

TRV Statistical Annex

ESMA Report on Trends, Risks and Vulnerabilities

No.1, 2025



ESMA Report on Trends, Risks and Vulnerabilities – Statistical Annex
No. 1, 2025

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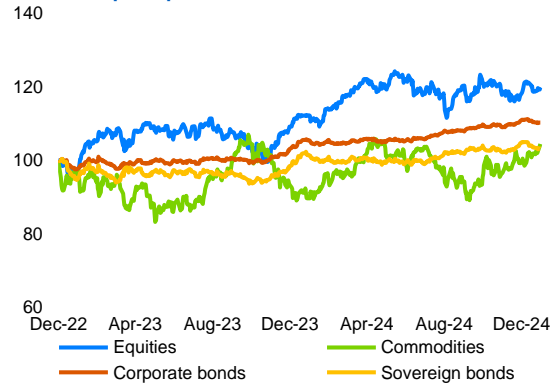
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Market environment

A.1

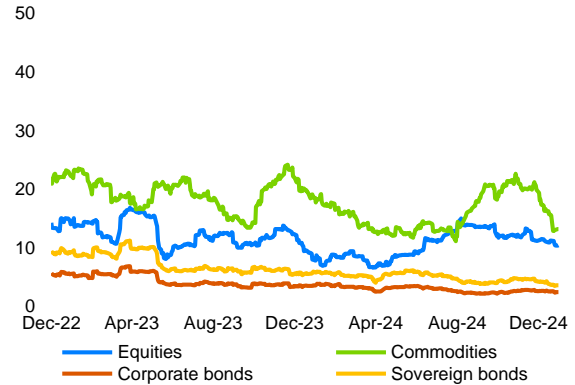
EU market price performance



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). 01/12/2022=100.
Sources: Refinitiv Datastream, ESMA.

A.2

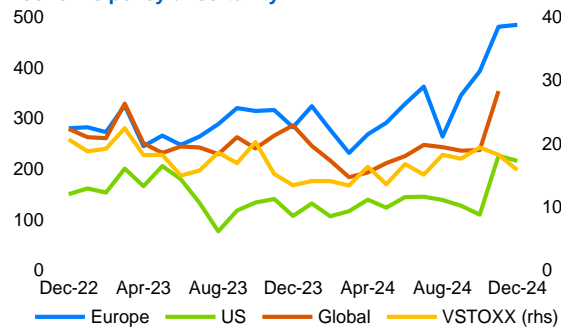
EU market volatilities



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

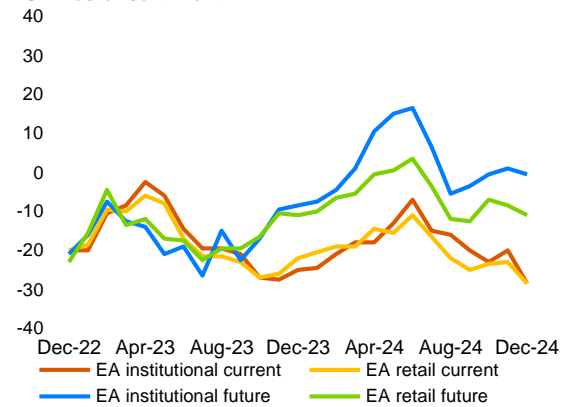
Economic policy uncertainty



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

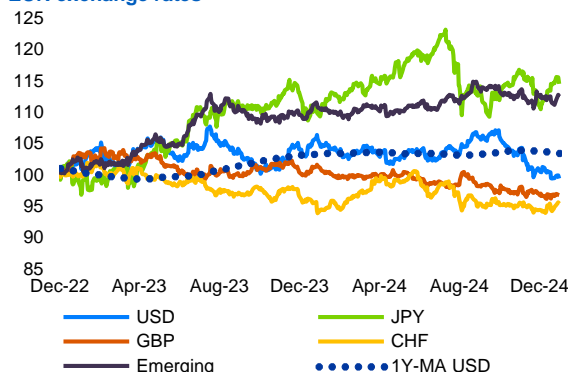
EU investor sentiment



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.5

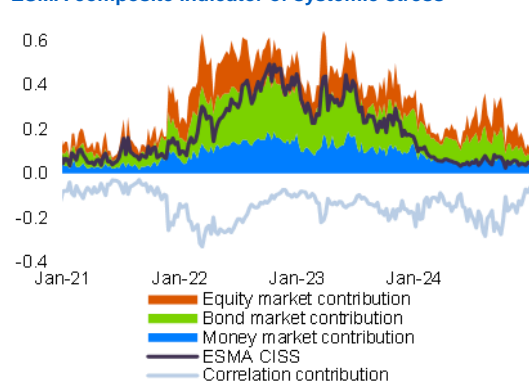
EUR exchange rates



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. 01/04/2022=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

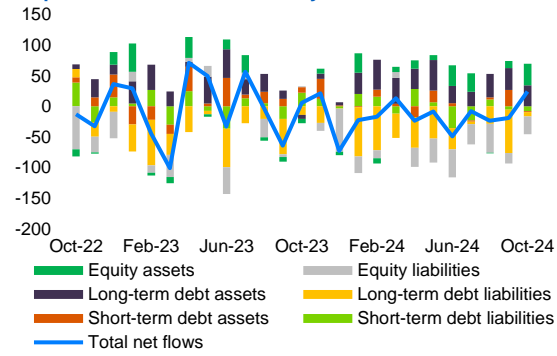
ESMA composite indicator of systemic stress



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.

A.7

EA portfolio investment flows by asset class



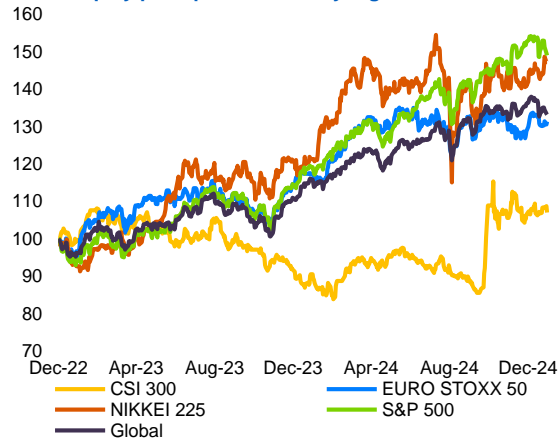
Note: Balance of Payments statistics, financial accounts, portfolio investments by asset class, EUR bn, Assets=net purchases (net sales) of non-EA securities by EA investors. Liabilities=net sales (net purchases) of EA securities by non-EA investors. Total net flows=net outflows (inflows) from (into)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

Securities markets

Equity markets

A.8

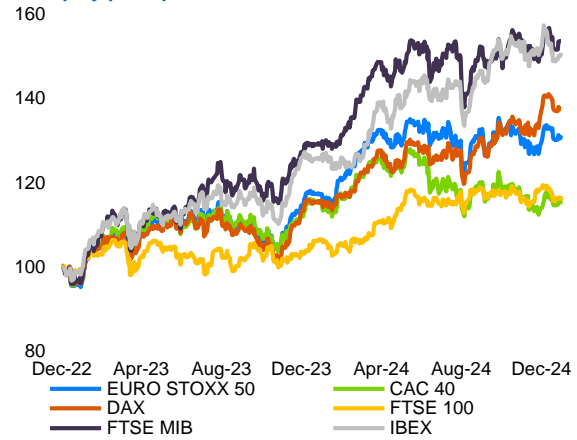
Global equity price performance by region



Note: Regional equity return indices. 01/12/2022=100.
Sources: Refinitiv Datastream, ESMA.

A.9

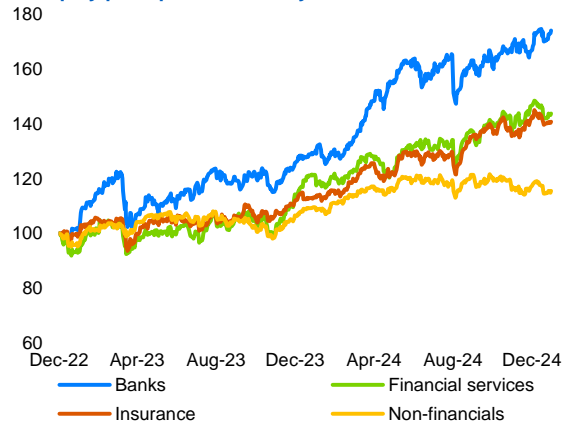
EU equity price performance of national indices



Note: European equity return indices. 01/12/2022=100.
Sources: Refinitiv Datastream, ESMA.

A.10

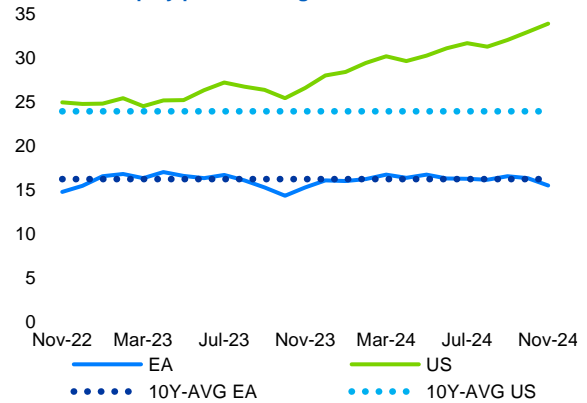
EU equity price performance by sector



Note: STOXX Europe 600 sectoral return indices. 01/12/2022=100.
Sources: Refinitiv Datastream, ESMA.

A.11

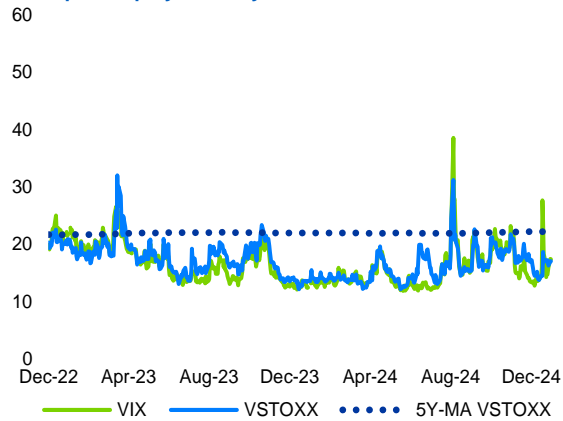
US and EU equity price-earnings ratios



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

A.12

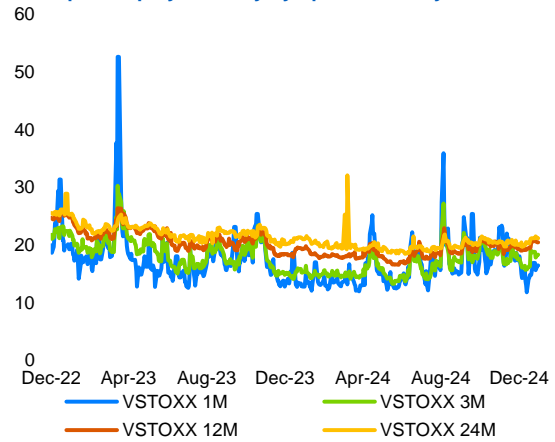
EU implied equity volatility



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

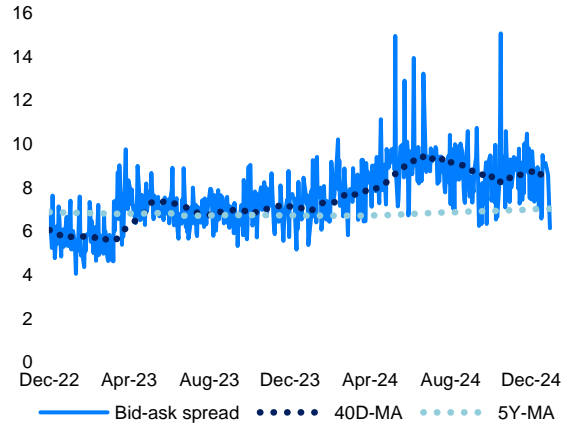
A.13

EU implied equity volatility by option maturity



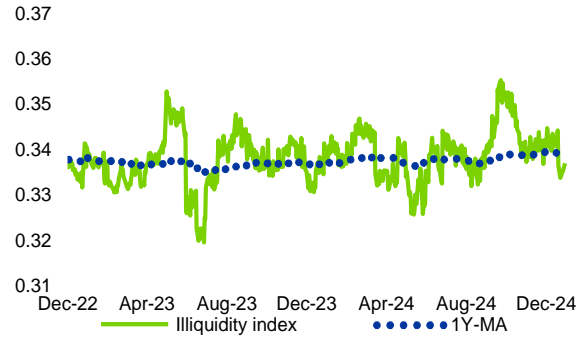
Note: EURO STOXX 50 implied volatilities, measured as price indices, in %.
Sources: Refinitiv Datastream, ESMA.

A.14
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.

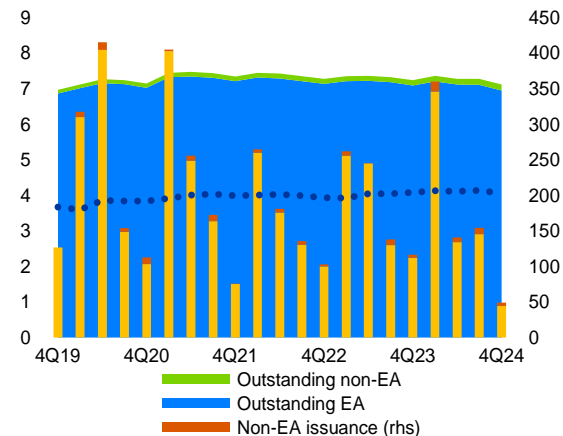
A.15
ESMA composite equity illiquidity index



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.

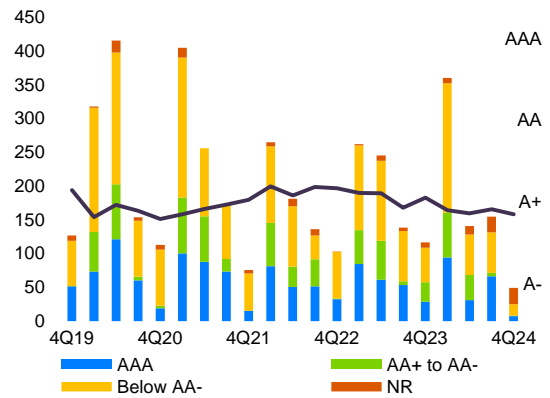
Sovereign-bond markets

A.16
EU sovereign bond issuance and outstanding



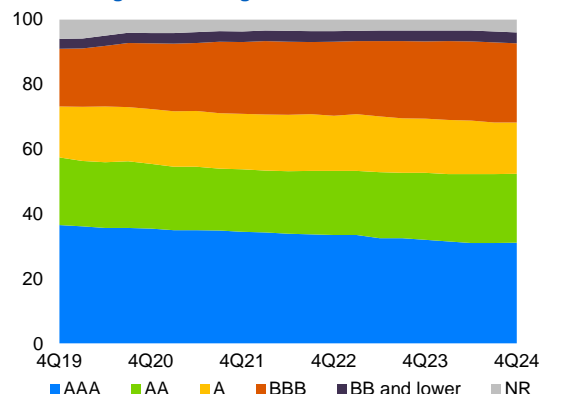
Note: Sovereign bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn. Maturities < 12 months are excluded.
Sources: Refinitiv EIKON, ESMA.

A.17
EU sovereign bond issuance by credit rating



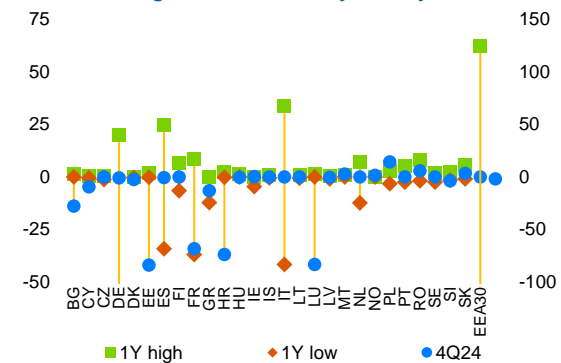
Note: Sovereign bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA+=2, etc.) excluding non-rated bonds. Maturities < 12 months are excluded.
Sources: Refinitiv EIKON,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

A.18
EU sovereign bond rating distribution



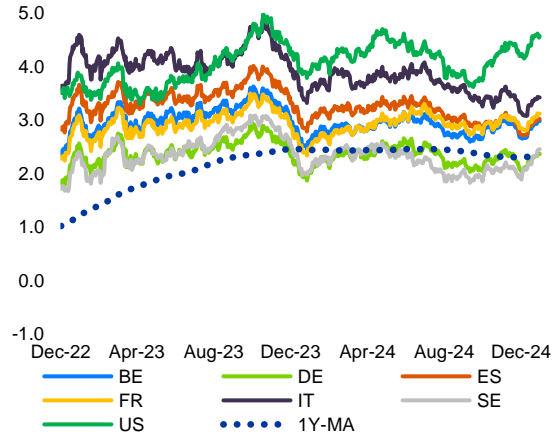
Note: Outstanding amount of sovereign bonds in the EEA30 as of issuance date by rating category, in % of the total. Maturities < 12 months are excluded.
Sources: Refinitiv EIKON, ESMA.

A.19
Net EU sovereign bond issuance by country

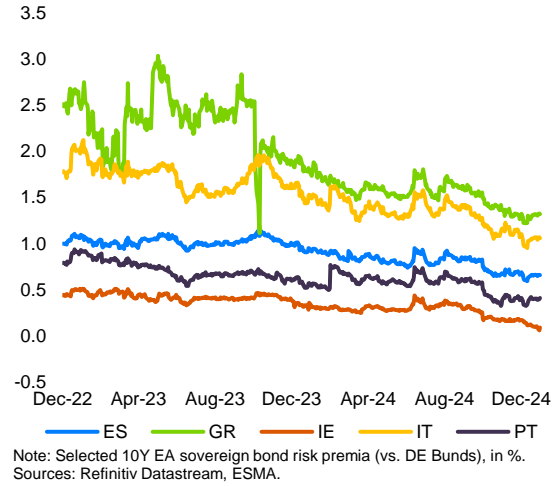


Note: Quarterly net issuance of EEA30 sovereign debt by country, EUR bn. Net issuance calculated as the difference between new issuance over the quarter and outstanding debt maturing over the quarter. Highest and lowest quarterly net issuance in the past year are reported. EEA30 total on right-hand scale.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

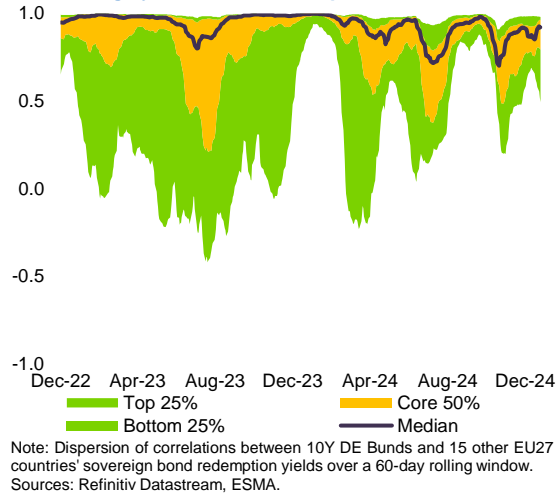
A.20
EU and US 10Y sovereign yields



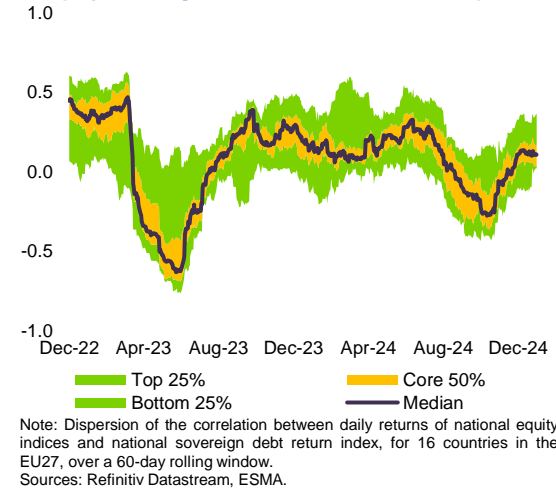
A.21
EU 10Y sovereign spreads



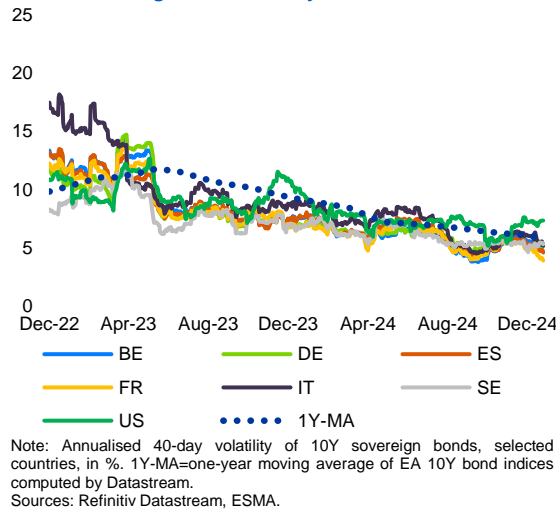
A.22
EU sovereign yield correlation dispersion



