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ESMA
European Securities and Markets Authority

TRV Risk Monitor

ESMA Report on Trends, Risks and Vulnerabilities No. 1, 2026

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Executive summary

Risk summary

In the second half of 2025 and into early 2026, equity valuations reached record highs, underscoring mounting risks of unsustainable pricing and disorderly corrections that could reverberate across markets, even after a modest subsequent retreat. The October crypto flash crash dampened exuberance in crypto markets, yet valuations remain at elevated levels. Private credit emerged as a systemic vulnerability following US defaults highlighting opacity and systemic interlinkages. Debt sustainability concerns grew in both the EU and U.S. on the back of rising public deficits. Cyber and hybrid threats remained elevated, increasing the risk of severe disruptions to market infrastructure and amplifying systemic vulnerabilities.

These market developments collectively contributed to keep risks of market and systemic stress elevated, particularly given the backdrop of evolving geopolitics and continuing uncertainty. Asset price correlations have also increased since April, indicating enhanced contagion risk between asset classes.

In light of this assessment, we continue to score market, contagion and operational risk categories at the highest level, credit risk at high and environmental risk at medium level. Stretched valuation levels, which exacerbate the risk of a sharp correction in a volatile environment, explain the high-risk score for securities markets and crypto assets.

Risk outlook

Persistent uncertainty continues to cloud the outlook, with stretched global equity valuations posing significant risks of abrupt corrections and systemic contagion and credit quality potentially deteriorating. Tariff-driven inflation may complicate central bank policy decisions, with potential for volatility in bond and currency markets. The rapid expansion of private credit adds leverage and liquidity vulnerabilities, where setbacks could cascade into wider financial distress. Growing interlinkages between crypto and traditional markets, including through stablecoins, warrant close attention too, as they increase potential negative spillovers. In addition, cyber and hybrid threats represent an escalating concern. Retail and institutional investors should remain vigilant and maintain robust liquidity buffers to withstand sharp market corrections.

Risk indicators

Risk categories

	Previous risk level	Current risk level	Outlook
Liquidity	🟨	🟨	→
Market	🟥	🟥	→
Credit	🟨	🟨	→
Contagion	🟥	🟥	→
Operational	🟥	🟥	→
Environmental	🟨	🟨	→

Market segments

	Previous risk level	Current risk level	Outlook
Securities markets and crypto-assets	🟥	🟥	→
Infrastructures, services	🟨	🟨	↗
Asset management	🟨	🟨	→
Retail investors	🟨	🟨	→

Note: Assessment of the main risks by drivers and categories for markets within ESMA's remit since the last assessment, and outlook for the forthcoming quarter. Risk dashboard based on the categorisation of the European Supervisory Authorities Joint Committee. Risk drivers are key factors influencing potential risks within ESMA's remit, assessed through a narrative-based approach. Colours indicate current risk intensity. Coding: green = potential risk; yellow = elevated risk; orange = high risk; red = very high risk. Upward-pointing arrows = increase in risk intensity; downward-pointing arrows = decrease in risk intensity; horizontal arrows = no change. Change is measured with respect to the previous period; the outlook refers to the forthcoming period.

Risk drivers

Financial stability and orderly markets

Outlook →

Geopolitical and macroeconomic uncertainties: Ongoing geopolitical uncertainties, including on regional conflicts and in global trade, increase fragmentation risk and could be a trigger for event risk and large, sudden and potentially lasting price movements. The EU's economic performance also provides an uncertain backdrop for EU financial markets, especially given the expected impact of higher tariffs. Rising public and private debt is set to increase debt servicing, which will continue to weigh on issuers. Persisting elevated equity market valuations, linked to technology and AI in the US and financials in the EU, further intensify risks of sharp market corrections in a context of increasing market reactivity and volatility.

