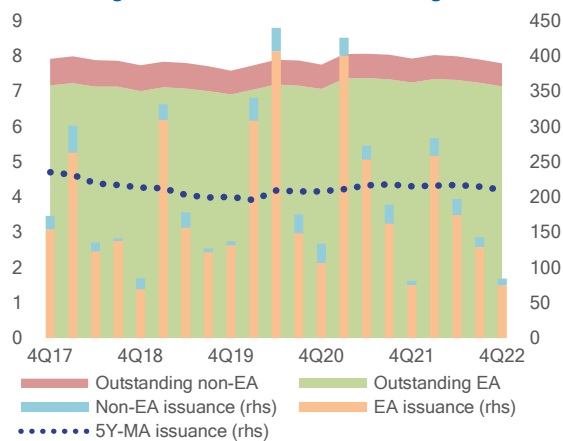


Note: Composite indicator of illiquidity in the equity market for the current STOXX Europe Large 200 constituents, computed by applying the principal component methodology to six input liquidity measures (Amihud illiquidity coefficient, bid-ask spread, Hui-Heubel ratio, turnover value, inverse turnover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

Sovereign-bond markets

A.15

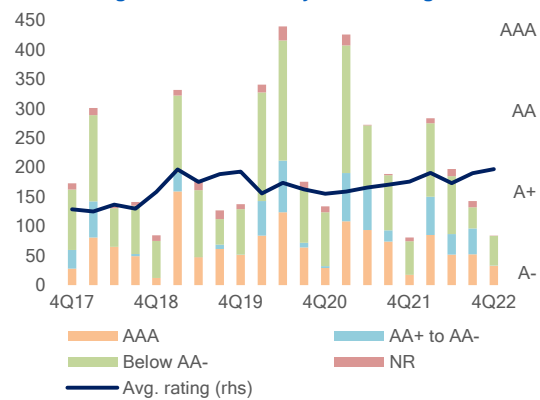
EU sovereign bond issuance and outstanding



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

A.16

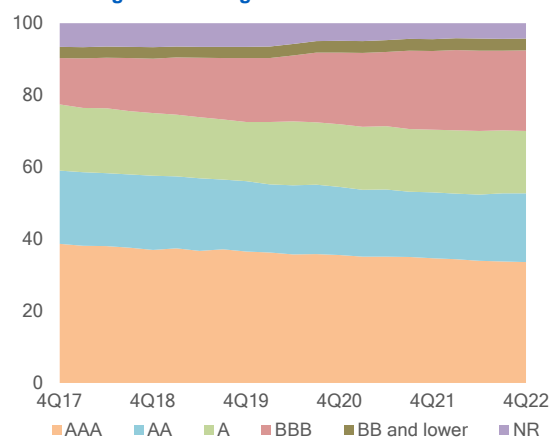
EU sovereign bond issuance by credit rating



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

A.17

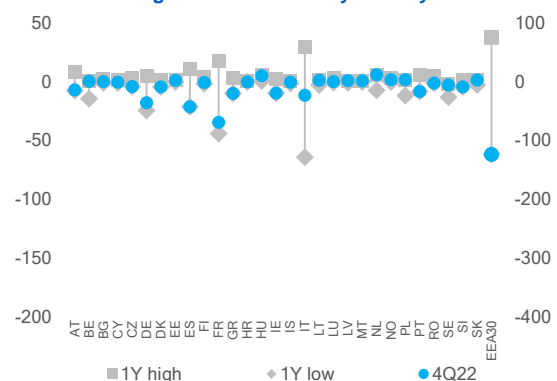
EU sovereign bond rating distribution



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

A.18

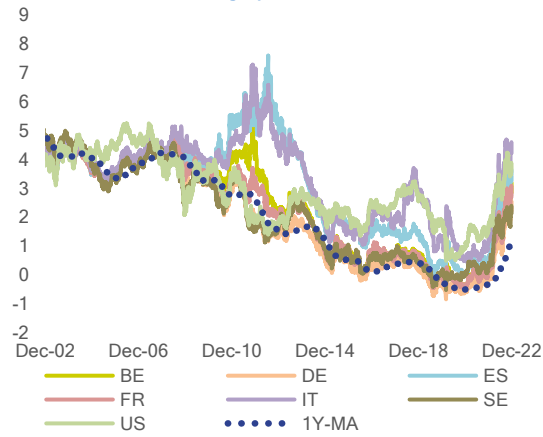
Net EU sovereign bond issuance by country



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

A.19

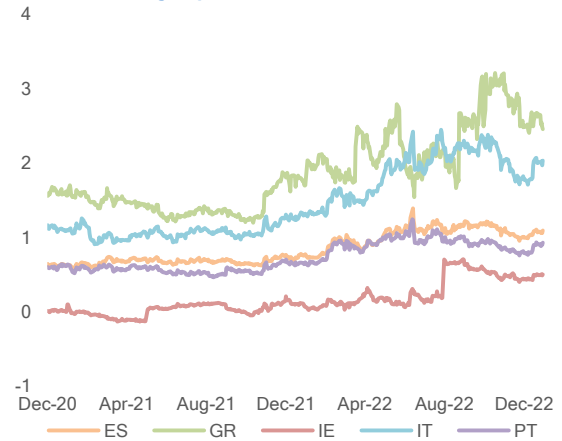
EU and US 10Y sovereign yields



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.20

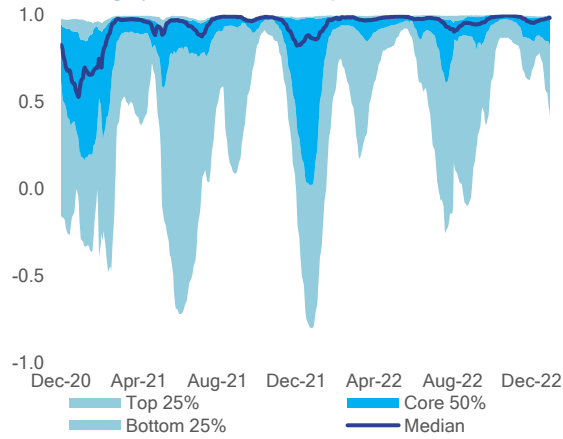
EU 10Y sovereign spreads



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

A.21

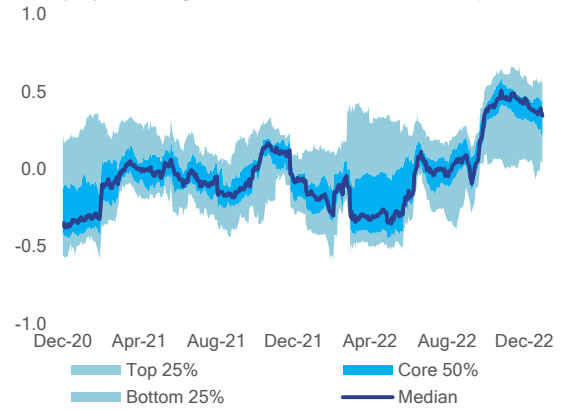
EU sovereign yield correlation dispersion



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.22

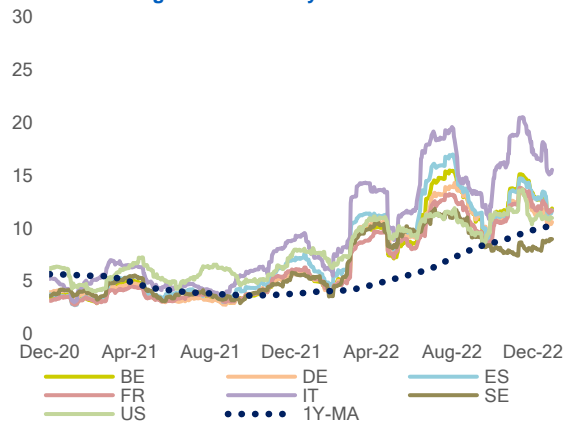
EU equity-sovereign bond returns correlation dispersion



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.23

EU 10Y sovereign bond 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.24

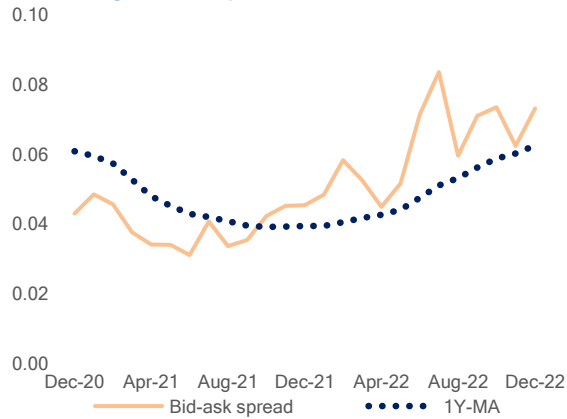
Global sovereign CDS spreads



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

A.25

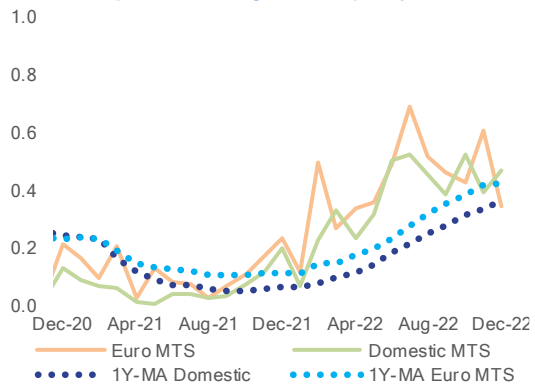
EU sovereign bid-ask spread



Note: Bid-ask spread as a monthly average of bid-ask spreads weighted by trading volumes for bonds both traded on one of 12 EU27 domestic markets (AT, BE, DE, ES, FI, FR, GR, IE, IT, NL, PT and SI) and Euro MTS, in EUR. Sources: MTS, ESMA.

A.26

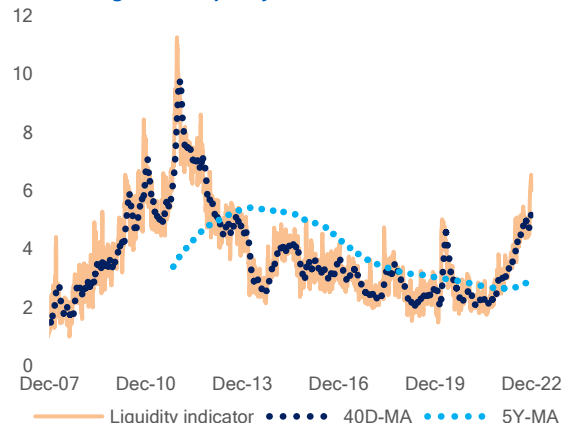
ESMA composite sovereign bond liquidity index



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.27

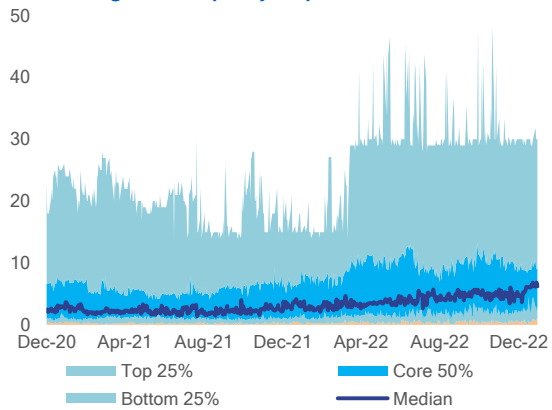
EU sovereign bond liquidity



Note: Liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in bps. Lower figures mean more liquidity and vice-versa. 22 EEA30 countries are included.

A.28

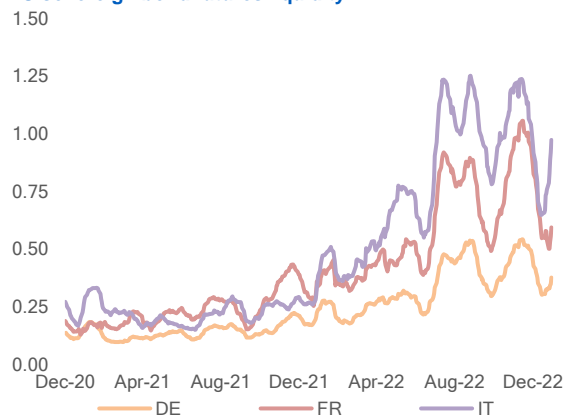
EU sovereign bond liquidity dispersion



Note: Dispersion of liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in bps. Lower figures mean more liquidity and vice-versa. 22 EEA30 countries are included. Sources: Refinitiv EIKON, ESMA.

A.29

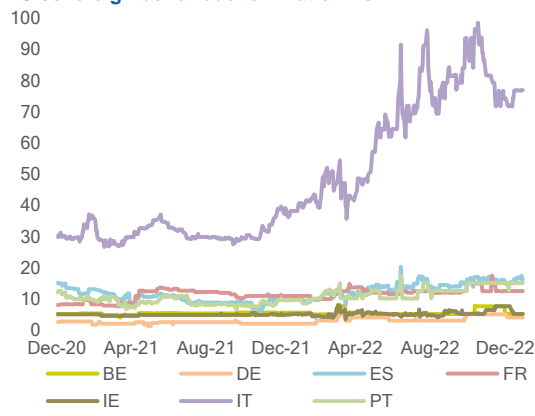
EU sovereign bond futures liquidity



Note: One-month moving averages of the Hui-Heubel illiquidity indicator for selected 10Y sovereign bond futures, in %. Lower figures mean more liquidity and vice-versa. Sources: Refinitiv Datastream, ESMA.

A.30

EU sovereign bond redenomination risk

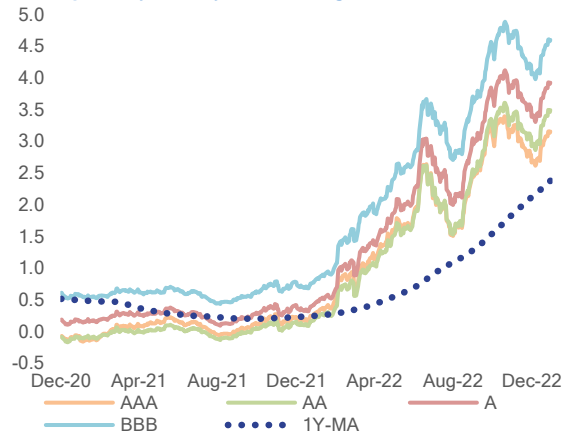


Note: Difference between 5Y CDS spreads under the 2014 ISDA definition (where debt redenomination is a credit event), and under the 2003 ISDA definition (where it is not), in bps. Sources: Refinitiv Datastream, ESMA.

Corporate-bond markets

A.31

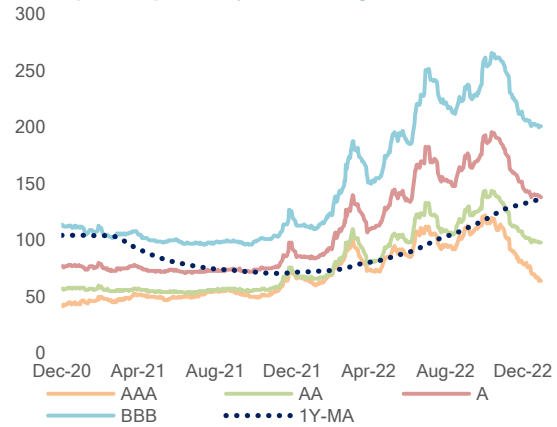
EU corporate yields by credit rating



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.32

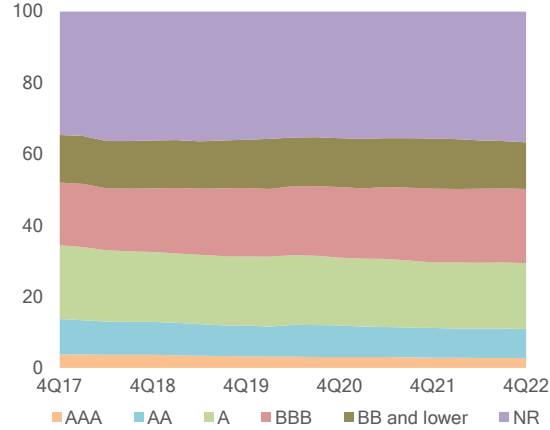
EU corporate spreads by credit rating



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.33

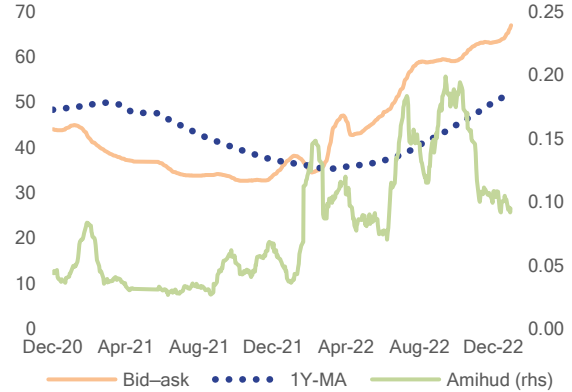
EU corporate rating distribution



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

A.34

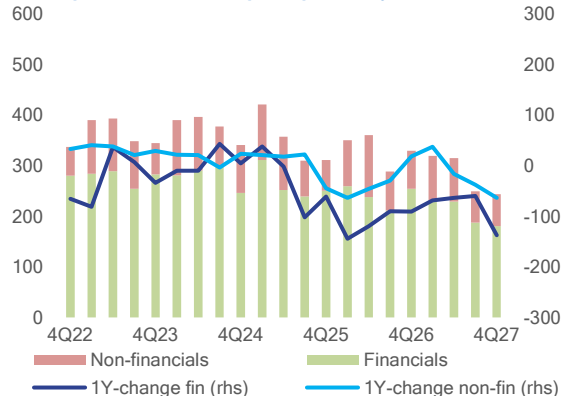
EU corporate bid-ask spread and Amihud indicator



Note: Markit iBoxx EUR Corporate Bond Index bid-ask spread, in bps, computed as a one-month moving average of the constituents bid-ask spread. 1Y-MA = one-year moving average of the bid-ask spread. Amihud liquidity coefficient index between 0 and 1. Highest value indicates less liquidity.

A.35

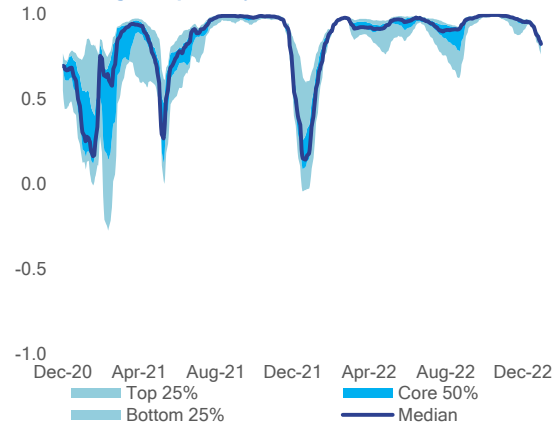
EU corporate debt redemption profile by sector



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

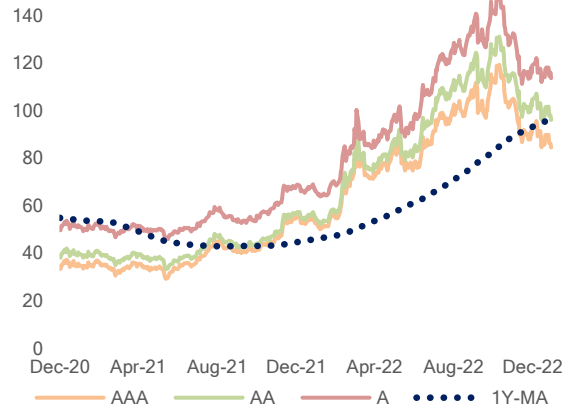
A.36

EU sovereign-corporate yield correlation



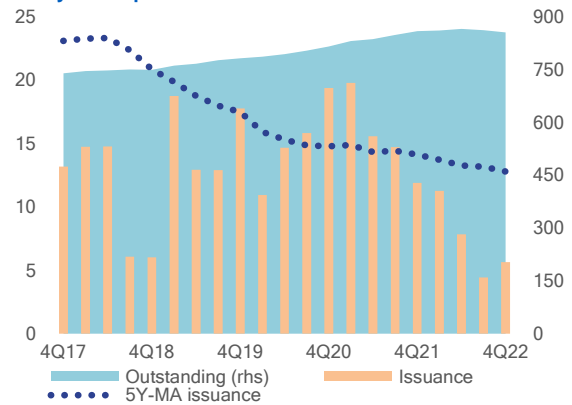
Note: Dispersion of correlation between Barclays Aggregate for corporate and 10Y sovereign bond redemption yields for AT, BE, ES, FI, FR, IT and NL. Sources: Refinitiv Datastream, ESMA.