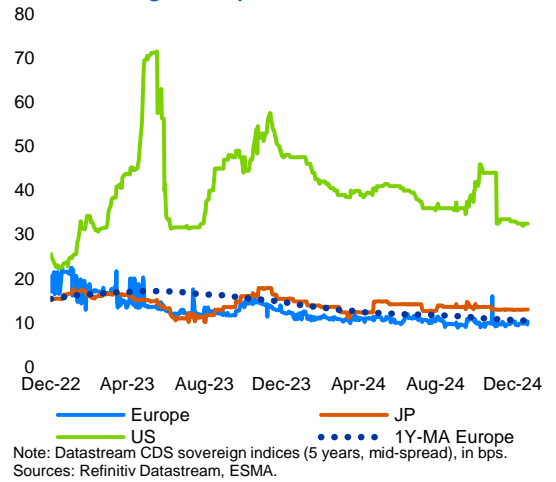
A.23
EU equity-sovereign bond returns correlation dispersion



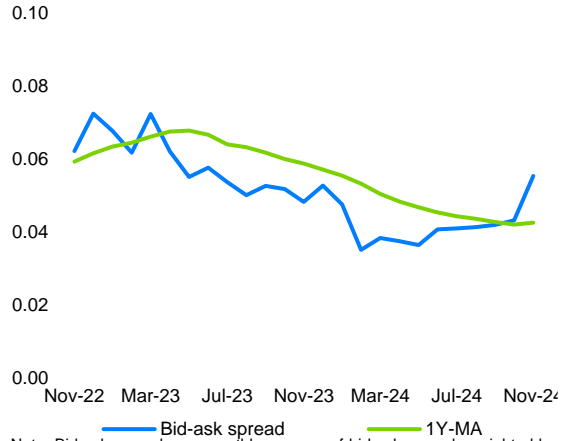
A.24
EU 10Y sovereign bond volatility



A.25
Global sovereign CDS spreads

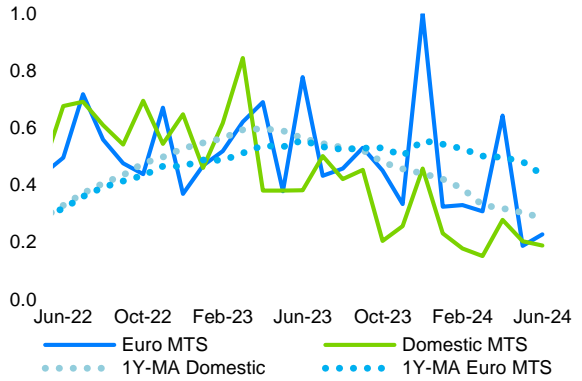


A.26
EU sovereign bid-ask spread



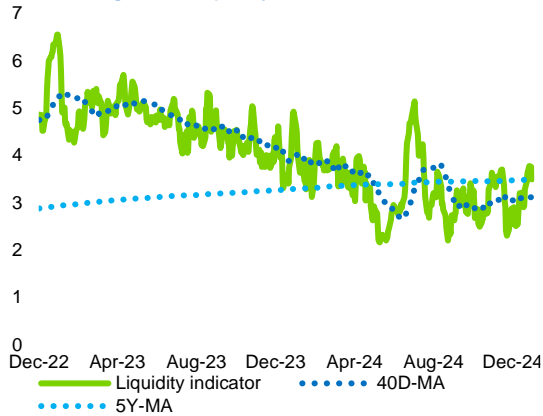
Note: Bid-ask spread as a monthly average of bid-ask spreads weighted by trading volumes for bonds both traded on one of 12 EU27 domestic markets (AT, BE, DE, ES, FI, FR, GR, IE, IT, NL, PT and SI) and Euro MTS, in EUR. Sources: MTS, ESMA.

A.27
ESMA composite sovereign bond liquidity index



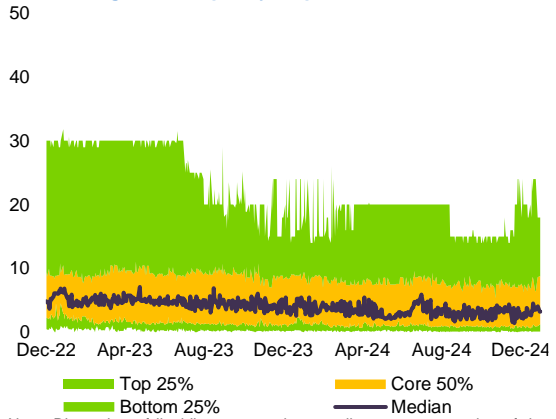
Note: Composite indicator of market liquidity in the sovereign bond market for the domestic and Euro MTS platforms, computed by applying the principal component methodology to four input liquidity measures (Amihud illiquidity coefficient, Bid-ask spread, Roll illiquidity measure and Turnover). The indicator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

A.28
EU sovereign bond liquidity



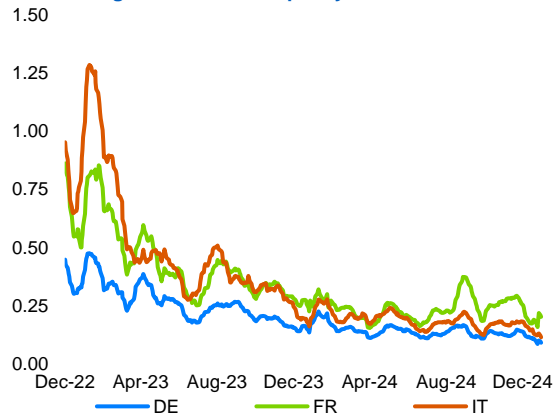
Note: Liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in bps. Lower figures mean more liquidity and vice-versa. 22 EEA30 countries are included. Sources: Refinitiv EIKON, ESMA.

A.29
EU sovereign bond liquidity dispersion



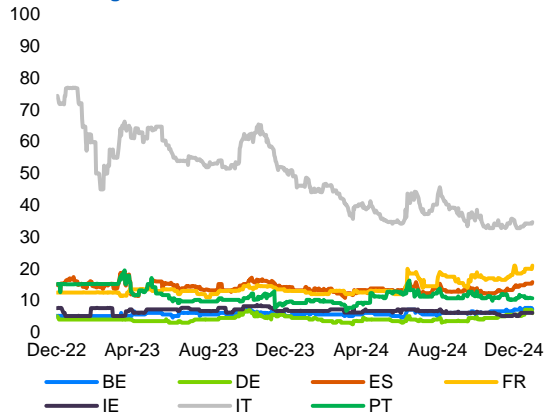
Note: Dispersion of liquidity measured as median across countries of the bid-ask yields difference for 10Y sovereign bonds, in bps. Lower figures mean more liquidity and vice-versa. 22 EEA30 countries are included. Sources: Refinitiv EIKON, ESMA.

A.30
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.31
EU sovereign bond redenomination risk

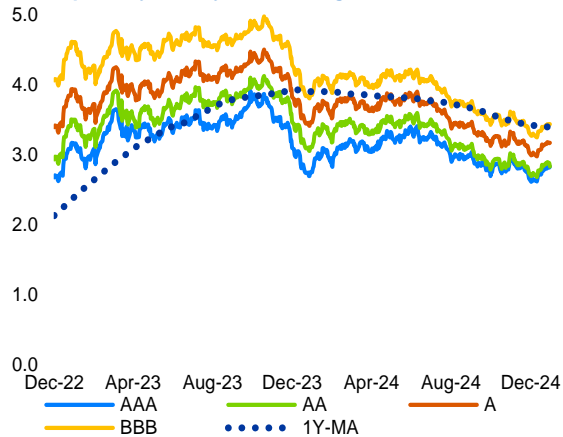


Note: Difference between 5Y CDS spreads under the 2014 ISDA definition (where debt redenomination is a credit event), and under the 2003 ISDA definition (where it is not), in bps. Sources: Refinitiv Datastream, ESMA.

Corporate-bond markets

A.32

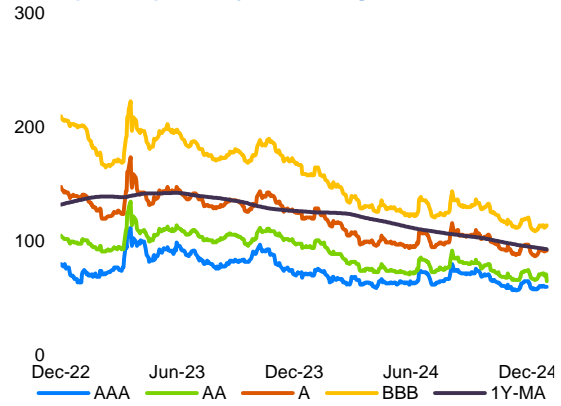
EU corporate yields by credit rating



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.33

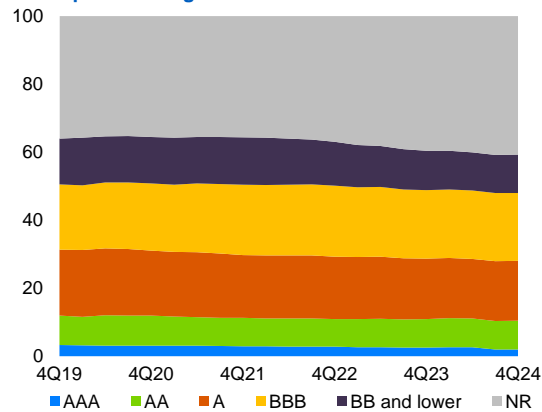
EU corporate spreads by credit rating



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

A.34

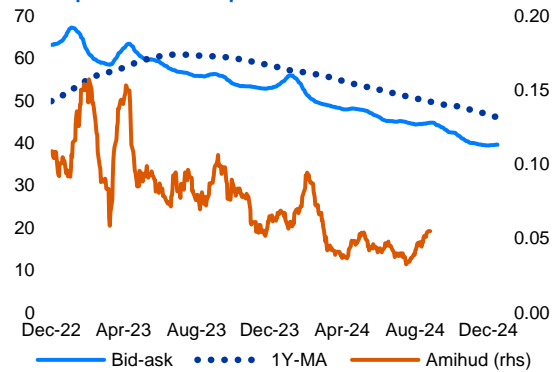
EU corporate rating distribution



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.35

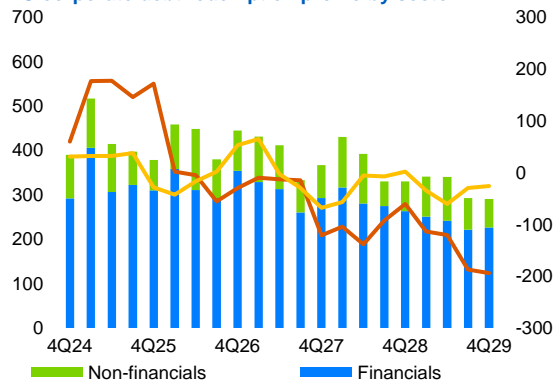
EU corporate bid-ask spread and Amihud indicator



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.
Sources: IHS Markit, ESMA.

A.36

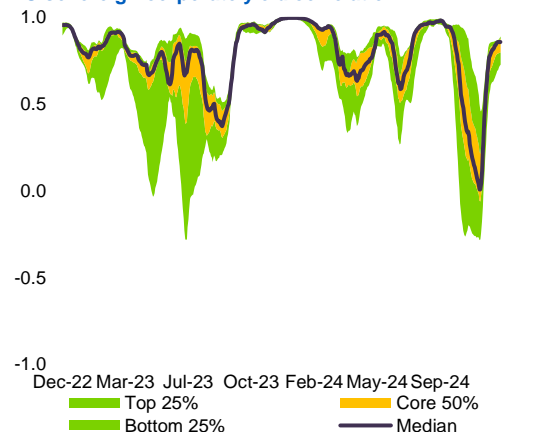
EU corporate debt redemption profile by sector



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.

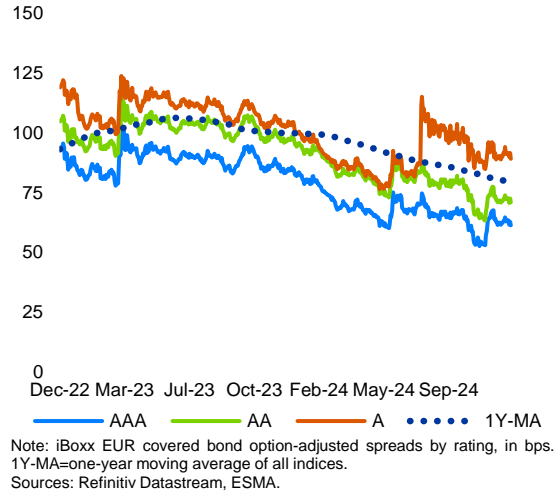
A.37

EU sovereign-corporate yield correlation

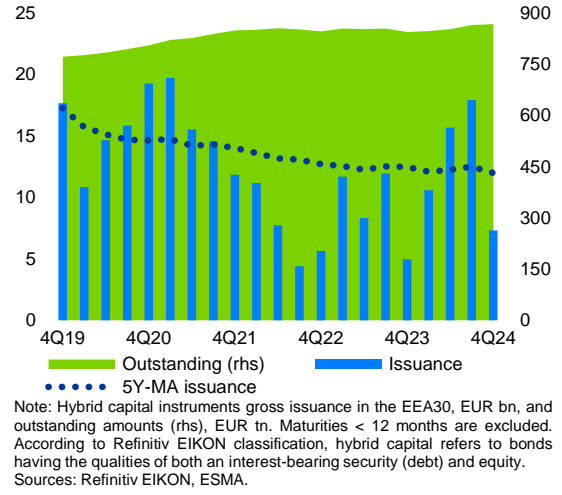


Note: Dispersion of correlation between Barclays Aggregate for corporate and 10Y sovereign bond redemption yields for AT, BE, ES, FI, FR, IT and

A.38
EU covered bond spreads

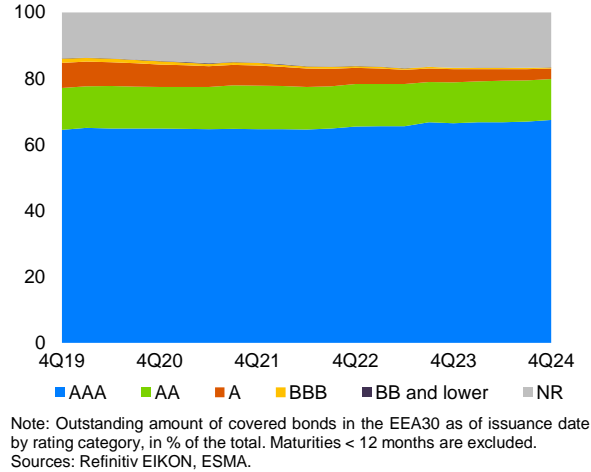


A.39
EU hybrid capital instruments issuance

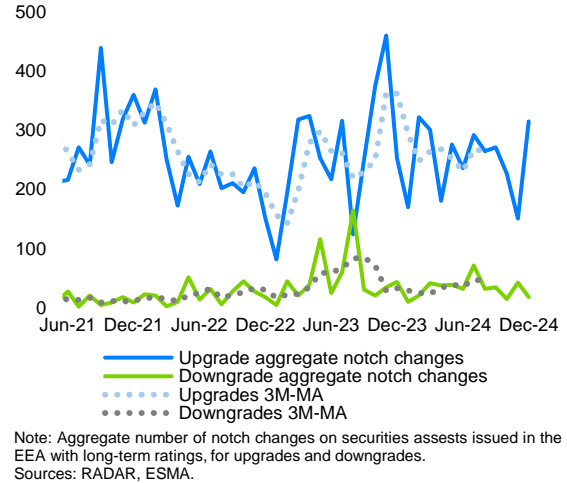


Credit quality

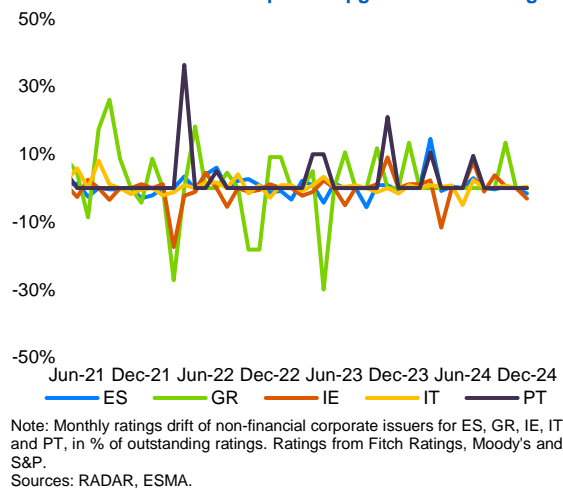
A.40
Credit rating distribution of EU covered bonds



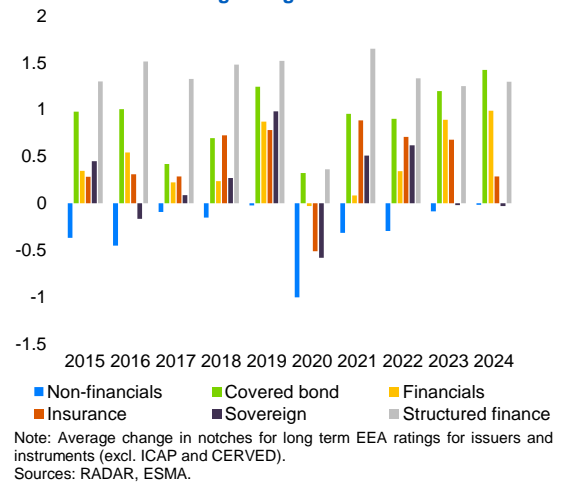
A.41
EU SFI rating changes



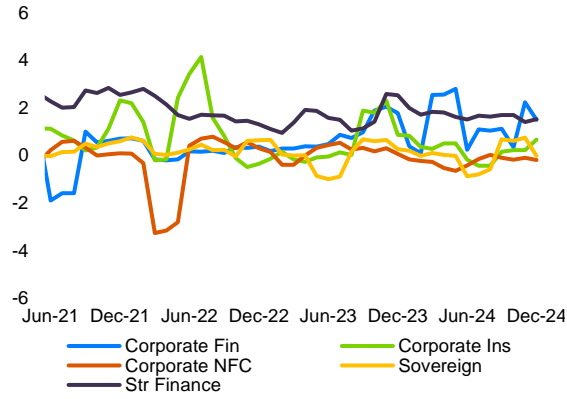
A.42
EU non-financial issuer corporate upgrades less downgrades



A.43
Size of EU credit rating changes

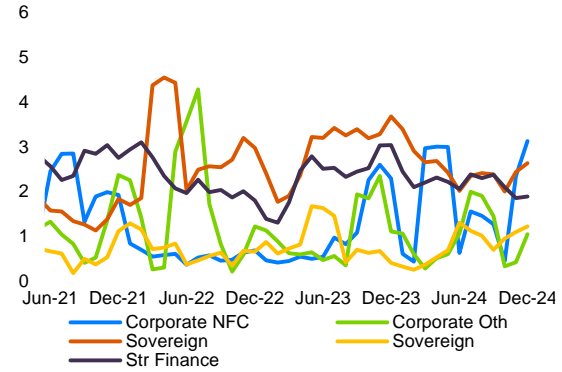


A.44
EU credit ratings drift by asset class



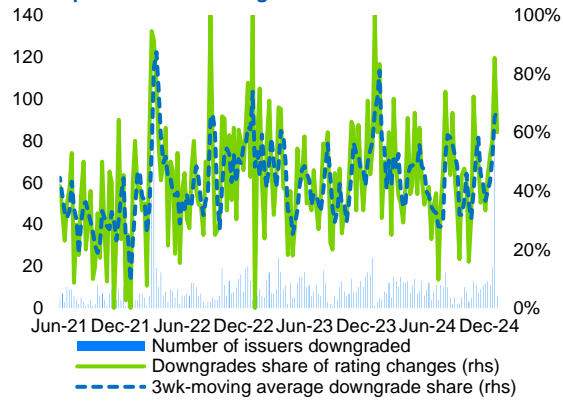
Note: 3-month moving average of net rating changes in EEA outstanding ratings from all credit rating agencies, excluding CERVED and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades. Fin - Financials, Ins - Insurance, NFC - non-financials.
Sources: RADAR,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

A.45
EU credit ratings volatility by asset class



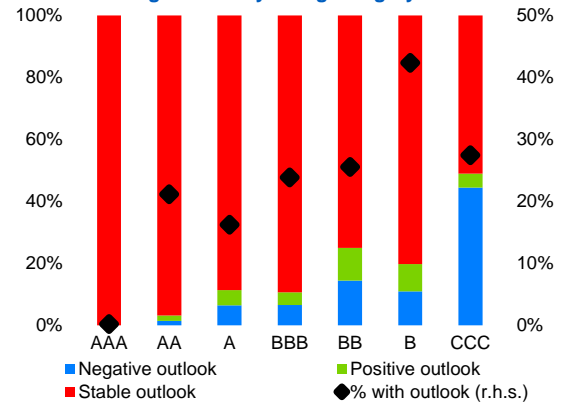
Note: 3-month moving average of volatility of net rating changes in EEA outstanding ratings from all credit rating agencies, excluding CERVED and ICAP, by asset class, computed as the percentage of upgrades minus the percentage of downgrades.
Sources: RADAR, ESMA.

A.46
EU corporate issuer downgrades



Note: Number of EEA corporate issuers with at least one bond downgraded, and ratio of downgraded corporate issues over upgrades and downgrades (3 week moving average). Issuers with same reported parent treated as one issuer.
Sources: RADAR, ESMA.