Operational and technology disruptions: Recent incident data show that the financial sector is increasingly targeted by cyber and hybrid threats, while critical infrastructures and service providers remain vulnerable to operational dependencies that can propagate shocks across participants and markets. Efforts to strengthen operational-resilience frameworks, enhance third-party oversight and improve incident reporting and testing are central to mitigating the potential financial-stability and orderly-market impact of future disruptions ↗

Investor protection

Outlook →

Speculative products: While much retail investing is in traditional asset classes such as equities or fund shares, some investors transact in complex, leverage products or gain exposure to crypto-assets. Risks and costs are compounded if investors trade in and out of positions frequently, as is the case for certain types of leverage products such as turbos. Such products are associated with persistent expected losses for investors

Behavioural biases in investing: New clients are flocking to digital platforms. While greater participation brings significant benefits, inexperienced clients are especially at risk of making poor trading decisions or having unrealistic expectations. Investors face the risk of being exposed to false or misleading information through social media. Some digital platforms embed social media feeds, increasing the potential influence on investment decisions →

Portfolio concentration risk: Retail clients have accumulated significant exposures to US-based AI stocks. This particularly applies to young investors, and exposures can be direct through stock holdings as well as indirect through investment fund and ETF shares. Investments in AI and technology firms have continued to drive US equity valuations higher, raising concerns over the risk of a disorderly correction that would impact EU retail investors. ↗

Note: Summary of key drivers of risks in financial markets under ESMA's remit. The summary is not a complete list and changes over time. Risk drivers may be interdependent and can affect numerous market segments and market activities. Upward-pointing arrows = increase in risk intensity; downward-pointing arrows = decrease in risk intensity; horizontal arrows = no change. Change is measured with respect to the previous period; the outlook refers to the forthcoming period. .

Market developments

Securities markets and crypto-assets

- Equity: Persisting elevated market valuations further intensify risks of sharp market corrections in context of increasing market reactivity and volatility
- Bonds: Narrowing sovereign bond spreads, but slight deterioration in liquidity amid broader risks from uncertain macro context; credit quality signs are mixed in EU as concerns grow on US private credit
- Crypto-assets: decline deepens after October flash crash but stablecoins continue to grow
- *In depth: Sensitivity of the EU sovereign bond market to unexpected events*
- *In depth: 10 October crash exposed vulnerabilities in crypto market structure*

Infrastructures and services

- Cyber risks are increasing in structural relevance for financial markets
- Trading venues see decrease in lit equity trading volumes in 2H25.
- Surge in CSD settlement fails for ETFs in April
- Numbers of outstanding credit ratings increase slightly for the EEA

Asset management

- Equity funds performance dependence on the US raises the risk of a massive repricing
- Risks are stable for fixed income funds, with credit risk more prominent
- Liquidity and valuation risks are ongoing concerns in real estate funds
- Growing private finance sector raises concerns due to opacity and interconnectedness
- *In depth: Funds exposures to private finance*

Consumers

- High inflows to ETFs as investors continue to shift from active to passive management
- Accessible digital platforms attract young investors
- Social media drives investor behaviour, raising bubble risks
- *In depth: Retail investing in leverage barrier products*
- *In depth: Total costs of investing in UCITS and AIFs*

Structural developments

Market-based finance

- Equity issuance stayed weak, with IPOs declining and secondary offerings providing little support
- Corporate bonds remained strong, despite moderating short-term debt and rising refinancing risks
- Private equity slowed, as fundraising and investment fell and EU fund assets contracted
- *In depth: Concerns over an increase in EU delistings*

Sustainable finance

- Shift in global climate policy sentiment creates negative backdrop for ESG investing
- ESG funds saw mixed developments, ESG bond market more resilient but issuance slowed
- ESMA fund naming guidelines improved alignment between fund names and portfolio
- *In depth: Physical risk and catastrophe bonds*

Financial innovation

- Tokenisation adoption remains low but is gaining momentum
- AI uptake in EU securities markets remains uneven, with 40 % of surveyed firms (65 % of micro firms) reporting no active or planned AI use cases
- Although far from being commercially viable, quantum computing applications are attracting growing interest from financial institutions and investors

Recent TRV Risk Analysis

ESMA publishes in-depth analyses across a wide range of risk issues. The list below highlights key ESMA Risk Analysis publications since 2024 and their website links, as well as the latest editions of our ESMA Market Report series. For a full list of publications, visit our ESMA Risk Analysis webpage.