A.37
EU covered bond spreads



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

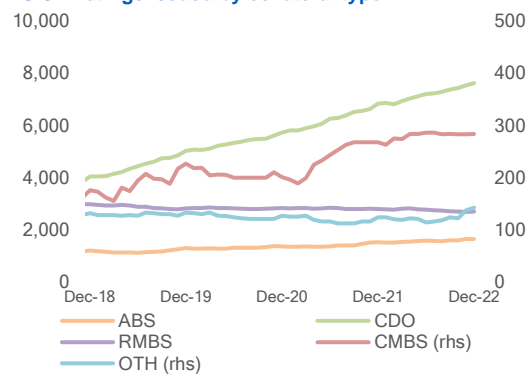
A.38
EU hybrid capital instruments issuance



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

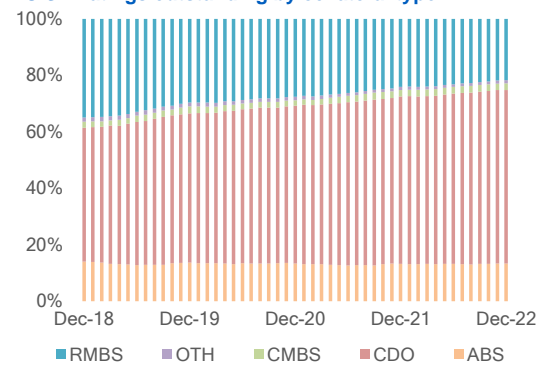
Credit quality

A.39
EU SFI ratings issued by collateral type



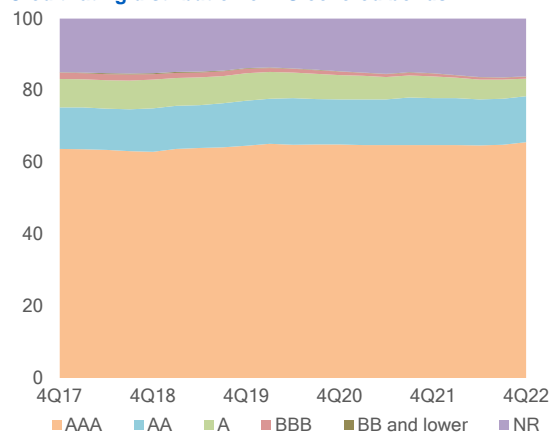
Note: Number of rated EEA30 structured finance instruments by asset class. ABS=Asset-backed securities (r.h.axis); CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=Other; RMBS=Residential mortgage-backed securities. Asset backed commercial paper omitted due to very small sample size. Sources: RADAR, ESMA.

A.40
EU SFI ratings outstanding by collateral type



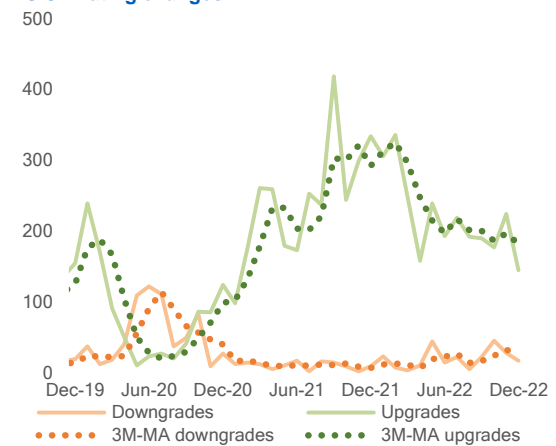
Note: Outstanding ratings of EEA30 structured finance instruments by asset class, in % of total. ABS=Asset-backed securities; CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=other; RMBS=Residential mortgage-backed securities. Asset backed commercial paper omitted due to very small sample size. Sources: RADAR, ESMA.

A.41
Credit rating distribution of EU covered bonds



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

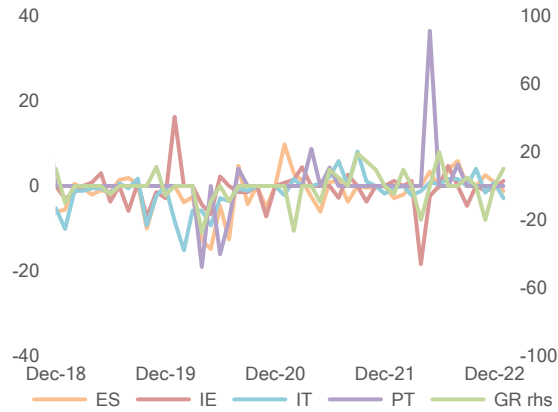
A.42
EU SFI rating changes



Note: Aggregate number of notch changes on securitised assets issued in the EEA30 with long-term ratings, for upgrades and downgrades. Sources: RADAR, ESMA.

A.43

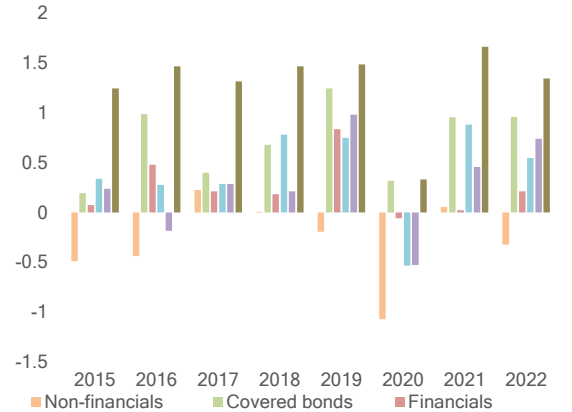
EU non-financial corporate rating changes



Note: Number of upgrades minus downgrades of non-financial corporate issuers for ES, GR, IE, IT and PT, in % of outstanding ratings. Ratings from Fitch Ratings, Moody's and S&P's.
Sources: RADAR, ESMA.

A.44

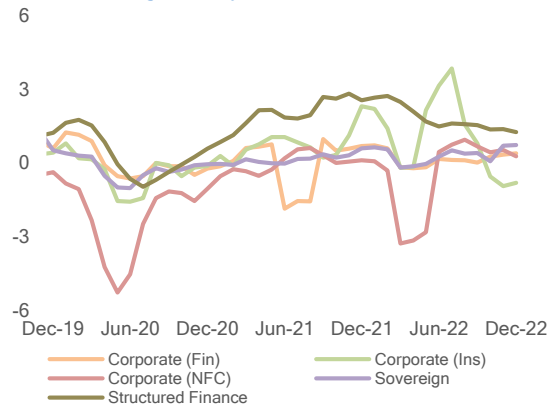
Size of EU credit rating changes



Note: Average change in notches for long-term EEA30 ratings for issuers and instruments (excl. ICAP and CERVED).
Sources: RADAR, ESMA

A.45

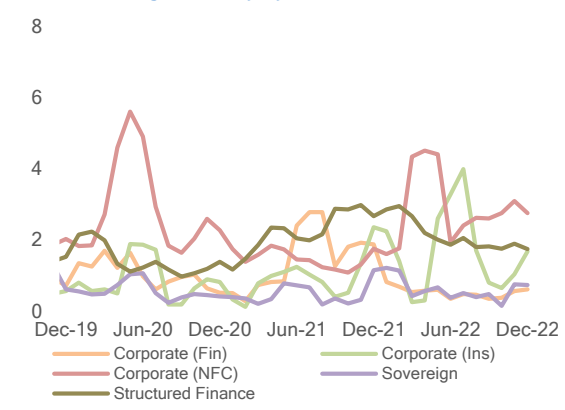
EU credit ratings drift by asset class



Note: 3-month moving average of net rating changes in EEA30 outstanding ratings from all credit rating agencies, excluding CERVED and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades. EEA30 ratings. Fin - Financials, Ins - Insurance, NFC - non-financials.
Sources: RADAR, ESMA.

A.46

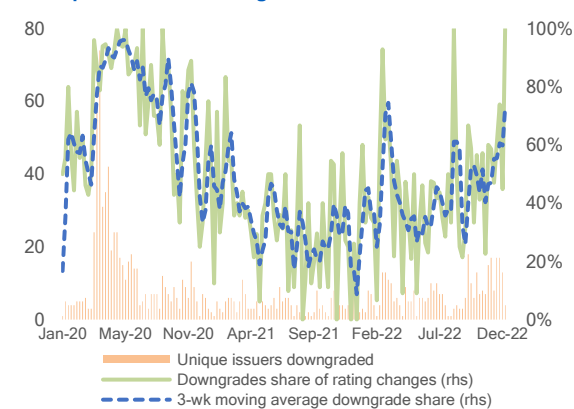
EU credit ratings volatility by asset class



Note: 3-month moving average of net rating changes in EEA30 outstanding ratings from all credit rating agencies, excluding CERVED and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades. EEA30 ratings. Fin - Financials, Ins - Insurance, NFC - non-financials.
Sources: RADAR, ESMA.

A.47

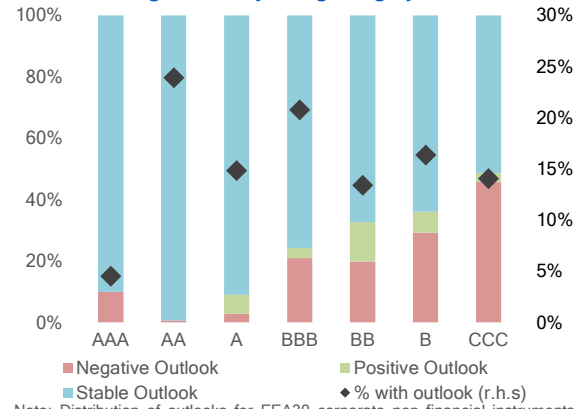
EU corporate issuer downgrades



Note: Number of EEA30 corporate issuers with at least one bond downgraded, and ratio of downgraded corporate issues over upgrades and downgrades (3 week moving average).
Sources: ESMA, RADAR

A.48

EU credit rating outlook by rating category

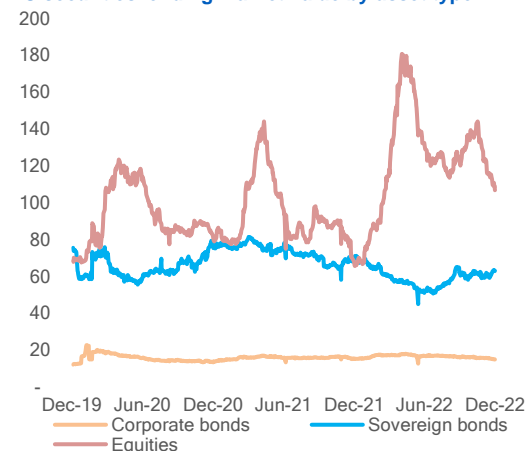


Note: Distribution of outlooks for EEA30 corporate non financial instruments (ISINs) with outlook rated by the Big 5 (Fitch, Moody's, S&P, Scope and DBRS) by category value over the total ratings per category value. Cutoff date 31/12/2022.
Sources: RADAR, ESMA.

Securities lending

A.49

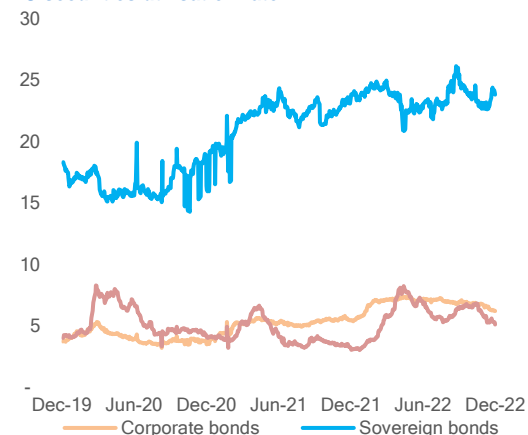
EU securities lending market value by asset type



Note: value on loan of securities issued in the EEA by asset class, in EUR bn.
Sources: FIS Astec, Quandl, ESMA.

A.50

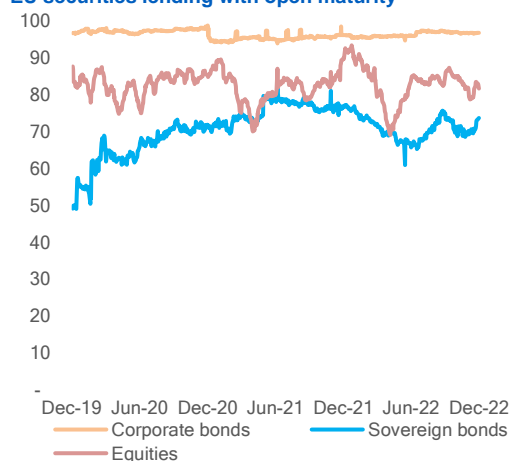
EU securities utilisation rate



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

A.51

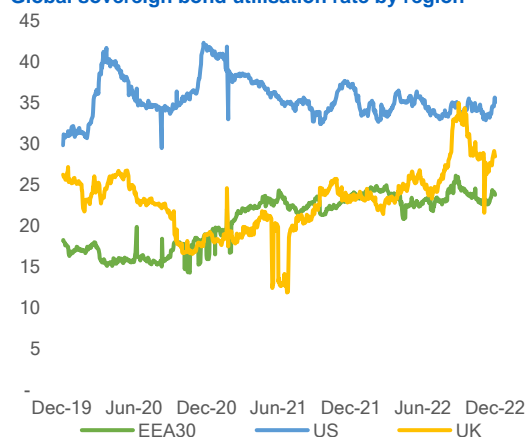
EU securities lending with open maturity



Note: value of open-ended lending over total lending by asset class, in percentage.
Sources: FIS Astec, Quandl, ESMA.

A.52

Global sovereign bond utilisation rate by region

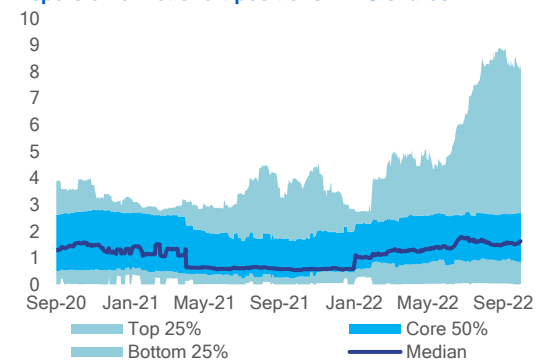


Note: Utilisation rate of sovereign bonds issued in EEA countries, in the US and in the UK. Utilisation rate in percent: the ratio of the market value of securities lent over the market value of securities available for lending.
Sources: FIS Astec, Quandl, ESMA.

Short selling

A.53

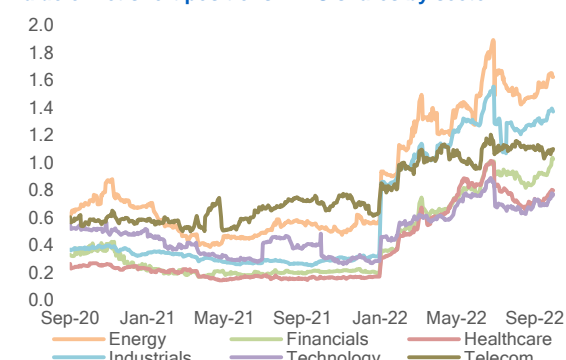
Dispersion of net short positions in EU shares



Note: Dispersion of net short selling positions by country in the EEA30 as percentage of market value of those positions relative to each country's blue-chip index market value. The 0.1% threshold entered into force on 31 January 2022 for all EU countries. NO, IS and LI continue to use the 0.2% threshold until the CDR 2022/27 is incorporated in their national legislation. Partially or fully missing data for the following countries: DK, GR, NL, PL and RO.
Sources: NCAs, Refinitiv Datastream, ESMA.

A.54

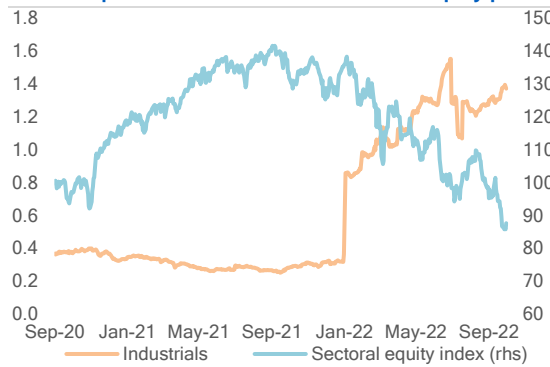
Value of net short positions in EU shares by sector



Note: Market value of net short selling positions in EA shares as percentage of market value of selected EA sectoral indices. The 0.1% reporting threshold entered into force on 31 January 2022 for all EU countries. NO, IS and LI will continue to use the 0.2% reporting threshold until their national legislation is amended. Partially or fully missing data for the following countries: DK, GR, NL, PL and RO.
Sources: NCAs, Refinitiv Datastream, ESMA.

A.55

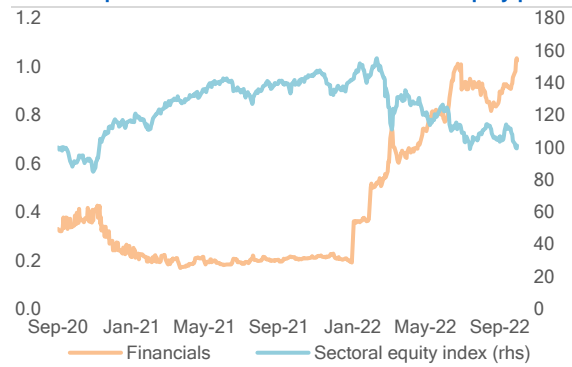
Net short positions in industrial shares and equity prices



Note: Market value of net short selling positions in EA industrial shares as percentage of market value of EA industrial sectoral index. 01/03/2020=100. The 0.1% threshold entered into force on 31 January 2022 for all EU countries. NO, IS and LI continue to use the 0.2% threshold until the CDR 2022/27 is incorporated in their national legislation. Partially or fully missing data for the following countries: DK, GR, NL, PL and RO.
Sources: NCAs, Refinitiv Datastream, ESMA.

A.56

Net short positions in EU financial shares and equity prices

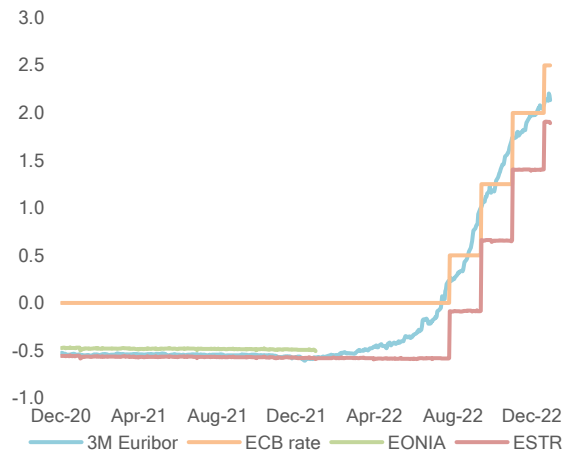


Note: Market value of net short selling positions in EA financial shares as percentage of market value of EA financial sectoral index. 01/03/2020=100. The 0.1% threshold entered into force on 31 January 2022 for all EU countries. NO, IS and LI continue to use the 0.2% threshold until the CDR 2022/27 is incorporated in their national legislation. Partially or fully missing data for the following countries: DK, GR, NL, PL and RO.
Sources: NCAs, Refinitiv Datastream, ESMA.

Money markets

A.57

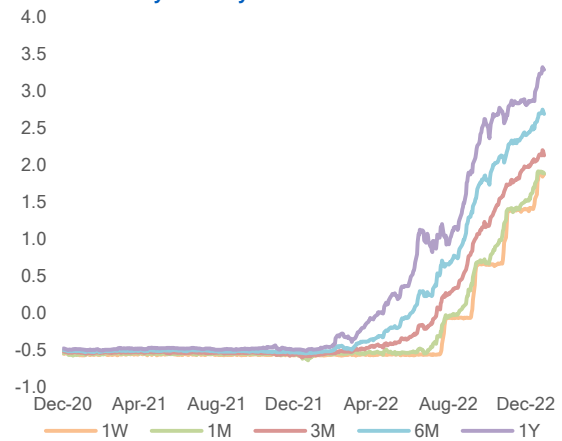
Euro area interest rates



Note: EA money market interest rates, in %.
Sources: Refinitiv Datastream, ESMA.

A.58

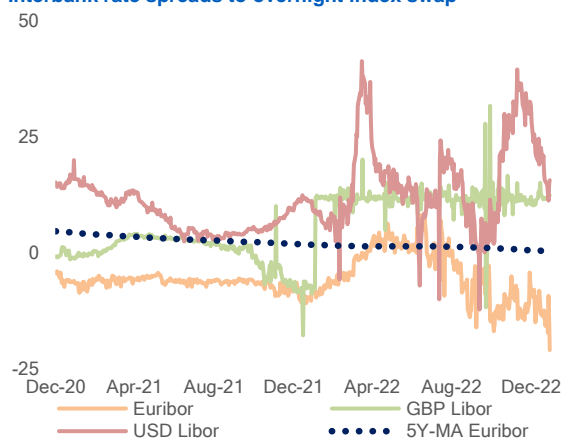
Euribor rates by maturity



Note: Euribor interest rates by maturity, in %.
Sources: Refinitiv Datastream, ESMA.