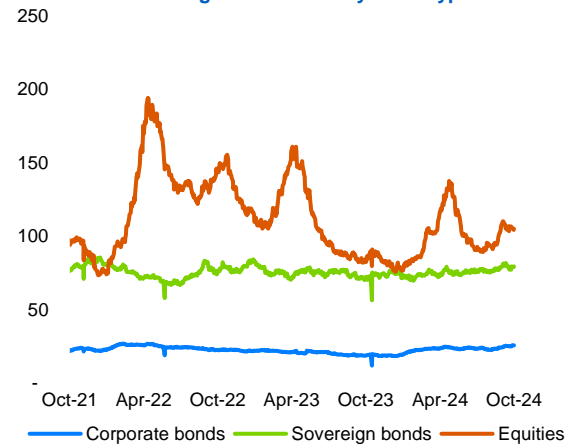
A.47
EU credit rating outlook by rating category



Note: Distribution of outlooks for EEA 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.
Sources: RADAR, ESMA.

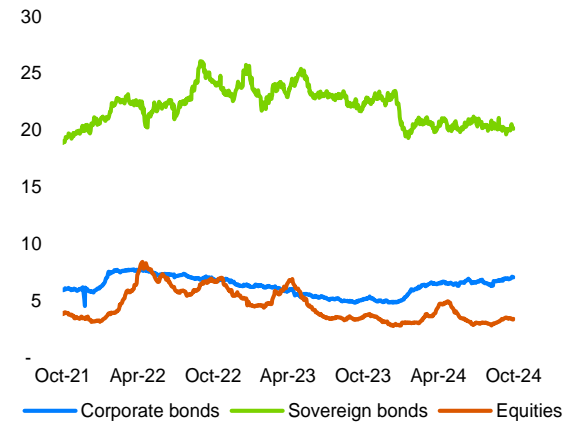
Securities lending

A.48
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.

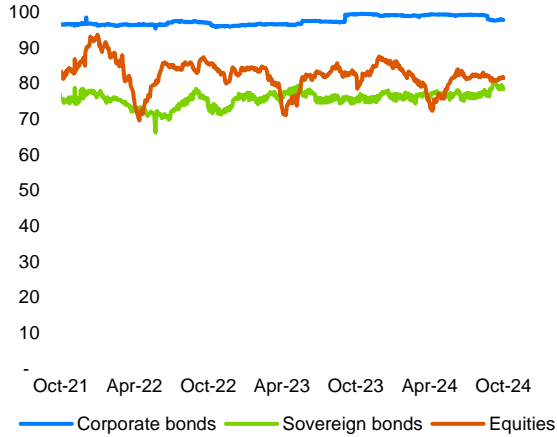
A.49
EU securities utilisation rate



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.50

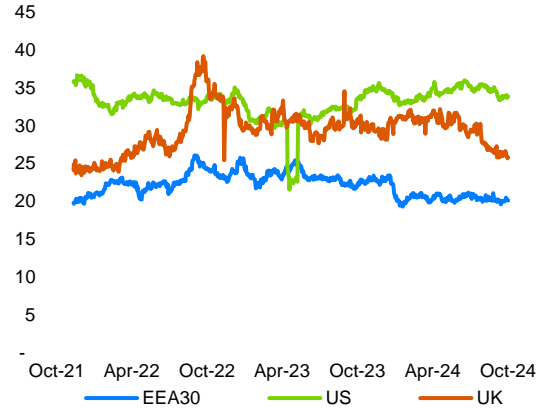
EU securities lending with open maturity



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

A.51

Global sovereign bond utilisation rate by region

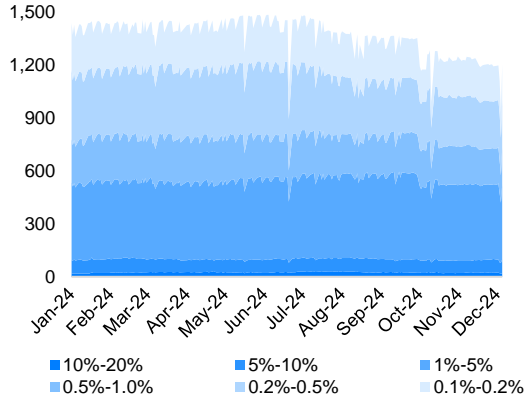


Note: Utilisation rate of sovereign bonds issued in EEA countries, in the US and in the UK. Utilisation rate in percent: the ratio of the market value of securities lent over the market value of securities available for lending.
Sources: FIS Astec, Quandl, ESMA.

Short selling

A.52

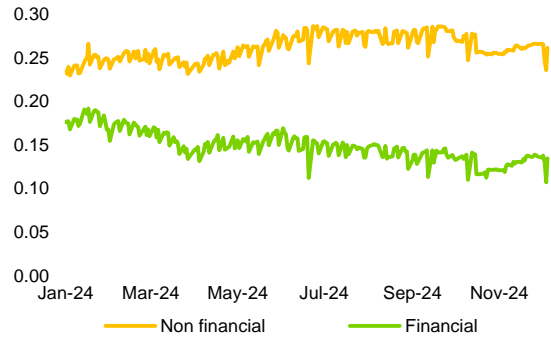
Number of EU shares by net short position level



Note: Number of equities by the level of net short positions reported, end of the day.
Sources: SSREP, FIRDS, ESMA.
KIR: SSREP.NM_SEC.D.Y.Z.Z.Z.Z.Z.Z.Y

A.53

Net short positions in EU financial vs non-financial shares

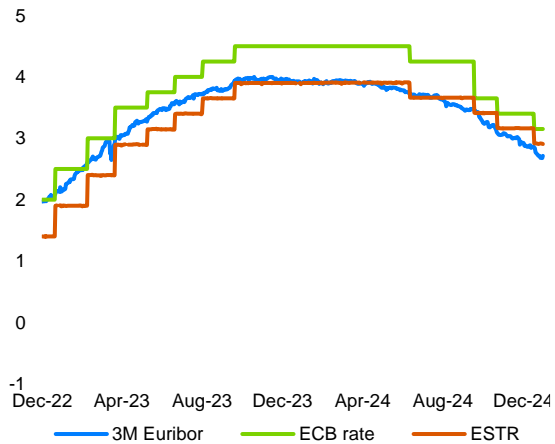


Note: Average percentage of NSP weighted by market capitalisation (31/12/2023) compared to value of all listed shares by institutional sector of the issuer.
Sources: SSREP, FIRDS, FITRS, EIS, ESMA.
KIR: SSREP.AVG_NSP_MV.D.Y.Z.Z.Z.Y.Z.Z.Z

Money markets

A.54

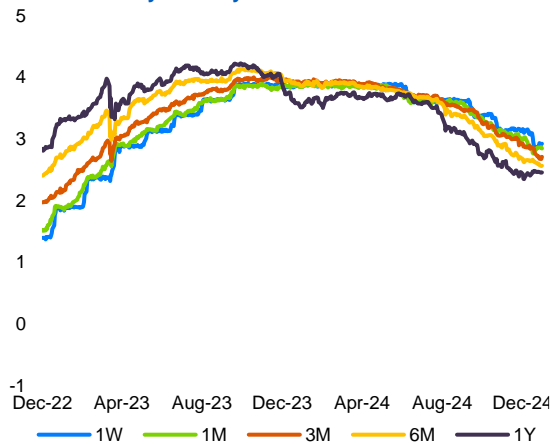
Euro area interest rates



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

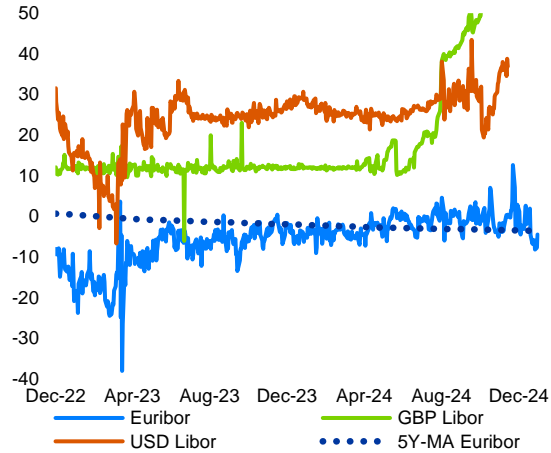
A.55

Euribor rates by maturity



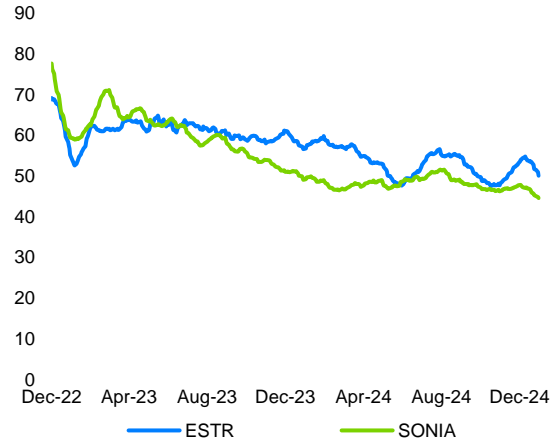
Note: Euribor interest rates by maturity, in %.
Sources: Refinitiv Datastream, ESMA.

A.56
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.

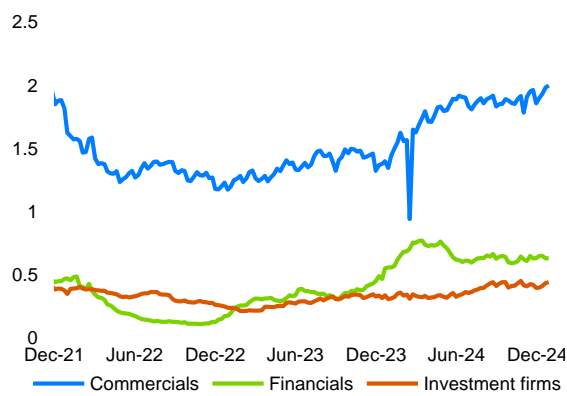
A.57
Interbank overnight activity



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

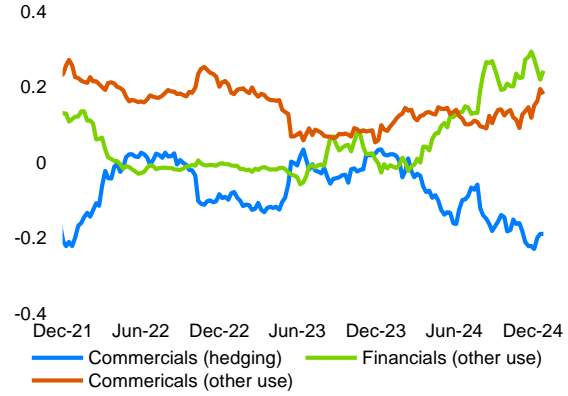
Commodities

A.58
Dutch Natural Gas Futures open interest



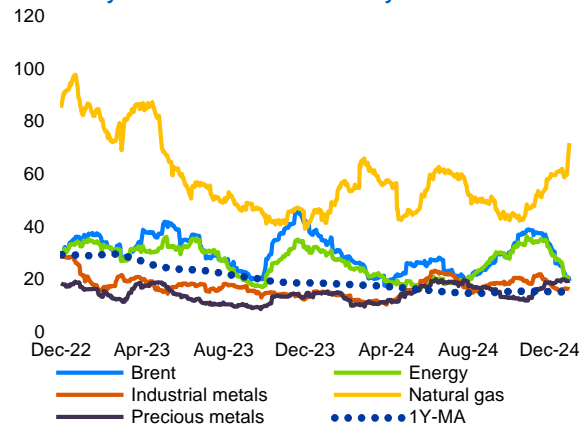
Note: Open interest on Dutch Natrual Gas Futures by commercial, financials traders (funds and other financial institutions) and investment firms in bn. Spikes might reflect data quality issues.
Sources: ESMA Weekly Commodities Derivatives Positions Reporting, ESMA

A.59
Dutch Natural Gas Futures net positions



Note: Net number of positions (long minus short) of Dutch Natural Gas Futures held by commercials and financials traders (funds and other financial institutions) and investment firms in billions. Spikes might reflect data quality issues.
Sources: ESMA Weekly Commodity Derivative Positions Reporting, ESMA.

A.60
Commodity derivatives realised volatility



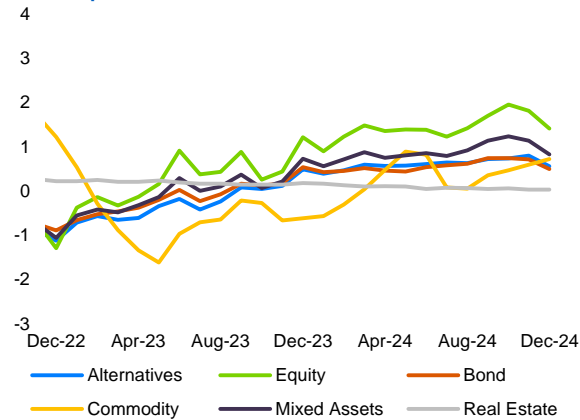
Note: Annualised 40-day volatility of S&P GSCI commodity indices and Brent price, in %. 1Y-MA=one-year moving average computed using S&P GSCI.
Sources: Refinitiv Datastream, ESMA.

Asset management

Fund industry

A.61

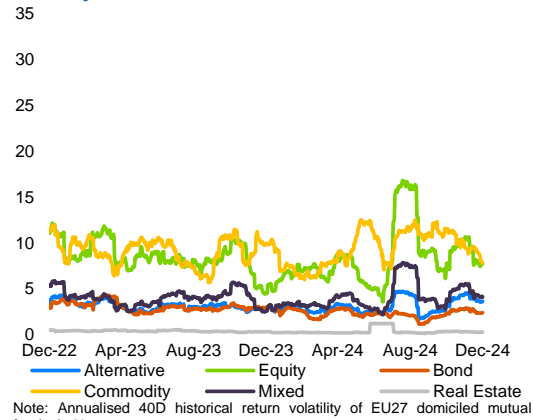
EU fund performance



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

A.62

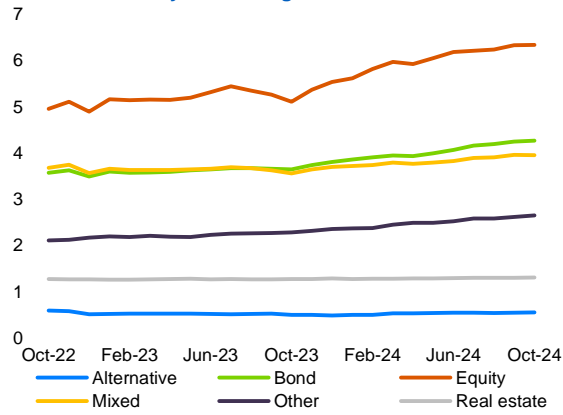
Volatility of EU fund returns



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

A.63

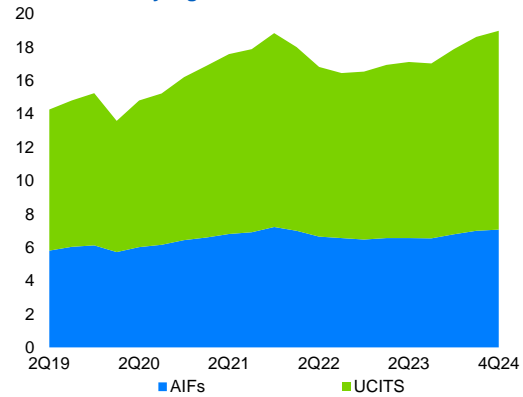
EU fund assets by market segment



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

A.64

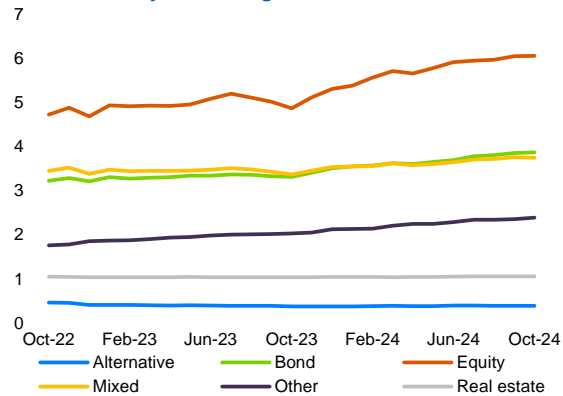
EU fund NAV by legal form



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

A.65

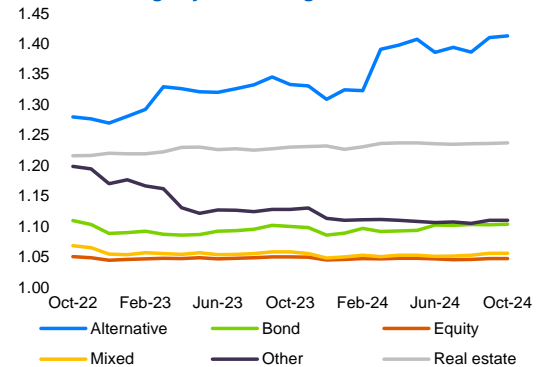
EU fund NAV by market segment



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

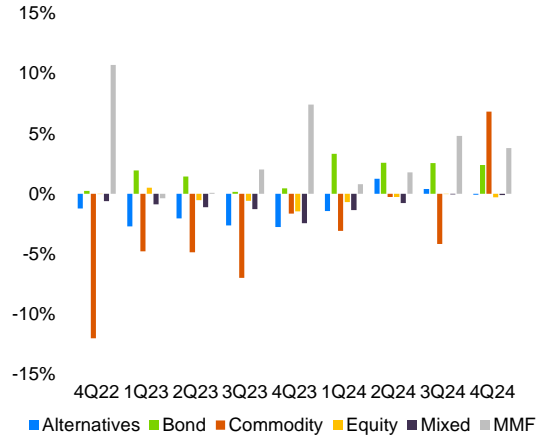
A.66

EU fund leverage by market segment



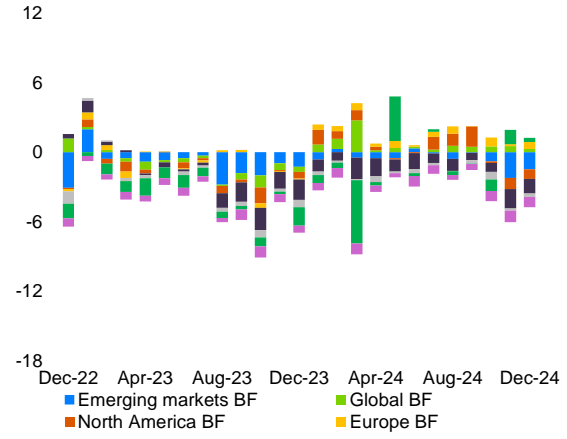
Note: Leverage of EA investment funds by fund type computed as the AuM/NAV ratio.
Sources: ECB, ESMA.

A.67
EU fund flows by fund type



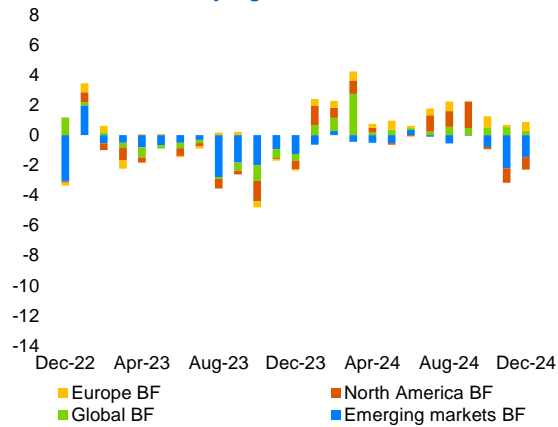
Note: EU27-domiciled funds' quarterly flows, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.68
EU fund flows by regional investment focus



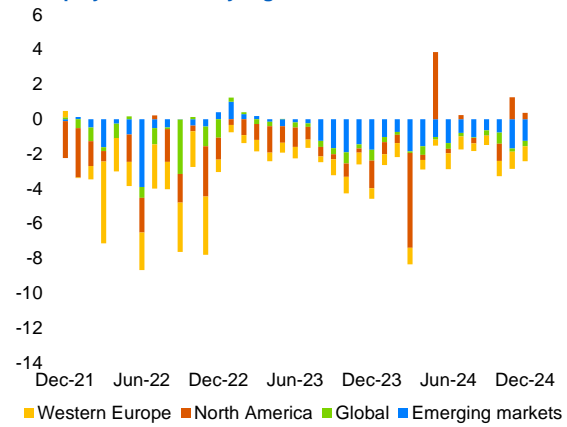
Note: EU27 bond and equity funds (BF and EF) monthly flows over time since 2004 by regional investment focus, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.69
EU bond fund flows by regional investment focus



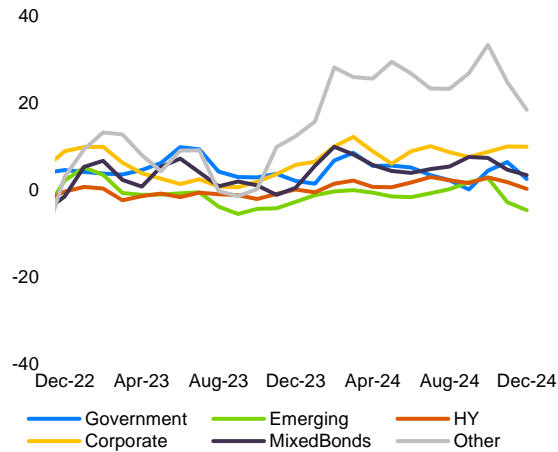
Note: EU27 bond fund monthly flows by regional investment focus, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.70
EU equity fund flows by regional investment focus



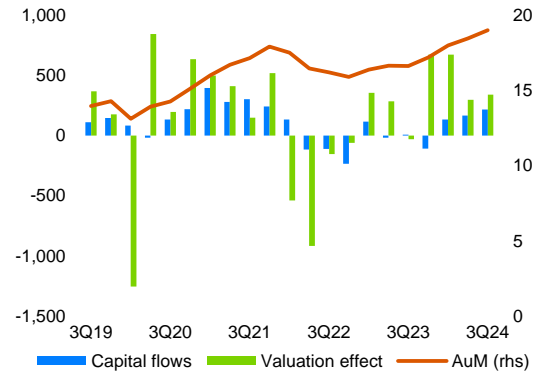
Note: EU27 Equity fund monthly flows by regional investment focus, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.71
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

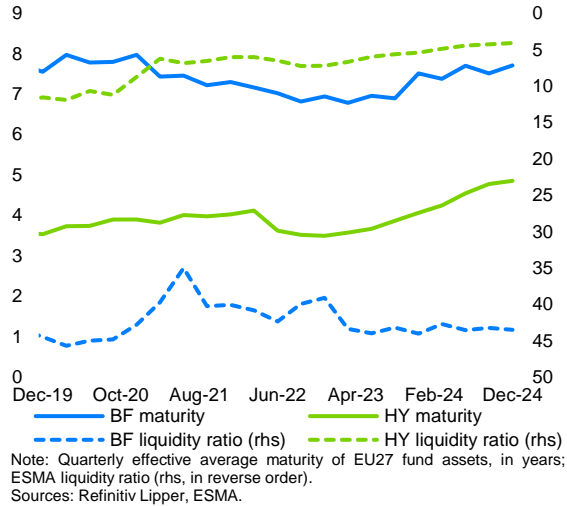
A.72
Net asset valuation of EU funds



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.