Securities markets, infrastructures and services

- Measurement and modelling of cyber risk Link
- Real estate markets – Risk exposures in EU securities markets and investment funds Link

Asset management

- Annual risk assessment of leveraged AIFs in the EU – 2024 Link
- Risks in UCITS using the absolute Value-at-Risk approach Link

Consumers

- The scale factor: Impact of size on EU fund cost structures Link
- Social media sentiment: Influence on EU equity prices Link

Sustainable finance

- Impact of ESMA Guidelines on the use of ESG or sustainability-related terms in fund names Link
- Emerging trends in transition fund strategies Link
- Fund names: ESG-related changes and their impact on investment flows Link
- Assessing portfolio exposures to climate physical risks Link

Financial innovation

- Operational and cyber risks in EU financial markets: measurement and stress simulation Link
- Maximum Extractable Value - implications for crypto markets Link
- Artificial intelligence in EU investment funds: adoption, strategies and portfolio exposures Link
- Neo-brokers in the EU: developments, benefits and risks Link
- Crypto assets: Market structures and EU relevance Link

ESMA Market Reports

- EU Crowdfunding 2025 Link
- Report on total costs of investing in UCITS and AIFs Link
- Costs and performance of EU retail investment products 2024 Link
- EU Carbon Markets 2025 Link
- EU Prospectuses 2024 Link

Risk monitoring

Market environment

Geopolitically, the second half of 2025 brought an increase in clarity, as the **US entered into trade agreements** with the EU in late July and with China in November. Nonetheless, the situation remained fragile and volatile, as evidenced in the sudden but short-lived escalation of trade tensions between US and China in October. Other important geopolitical developments included the Gazan peace deal in October, though with tensions continuing. In contrast, the Russia-Ukraine conflict continued, with US and European attempts to broker peace yet to bear fruit. Developments in early 2026, after the reporting period, also maintained geopolitical uncertainty, with the tensions over Greenland, the US capture of the Venezuelan president, the unrest in Iran and the criminal investigation of the chair of the Federal Reserve.

An increase in clarity on global trade relationships should ease economic activity by facilitating planning and investment, but the situation also remains uncertain, and tariffs coming into effect will reduce and shift trade flows. In this context, the global **macroeconomic outlook** is expected to remain subdued, with the IMF expecting global growth to remain at 3.3 % in 2026 and to slow a little to 3.2 % in 2027.[1] The European outlook also looks muted, with relative weakness in the largest Member States. The European Commission's latest forecasts revised EU real GDP forecasts up for 2025 to 1.4 % (+ 0.3pp) but down for 2026, 1.4 % (- 0.1pp),[2] with the increase in 2025 attributed in part to a surge in exports in advance of the tariffs coming into effect.

There was little change in **inflation** forecasts, expected to remain near target levels in the medium-term, at 2.5 % for the EU in 2025 (+ 0.2pp) and 2.1 % for 2026 (+ 0.2pp) and 2.2 % for 2027. Energy prices continued to trend downwards for both natural gas and oil.

Interest rates for the euro area have remained unchanged since the 25bps cut in June and are expected to remain stable in the near-term. In the US, questions on the future monetary stance prevail.

Global financial conditions eased with the rebound in global asset prices since April and the weaker dollar.[3] In contrast, in the EU there was a small but unexpected net tightening of bank credit standards in 3Q25 amid perceived risks to the economic outlook. Credit standards tightened moderately for consumer credit but remained unchanged for housing loans.[4]

Global climate risks remained high, with global temperature deviations from the pre-industrial era averaging 1.05°C in 2025, albeit lower than in 2024. Rising temperatures increase the frequency and severity of climate-related physical hazards, with irreversible changes if tipping points are crossed, with potentially severe economic and financial implications for the operations of firms and markets.