A.59

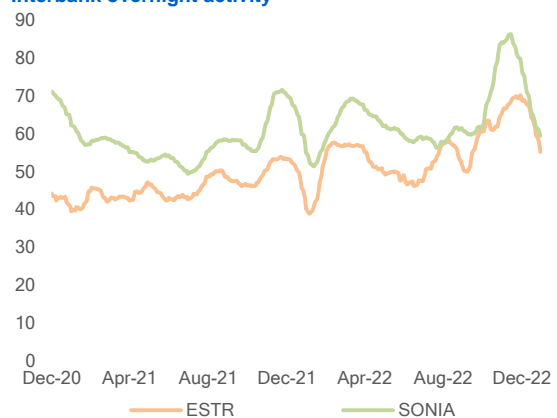
Interbank rate spreads to overnight index swap



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

A.60

Interbank overnight activity

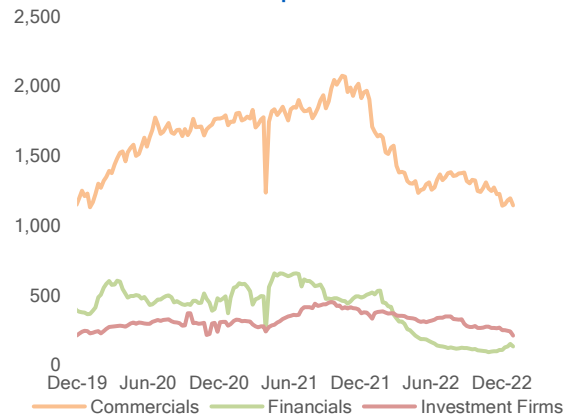


Note: 1M-MA of daily lending volumes on Euro short-term rate (€ESTR), EUR bn, and Sterling Overnight Index Average (SONIA), GBP bn.
Sources: ECB, Refinitiv EIKON, ESMA.

Commodities

A.61

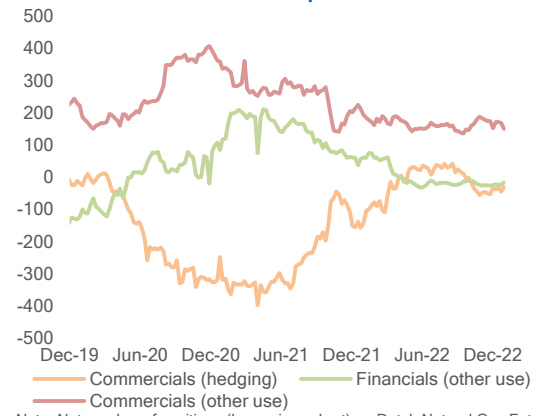
Dutch Natural Gas Futures open interest



Note: Open interests on Dutch Natural Gas Futures by commercial, financials traders (funds and other financial institutions) and investment firms, in mn. Spikes might reflect data quality issues.
Sources: ESMA Weekly Commodity Derivatives Positions Reporting, ESMA.

A.62

Dutch Natural Gas Futures net positions



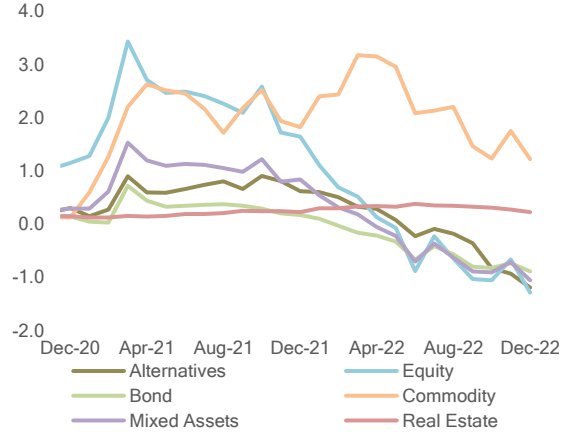
Note: Net number of positions (long minus short) on Dutch Natural Gas Future held by commercial traders and financials traders (funds and other financial institutions) in mn.
Sources: ESMA Weekly Commodity Derivatives Positions Reporting, ESMA.

Asset management

Fund industry

A.63

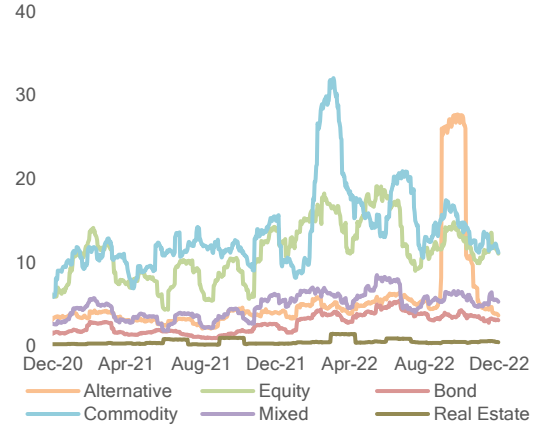
EU fund performance



Note: EU27-domiciled investment funds' annual average monthly returns, asset weighted, in %.
Sources: Thomson Reuters Lipper, ESMA.

A.64

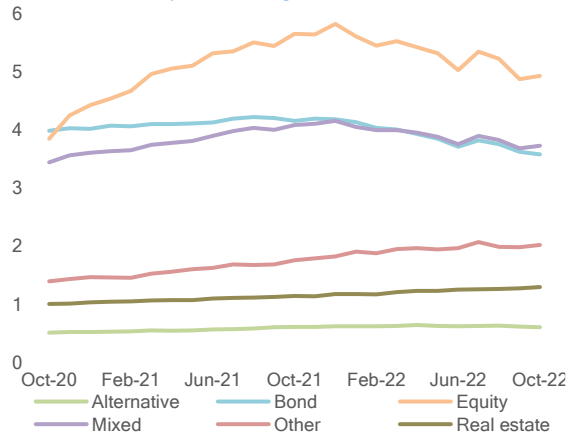
Volatility of EU fund returns



Note: Annualised 40D historical return volatility of EU27 domiciled mutual funds, in %.
Sources: Thomson Reuters Lipper, ESMA.

A.65

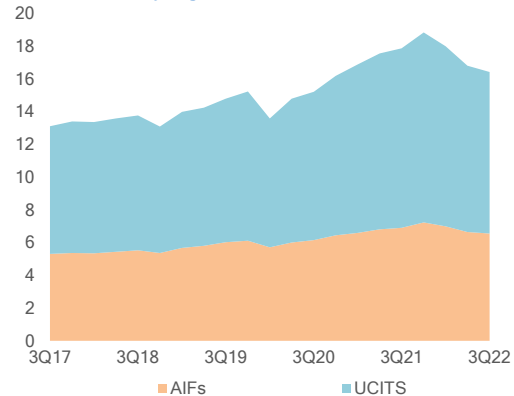
EU fund assets by market segment



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

A.66

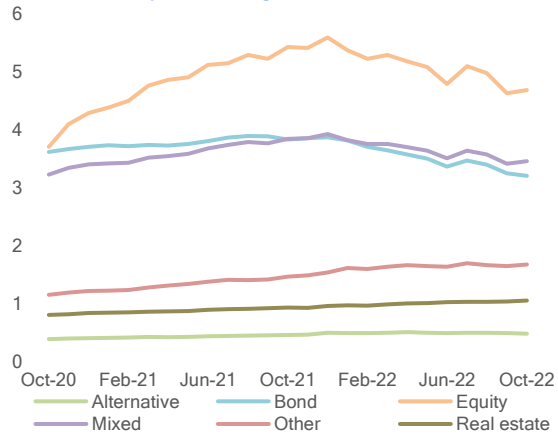
EU fund NAV by legal form



Note: NAV of EEA30 funds, EUR tn.
Sources: EFAMA, ESMA.

A.67

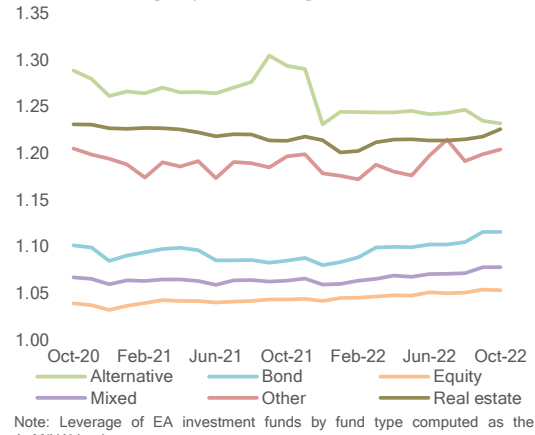
EU fund NAV by market segment



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

A.68

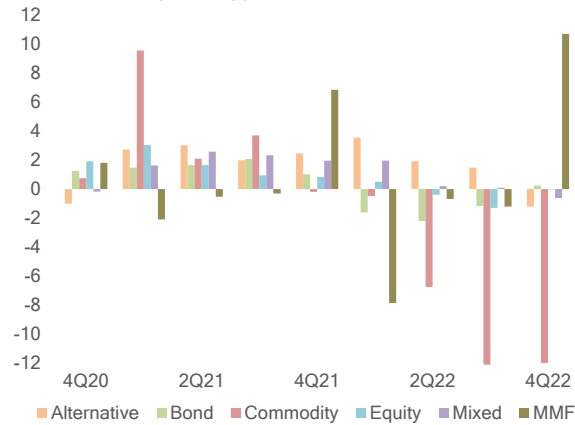
EU fund leverage by market segment



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

A.69

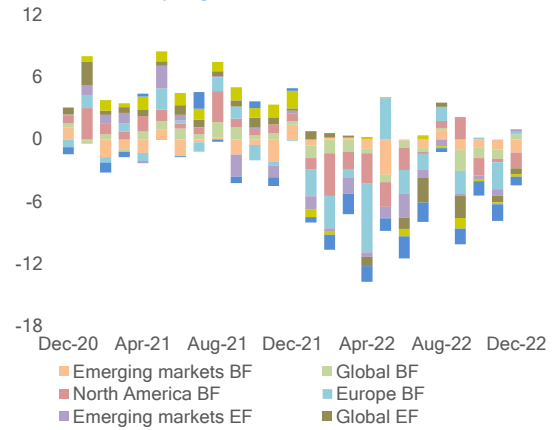
EU fund flows by fund type



Note: EU27 fund quarterly net flows, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.70

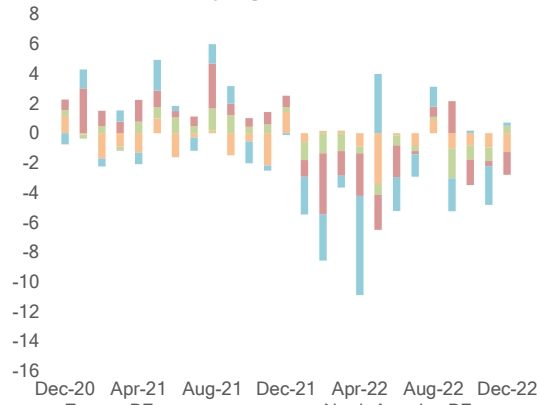
EU fund flows by regional investment focus



Note: EU27 bond and equity funds (BF and EF) monthly flows over time since 2004 by regional investment focus, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.71

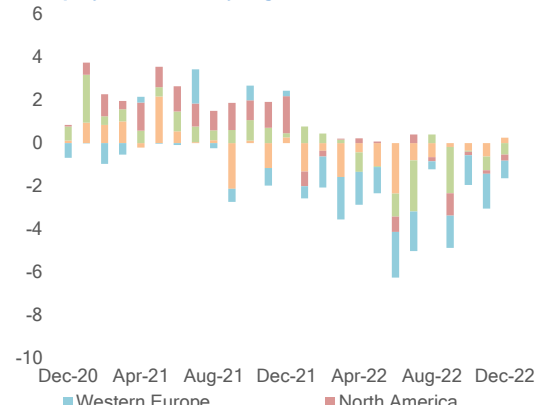
EU bond fund flows by regional investment focus



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

A.72

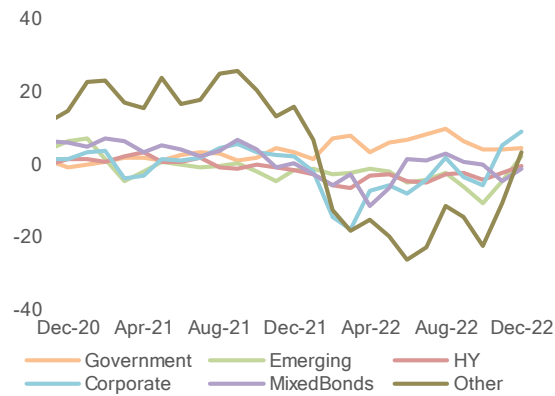
EU equity fund flows by regional investment focus



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

A.73

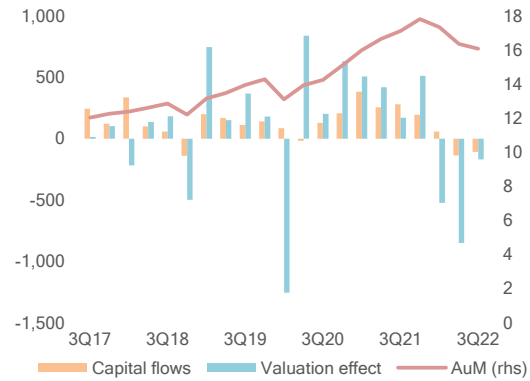
Net flows in EU bond funds



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

A.74

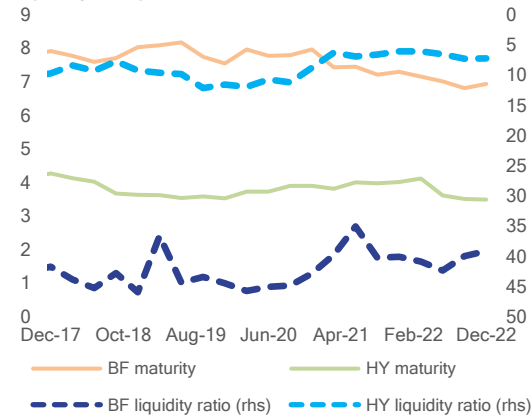
Net asset valuation of EU funds



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.75

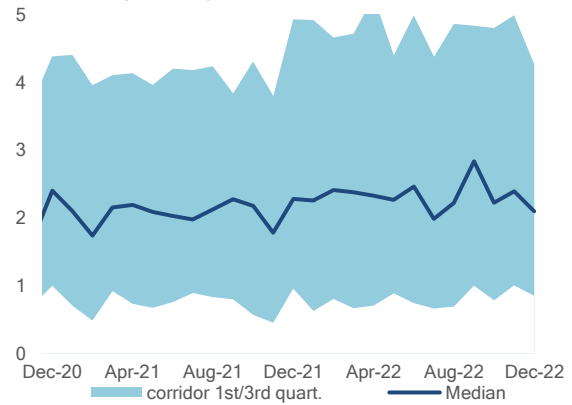
Liquidity risk profile of EU bond funds



Note: Quarterly effective average maturity of EU27 fund assets, in years; ESMA liquidity ratio (rhs, in reverse order).
Sources: Refinitiv Lipper, ESMA.

A.76

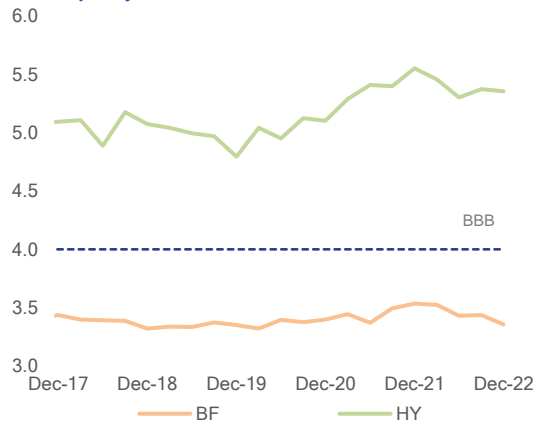
Cash held by EU corporate bond funds



Note: Median and difference between the first and 3rd quartile of the value of cash held by EU27 corporate bond funds, in % of portfolio holdings (%). Short positions can have a negative value.
Sources: Refinitiv Lipper, ESMA.

A.77

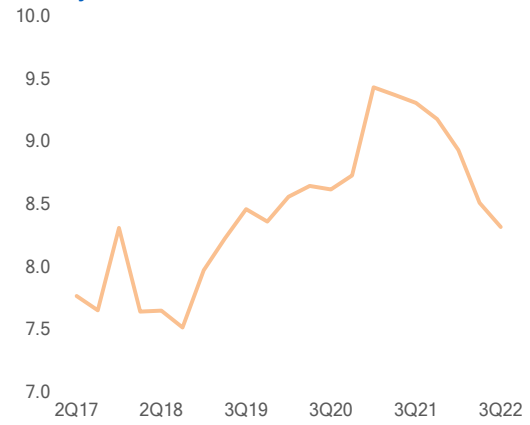
Credit quality of EU bond funds' assets



Note: Quarterly average credit quality (S&P ratings; 1= AAA; 4= BBB; 10 = D) for EU27-domiciled funds.
Sources: Refinitiv Lipper, ESMA.

A.78

Maturity of EU bond funds' assets

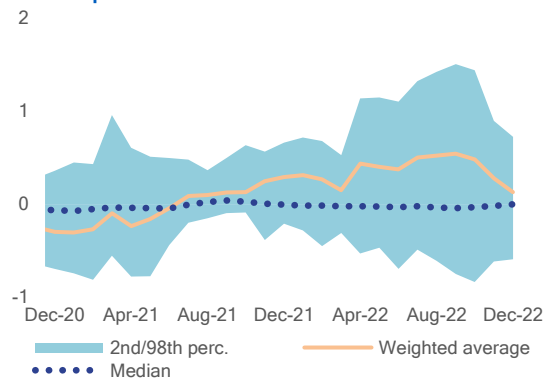


Note: Weighted average effective maturity of EU bond funds' assets, data in years.

Money market funds

A.79

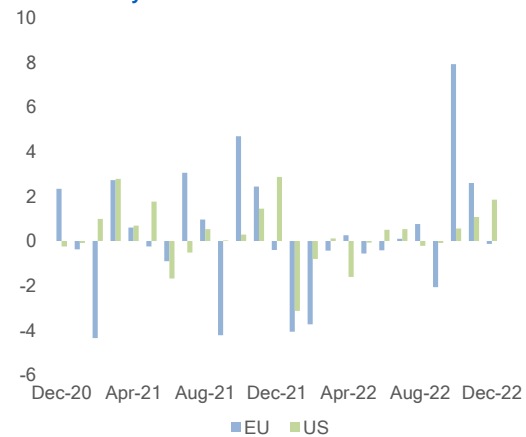
EU MMF performance



Note: EU27-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.80

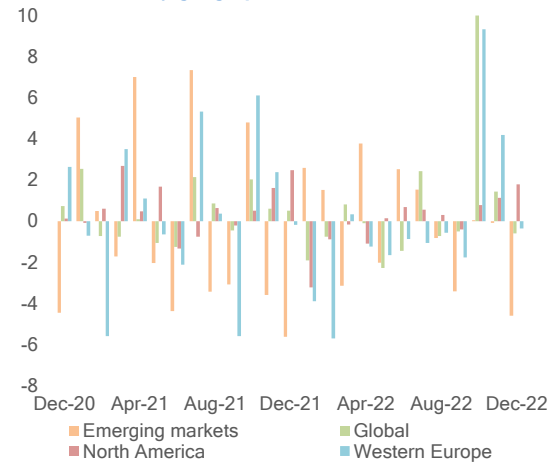
MMF flows by domicile



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

A.81

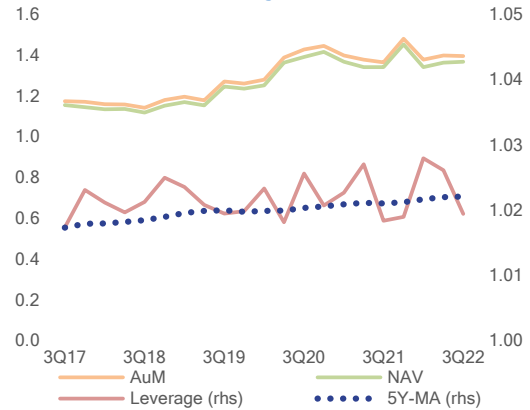
EU MMF flows by geographical focus



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

A.82

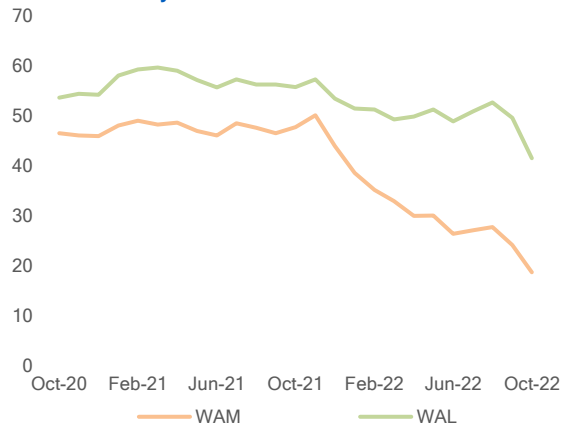
EU MMF assets and leverage



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.