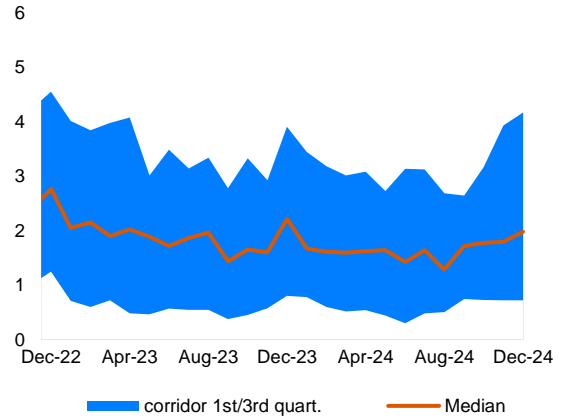
A.73

Liquidity risk profile of EU bond funds



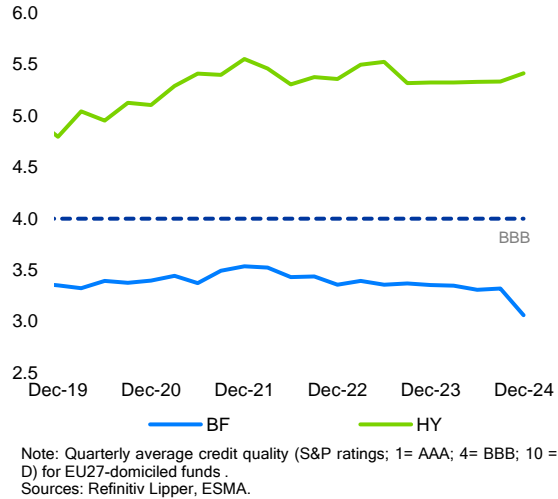
A.74

Cash held by EU corporate bond funds



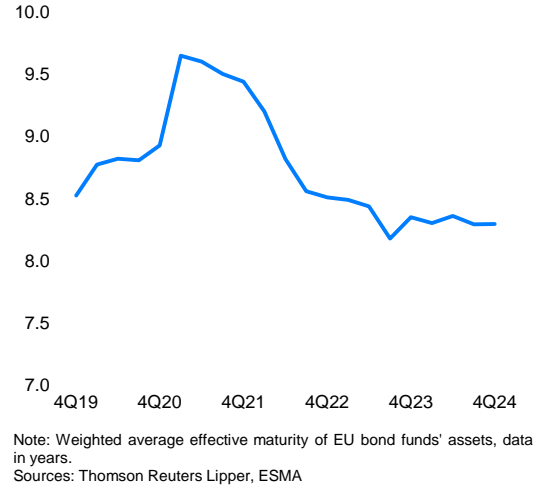
A.75

Credit quality of EU bond funds' assets



A.76

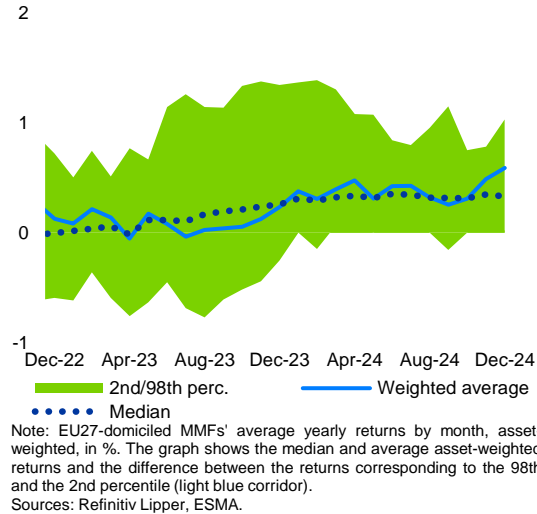
Maturity of EU bond funds' assets



Money market funds

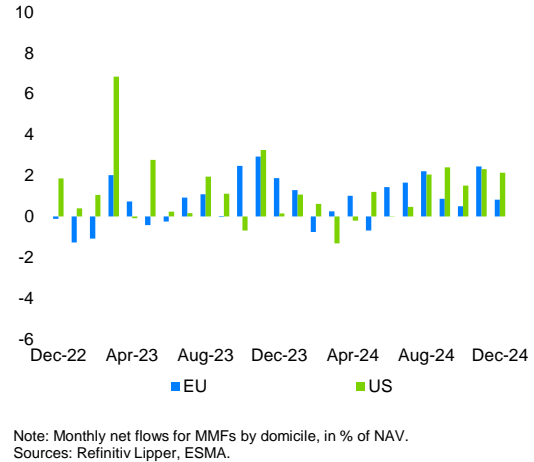
A.77

EU MMF performance

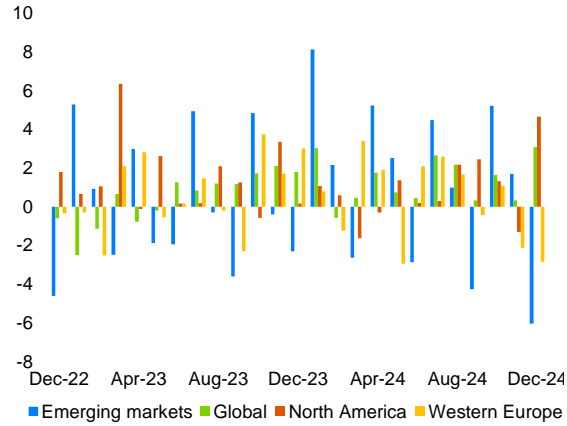


A.78

MMF flows by domicile

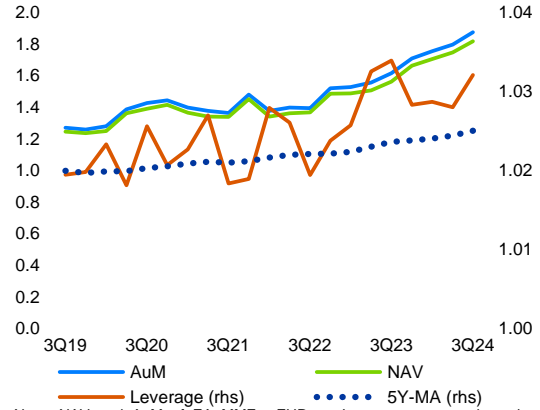


A.79
EU MMF flows by geographical focus



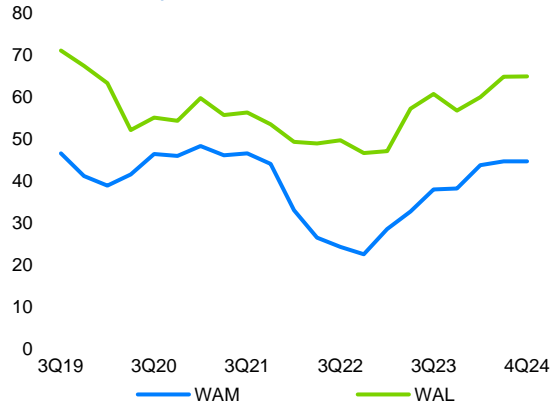
Note: EU27 MMF monthly net flows by geographical focus, in % of NAV of the geographical area.
Sources: Refinitiv Lipper, ESMA.

A.80
EU MMF assets and leverage



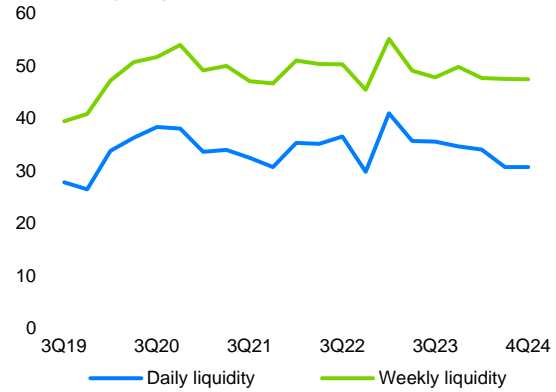
Note: NAV and AuM of EA MMFs, EUR tn. Leverage computed as the AuM/NAV ratio. 5Y-MA=five-year moving average of the leverage ratio.
Sources: ECB, ESMA.

A.81
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.
Sources: Fitch Ratings, ESMA.

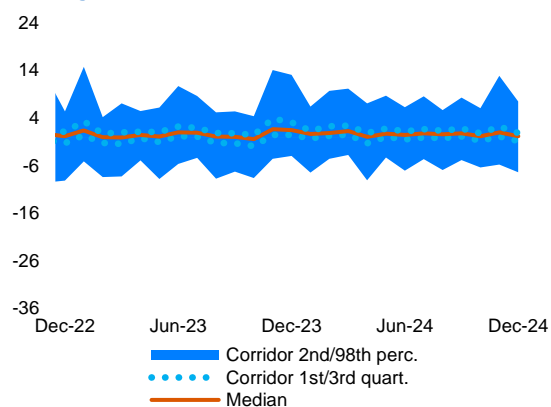
A.82
EU MMF liquidity



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.
Sources: Fitch Ratings, ESMA.

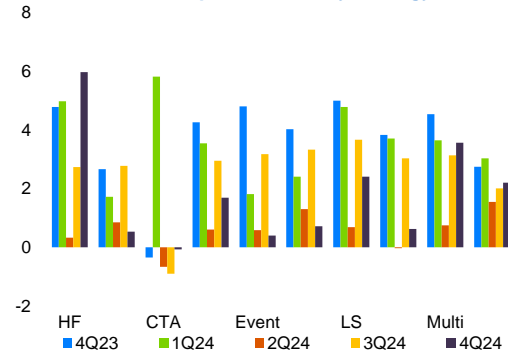
Alternative funds

A.83
EU hedge fund returns



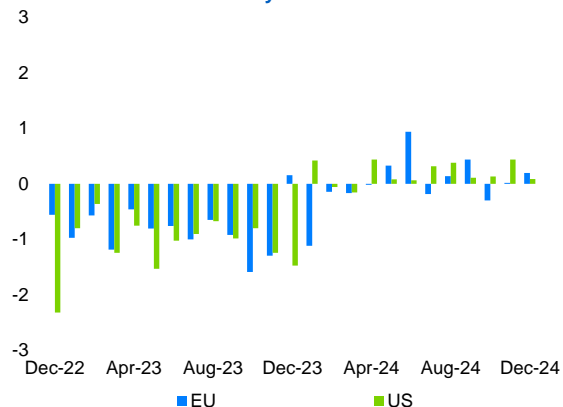
Note: EU27-domiciled hedge funds' monthly returns, %. The graph shows the returns' median, the difference between the returns corresponding to the 98th and 25th percentiles (light blue corridor) and the difference between the returns corresponding to the 1st and 3rd quartiles (dotted line corridor).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

A.84
EU alternative fund performance by strategy



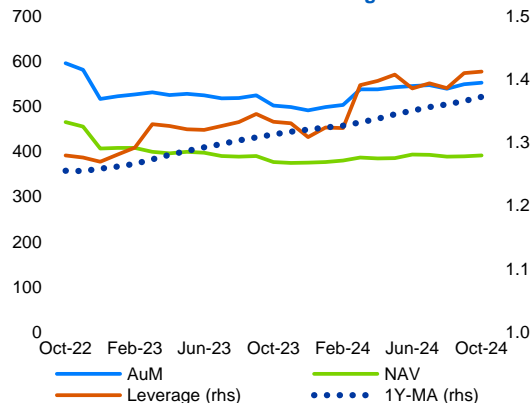
Note: Growth in hedge fund performance indices by strategy: Hedge fund index (Total), arbitrage, Commodity Trading Advisor (CTA), distressed debt, event driven, fixed income, long/short equity, macro, multi-strategy, relative value (RV), in %.
Sources: Eurekahedge, ESMA.

A.85
EU alternative fund flows by domicile



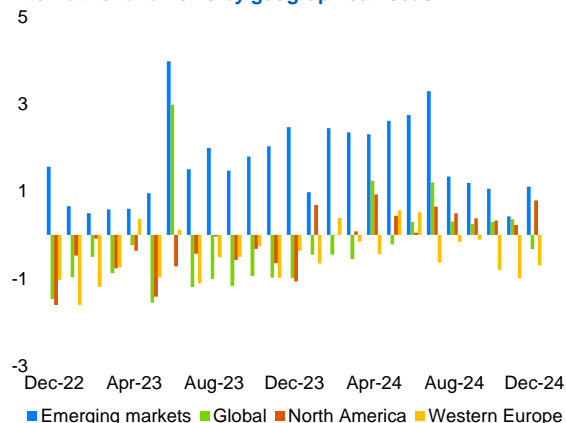
Note: Alternative mutual funds monthly net flows by domicile, in %. Data on alternative mutual funds represents only a subset of the entire alternative fund industry.
Sources: Refinitiv Lipper, ESMA.

A.86
EU alternative fund assets and leverage



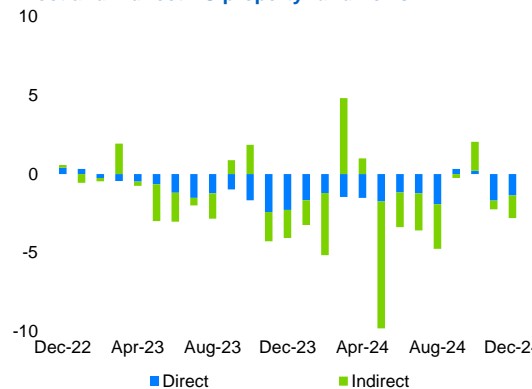
Note: NAV and AuM of EA alternative funds, EUR bn. Leverage computed as the AuM/NAV ratio. 1Y-MA=one-year moving average for the leverage ratio.
Sources: ECB, ESMA.

A.87
Alternative fund flows by geographical focus



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

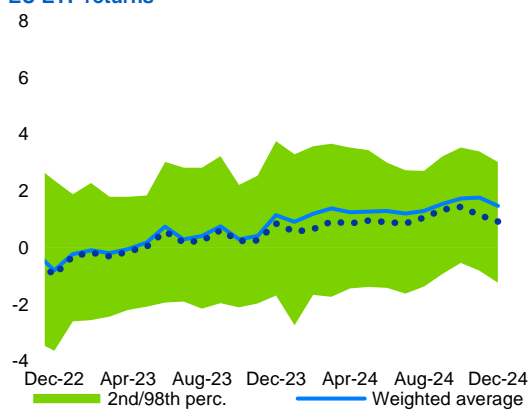
A.88
Direct and indirect EU property fund flows



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.89
EU ETF returns



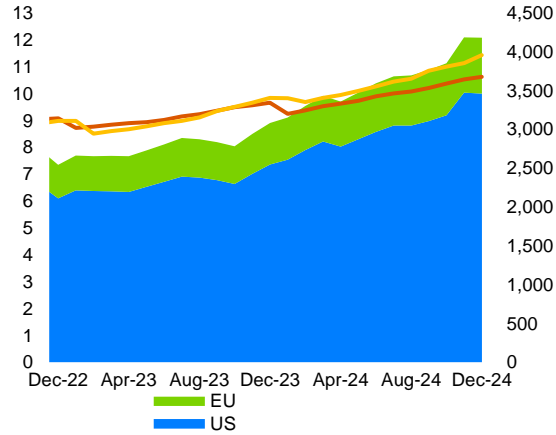
Note: EU27-domiciled ETFs' average yearly returns by month, asset-weighted, in %. The graph shows the median and average asset-weighted returns and the difference between the returns corresponding to the 98th and the 2nd percentile (light blue corridor).
Sources: Refinitiv Lipper, ESMA.

A.90
EU ETF returns volatility



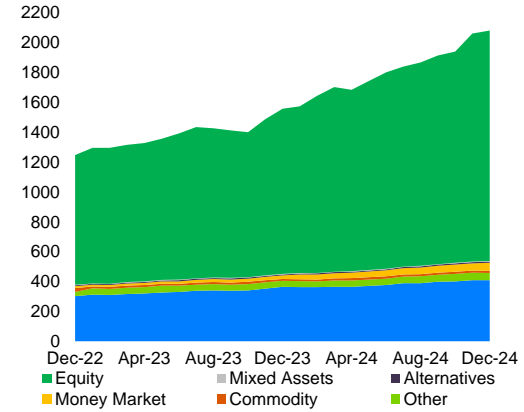
Note: Annualised 40-day historical return volatility of EU27-domiciled ETF, in %.
Sources: Refinitiv Lipper, ESMA.

A.91
EU ETF and NAV by domicile



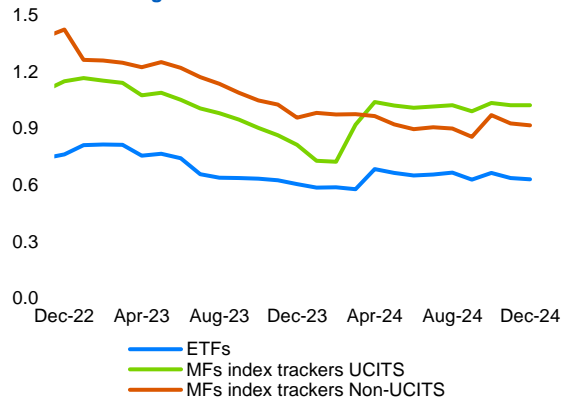
Note: NAV, EUR bn, and number of ETFs by domicile (rhs).
Sources: Refinitiv Lipper, ESMA.

A.92
EU ETF NAV by asset type



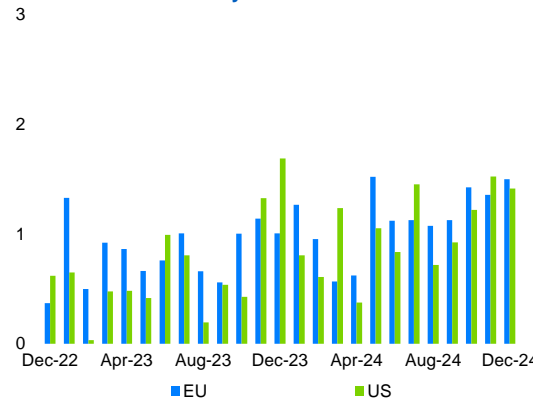
Note: Monthly NAV of EU27 ETFs by asset type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.93
EU ETF tracking error



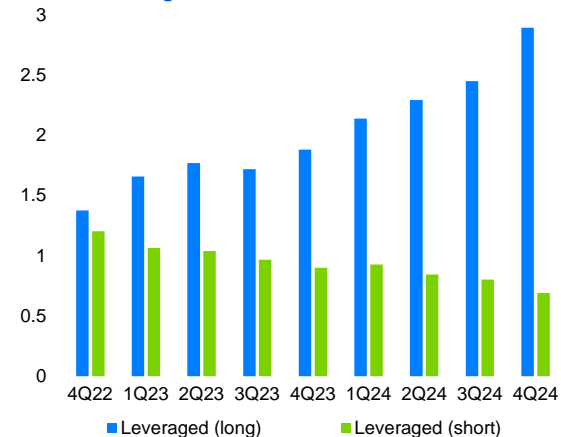
Note: Tracking error defined as standard deviation of fund excess returns compared to benchmark. The graph shows the tracking error for EU27 ETF and EU27 mutual funds both UCITS and non-UCITS. Yearly standard deviation reported on monthly frequency. End-of-month data.
Sources: Refinitiv Lipper, ESMA.

A.94
EU and US ETF flows by domicile



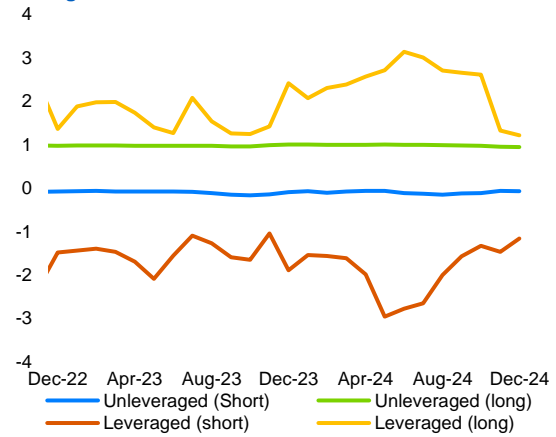
Note: ETF monthly net flows by domicile, in % of NAV.
Sources: Refinitiv Lipper, ESMA.