Global equity valuations continued to rise after the April 2025 dip, reaching record highs in 2H25, particularly in Japanese markets, which saw exceptional growth. In the US, valuations briefly retreated in mid-October amid concerns that gains driven by technology, particularly artificial intelligence, might prove unsustainable. With a continuing highly uncertain context, the stretched global equity valuations present ongoing and significant market risks of sudden corrections and wider contagion.

Commodity price volatility appeared high initially in summer 2025, reflecting the temporary energy price surge in June linked to the Israel-Iran conflict (Chart 2). Subsequently, volatility eased and the oil price and the Dutch TTF natural gas price trended downwards, with oil prices falling further on the Gazan peace deal in October. In January 2026, oil prices remained relatively stable following the removal of the Venezuelan president but rose with the Iran unrest in January 2026. Gold continued its steady appreciation, reaching record highs in October, fuelled by safe-haven asset demand and in January with the announcement of the investigation of the chair of the Federal Reserve and tensions over Greenland.

Corporate **bond spreads** continued narrowing in the summer reversing the widening seen in April

[1] IMF (2025), World Economic Outlook Update, January 2026.

[2] European Commission (2025), European Economic Forecast – Autumn 2025.

[3] IMF (2025), Global Financial Stability Report, October 2025.

[4] ECB (2025), The euro area bank lending survey - Third quarter of 2025.

on the fears of the economic impacts of the sudden shifts in US trade policies. The narrowing slowed in September and October, in the context of renewed trade tensions. EU sovereign spreads also narrowed, apart from France in October on the government instability and its potential impact on the forthcoming budget.

In **foreign exchange markets**, the EUR/USD exchange rate remained on a flatter trend after the strong increase in 1H25 (Chart 3), with the euro holding much of its earlier appreciation against the dollar. Exchange rate volatility was also lower compared to the first half of the year.

Net investment flows showed small net inflows in the first four months of 2H25 (Chart A.7), driven mainly by non-EA investment in EA equities, and to a lesser extent in long-term and short-term EA debt. These inflows exceeded outflows from EA investments into non-EA long-term and short-term debt and to much a lesser extent into non-EA equities. While these statistics are based on all non-EA flows, the pattern may reflect some investor rebalancing of financial assets from the US to the EA.

Real estate prices appear to have bottomed out, with the sector slowly recovering. Residential **real estate** prices continued to rise in the first half of 2025,[5] and commercial real estate prices also grew overall, though with weaker performance in office and retail sectors.[6] Authorities are monitoring that the recovery is orderly given market footprint of the commercial real estate on the asset side, and interconnections with banks on the liability side.

There were mixed signs on **credit quality** in the second half of 2025. European ratings drift was near zero for corporates, indicating little clear direction in rating changes, positive after a lull for structured finance, suggesting slowing upgrades followed by an uptick in upgrades, and negative for sovereigns for a time on the French downgrades. Rolling default rates for high-yield non-financial corporates were largely stable. The sudden and surprising collapses of First Brands and Tricolor in the US illustrated how losses in private credit could quickly crystallize and lead to knock-on losses to other institutions. The private credit market is increasingly seen as source of risk. It has grown rapidly in recent years, is highly interconnected with banks and non-banks, and relatively opaque, including through its reliance on private ratings in the US.

The US signalled willingness to accept lower tariffs and preliminary trade deals were reached. This was reflected in the fall from record-high levels of **economic policy uncertainty** indices in April (Chart 5). Despite the fall, however, the uncertainty indices remain markedly higher than levels before October 2024 and the election of the new US administration. Moreover, unexpected developments in tariff policies or other political developments could trigger renewed financial market volatility.

Consistent with this fall in uncertainty, our composite market indicator continues to show a stable and low **systemic stress** following the higher volatility in equity and bond markets in March 2025 (Chart 6). However, the contribution of correlation to the systemic risk measure has increased since April indicating enhanced contagion risk between asset classes. Also, with ongoing geopolitical and macroeconomic uncertainty, the risk of further increases in systemic stress remains.