A.83

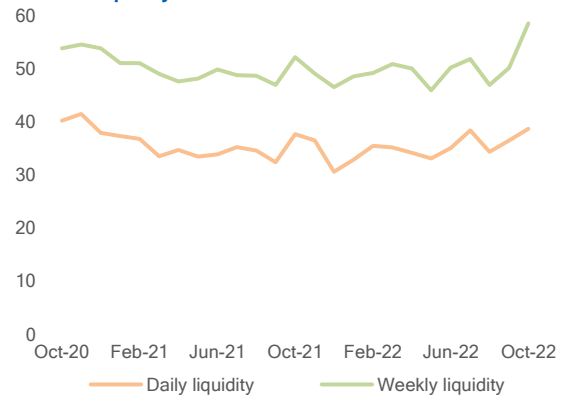
EU MMF maturity



Note: Weighted average maturity (WAM) and weighted average life (WAL) of Europe-domiciled MMFs, in days. Aggregation carried out by weighting individual MMFs' WAM and WAL by AuM.

A.84

EU MMF liquidity

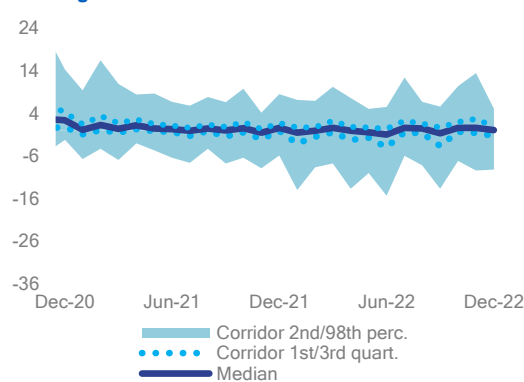


Note: Daily and weekly liquidity includes all assets maturing overnight and shares by AAA MMFs, securities issued by highly rated sovereigns with a maturity of less than one year, in % of total assets. Aggregation carried out using individual Europe-domiciled MMF data weighted by AuM.

Alternative funds

A.85

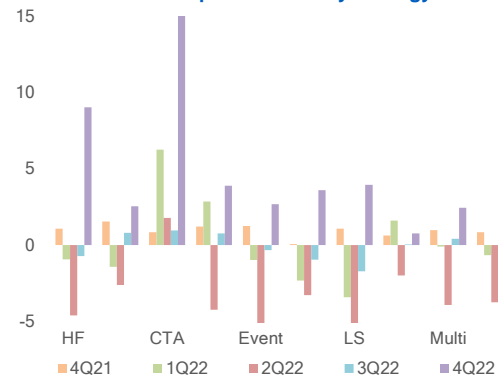
EU hedge fund returns



Note: EU27-domiciled hedge funds' monthly returns, %. The graph shows the returns' median, the difference between the returns corresponding to the 98th and 25th percentiles (light blue corridor) and the difference between the returns corresponding to the 1st and 3rd quartiles (dotted line corridor). Sources: Lipper Tass, ESMA.

A.86

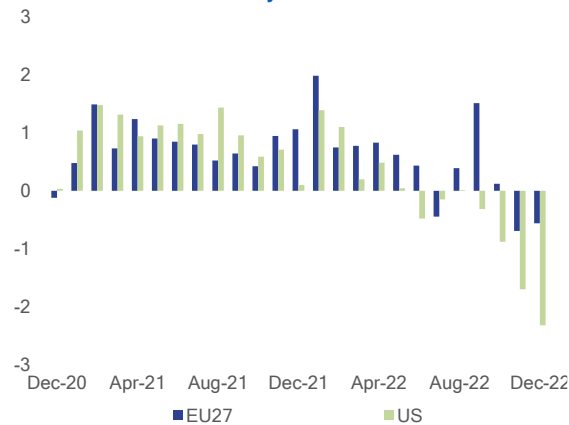
EU alternative fund performance by strategy



Note: Growth in hedge fund performance indices by strategy: Hedge fund index (Total), arbitrage, Commodity Trading Advisor (CTA), distressed debt, event driven, fixed income, long/short equity, macro, multi-strategy, relative value (RV), in %. Sources: Eurekahedge, ESMA.

A.87

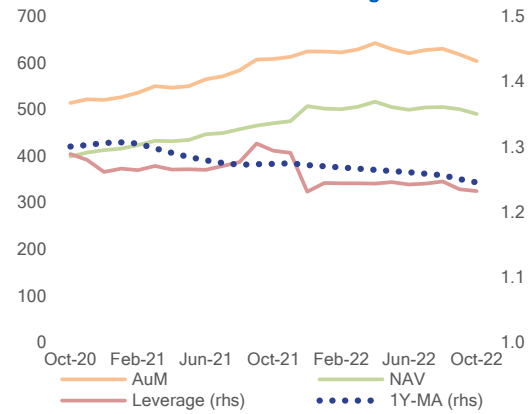
EU alternative fund flows by domicile



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

A.88

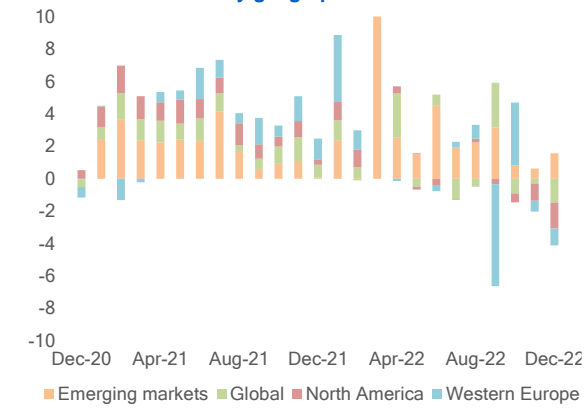
EU alternative fund assets and leverage



Note: NAV and AuM of EA alternative funds, EUR bn. Leverage computed as the AuM/NAV ratio. 1Y-MA=one-year moving average for the leverage ratio. Sources: ECB, ESMA.

A.89

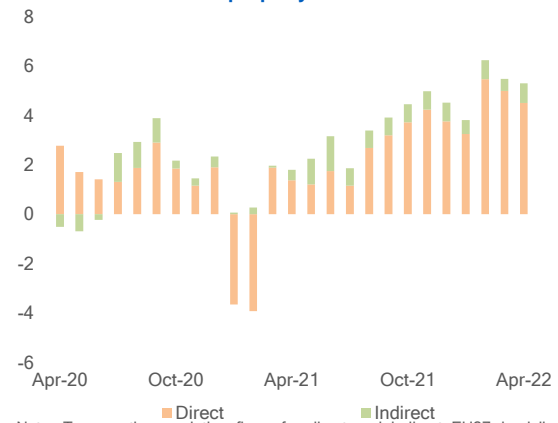
Alternative fund flows by geographical focus



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

A.90

Direct and indirect EU property fund flows

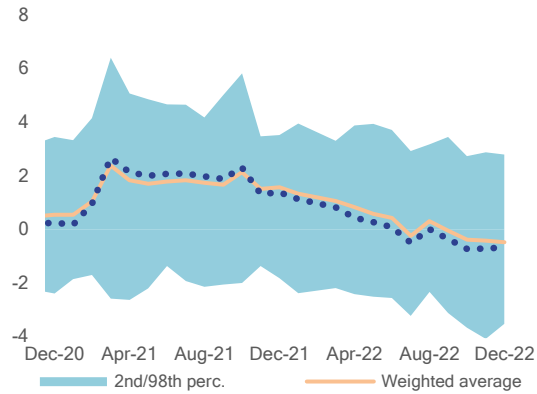


Note: Two-month cumulative flows for direct and indirect EU27-domiciled property funds. Indirect property funds invest in securities of real estate companies, including Real Estate Investment Trusts (REITs), in EUR bn. Sources: Morningstar, ESMA.

Exchange-traded funds

A.91

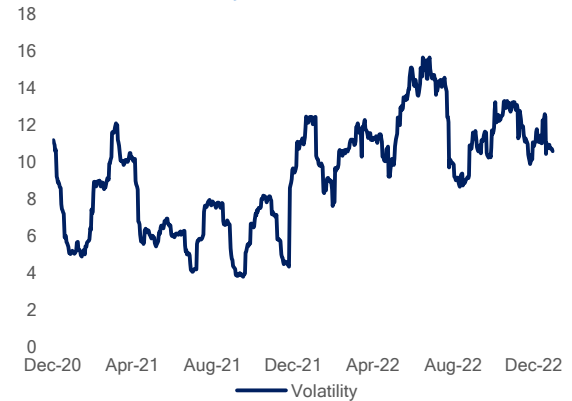
EU ETF returns



Note: EU27-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.92

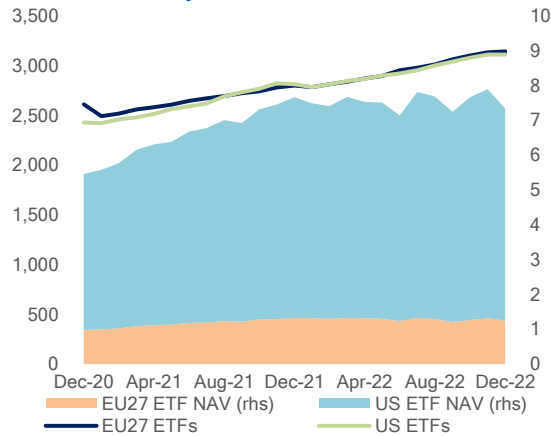
EU ETF returns volatility



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

A.93

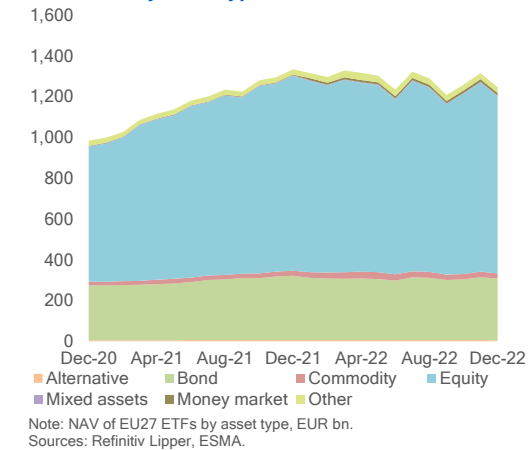
EU ETF and NAV by domicile



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

A.94

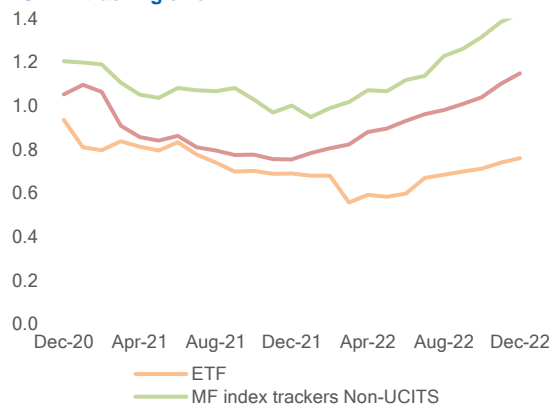
EU ETF NAV by asset type



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

A.95

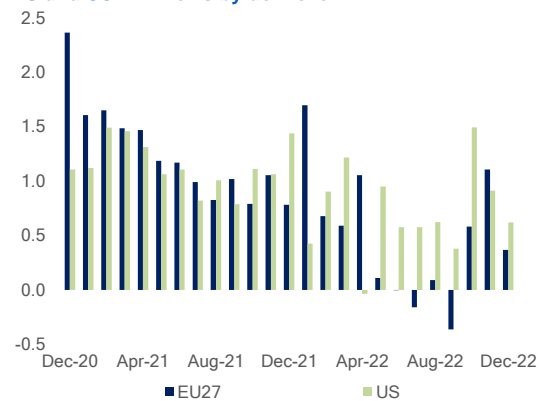
EU ETF tracking error



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

A.96

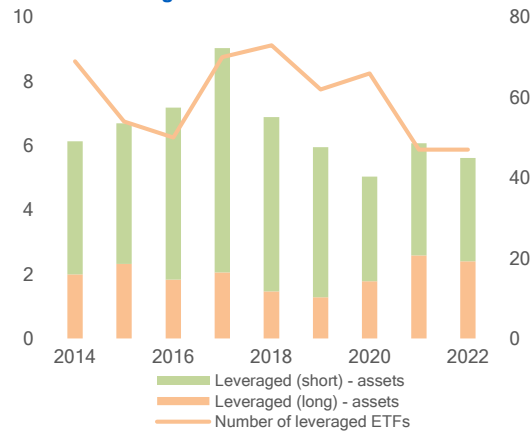
EU and US ETF flows by domicile



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

A.97

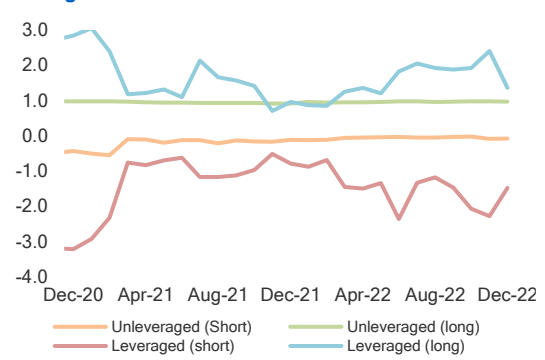
Assets of leveraged EU ETFs



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

A.98

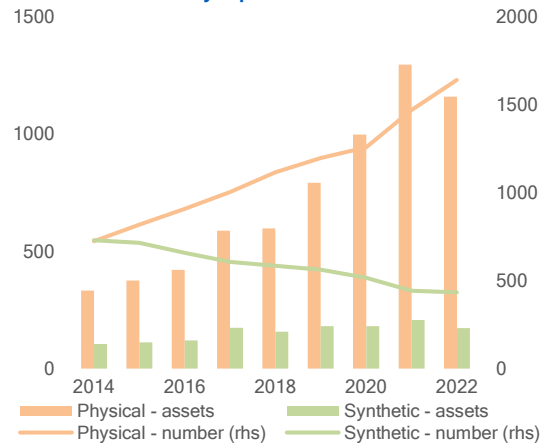
Average beta values for EU ETFs



Note: Annual average beta for leveraged and unleveraged EU27 ETFs. 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.99

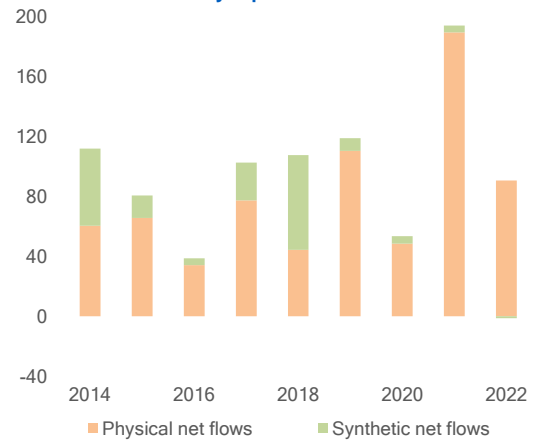
Assets of EU ETFs by replication method



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.100

Flows into EU ETFs by replication method



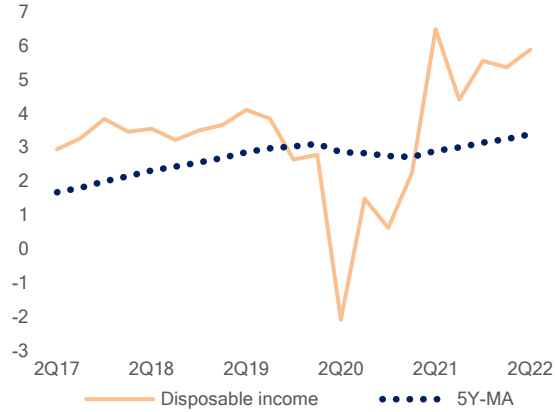
Note: Net flows of physical and synthetic ETFs with primary listings in Europe, in EUR bn. Sources: ETFGI, ESMA

Consumers

Investment resources available to households

A.101

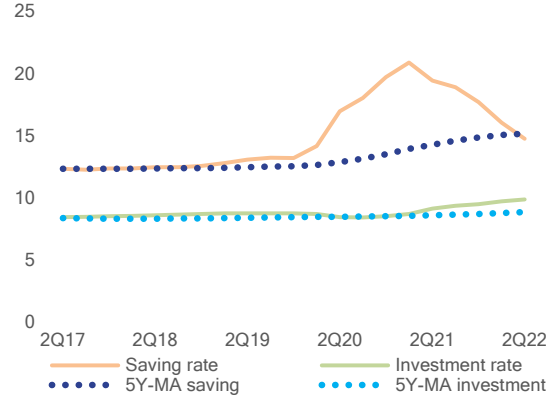
EU household disposable income growth



Note: Annualised growth rate of household gross disposable income adjusted for changes in pension entitlements for EU27 countries, in %. 5Y-MA=five-year moving average of the growth rate.
Sources: Eurostat, ESMA.

A.102

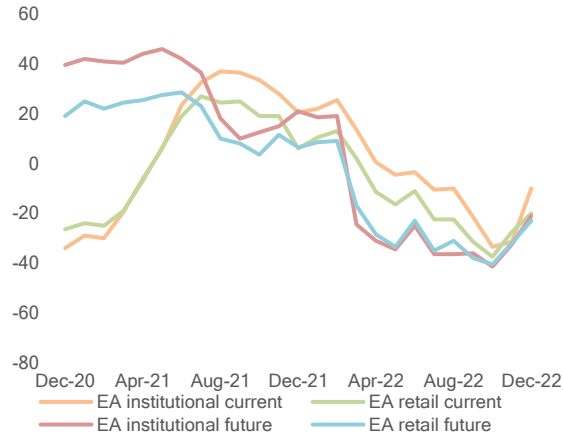
EU household saving and investment rates



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.103

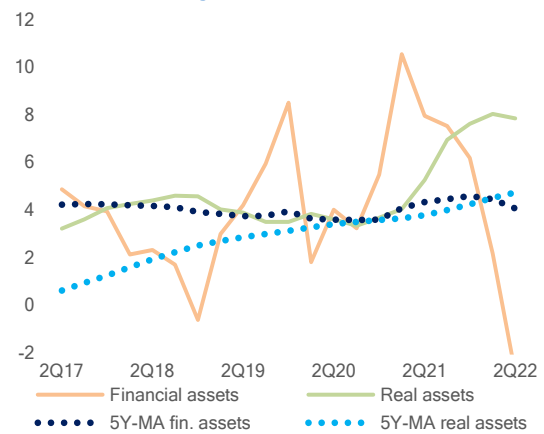
EU investor sentiment



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.104

EU household asset growth

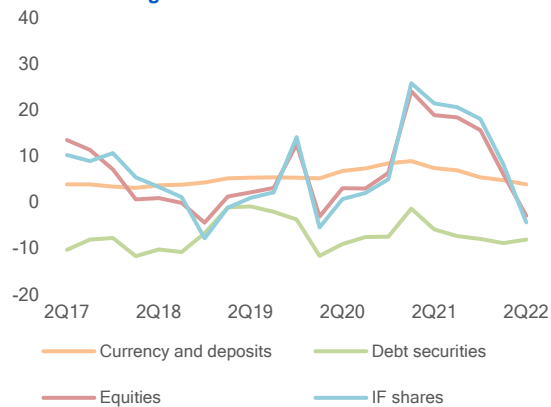


Note: Annualised growth rate real and financial assets of EA households, in %. 5Y-MA=five-year moving average of the growth rates.
Sources: ECB, ESMA.

Asset allocation by retail investors

A.105

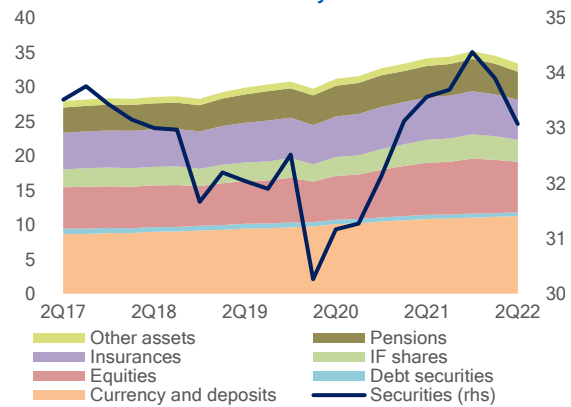
EU household growth rates in financial assets



Note: Average annualised growth rates of financial asset classes held by EU27 households, in %. IF shares=investment fund shares. Ins.=insurance companies, Other assets=other accounts receivable/payable.
Sources: ECB, ESMA.