A.95
Assets of leveraged EU ETFs



Note: Total assets of leveraged ETFs by exposure type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

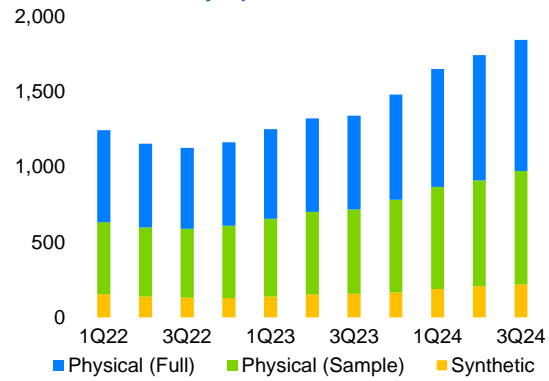
A.96
Average beta values for EU ETFs



Note: Leveraged ETFs are self-reported. The annual average beta is measured as the volatility of fund return in comparison to its benchmark.
Sources: Refinitiv Lipper, ESMA.

A.97

Assets of EU ETFs by replication method

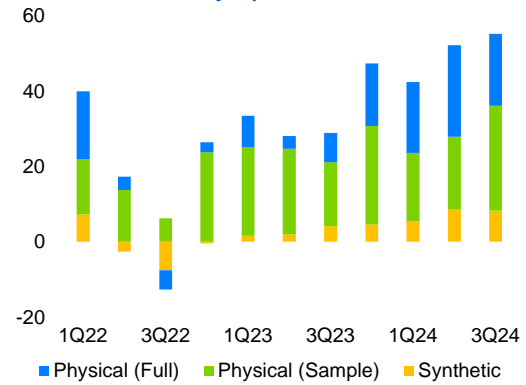


Note: Assets under management of EU-domiciled ETFs by replication method. "Physical (Full)" = fund replicates index performance by purchasing all constituent securities. "Physical (Sample)" = fund replicates index performance by purchasing only some of the constituent securities.

Sources: Morningstar, ESMA

A.98

Flows into EU ETFs by replication method



Note: Net quarterly flows of EU-domiciled ETFs by replication method. "Physical (Full)" = fund replicates index performance by purchasing all constituent securities. "Physical (Sample)" = fund replicates index performance by purchasing only some of the constituent securities.

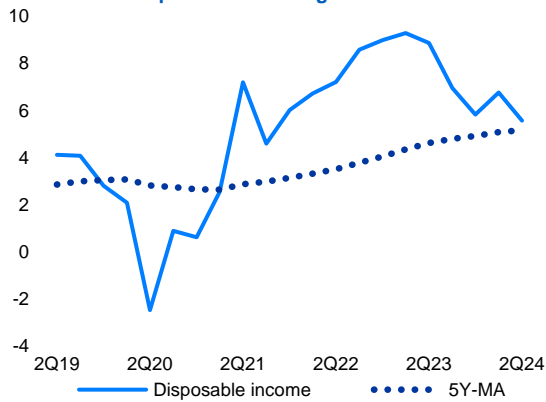
Sources: Morningstar, ESMA

Consumers

Investment resources available to households

A.99

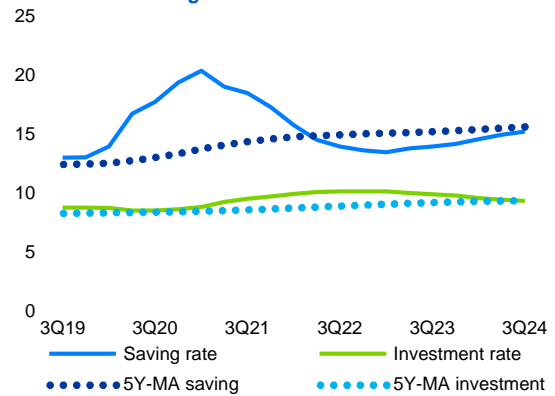
EU household disposable income growth



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.100

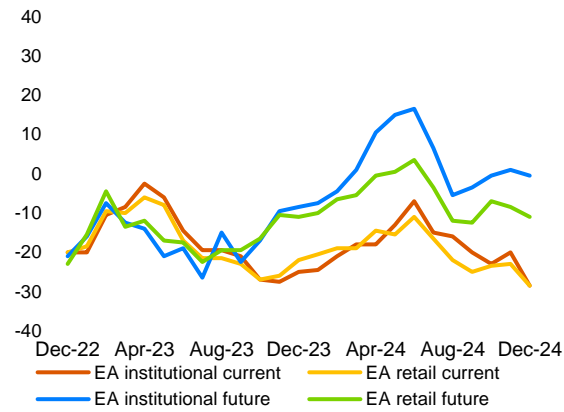
EU household saving and investment rates



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.101

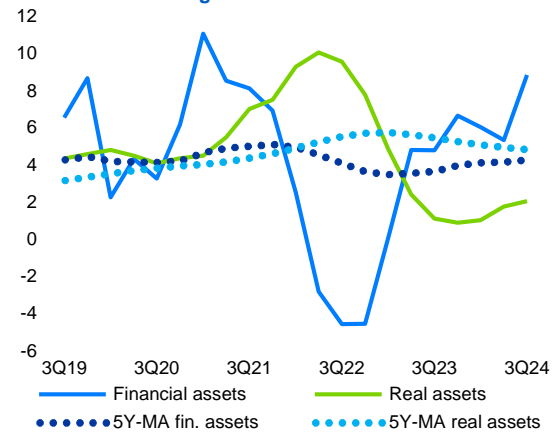
EU investor sentiment



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.102

EU household asset growth

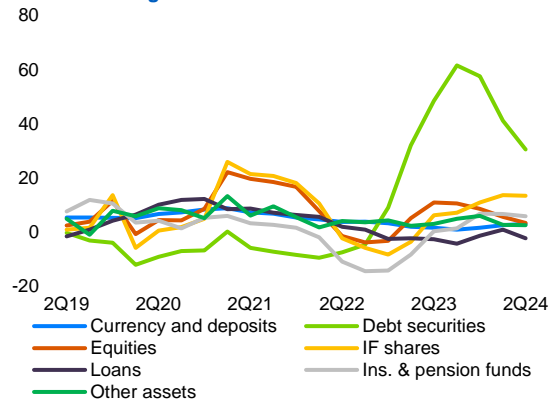


Note: Annualised growth rate real and financial assets of EA households, in %. 5Y-MA=five-year moving average of the growth rates.
Sources: ECB, ESMA.

Asset allocation by retail investors

A.103

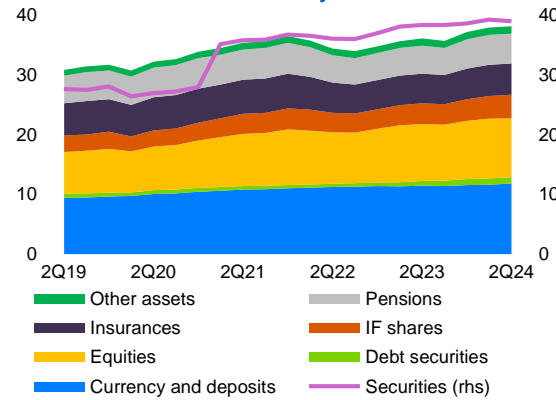
EU household growth rates in financial assets



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.

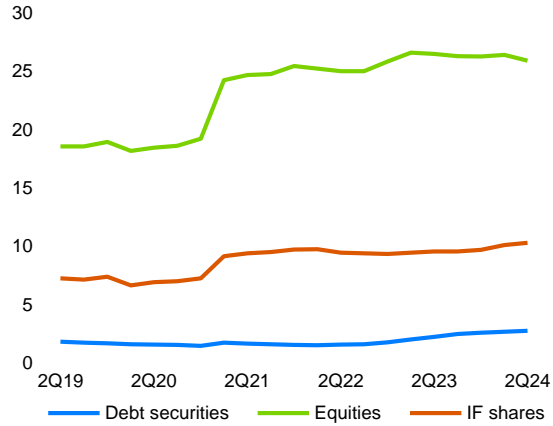
A.104

EU household financial assets by class



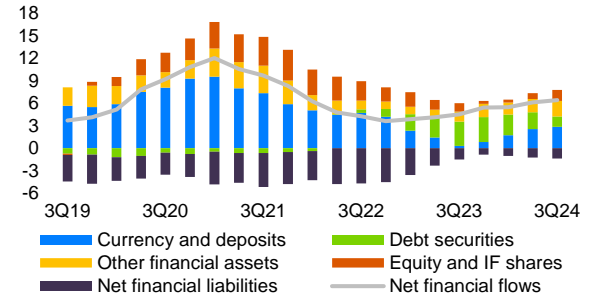
Note: Financial assets of EU27 households, EUR tn, and share of securities investments (debt securities, equities and IF shares) in total, in %. IF shares=investment fund shares. Other financial assets=Insurance technical reserves, financial derivatives, loans granted and other accounts receivable.
Sources: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

A.105
Share of securities investments in EU household assets



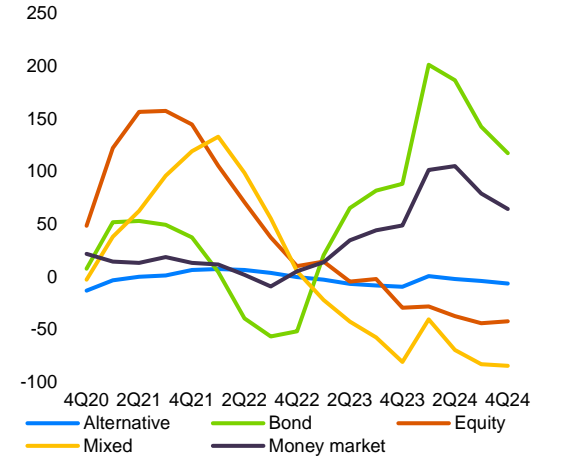
Note: Share of debt securities, equities and IF shares into the financial assets of EU27 households, in %. IF shares=investment fund shares.
Sources: ECB, ESMA.

A.106
EU household net financial asset flows



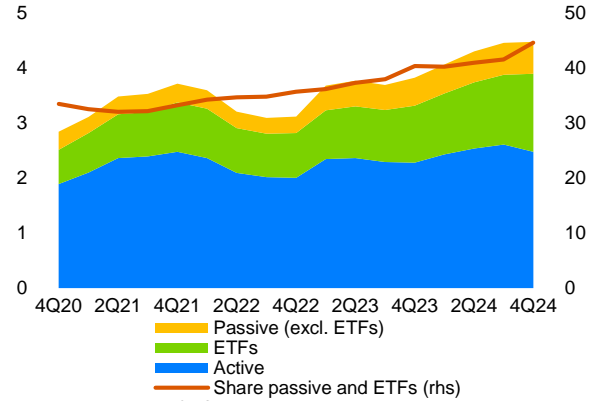
Note: Net acquisition of financial assets and net incurrence of liabilities for EA households as a share of their gross disposable income adjusted for changes in pension entitlements, based on a one-year rolling period, in %. IF shares=investment fund shares. Other financial assets=Insurance technical 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.107
UCITS net flows by asset class for retail investors



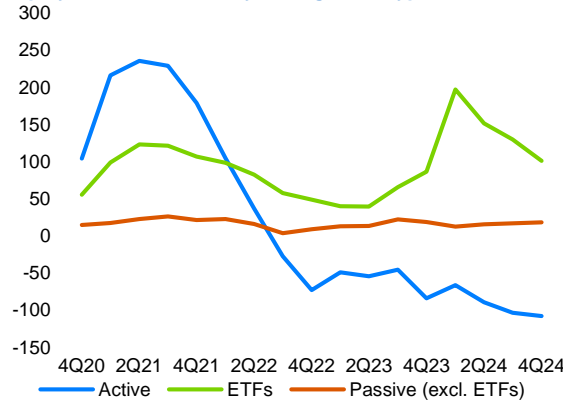
Note: EU27 UCITS annual net flows, retail investors only, at quarterly frequency by asset class, EUR bn.
Sources: Refinitiv Lipper, ESMA.

A.108
Equity UCITS market size by management type



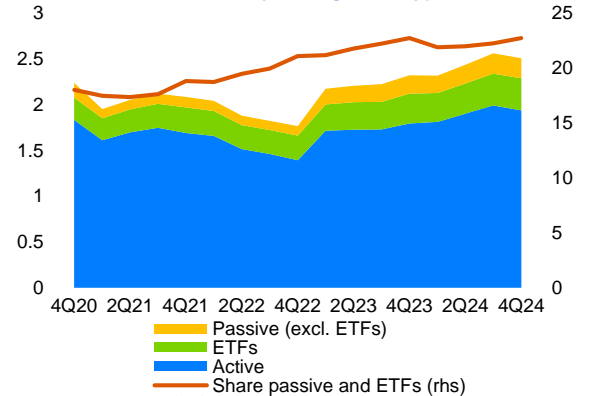
Note: EU27 equity UCITS market size, retail and institutional investors, by management type. All observations for which information on fund value, performance, net flows, subscription and redemption fees are available, in EUR tn. Share of passive and ETFs, in%.
Sources: Refinitiv Lipper, ESMA.

A.109
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.

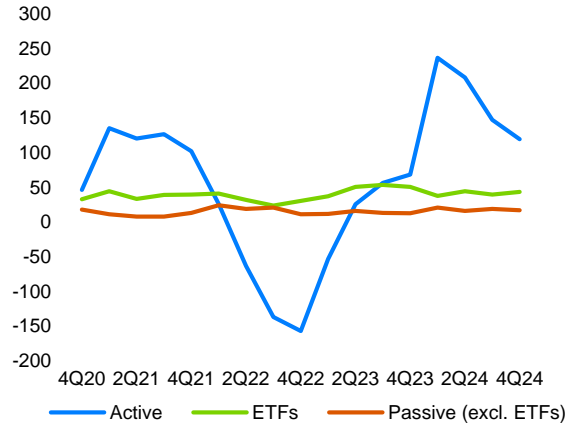
A.110
Bond UCITS market size by management type



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.111

Bond UCITS net flows by management type

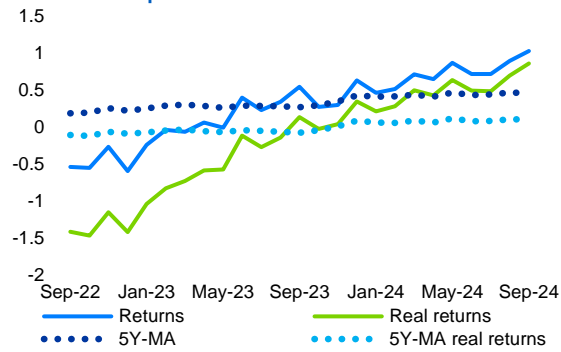


Note: EU27 bond UCITS annual net flows from retail and institutional investors at quarterly frequency by management type, EUR bn.
Sources: Refinitiv Lipper, ESMA.

Costs and performance

A.112

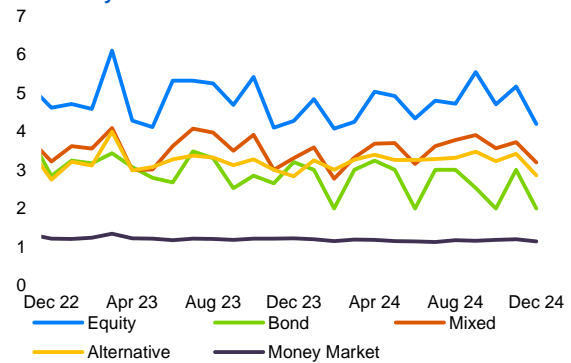
EU household portfolio returns



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.113

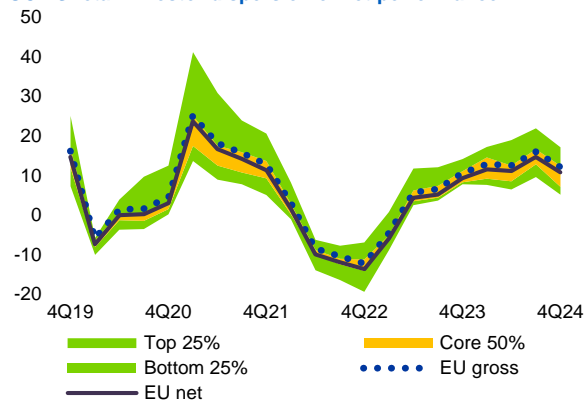
EU fund synthetic risk and reward indicator



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

A.114

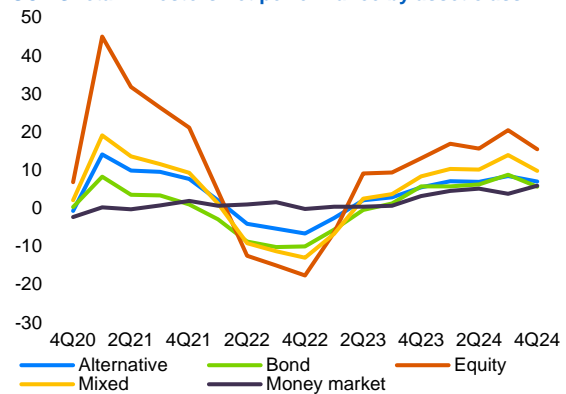
UCITS retail investor dispersion of net performance



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.

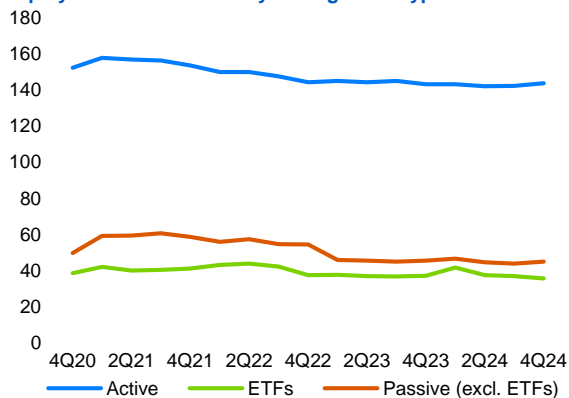
A.115

UCITS retail investors net performance by asset class



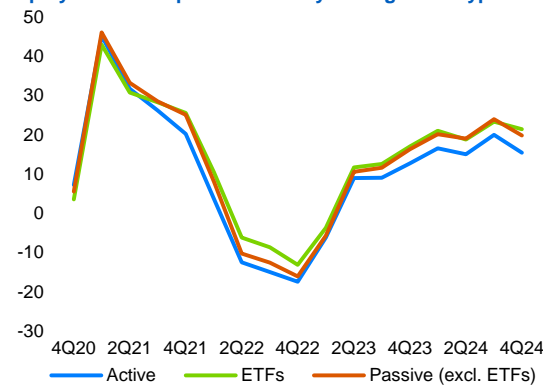
Note: Evolution of net annual performance (net of ongoing costs (TER) subscription and redemptions fees) of EU27 UCITS, retail investors only, by asset class, in %.
Sources: Refinitiv Lipper, ESMA.

A.116
Equity UCITS total costs by management type



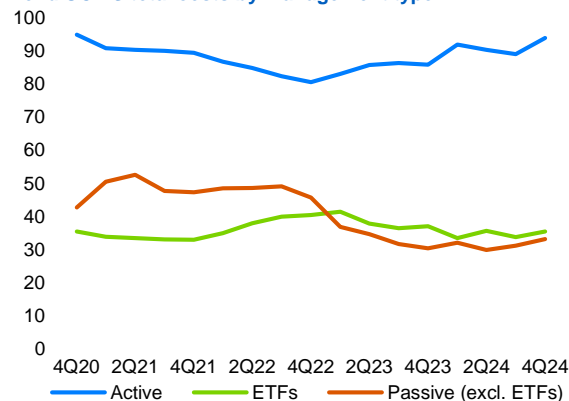
Note: Evolution of total costs (ongoing costs (TER), subscription and redemptions fees) of EU27 of equity UCITS, retail and institutional investors, by management type, in bps.
Sources: Refinitiv Lipper, ESMA.

A.117
Equity UCITS net performance by management type



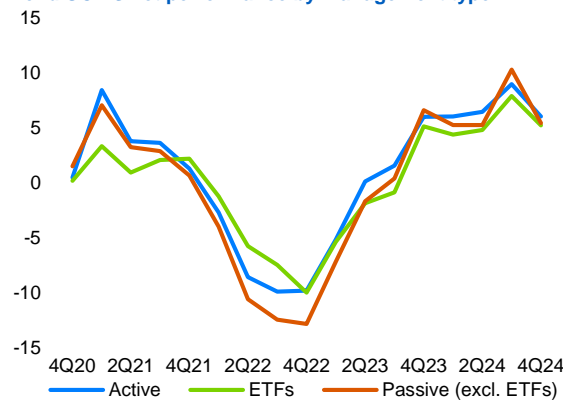
Note: Evolution of net annual performance (net on ongoing costs (TER), subscription and redemption fees) of EU27, equity UCITS, retail and institutional investors, by management type, in %.
Sources: Refinitiv Lipper, ESMA.

A.118
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.

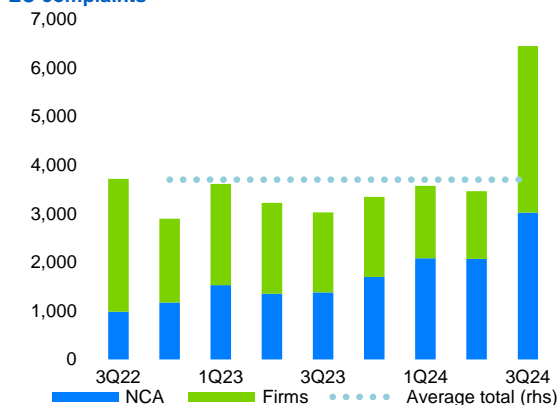
A.119
Bond UCITS net performance by management type



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.