Government debt-to-GDP in the EU is expected to rise from 82 % in 2024 to 85 % in 2027 (88 % to 91 % in the euro area) driven by persistent deficits and debt servicing costs exceeding nominal GDP growth. Also, the Commission projects that four Member States will have debt ratios over 100 % of GDP by 2027. Debt sustainability concerns were also underlying the October increases in French sovereign yields, with the collapse of the government and concerns that structural debt drivers would be insufficiently addressed in future. The deterioration in debt sustainability was reflected also in downgrades of French sovereign debt. Meanwhile, in the US, concerns have also grown on debt sustainability, with the passing of the One Big Beautiful Bill Act in July which substantially increases the US deficit and will make US debt markedly less sustainable in the medium term.[7]

[5] ECB (2025), Residential property price indicator, Euro area 20, accessed 25 November 2025.

[6] S&P (2025), European Covered Bonds Eye Commercial Real Estate Recovery, and Green Street's quarterly CPPI – real-time property values, accessed 25 November 2025.

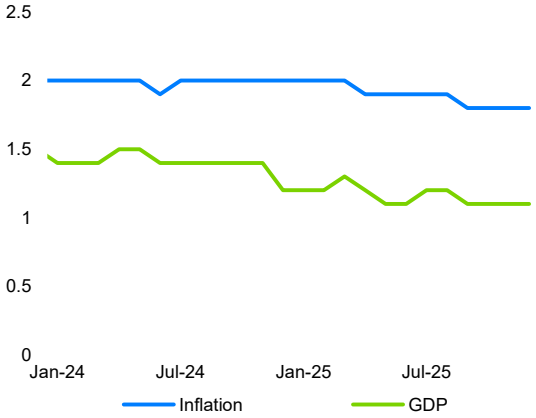
[7] See, for example, VoxEU (2025) Then and now: A look back and ahead at the US federal budget, Budgetlab Yale (2025), Long-term Impacts of the One Big Beautiful Bill Act, as Enacted on July 4, 2025 and Brueghel (2025) How much of a threat to US debt sustainability is Trump's One Big Beautiful Bill Act?.

Key indicators

Chart 1

GDP and inflation forecasts for 2026

GDP and inflation forecasts stable

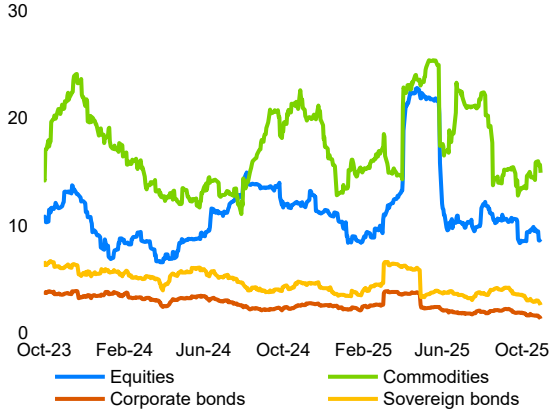


Note: Median GDP growth and inflation forecast for the euro area for 2026, by vintage month, in %.
Sources: Refinitiv Eikon, ESMA.

Chart 2

Market volatilities

Falls in volatility across assets

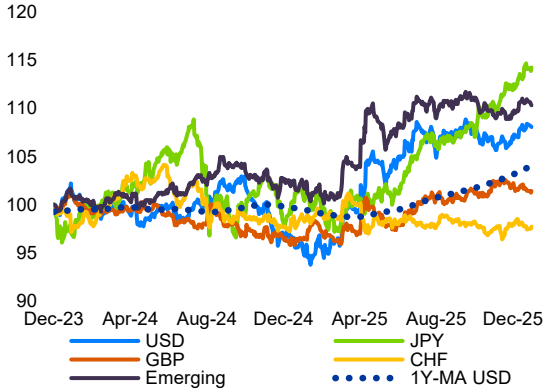


Note: Annualised 40D volatility of return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities), in %.
Sources: Refinitiv Datastream, ESMA.