A.106

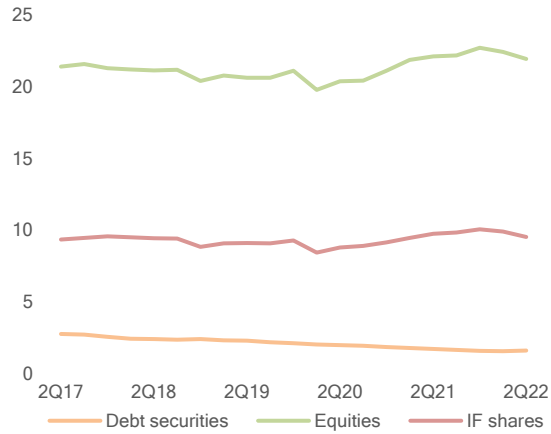
EU household financial assets by class



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

A.107

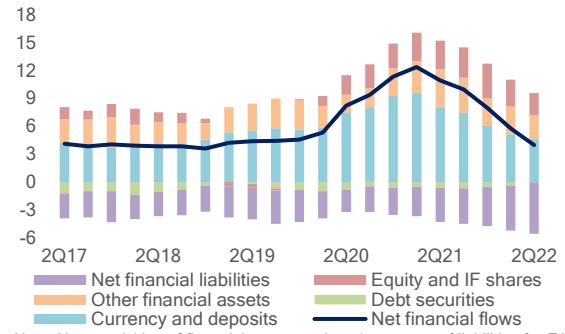
Share of securities investments in EU household assets



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

A.108

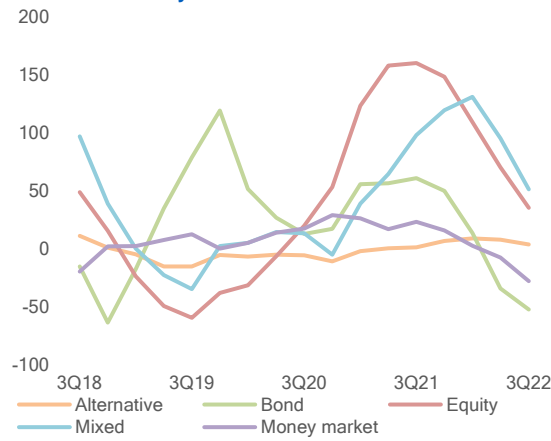
EU household net financial asset flows



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.109

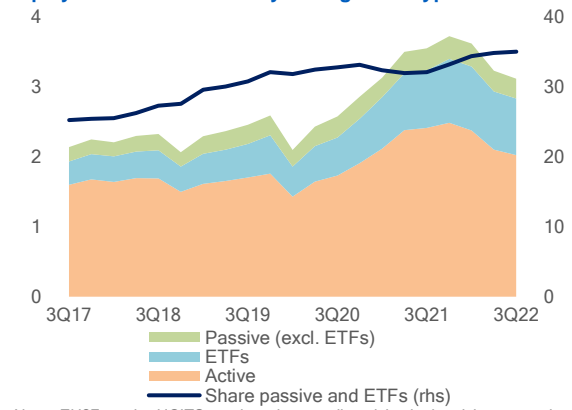
UCITS net flows by asset class for retail investors



Note: EU27 UCITS annual net flows, retail investors only, at quarterly frequency by asset class, EUR bn. Sources: Refinitiv Lipper, ESMA.

A.110

Equity UCITS market size by management type



Note: EU27 equity UCITS market size, retail and institutional investors, by management type. All observations for which information on fund value, performance, net flows, subscription and redemption fees are available, in EUR tn. Share of passive and ETFs, in %. Sources: Refinitiv Lipper, ESMA.

A.111

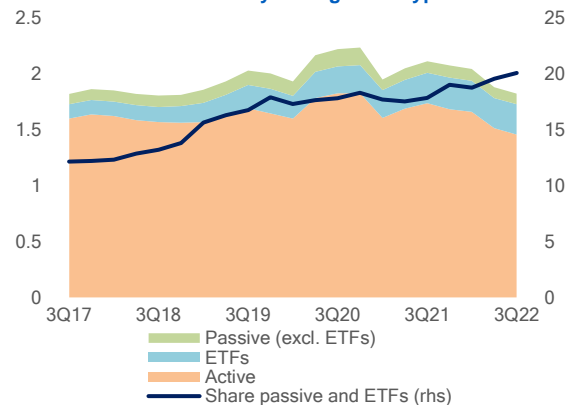
Equity UCITS net flows by management type



Note: EU27 equity UCITS annual net flows from retail and institutional investors at quarterly frequency by management type, EUR bn. Sources: Refinitiv Lipper, ESMA.

A.112

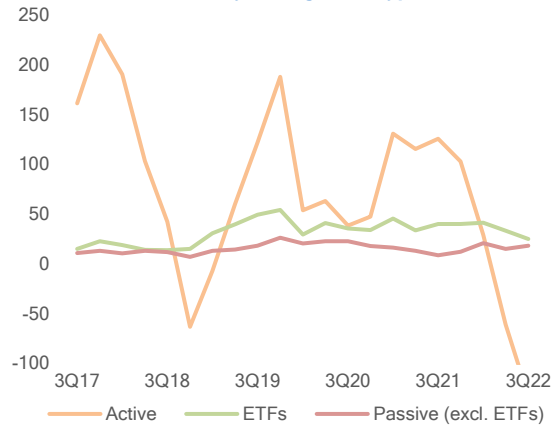
Bond UCITS market size by management type



Note: EU27 bond UCITS market size, retail and institutional investors, by management type. All observations for which information on fund value, performance, net flows, subscription and redemption fees are available, in EUR tn. Share of passive and ETFs, in %. Sources: Refinitiv Lipper, ESMA.

A.113

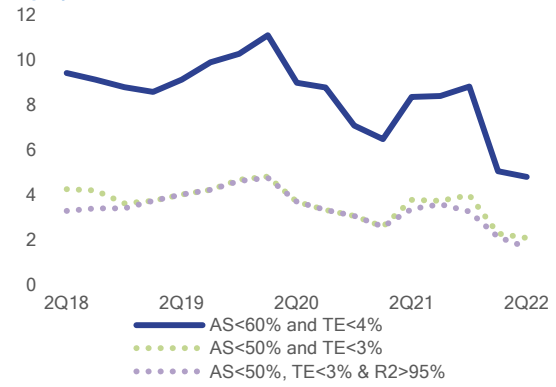
Bond UCITS net flows by management type



Note: EU27 bond UCITS annual net flows from retail and institutional investors at quarterly frequency by management type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.114

Equity active funds closet index indicator

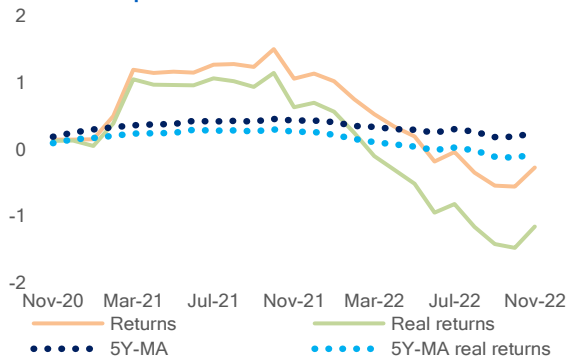


Note: EU27 active equity UCITS share of potential closet index (CI) within our sample. Share of total, %. Potential CI based on three criteria: Active Share (AS) < 60% and Tracking Error (TE) < 4%; AS < 50% and TE < 3%; AS < 50% and TE < 3% and R-squared (R2) > 95%.
Sources: Morningstar Direct, ESMA.

Costs and performance

A.115

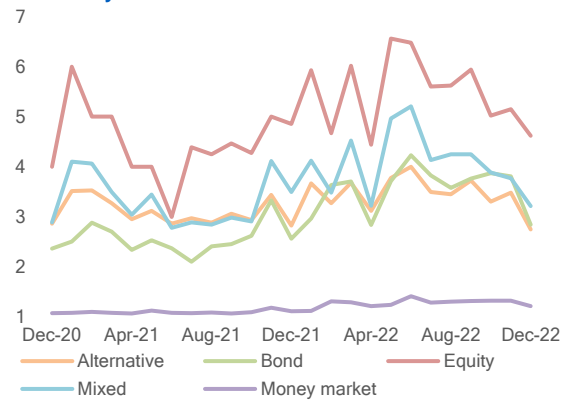
EU household portfolio returns



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

A.116

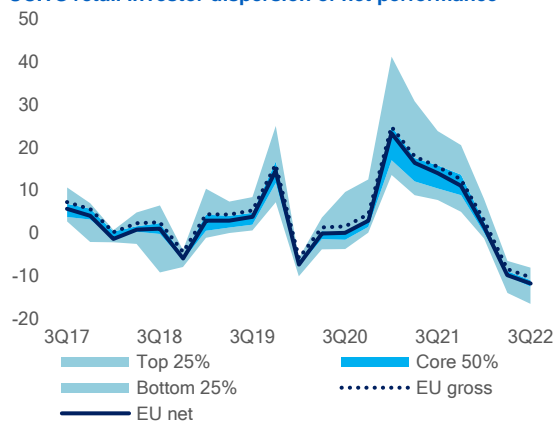
EU fund synthetic risk and reward indicator



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

A.117

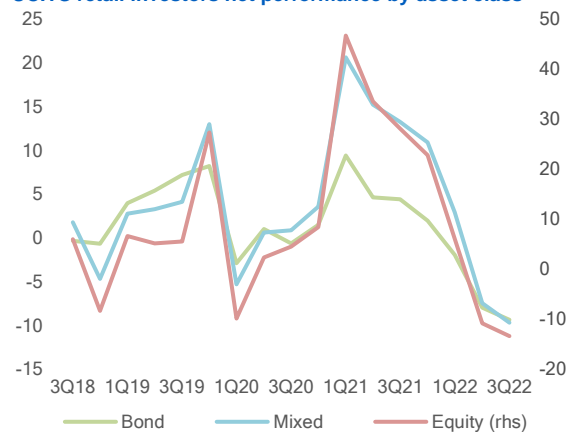
UCITS retail investor dispersion of net performance



Note: Dispersion of EU27 UCITS net performances, retail investors only, adjusted for total expense ratio and load fees, in %. Distribution represents selected EU27 markets.
Sources: Refinitiv Lipper, ESMA.

A.118

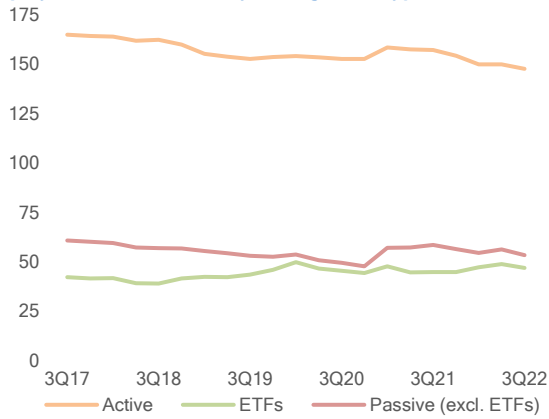
UCITS retail investors net performance by asset class



Note Evolution of gross annual performance of EU27 UCITS, retail investors only, by asset class, in %.
Sources: Refinitiv Lipper, ESMA.

A.119

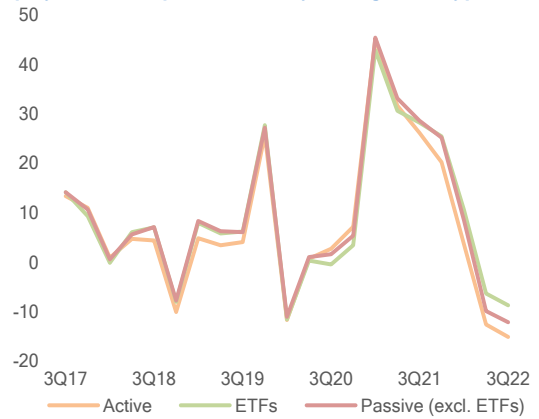
Equity UCITS total costs by management type



Note: Evolution of total costs (ongoing costs (TER), subscription and redemption fees) of EU27 equity UCITS, retail and institutional investors, by management type, in bps.
Sources: Refinitiv Lipper, ESMA.

A.120

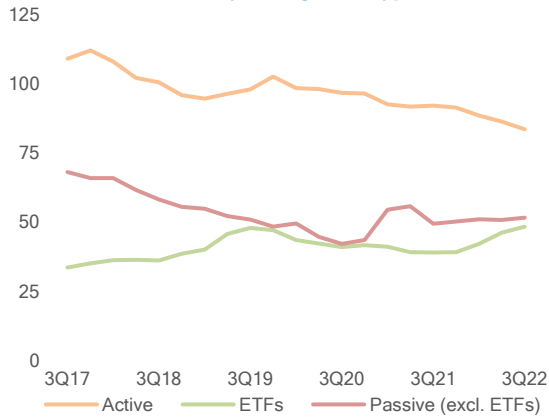
Equity UCITS net performance by management type



Note: Evolution of net annual performance (net of ongoing costs (TER), subscription and redemption fees) of EU27 equity UCITS, retail and institutional investors, by management type, in %.
Sources: Refinitiv Lipper, ESMA.

A.121

Bond UCITS total costs by management type



Note: Evolution of total costs (ongoing costs (TER), subscription and redemption fees) of EU27 bond UCITS, retail and institutional investors, by management type, in bps.
Sources: Refinitiv Lipper, ESMA.

A.122

Bond UCITS net performance by management type

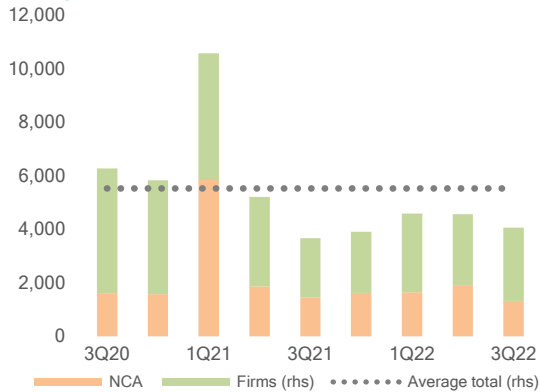


Note: Evolution of net annual performance (net of ongoing costs (TER), subscription and redemption fees) of EU27 bond UCITS, retail and institutional investors, by management type, in %.
Sources: Refinitiv Lipper, ESMA.

Complaints

A.123

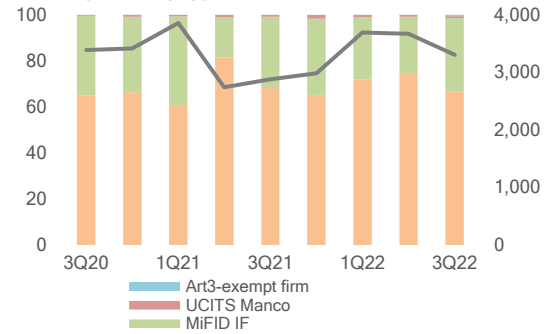
EU complaints



Note: Number of complaints recorded by quarterly-reporting NCAs (n=14) via given reporting channels. "NCA"=Reports lodged directly by consumers with NCAs. "Firms"=Complaints recorded by NCAs via firms. "Average total"=average total number from 3Q20 to 3Q22. Sources: ESMA complaints database.

A.124

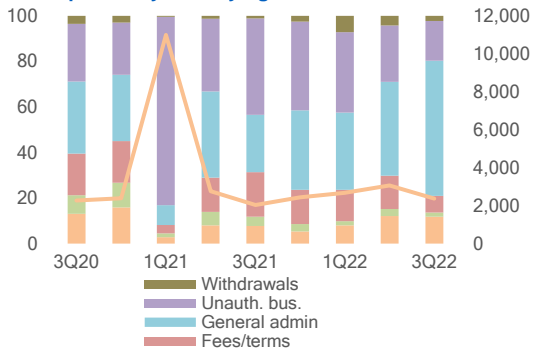
EU complaints by type of firm involved



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

A.125

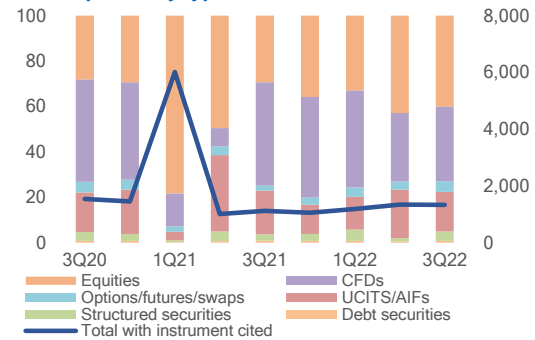
EU complaints by underlying cause



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

A.126

EU complaints by type of financial instrument



Note: Share of complaints from quarterly-reporting NCAs (n=14) received direct from consumers 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.127

EU complaints by MiFID II service category



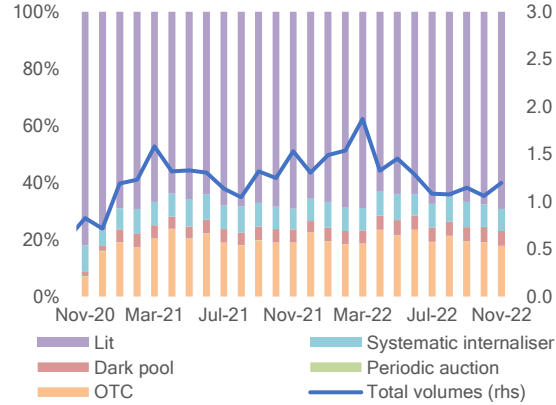
Note: Share of complaints for quarterly-reporting NCAs (n=14) received direct from consumers and via firms recorded as associated with a given MiFID service, excluding complaints with no such category recorded, all reporting channels, %. "Total with MiFID service reported"=Total complaints received via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

Infrastructures and services

Trading venues and MiFID entities

A.128

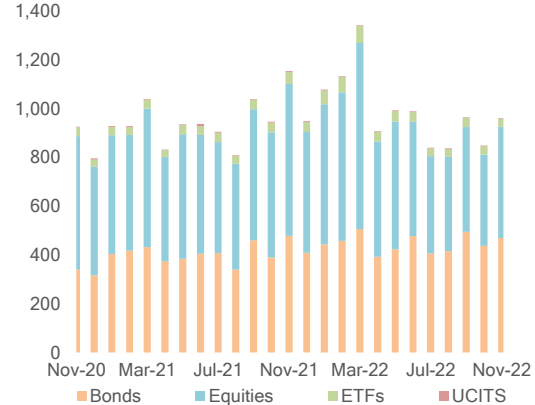
EU equity trading by trading type



Note: Type of equity trading in the EEA as a percentage of total equity turnover. Total equity trading turnover in EUR trillion (rhs). Last available data point is October 2022. Poland data included from 2021 onwards. Sources: FIRDS, FITRS, ESMA.

A.129

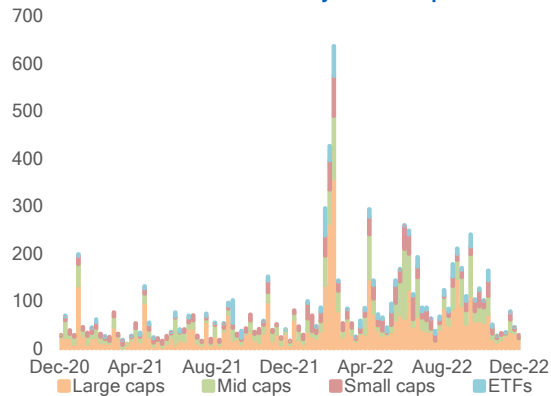
EU trading turnover by type of assets



Note: Monthly turnover on EEA30 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.130

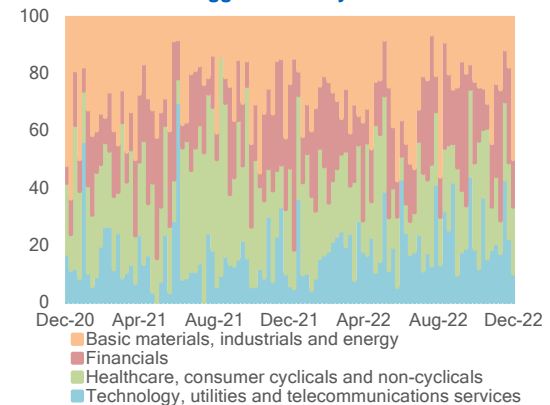
EU circuit breaker occurrences by market capitalisation



Note: Weekly number of circuit-breaker trigger events by type of financial instrument and by market cap registered on 29 EEA30 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. Sources: Morningstar Real-Time Data, ESMA.