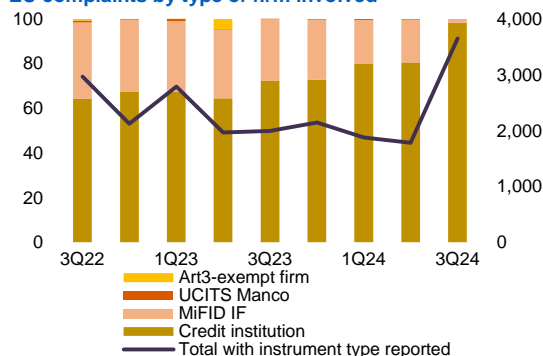
Complaints

A.120
EU complaints



Note: Number of complaints recorded by quarterly-reporting NCAs (n=13) 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 2Q22 to 2Q24.
Sources: ESMA complaints database.

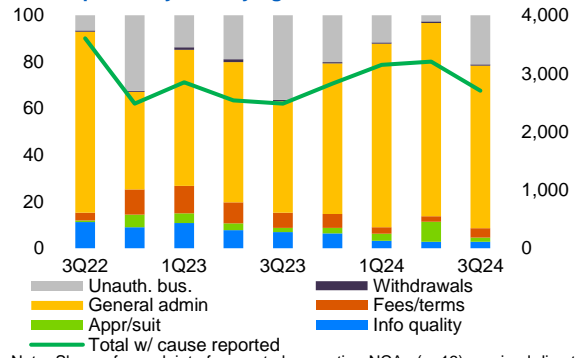
A.121
EU complaints by type of firm involved



Note: Share of complaints for quarterly-reporting NCAs (n=13) received direct from consumers and via firms by type of firm involved, excluding complaints without firm type recorded, %.
Sources: ESMA complaints database.

A.122

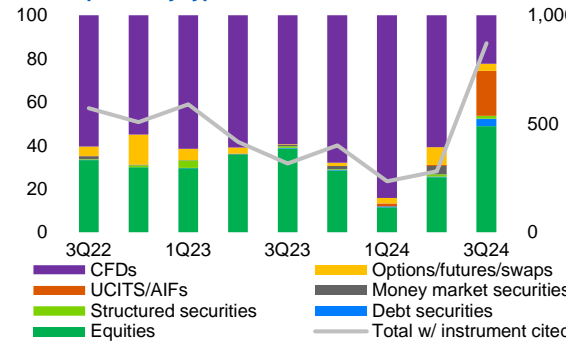
EU complaints by underlying cause



Note: Share of complaints for quarterly-reporting NCAs (n=13) 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 categorised by one of the listed causes. Sources: ESMA complaints database.

A.123

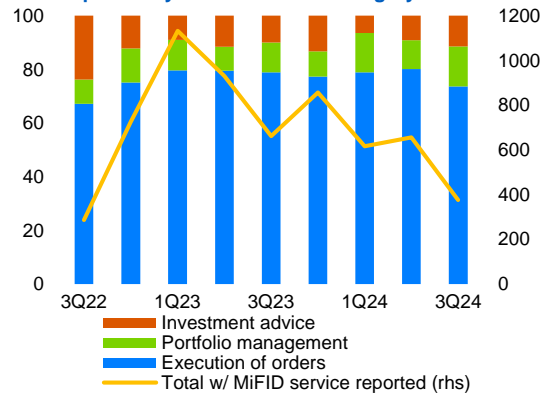
EU complaints by type of financial instrument



Note: Share of complaints from quarterly-reporting NCAs (n=13) 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 channels whether or not further categorisation possible. 'CFDs'='Contracts for Differences. Sources: ESMA complaints database.

A.124

EU complaints by MiFID II service category



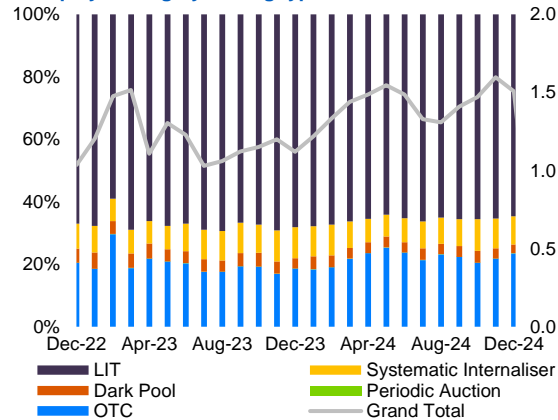
Note: Share of complaints for quarterly-reporting NCAs (n=13) received direct from consumers and via firms recorded as associated with a given MiFID service, excluding complaints with no such category recorded, all reporting channels, %. 'Total with MiFID service reported' = Total complaints received via these reporting channels recorded as associated with a MiFID service.

Infrastructures and services

Trading venues and MiFID entities

A.125

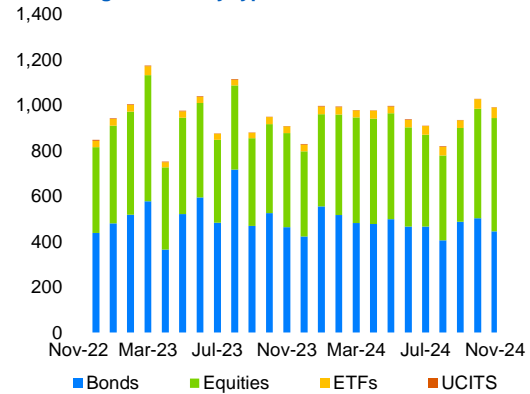
EU equity trading by trading type



Note: Type of equity trading in the EEA as a percentage of total equity trading turnover. Total equity trading turnover in EUR trillion (rhs). Last available data point is December 2024.
Sources: FIRDS, FITRS, ESMA.

A.126

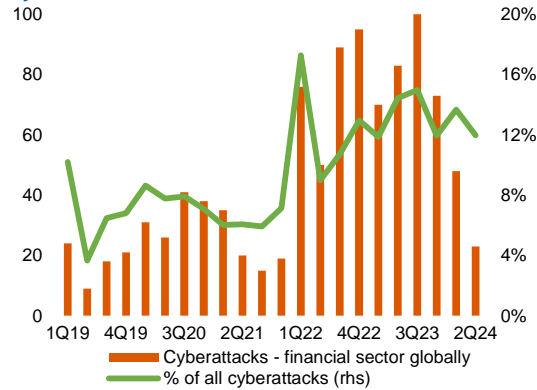
EU trading turnover by type of assets



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.127

Cyberattacks on financial sector entities

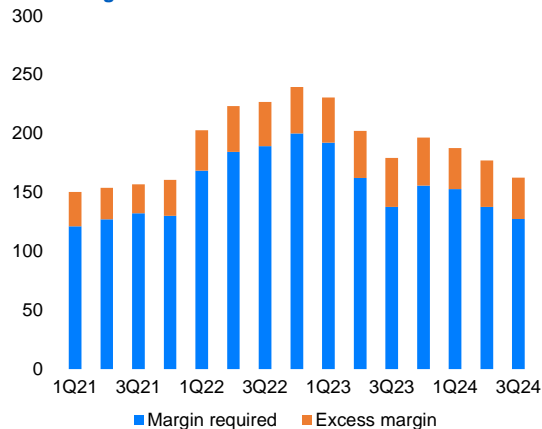


Note: Cyberattacks on financial sector entities globally by quarter, publicly-acknowledged incidents. For details, see *Harry, C., & Gallagher, N. (2018). Classifying cyber events. Journal of Information Warfare, 17(3), 17-31*
Sources: University of Maryland CISSM Cyber Attacks Database, ESMA

Central counterparties

A.128

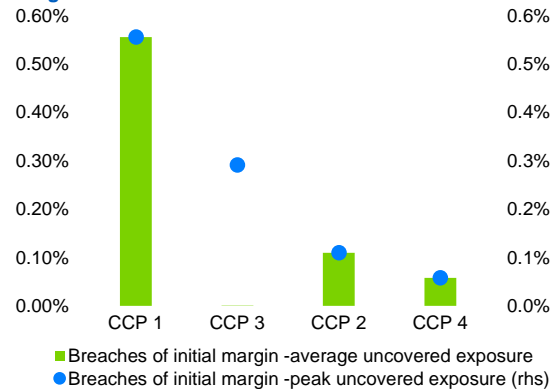
Initial margins held at EU and UK CCPs



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

A.129

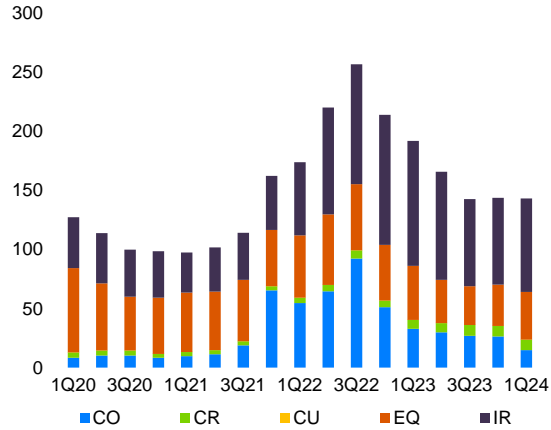
Margin breaches at selected EU CCPs



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

A.130

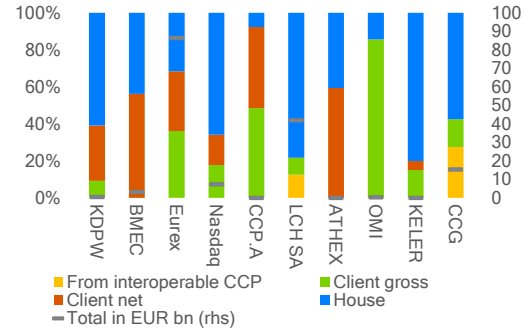
Initial margins held at EU CCPs by asset class



Note: Outstanding amounts of initial margin required and excess collateral received by EU27 CCPs for derivatives. in EUR bn. Sources: TRs, ESMA.

A.131

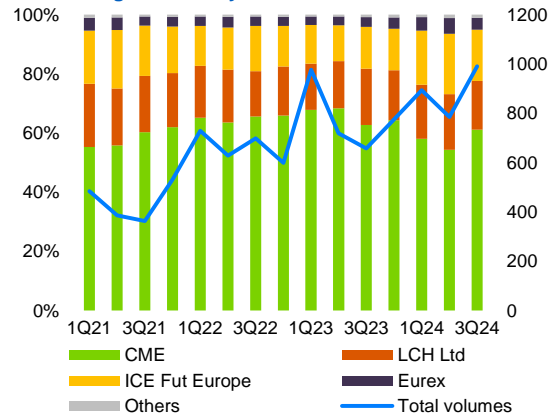
Initial margins held at EU CCPs by account



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 30 September 2024. Data for CCG from 28 June 2024) Sources: Clarus Financial Technology, CPMI-IOSCO PQD, ESMA.

A.132

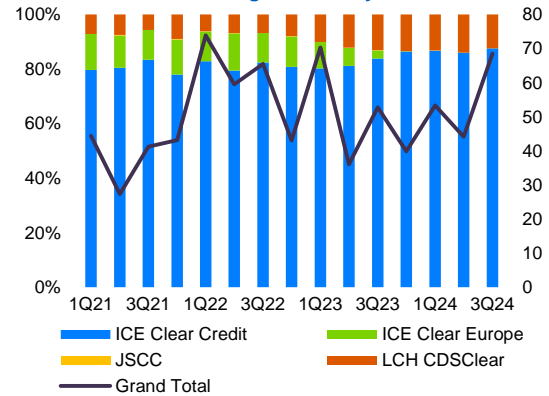
IRD clearing volumes by CCP



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.133

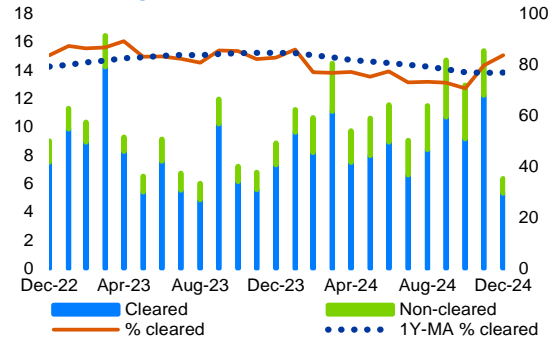
Credit derivatives clearing volumes by CCP



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.134

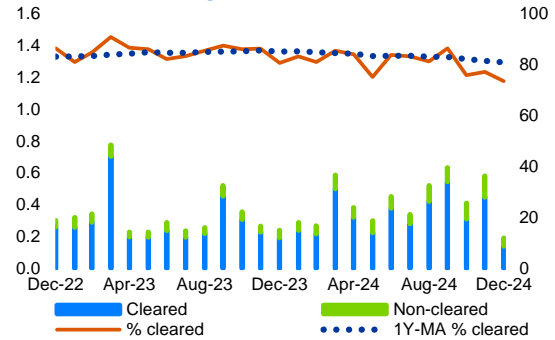
EU IRD trading volumes



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

A.135

EU CDS index trading volumes

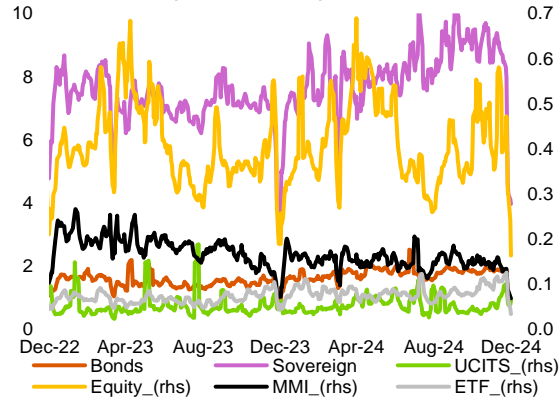


Note: Monthly trading volumes for the main EUR CDS indices including Itraxx Europe Crossover, Itraxx Europe Senior Financials. 40-day moving average notional, USD tn. ISDA SwapsInfo data are based on publicly available data from DTCC Trade Repository LLC and Bloomberg Swap Data Repository.

Central securities depositories

A.136

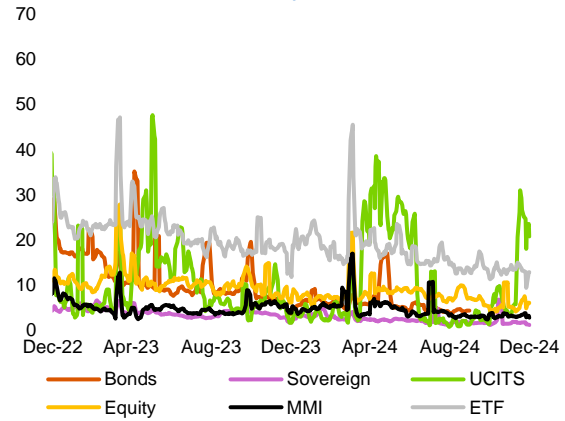
Settlement activity in EU CSDs by asset class



Note: Value of settlement instructions at EEA level, in EUR tn. One-week moving averages. Extreme values removed. Sources: CSDR7, ESMA.

A.137

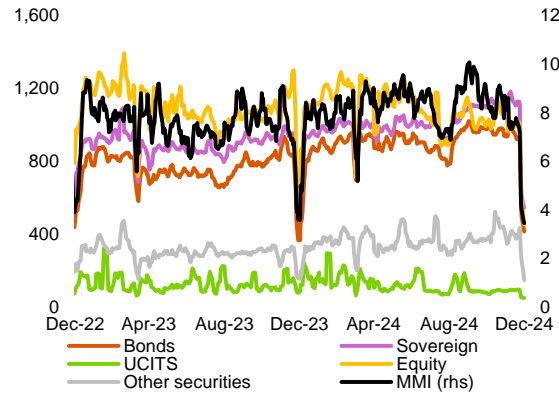
Settlement fails in EU CSDs by asset class



Note: Settlement fails as a % of total value of settlement instructions at EEA level. One-week moving averages. Extreme values removed. Sources: CSDR7, ESMA

A.138

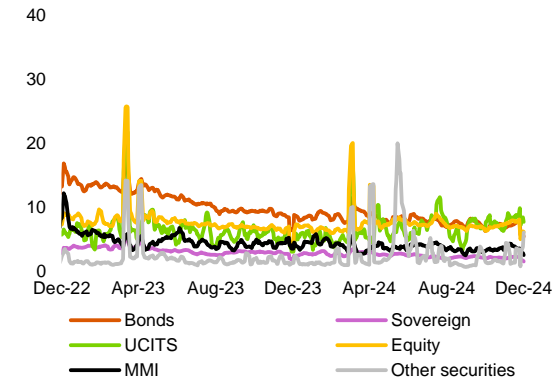
Number of settlement instructions in EU CSDs



Note: Volume of settlement instructions at EEA level, in thousands. One-week moving averages. Extreme values removed. Sources: CSDR7, ESMA.

A.139

Number of failed settlement instructions in EU CSDs

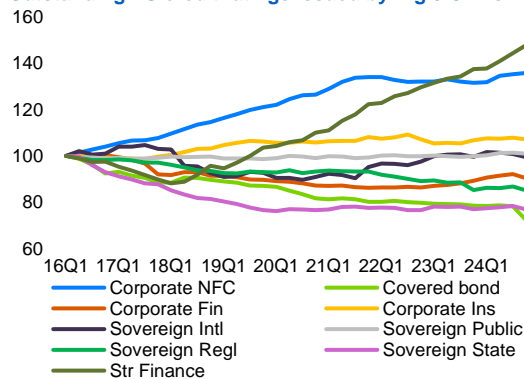


Note: Settlement fails as a % of total volume of settlement instructions at EEA level. One-week moving averages. Extreme values removed. Sources: CSDR7, ESMA

Credit rating agencies

A.140

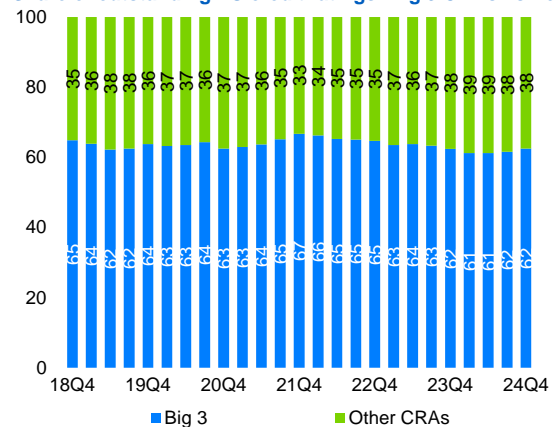
Outstanding EU credit ratings issued by Big 3 CRAs



Note: Evolution of the number of outstanding EEA issuer and instrument ratings by debt category on last day of quarter, indexed at 31 March 2016=100. S&P, Moody's and Fitch. NFC - non financial, Fin - financial, Ins - insurance, Intl - international, Reg - regional. Supranational sovereigns omitted due to very small population. Sources: RADAR, ESMA.

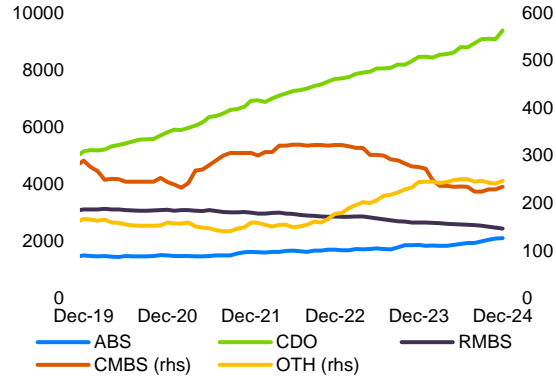
A.141

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



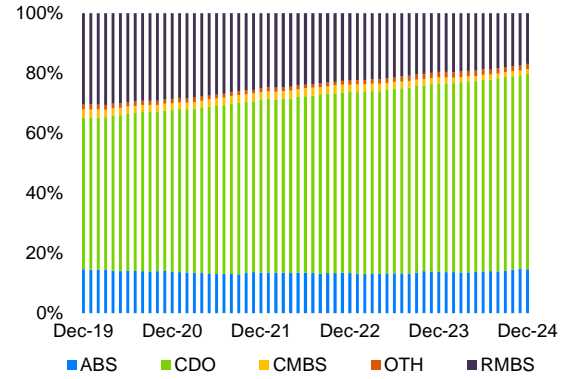
Note: Share of outstanding long-term ratings of EEA issuers and instruments from Big 3 CRAs (S&P, Moody's and Fitch) and from all other CRAs in %. Sources: RADAR, ESMA.