A.131

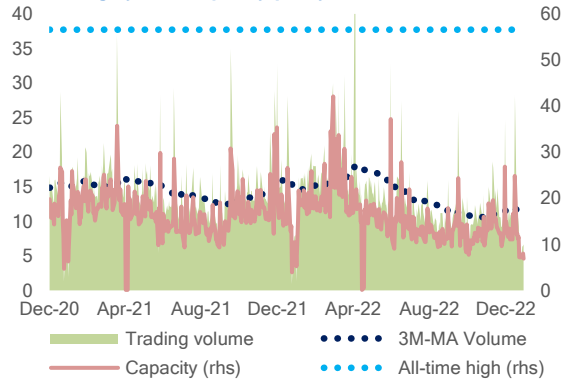
EU circuit breaker trigger events by sector



Note: Percentage of circuit-breaker trigger events by economic sector registered on 29 EEA30 trading venues for all constituents of the STOXX Europe Large/Mid/Small 200. Results displayed as weekly aggregates. Sources: Morningstar Real-Time Data, ESMA.

A.132

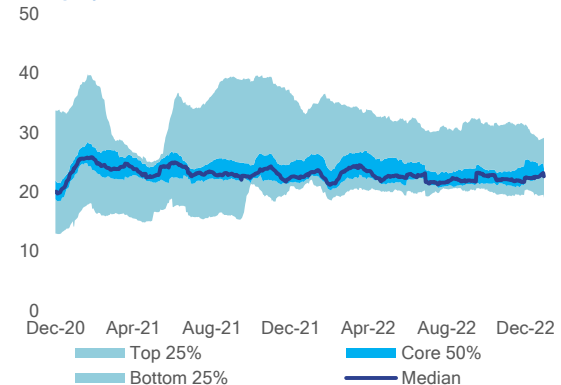
EU trading system capacity proxy



Note: Daily and 3M-MA of trading volumes on 29 EEA30 trading venues for all constituents of the STOXX Europe Large/Mid/Small 200 and a large sample of ETFs tracking these indices or some of their subindices, in EUR bn. Capacity computed as the average across trading venues of the ratio of daily trading volume over maximum volume observed since 31/03/2016, in %. Sources: Morningstar Real-Time Data, ESMA.

A.133

EU equity market concentration

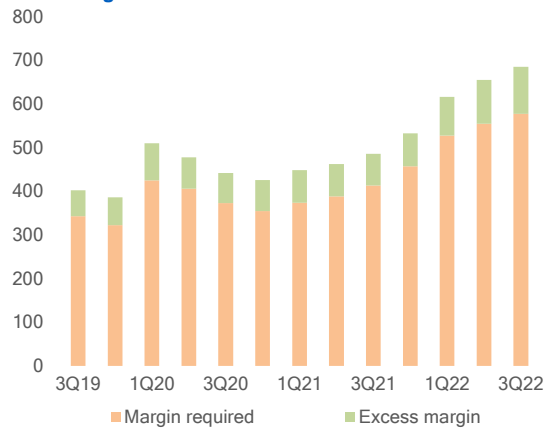


Note: Concentration of notional value of equity trading by national indices computed as a 1M-MA of the Herfindahl-Hirschmann Index, in %. Cboe indices included are AT 20, BE 20, DE 30, DK 25, ES 35, FI 25, FR 40, IE 20, IT 40, NL 25, PT 20 and SE 30. Sources: Cboe, ESMA.

Central counterparties

A.134

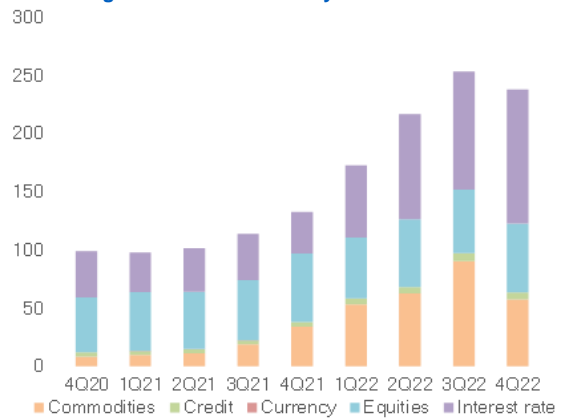
Initial margins held at EU and UK CCPs



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

A.136

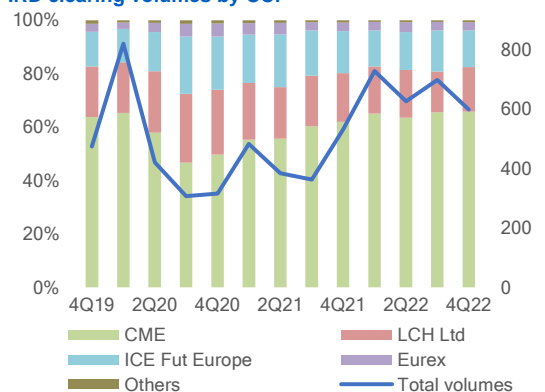
Initial margins held at EU CCPs by asset class



Note: Outstanding amounts of initial margin required and excess collateral received by EU27 CCPs for derivatives (CCP.A, CC&G, BME data missing), in EUR bn.
Sources: TRs, ESMA.

A.138

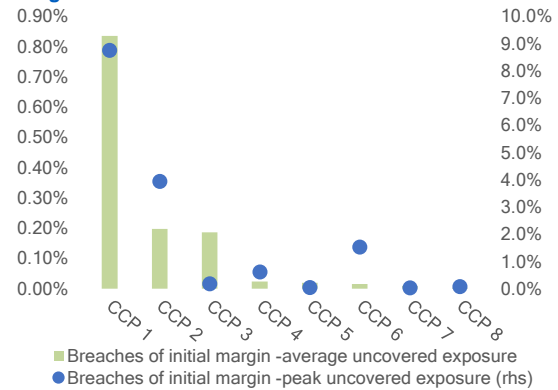
IRD clearing volumes by CCP



Note: Quarterly notional volumes cleared for OTC and ETD IRDs in EUR, USD, JPY or GBP. Market shares by CCP in % of total quarterly volumes cleared for these products. Total volumes in EUR tn.
Sources: Clarus Financial Technology, ESMA.

A.135

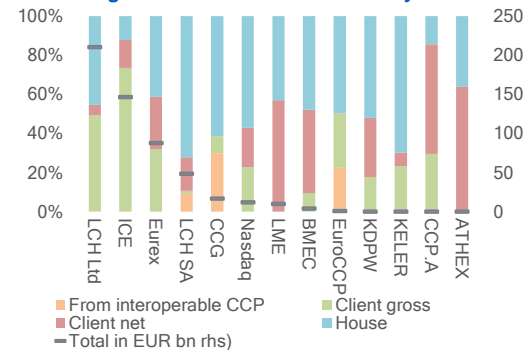
Margin breaches at selected EU CCPs



Note: Average and maximum margin breach size over the past 12 month at selected EU CCPs, as a percentage of the total margin held, as of 30 september 2022. (Data for Athex Clearing, BME Clearing, CC&G and Euro CCP not reported)
Sources: Clarus Financial Technology, PQD, ESMA.

A.137

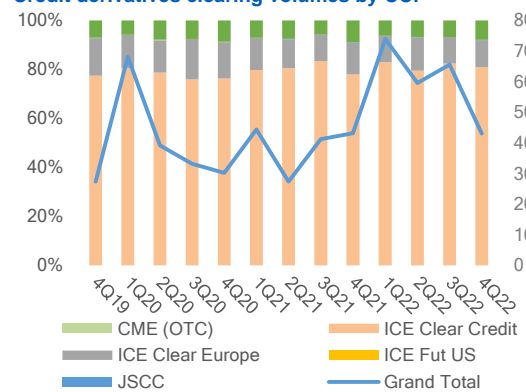
Initial margins held at EU and UK CCPs by account



Note: Total initial margin required, split by house accounts (participants positions on their own account), client gross (when initial margin for the positions of indirect participants must be provided for each indirect participant's own position) and client net (when positions are netted within a group of clients). As of 30th June 2022.
Sources: Clarus Financial Technology, CPMI-IOSCO PQD, ESMA.

A.139

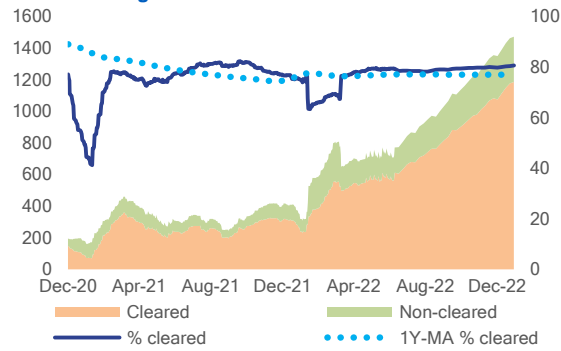
Credit derivatives clearing volumes by CCP



Note: Quarterly notional volumes cleared for CDS, CDX and CDX futures & swaptions in EUR, USD, JPY or GBP. Market shares by CCP in % of total quarterly volumes cleared for these products. Total volumes in EUR tn.
Sources: Clarus Financial Technology, ESMA.

A.140

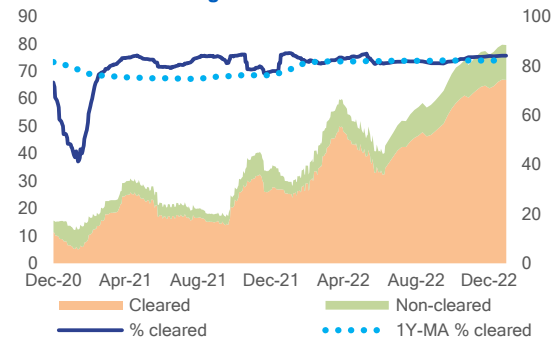
EU IRD trading volumes



Note: Daily trading volumes for EU27-currency-denominated IRD products. Products include IRS, basis swaps, FRA, inflation swaps, OIS. 40-day moving average notional, USD bn. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository. Sources: ISDA SwapsInfo, ESMA.

A.141

EU CDS index trading volumes

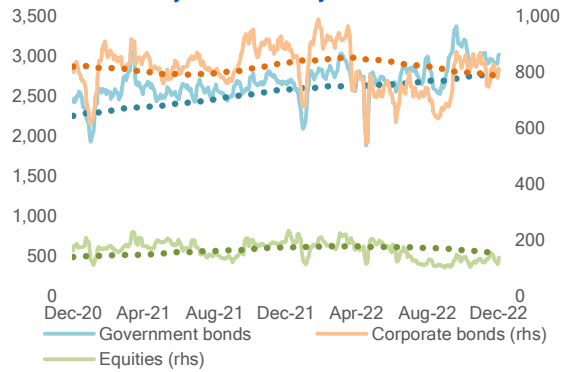


Note: Daily trading volumes for the main EUR CDS indices including Itraxx Europe, Itraxx Europe Crossover, Itraxx Europe Senior Financials. 40-day moving average notional, USD bn. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository.

Central securities depositories

A.142

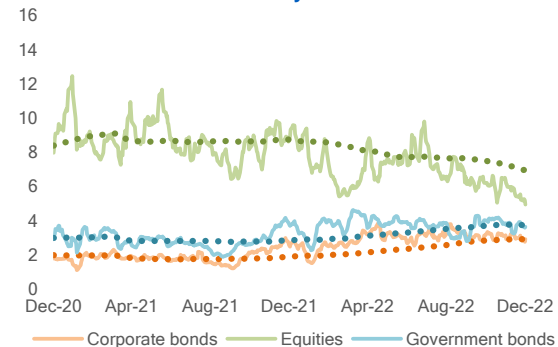
Settlement activity in EU CSDs by asset class



Note: Total value of settlement instructions in the EEA30 as reported by NCAs, in EUR bn, one-week moving averages. Missing data for some CSDs prior to mid-March 2020. Dotted lines represent one-year moving averages of the respective asset classes.

A.143

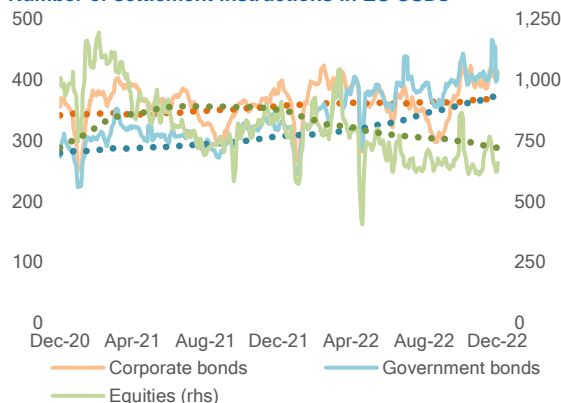
Settlement fails in EU CSDs by asset class



Note: Share of failed settlement instructions in the EEA30, in % of value, one-week moving averages. Missing data for some CSDs prior to mid-March 2020. Dotted lines represent one-year moving averages of the respective asset classes. Sources: NCAs, ESMA.

A.144

Number of settlement instructions in EU CSDs



Note: Total number of settlement instructions in the EEA30 as reported by NCAs, in thousand, one-week moving averages. Missing data for some CSDs prior to mid-March 2020. Dotted lines represent one-year moving averages of the respective asset classes. Sources: NCAs, ESMA.

A.145

Number of failed settlement instructions in EU CSDs

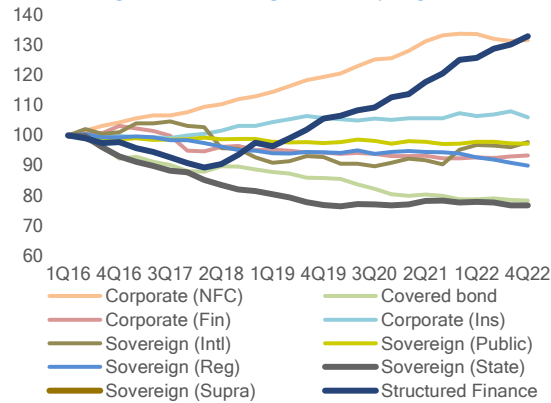


Note: Share of failed settlement instructions in the EEA30, in % of number of instructions, one-week moving averages. Missing data for some CSDs prior to mid-March 2020. Dotted lines represent one-year moving averages of the respective asset classes. Sources: NCAs, ESMA.

Credit rating agencies

A.146

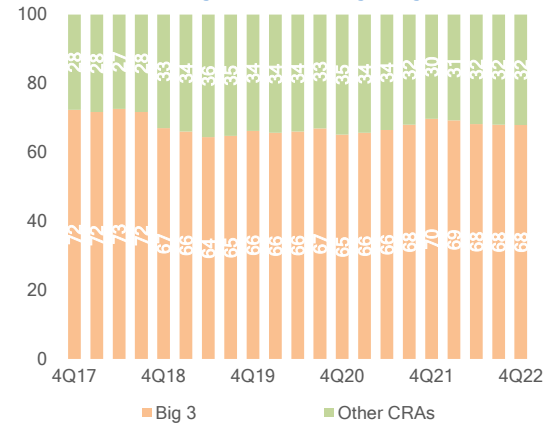
Outstanding EU credit ratings issued by Big 3 CRAs



Note: Evolution of the number of outstanding EEA30 issuer and instrument ratings by debt category, indexed 1Q16=100. S&P, Moody's and Fitch. NFC - non financial, Fin - financial, Ins - insurance, Intl - international, Reg - regional, Supra - supranational.

A.147

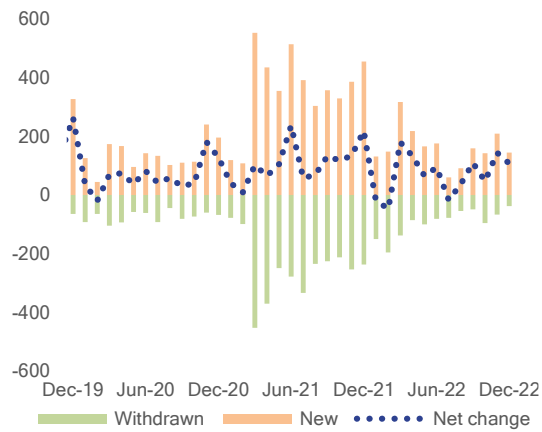
Share of outstanding EU credit ratings: Big 3 CRAs vs. rest



Note: Share of outstanding ratings of EEA30 issuers and instruments from Big 3 CRAs (S&P, Moody's and Fitch) and ratings from all other CRAs in %. Sources: RADAR, ESMA.

A.148

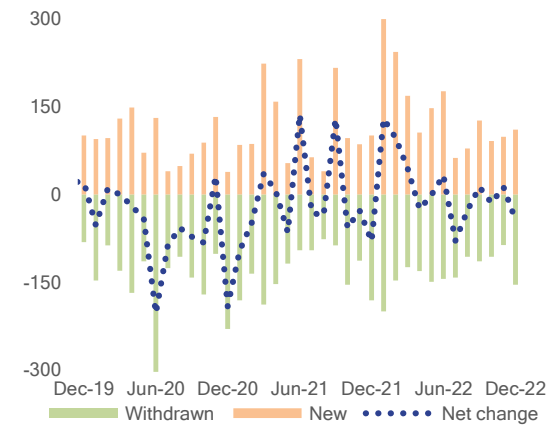
Changes in outstanding EU SFI ratings



Note: Number of withdrawn and new ratings for structured finance instruments, EEA30 ratings. Sources: RADAR, ESMA.

A.149

Changes in outstanding EU covered bond ratings

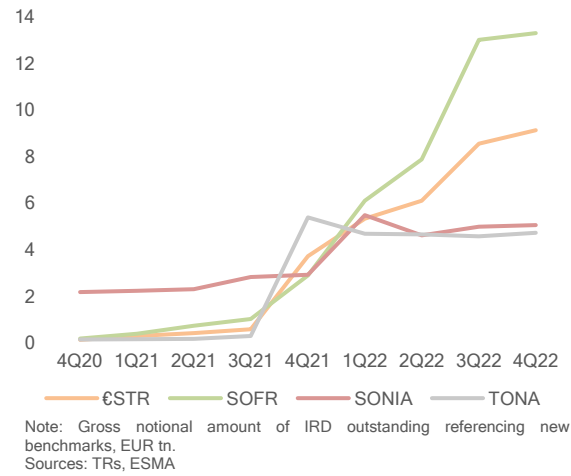


Note: Number of withdrawn and new ratings for covered bond ratings, EEA30 ratings. Sources: RADAR, ESMA.