A.142
EU SFI ratings issued by collateral type



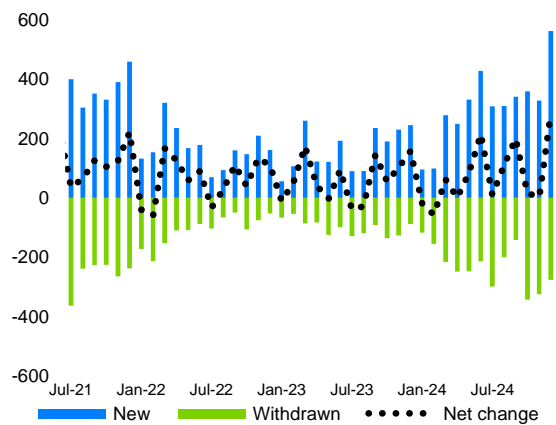
Note: Number of rated EEA structured finance instruments by asset class. ABS=Asset-backed securities (r.h.axis); CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=Other; RMBS=Residential mortgage-backed securities. Asset backed commercial paper omitted due to very small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

A.143
EU SFI ratings outstanding by collateral type



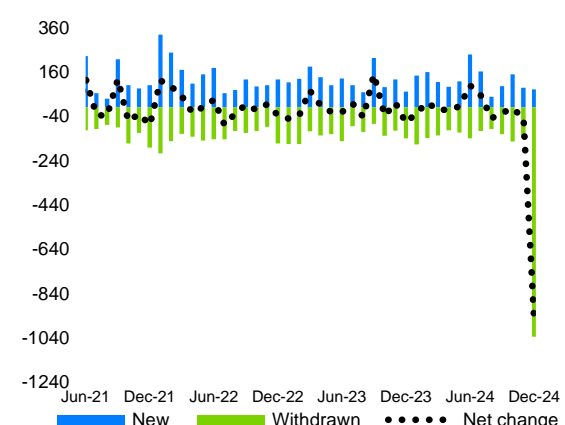
Note: Outstanding ratings of EEA structured finance instruments by asset class, in % of total. ABS=Asset-backed securities; CDO=Collateralised debt obligations; CMBS=Commercial mortgage-backed securities; OTH=other; RMBS=Residential mortgage-backed securities. Asset backed commercial paper omitted due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

A.144
Changes in outstanding EU SFI ratings



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

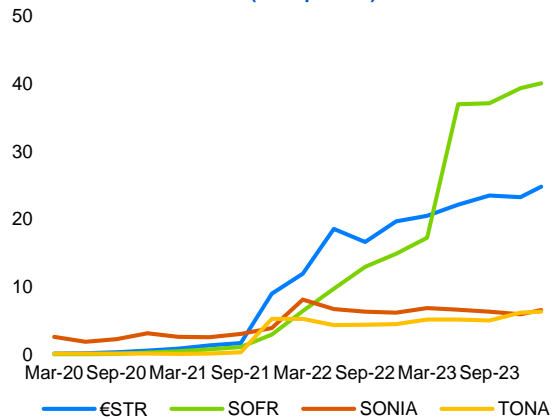
A.145
Changes in outstanding EU covered bond ratings



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

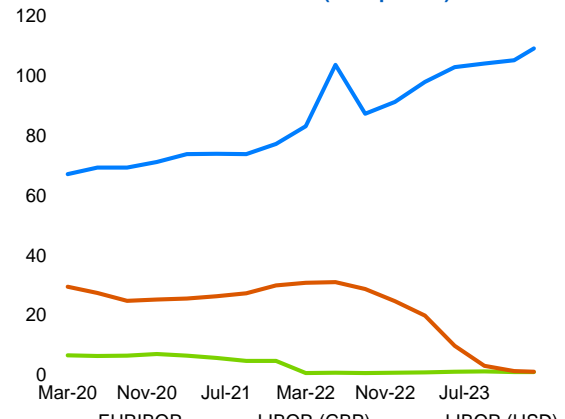
Financial benchmarks

A.146
IRDs linked to new RFRs (not updated)

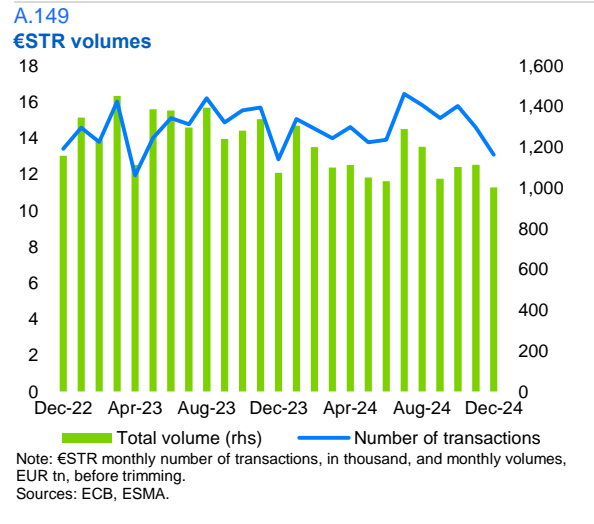
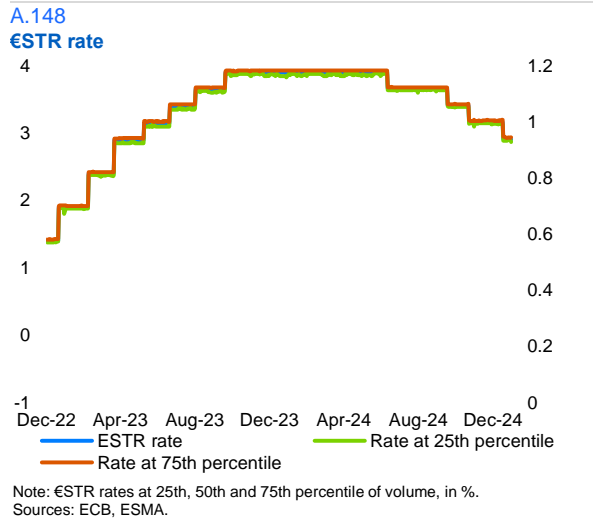


Note: Gross notional amount outstanding for interest rate derivatives referencing new benchmarks, excludes intragroup and UK-domiciled counterparties during transition period for UK withdrawal from the EU. Sources: TRs, ESMA.

A.147
IRDs linked to Euribor and Libor (not updated)



Note: Gross notional amount outstanding for interest rate derivatives referencing benchmarks, excludes intragroup and UK-domiciled counterparties during transition period for UK withdrawal from the EU. Sources: TRs, ESMA.

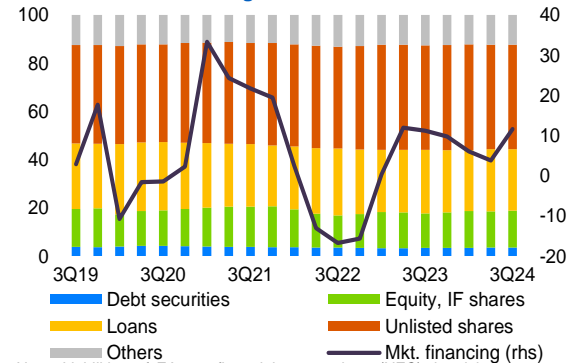


Market based finance

Capital markets financing

A.150

Total EA market financing

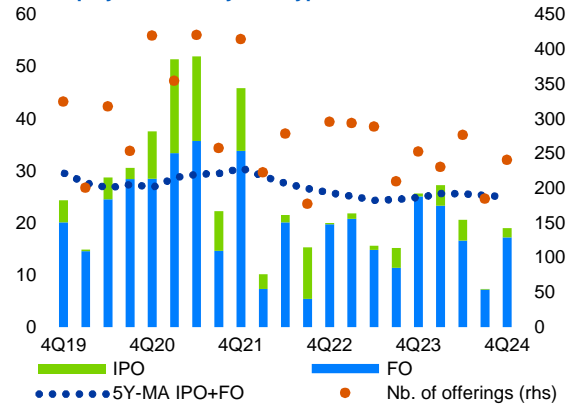


Note: Liabilities of EA non-financial corporations (NFC), by debt type as a share of total liabilities. Others include: financial derivatives and employee stock options; insurance, pensions and standardised guarantee schemes; trade credits and advances of NFC; other accounts receivable/payable. Mkt.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

Sources: ECB, ESMA.

A.151

EEA equity issuance by deal type

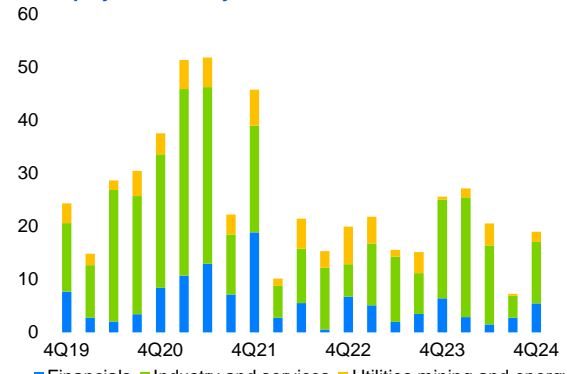


Note: Equity gross issuance in the EEA30 by type, EUR bn, and number of equity offerings. 5Y-MA=five-year moving average of the total value of equity offerings.

Sources: Refinitiv EIKON, ESMA.

A.152

EEA equity issuance by sector

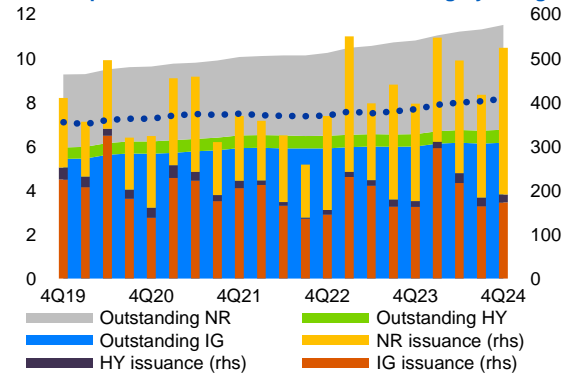


Note: Equity gross issuance in the EEA30 by sector, EUR bn. Financials includes banking & investment services, insurance, investment trusts and real estate.

Sources: Refinitiv EIKON, ESMA.

A.153

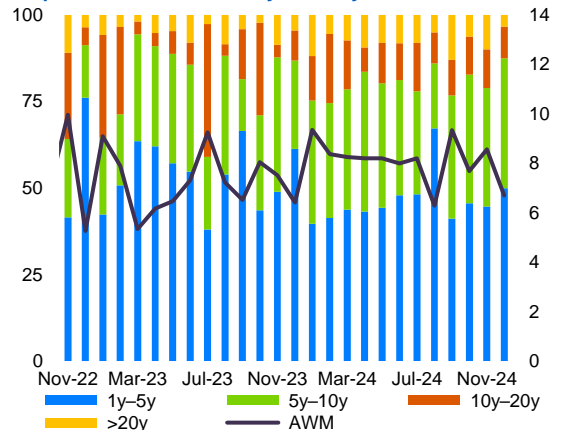
EEA corporate bond issuance and outstanding by rating



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

A.154

Corporate bond issuance by maturity buckets

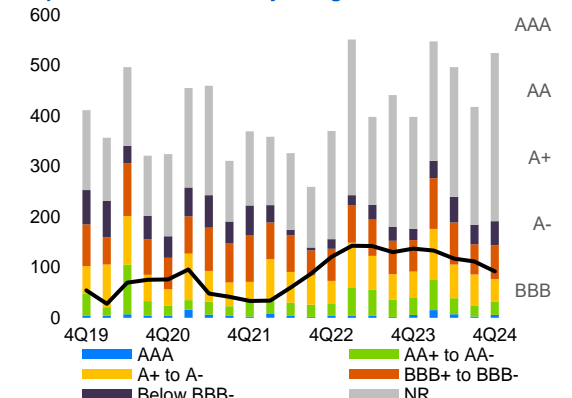


Note: Monthly share of corporate bond issuance by maturity bucket, in % (lhs) and average weighted maturity at issuance (AWM), in years (rhs).

Sources: Refinitiv Eikon, ESMA.

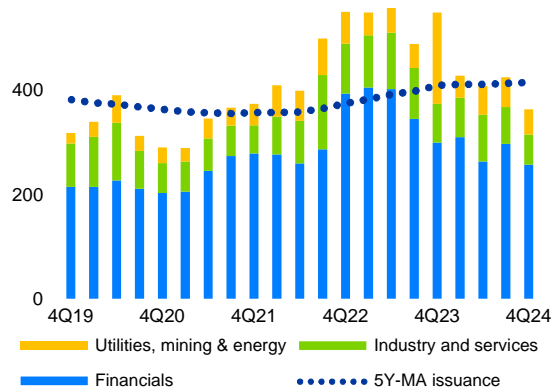
A.155

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.

A.156
Short-term EEA corporate debt issuance by sector
600



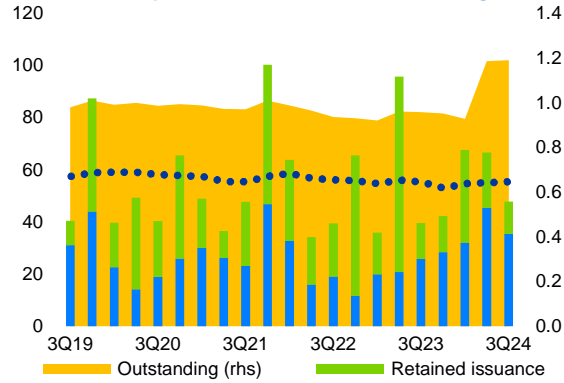
Note: Short-term corporate debt gross issuance in the EEA30 by sector, EUR bn. Short-term=Maturities < 12 months.
Sources: Refinitiv EIKON, ESMA.

A.157
EEA corporate bond issuance by sector
600



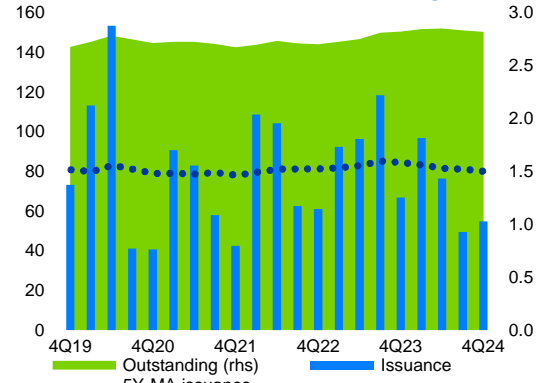
Note: Corporate bond gross issuance in the EEA30 by sector, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted into a numerical scale (AAA=1, AA+=2, etc.). Maturities < 12 months are excluded.
Sources: Refinitiv EIKON, ESMA.

A.158
EU securitised products issuance and outstanding
120



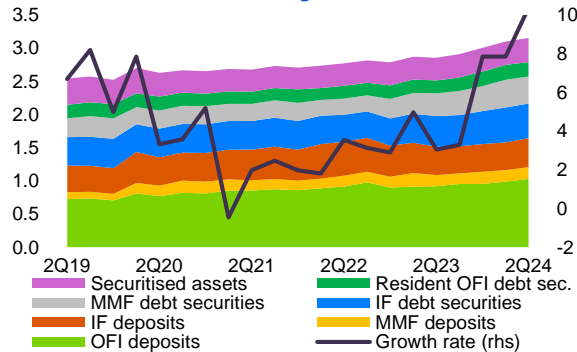
Note: Retained and placed securitised products gross issuance in Europe, EUR bn, and outstanding amounts (rhs), EUR tn. Data includes ABS, CDO, MBS, SME, WBS.
Sources: AFME, ESMA.

A.159
EEA covered bond issuance and outstanding
160



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.160
EA non-bank wholesale funding
3.5

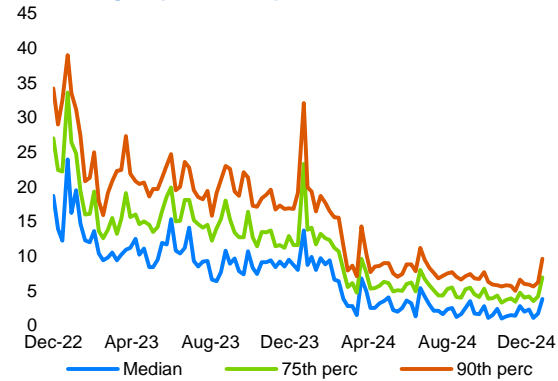


Note: Amount of wholesale funding provided by EA non-banks, EUR tn, and growth rate (rhs), in %. Securitised assets are net of retained securitisations. Resident OFI reflects the difference between the total financial sector and the known sub-sectors within the statistical financial accounts (i.e. assets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

Market-based credit intermediation

A.161

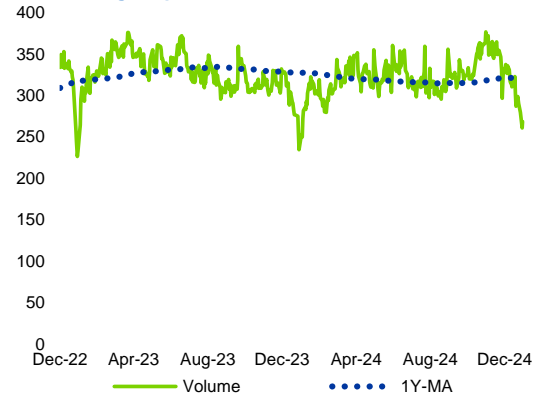
EU sovereign repo market specialness



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.162

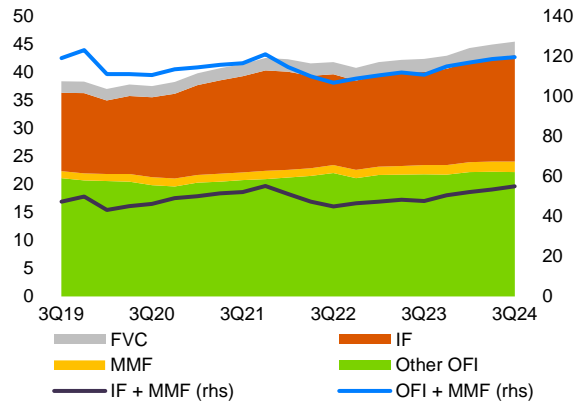
EU sovereign repo market turnover



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.163

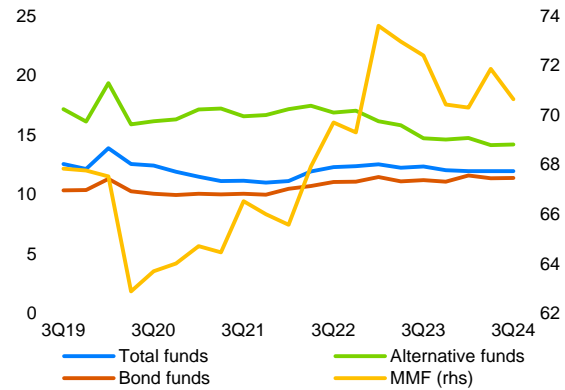
Total assets of EU MMFs and other financial institutions



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.164

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.165

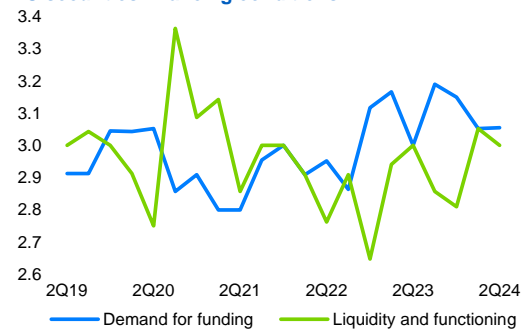
Credit terms in EU SFT and OTC derivatives



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.166

EU securities financing conditions



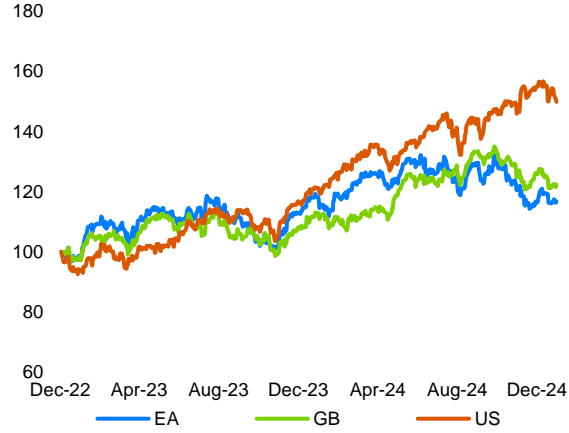
Note: Weighted average of responses to the questions "Over the past three months, how has demand for funding/how have liquidity and functioning for all EUR-denominated collateral types changed?" 1=decreased/deteriorated considerably, 2=decreased/deteriorated somewhat, 3=remained basically unchanged,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

Sustainable finance

ESG investing

A.167

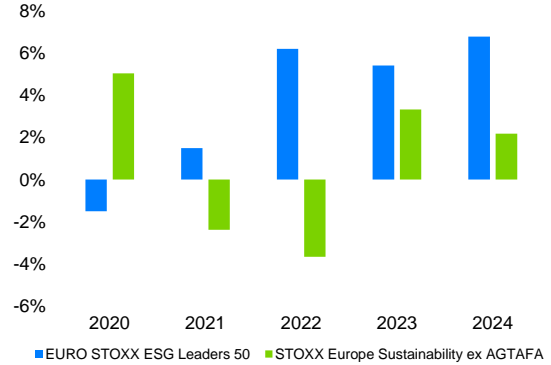
Global ESG leaders index performance



Note: MSCI ESG leaders total return indices, denominated in USD, indexed with 01/09/2021=100.
Sources: Refinitiv Datastream, ESMA.

A.168

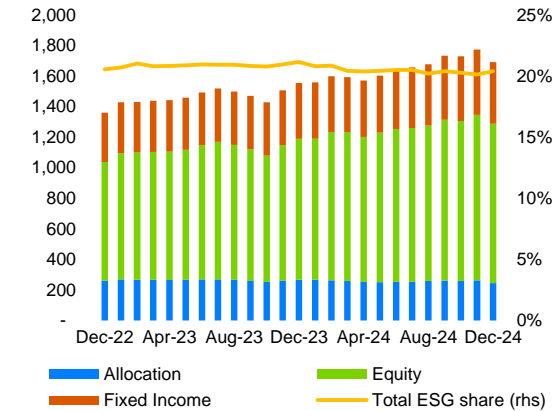
EU ESG vs. broad market index performance



Note: Annual returns of the STOXX ESG Leaders 50 index (best-in-class strategy) and STOXX Europe Sustainability excl. Alcohol, Gambling, Tobacco, Armaments & Firearms, and Adult Entertainment (AGTAF), positive screening and exclusion-based strategy) measured as relative difference to the STOXX Europe 600, in percentage points. 2024 data as of end-November.
Sources: Refinitiv Datastream, ESMA.