Financial benchmarks

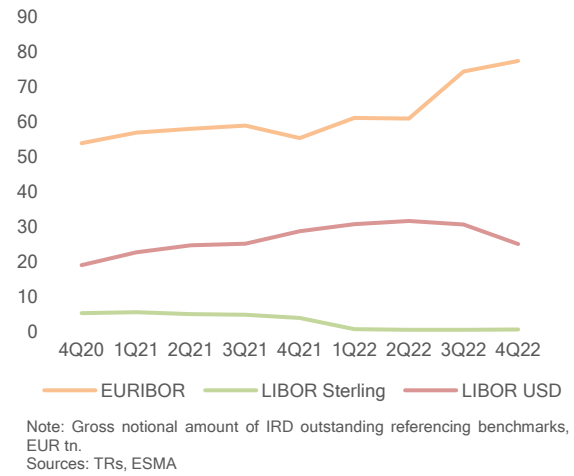
A.150

IRDs linked to new RFRs



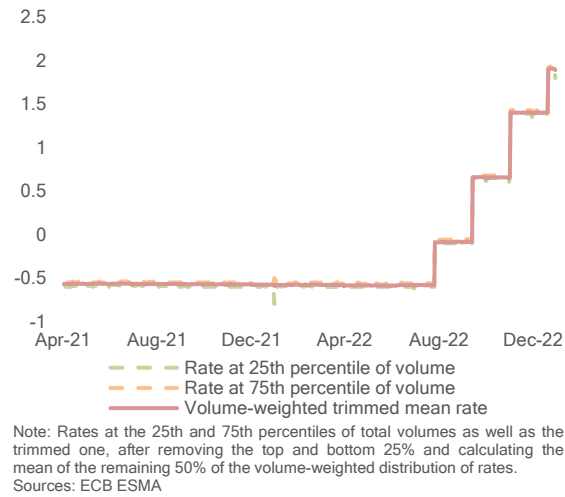
A.151

IRDs linked to Euribor and Libor



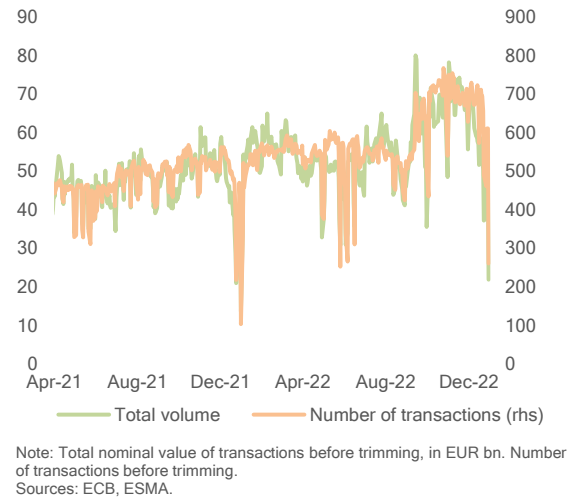
A.152

€STR rate



A.153

€STR volumes

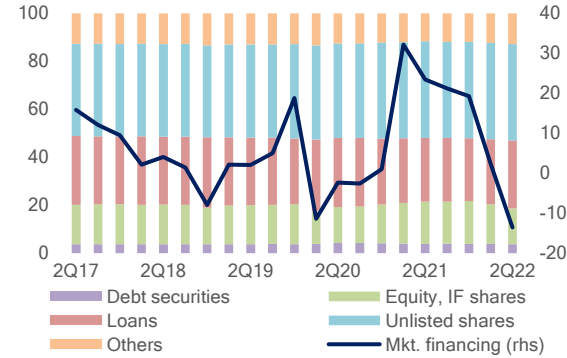


Market-based finance

Capital markets financing

A.154

Total EU market financing

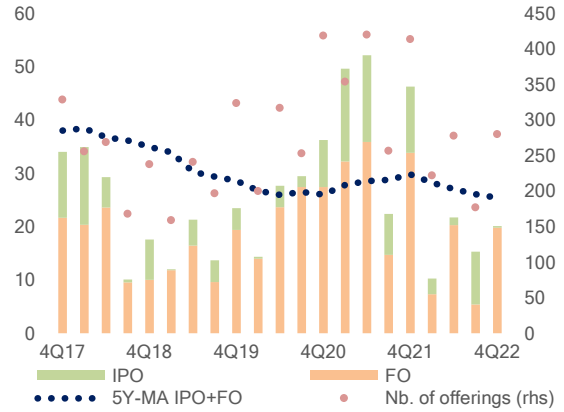


Note: Liabilities of EA NFCs, by debt type as a share of total liabilities. Others include financial derivatives and employee stock options; insurance, pensions and standardised guarantee schemes; trade credits and advances of NFC; and other accounts receivable/payable. Mkt. financing (rhs)= annual growth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

Sources: ECB, ESMA.

A.155

EU equity issuance by deal type

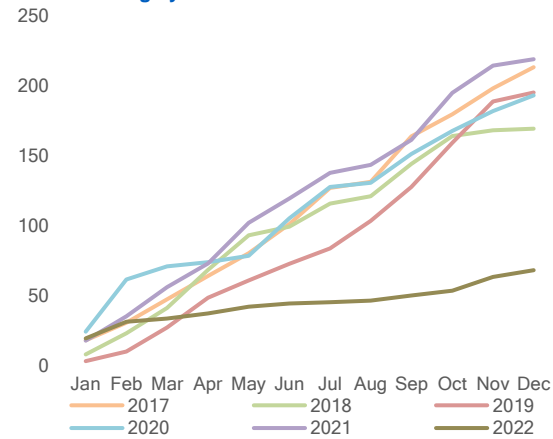


Note: Equity gross issuance in the EEA30 by type, EUR bn, and number of equity offerings. 5Y-MA = 5-year moving average of the total value of equity offerings.

Sources: Refinitiv EIKON, ESMA.

A.156

Cumulative high yield bond issuance

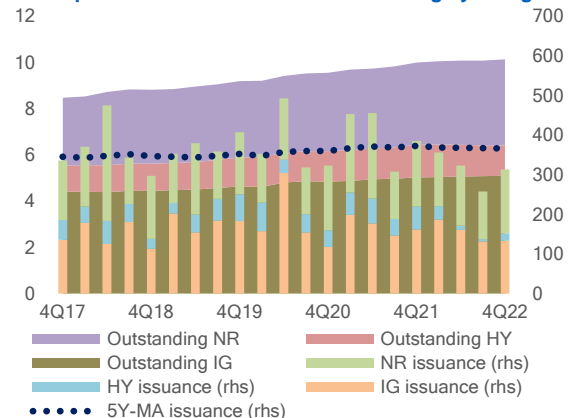


Note: Cumulative amount of gross HY corporate bond issuance in the EEA30 since 2017. EUR bn.

Sources: Refinitiv Eikon, ESMA.

A.157

EU corporate bond issuance and outstanding by rating

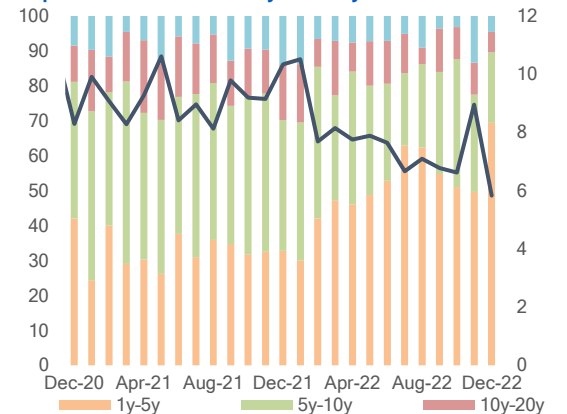


Note: Quarterly investment grade (rating >= BBB-), high-yield (rating < BBB-) and non-rated corporate bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn. Maturities < 12 months are excluded.

Sources: Refinitiv EIKON, ESMA.

A.158

Corporate bond issuance by maturity buckets

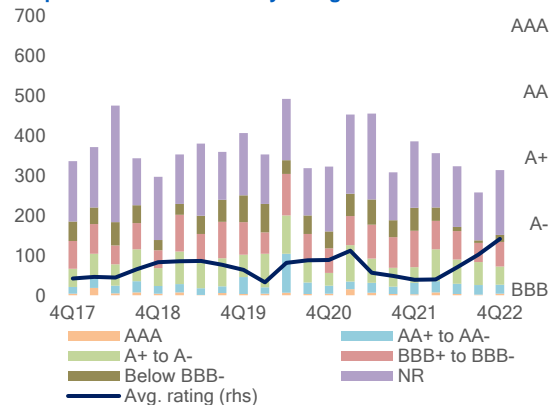


Note: Monthly share of corporate bond issuance by maturity bucket, in % (lhs) and average weighted maturity at issuance (AWM), in years (rhs).

Sources: Refinitiv Eikon, ESMA.

A.159

Corporate bond issuance by rating class

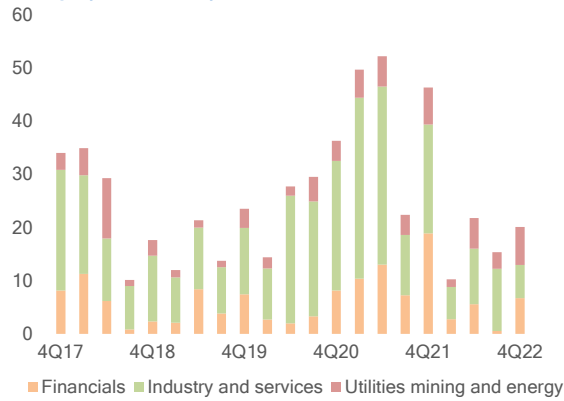


Note: Corporate bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA+=2, etc.) excluding non-rated bonds. Maturities < 12 months are excluded.

Sources: Refinitiv EIKON, ESMA.

A.160

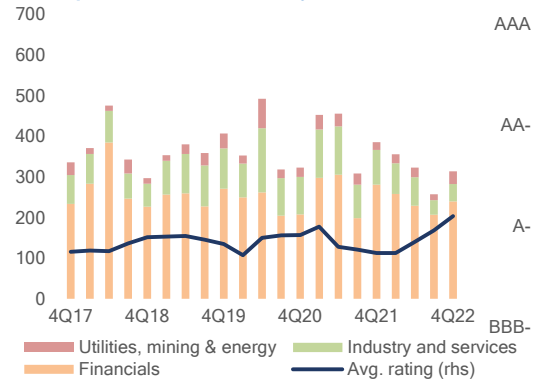
EU equity issuance by sector



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.161

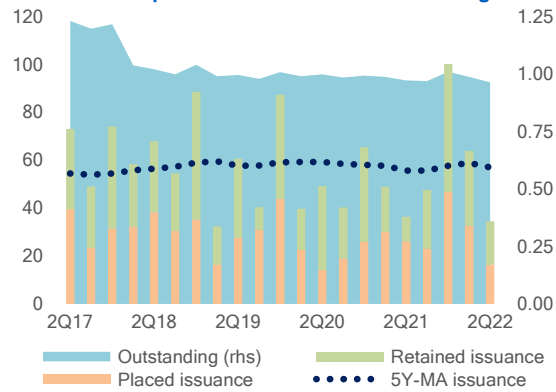
EU corporate bond issuance by sector



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

A.162

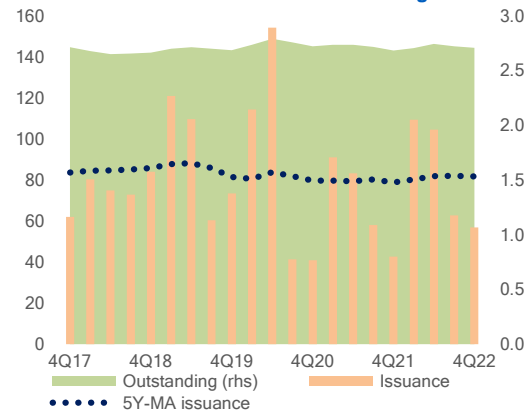
EU securitised products issuance and outstanding



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.163

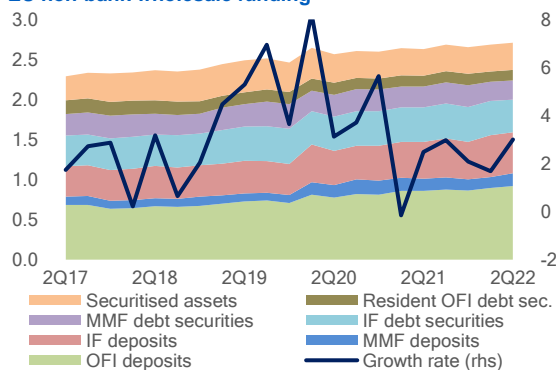
EU covered bond issuance and outstanding



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

A.164

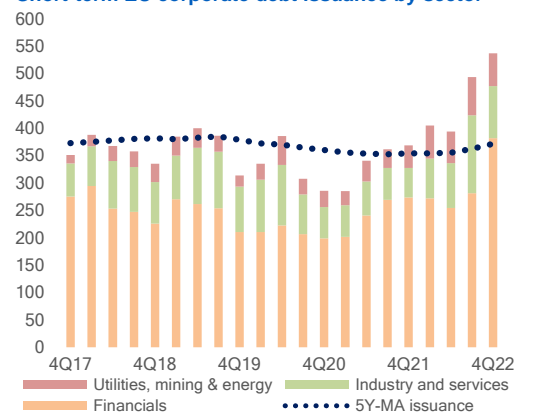
EU non-bank wholesale funding



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

A.165

Short-term EU corporate debt issuance by sector

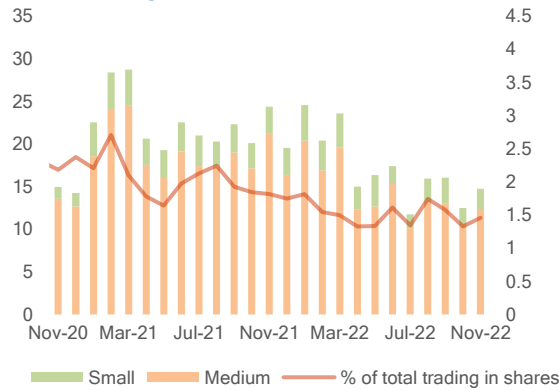


Note: Short-term corporate debt gross issuance in the EEA30 by sector, EUR bn. Short-term=Maturities < 12 months.
Sources: Refinitiv EIKON, ESMA.

SMEs

A.166

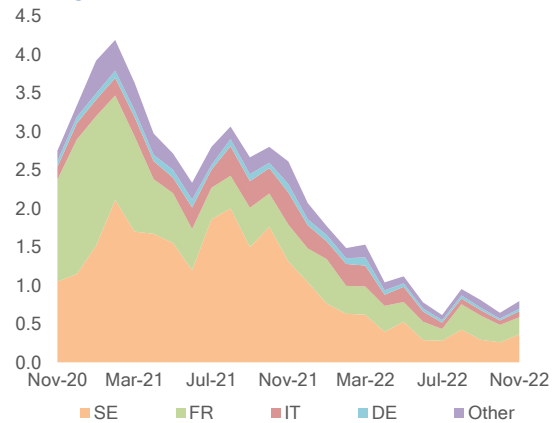
EU SME trading volumes



Note: Monthly trading volumes on EEA30 venues of SME shares, EUR bn (lhs), and % share of the total trading in shares (rhs). 'Small'=(0,20mn), 'Medium'=(20mn,200mn). 2022 classification of SMEs is based on share market capitalisation in 2021.
Sources: FIRDS, FITRS, ESMA.

A.167

Trading volumes on EU SME Growth Markets

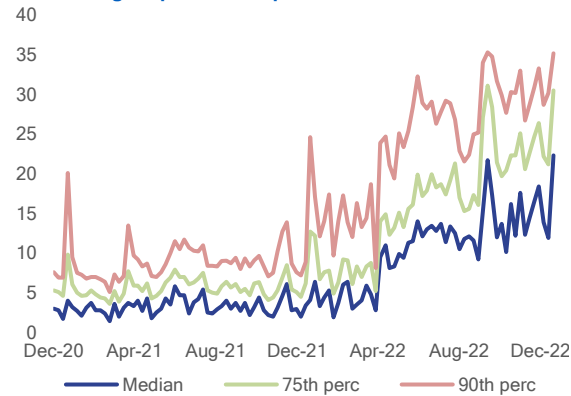


Note: SME trading volumes on GMs by segment MIC domicile and month, in EUR bn.
Sources: FIRDS, FITRS, ESMA.

Market-based credit intermediation

A.168

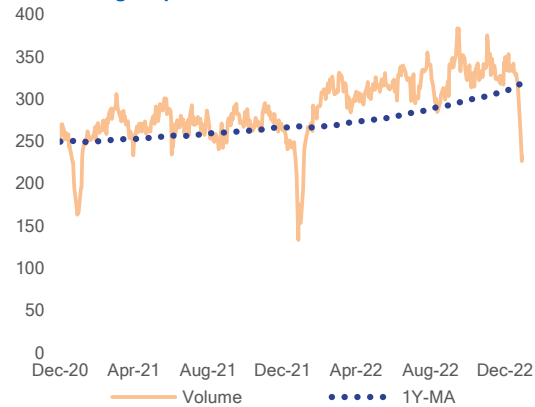
EU sovereign repo market specialness



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

A.169

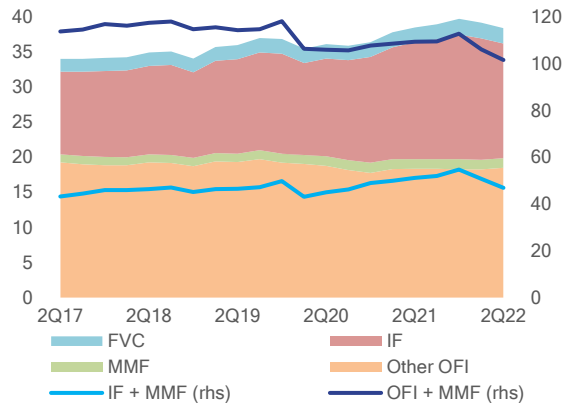
EU sovereign repo market turnover



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

A.170

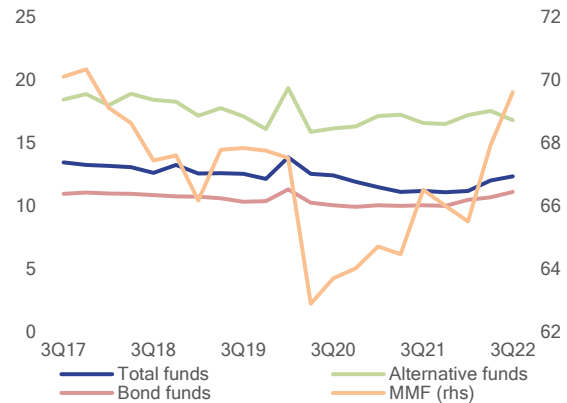
Total assets of EU MMFs and other financial institutions



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.171

EU 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.172

Credit terms in EU 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.173

EU securities financing conditions



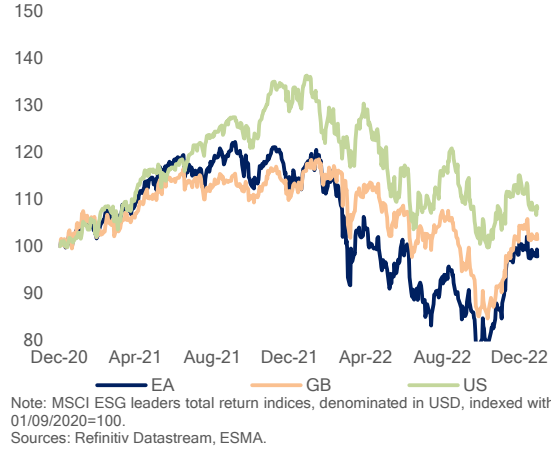
Note: Weighted average of responses to the questions "Over the past three months, how has demand for funding/how have liquidity and functioning for all EUR-denominated collateral types changed?" 1=decreased/deteriorated considerably, 2=decreased/deteriorated somewhat, 3=remained basically unchanged,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

Sustainable finance

ESG investing

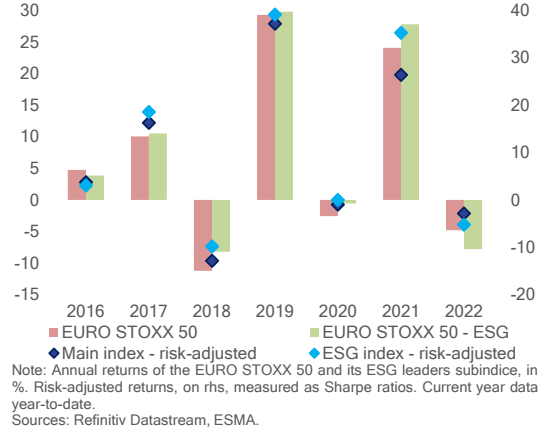
A.174

Global ESG leaders index performance



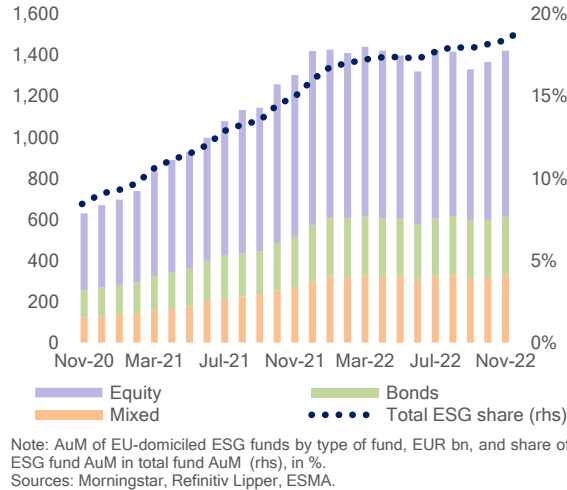
A.175

EU ESG leaders index risk-adjusted returns



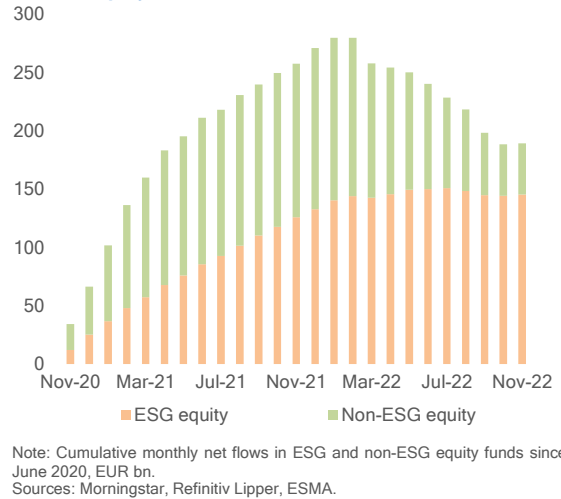
A.176

EU ESG fund assets



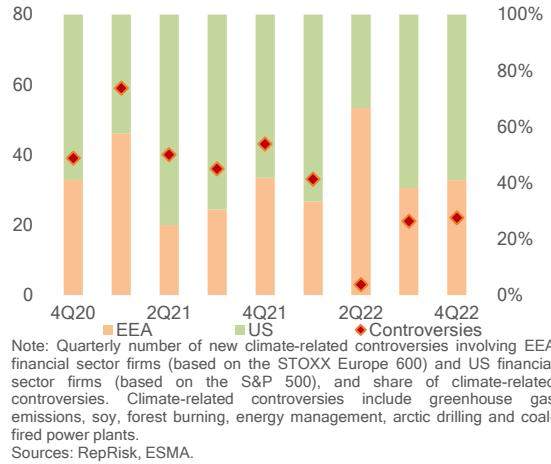
A.177

EU ESG equity fund flows



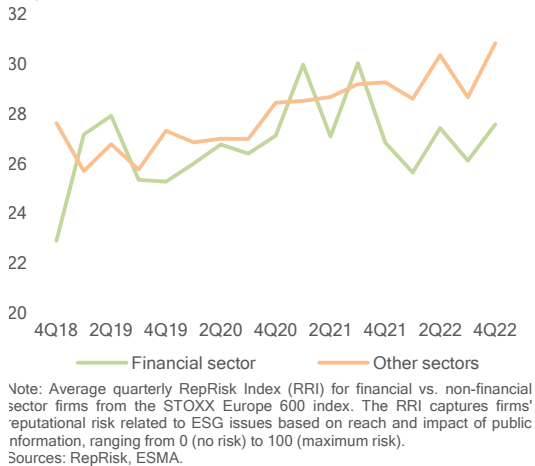
A.178

Number of EU and US climate-related controversies



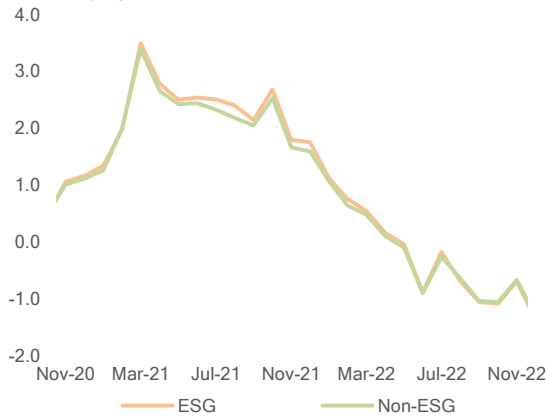
A.179

Reputational Risk Index of EU firms



A.180

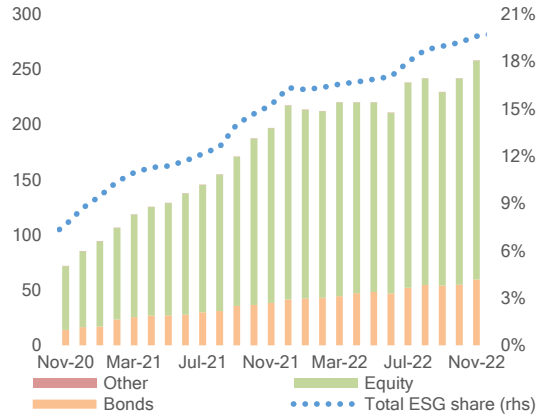
EU ESG equity fund returns



Note: ESG and non-ESG equity funds' annual average monthly returns, asset weighted, in %.
Sources: Morningstar, Refinitiv Lipper, ESMA.

A.181

EU ESG ETF assets

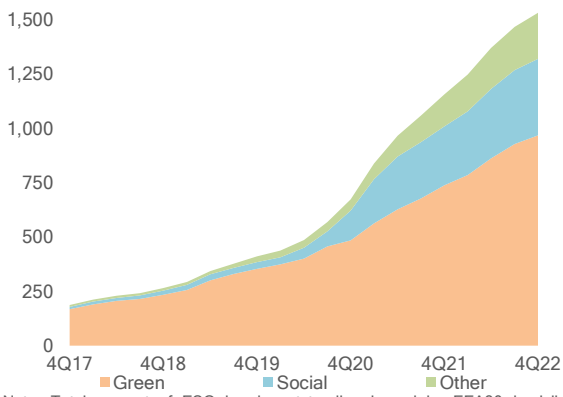


Note: AuM of EU-domiciled ESG ETFs by type of fund, EUR bn, and share of ESG ETF AuM in total ETF AuM (rhs), in %.
Sources: Morningstar, Refinitiv Lipper, ESMA.

Sustainable debt

A.182

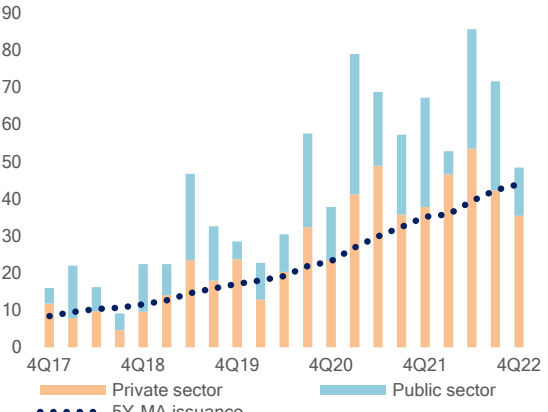
EU ESG bonds outstanding



Note: Total amount of ESG bonds outstanding issued by EEA30-domiciled issuers, EUR bn.
Sources: Refinitiv EIKON, ESMA.

A.183

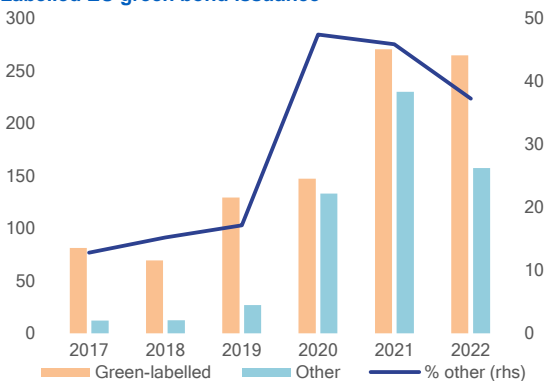
EU green bond quarterly issuance



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

A.184

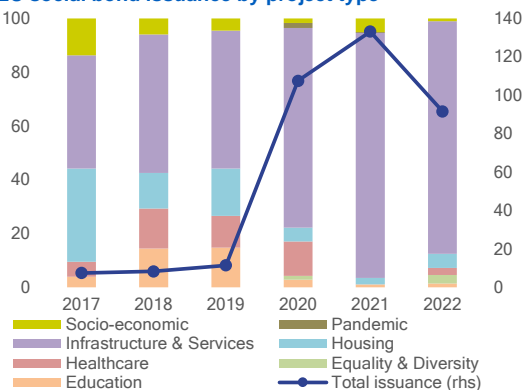
Labelled EU green bond issuance



Note: ESG bond gross issuance in the EEA30, EUR bn, and share of other ESG bonds (rhs), in %. Other = all ESG bonds not labelled "Green" by the Climate Bond Initiative and/or aligned with the ICMA Green Bond Principles.
Sources: Refinitiv EIKON, ESMA.

A.185

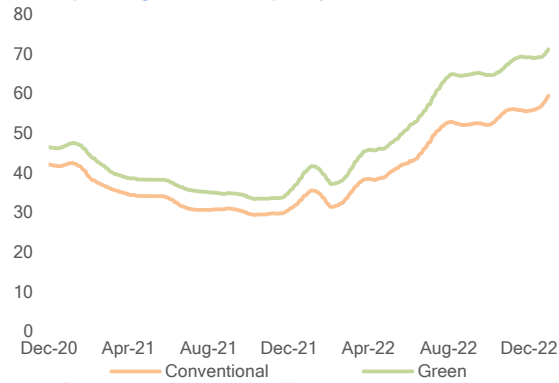
EU social bond issuance by project type



Note: Social bond gross issuance in the EEA30 by project type, in %, as a share of total social bond gross issuance (rhs), in EUR bn.
Sources: Refinitiv EIKON, ESMA.

A.186

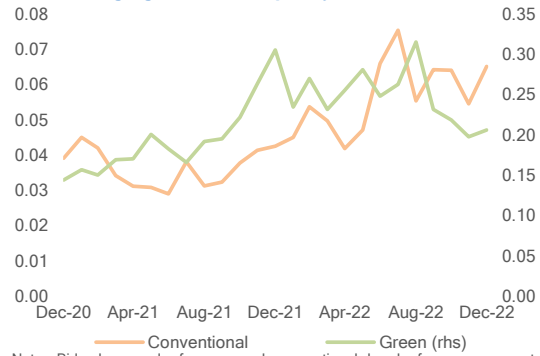
EU corporate green bond liquidity



Note: One-month moving average of the bid-ask spread of green and conventional bonds from green bond issuers included in the Markit iBoxx EUR Corporate bond index, in bps.
Sources: IHS Markit, ESMA.

A.187

EU sovereign green bond liquidity

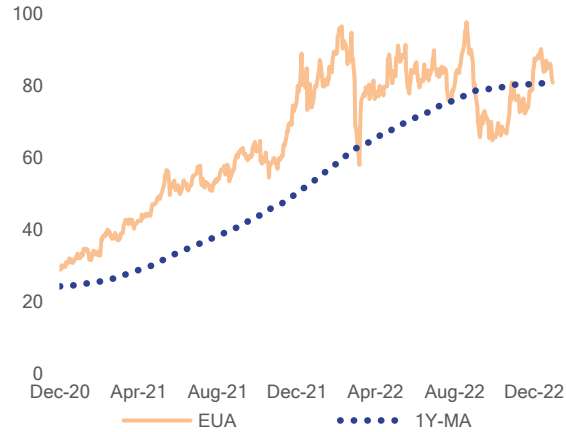


Note: Bid-ask spread of green and conventional bonds from government, supranational and agency green bond issuers, as a monthly average of bid-ask spreads weighted by trading volumes across 12 EU27 domestic markets (AT, BE, DE, ES, FI, FR, GR, IE, IT, NL, PT and SI) and Euro MTS, in EUR.
Sources: MTS, ESMA.

Carbon markets

A.188

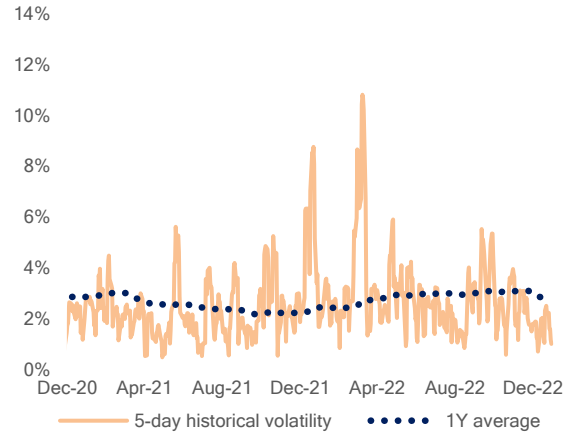
EU emission allowance prices



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

A.189

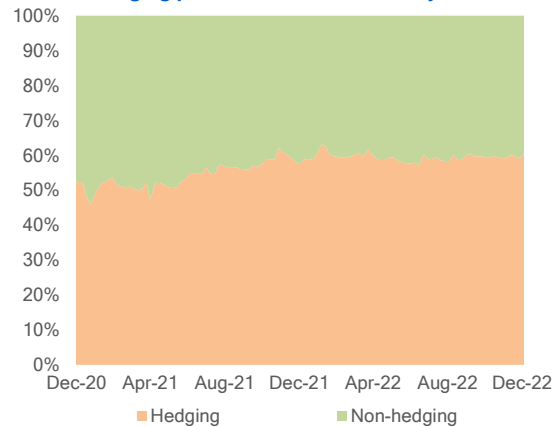
EU emission allowance returns volatility



Note: Rolling 5-day standard deviation of daily changes in EU emission allowance spot prices, in %.
Sources: Refinitiv EIKON, ESMA.

A.190

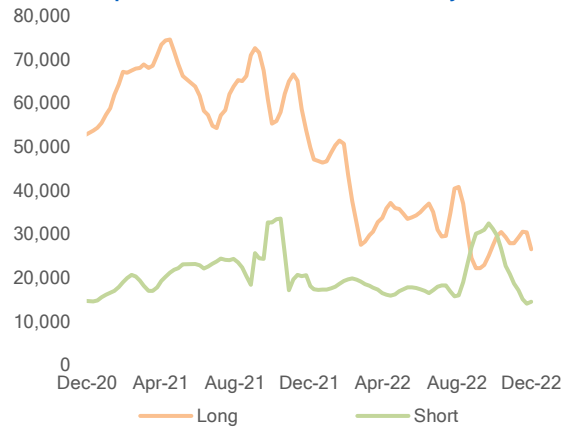
Share of hedging positions in EUA futures by non-financials



Note: Share of hedging and non-hedging positions in %.
Sources: ESMA commodity derivatives weekly position reporting.

A.191

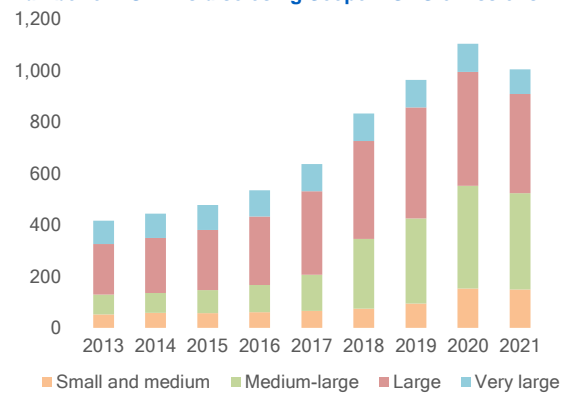
Number of positions in EUA derivatives held by funds



Note: Weekly number of long and short positions in EU emission allowance derivative contracts held by investment funds, four-week moving averages.
Sources: ESMA commodity derivatives weekly position reporting.

A.192

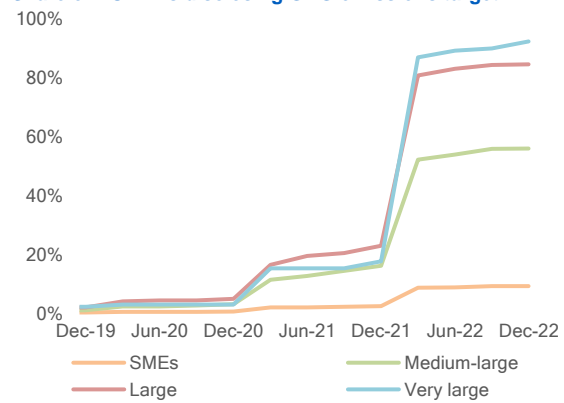
Number of EU firms disclosing Scope 1 GHG emissions



Note: Number of EEA-domiciled firms listed in the EU disclosing Scope 1 (direct) greenhouse gas emissions, by market capitalisation and statement year. SMEs=below 200mn; Medium-large=from 200mn to 2bn; Large=from 2bn to 20bn; Very large=above 20bn.
Sources: Refinitiv EIKON, FIRDS, ESMA.

A.193

Share of EU firms disclosing GHG emissions target



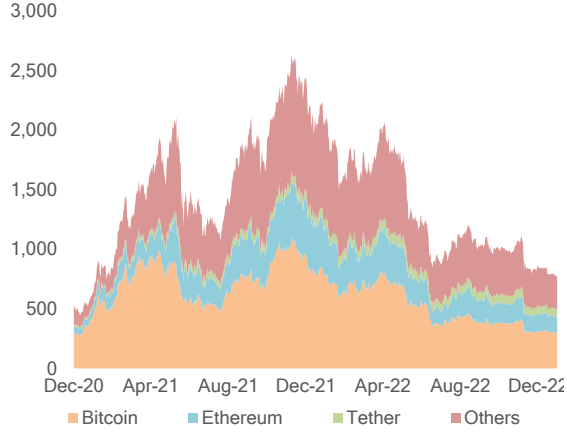
Note: Share of EEA-domiciled firms listed in the EU disclosing a greenhouse gas emission reduction target, by market capitalisation. SMEs=below 200mn; Medium-large=from 200mn to 2bn; Large=from 2bn to 20bn; Very large=above 20bn.
Sources: Refinitiv EIKON, FIRDS, ESMA.

Financial innovation

Financial innovation

A.194

Crypto asset market capitalisation



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

A.195

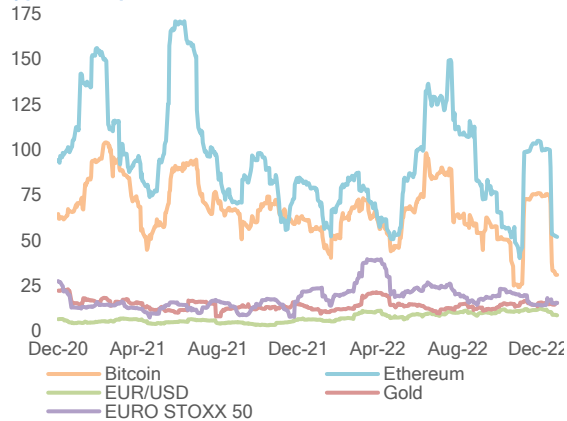
Crypto asset prices



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

A.196

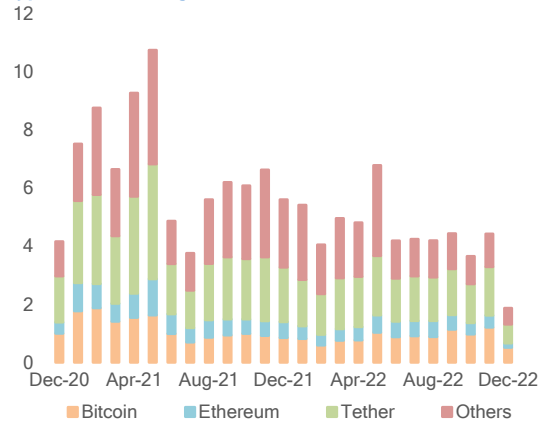
Crypto asset price volatilities



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.197

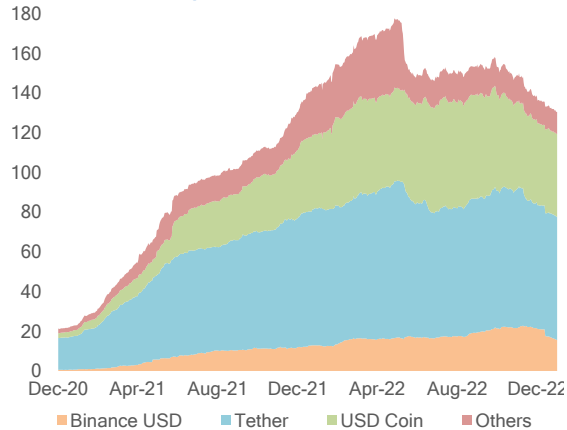
Crypto asset trading volumes



Note: Trading volumes of Bitcoin, Ethereum, Tether and other crypto-assets, in EUR tn.

A.198

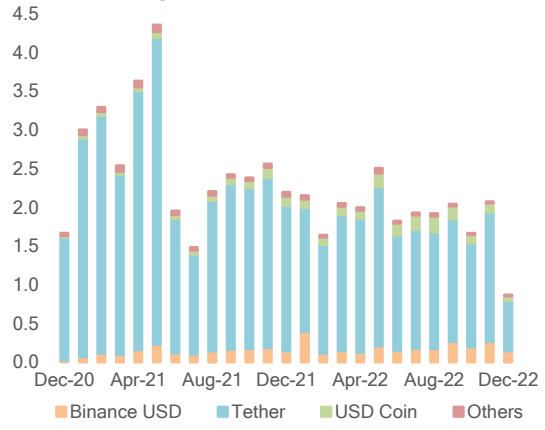
Stablecoin market capitalisation



Note: Market capitalisation of Binance USD, Tether, USD Coin and other stablecoins, in EUR bn.
Sources: CoinMarketCap, ESMA.

A.199

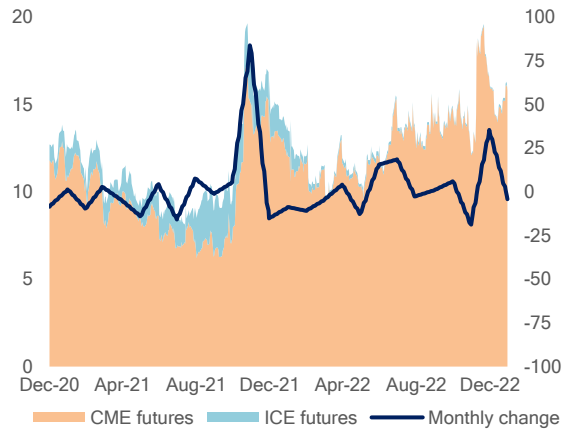
Stablecoin trading volumes



Note: Trading volumes of Binance USD, Tether, USD Coin and other stablecoins, in EUR tn.

A.200

Bitcoin futures market



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