A.169

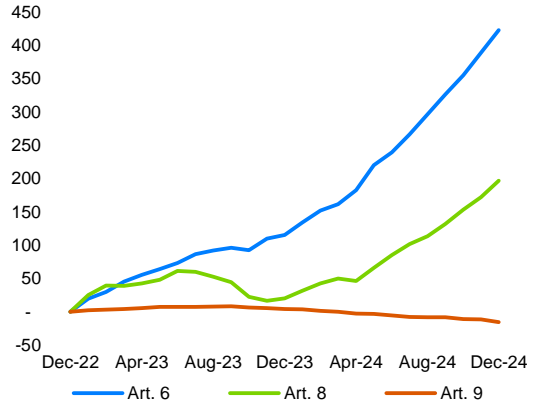
EU ESG fund assets



Note: AuM of EU-domiciled ESG funds by fund type, EUR billion, and share of ESG funds in total EU fund assets (right axis), in %.
Sources: Morningstar, ESMA.

A.170

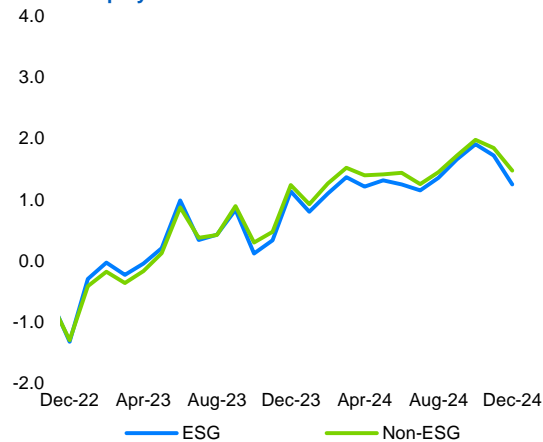
EU fund flows by SFDR disclosure regime



Note: Cumulative net flows into EU-domiciled funds (excluding MMFs) by SFDR fund type since December 2022, EUR bn.
Sources: Morningstar, ESMA.

A.171

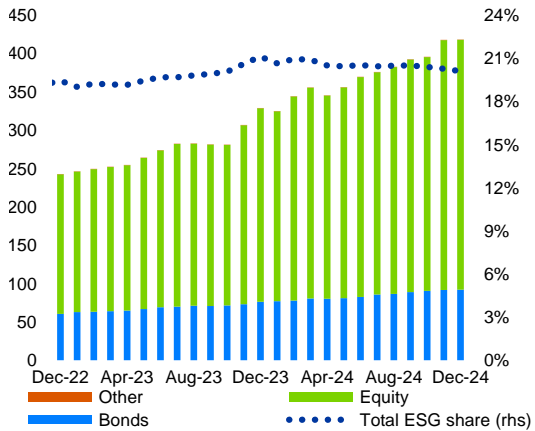
EU ESG equity fund returns



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

A.172

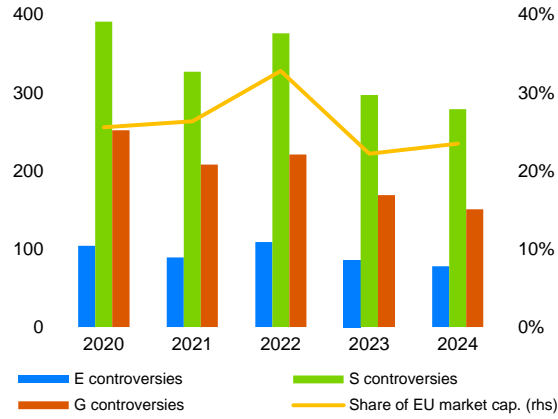
EU ESG ETF assets



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.

A.173

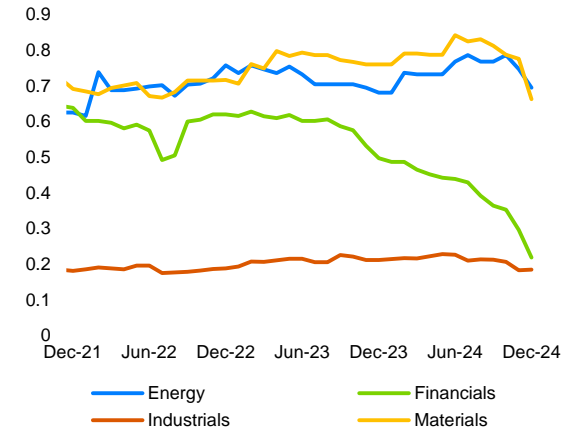
EU companies involved in ESG controversies



Note: Number of EU companies involved in high-impact environmental, social or governance controversies and share of EU market capitalisation (right axis), in % of total market capitalisation of EU-27 domiciled companies. Sources: Refinitiv Datastream, Sustainalytics, ESMA.

A.174

Environmental controversy scores of EU companies

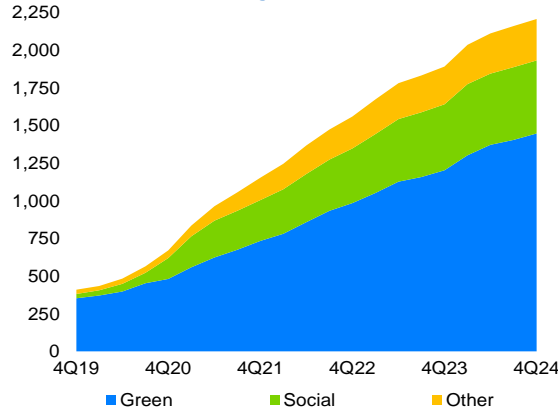


Note: Monthly average highest environmental controversy score of EU-27 domiciled companies within selected sectors, on a scale of 0 to 5. Sources: Sustainalytics, ESMA.

Sustainable debt

A.175

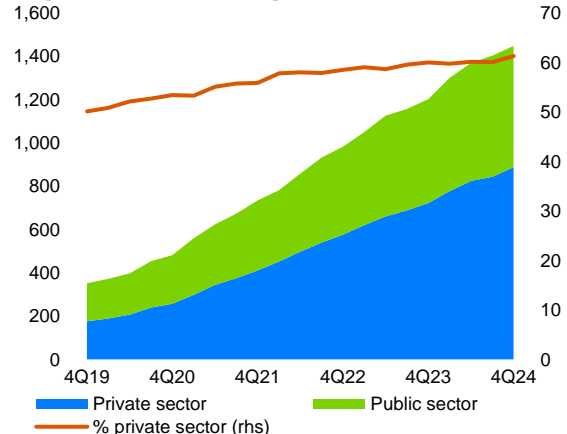
EU ESG bonds outstanding



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

A.176

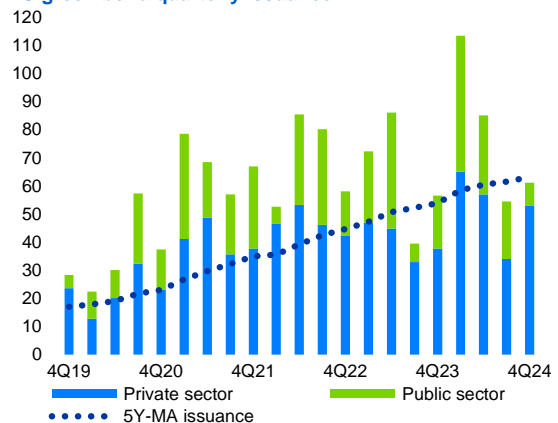
EU green bonds outstanding



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

A.177

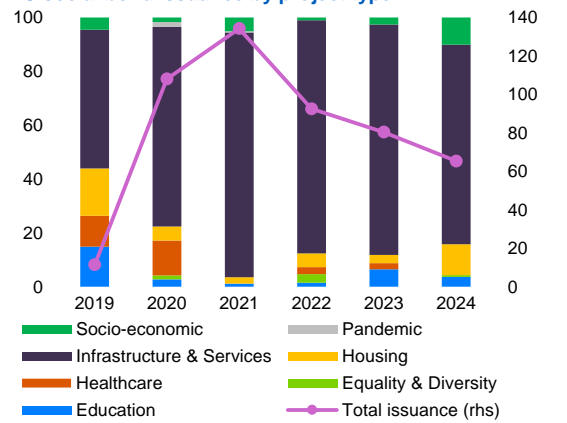
EU green bond quarterly issuance



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

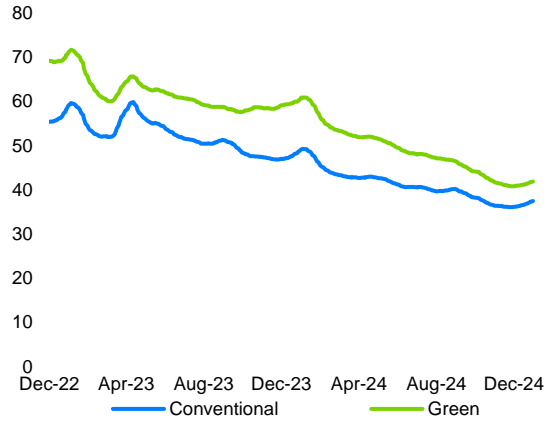
A.178

EU social bond issuance by project type



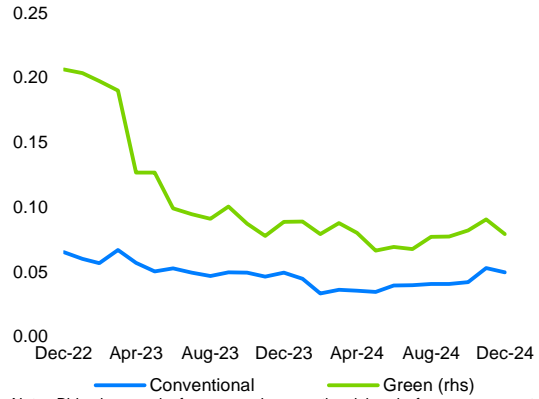
Note: Social bond gross issuance in the EEA30 by project type, in %, as a share of total social bond gross issuance (rhs), in EUR bn. Sources: Refinitiv EIKON, ESMA.

A.179
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.

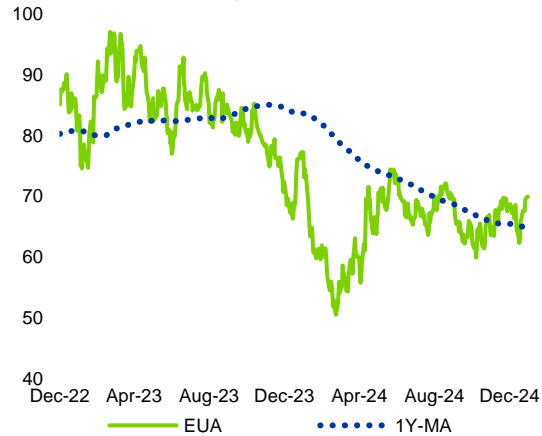
A.180
EU sovereign green bond liquidity



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.

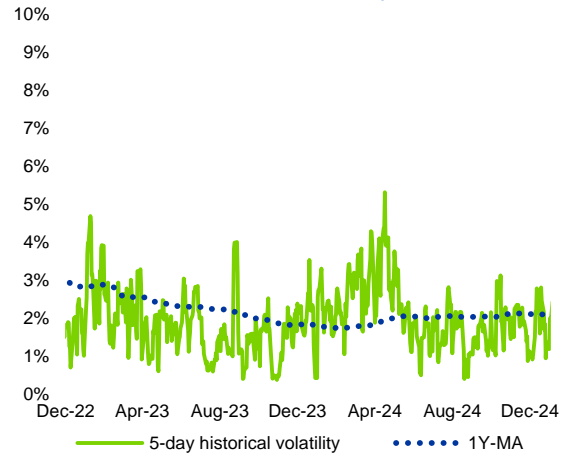
Carbon markets

A.181
EU emission allowance prices



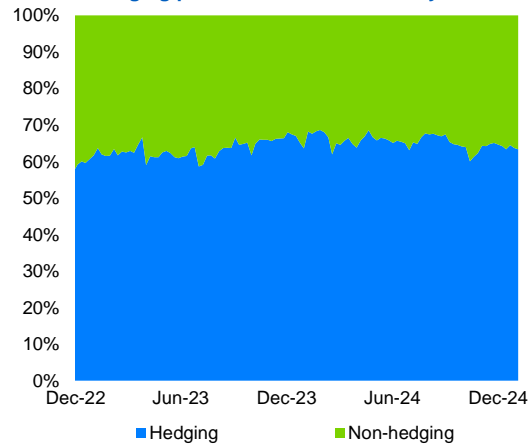
Note: Daily settlement price of European Emission Allowances (EUA) on European Energy Exchange spot market, in EUR/tCO2.
Sources: Refinitiv Datastream, ESMA.

A.182
EU emission allowance returns volatility



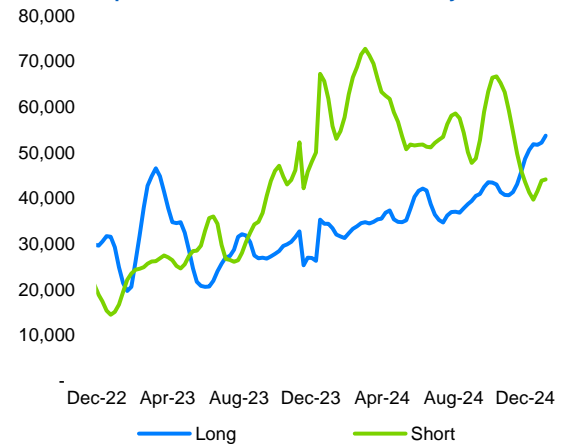
Note: Rolling 5-day standard deviation of daily changes in EU emission allowance spot prices, in %.
Sources: Refinitiv Datastream, ESMA.

A.183
Share of hedging positions in EUA futures by non-financials



Note: Share of hedging and non-hedging positions of compliance entities and other commercial undertakings in EU emission allowance derivatives, in %.
Sources: ESMA.

A.184
Number of positions in EUA derivatives held by funds



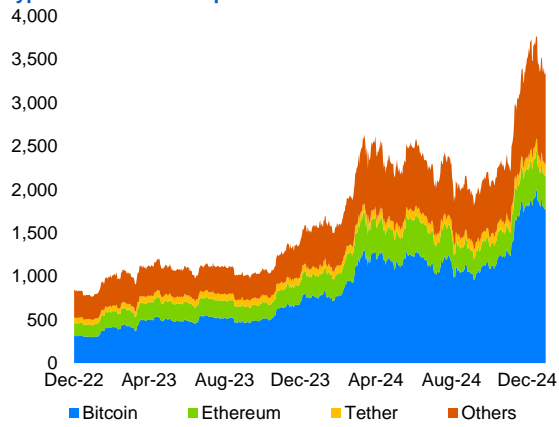
Note: Weekly number of long and short positions in EU emission allowance derivatives held by investment funds, four-week moving averages.
Sources: ESMA.

Financial innovation

Financial innovation

A.185

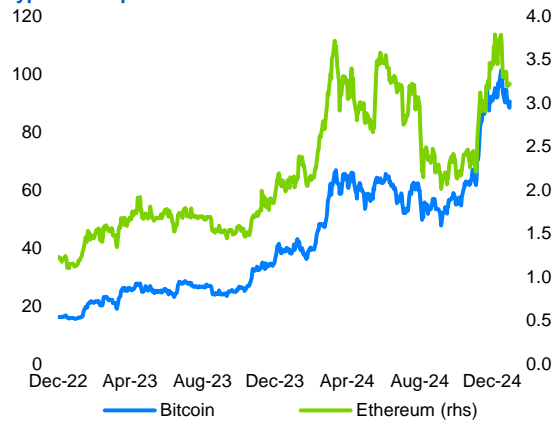
Crypto asset market capitalisation



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

A.186

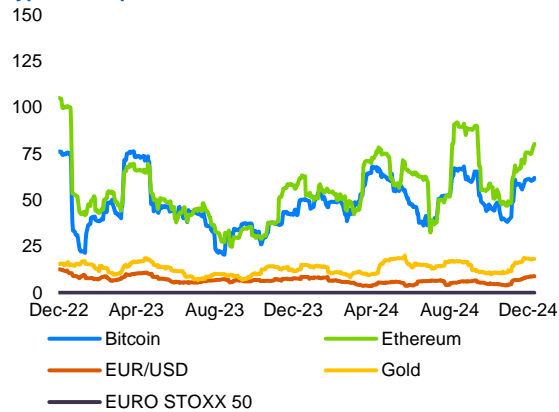
Crypto asset prices



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

A.187

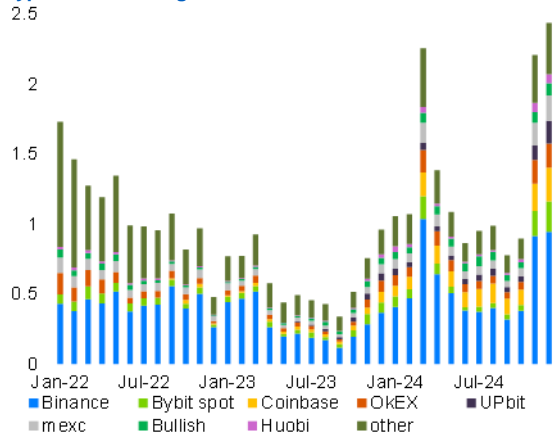
Crypto asset price volatilities



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.188

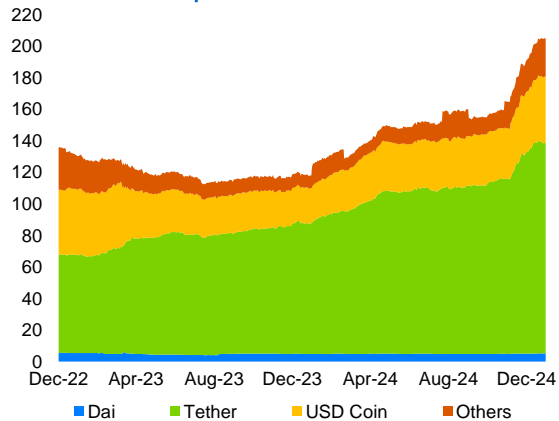
Crypto asset trading volumes



Note: Volume traded by exchange, in EUR tn (monthly)
Sources: Kaiko, ESMA.

A.189

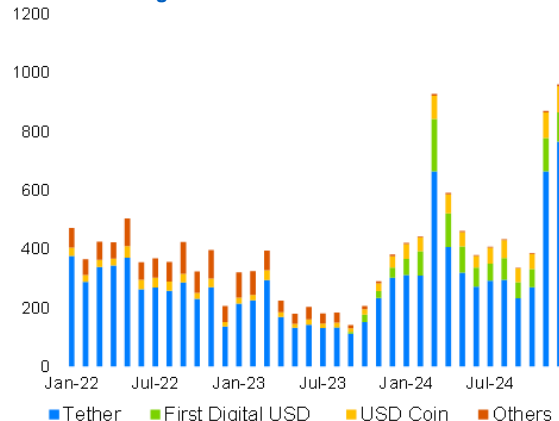
Stablecoin market capitalisation



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

A.190

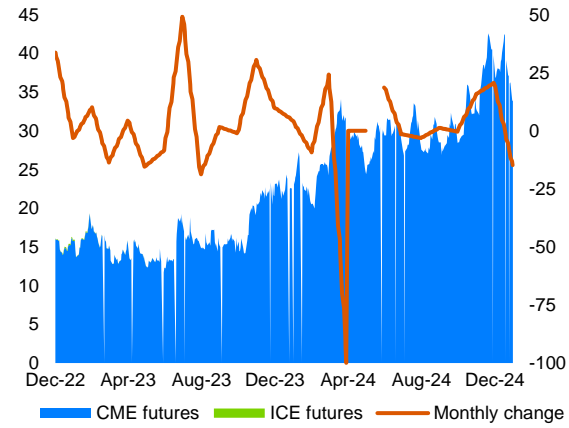
Stablecoin trading volumes



Note: Volume traded by stablecoin, in EUR bn (monthly).
Sources: Kaiko, ESMA.

A.191

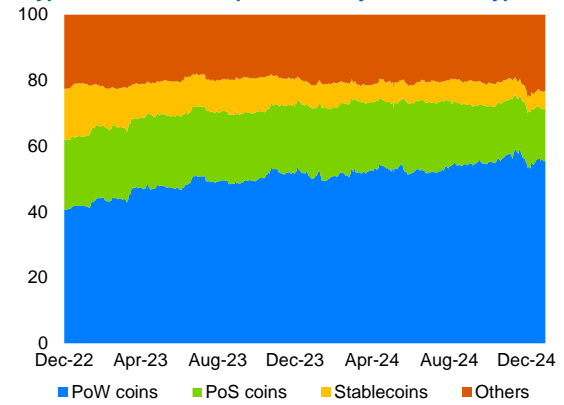
Bitcoin futures market



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

A.192

Crypto-asset market capitalisation by consensus type



Note: Market capitalisation of crypto-assets by consensus mechanism, as % of the total. PoW=Proof-of-Work, PoS=Proof-of-Stake. Stablecoins only include Binance USD, Tether and USD Coin.
Sources: CoinMarketCap, ESMA.