Chart 3

Exchange rates

Dollar weakening against Euro slows

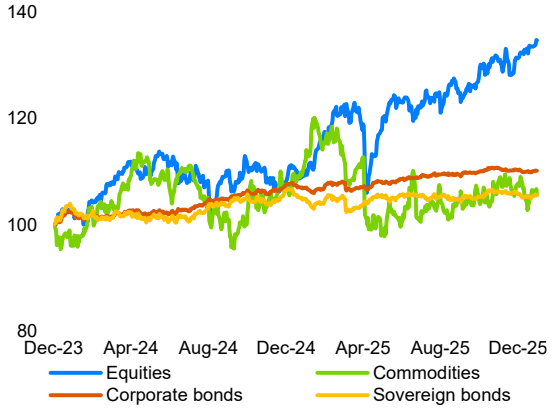


Note: Spot exchange rates to EUR. Emerging is an average of spot exchange rates for CNY, BRL, RUB, INR, MXN, IDR and TRY weighted by GDP as of start date year. 01/04/2023=100. Increases in value represent an appreciation of EUR. 1Y-MA USD=one-year moving average of the USD exchange rate.
Sources: ECB, IMF, ESMA.

Chart 4

Market performance

Growth generally, especially in equities

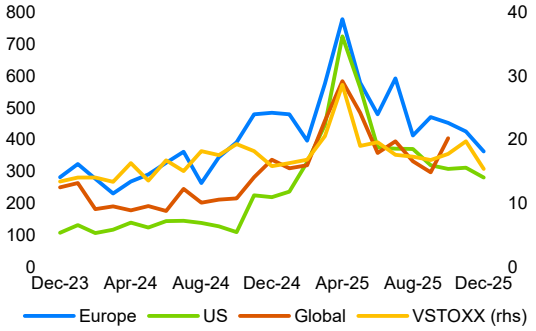


Note: Return indices on EA equities (Datastream regional index), global commodities (S&P GSCI) converted to EUR, EA corporate and sovereign bonds (iBoxx EUR, all maturities). 01/06/2023=100.
Sources: Refinitiv Datastream, ESMA.

Chart 5

Economic policy uncertainty index

Uncertainty reduces but remains high

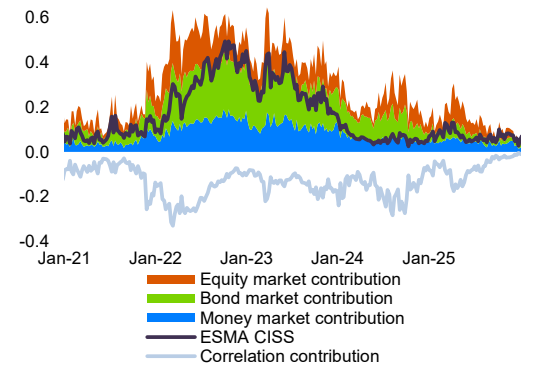


Note: Economic Policy Uncertainty Index (EPU), developed by Baker et al. (www.policyuncertainty.com), based on the frequency of articles in European newspapers that contain the following triple: "economic" or "economy", "uncertain" or "uncertainty" and one or more policy-relevant terms. Global aggregation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

Chart 6

ESMA systemic stress indicator

Low systemic stress, higher asset correlations



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

Securities markets and crypto-assets

Equity: Heightened market valuations

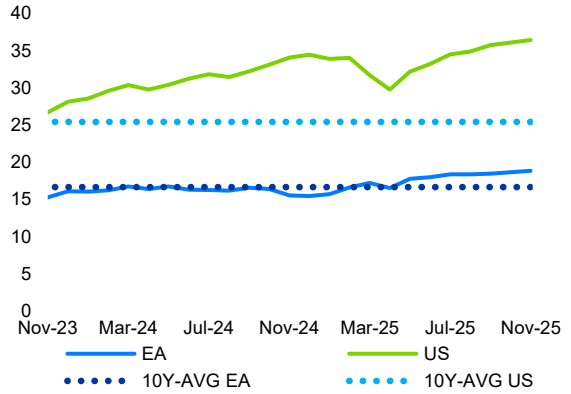
In 2H25, **European equity markets** continued to perform positively. With an increase of 22 % in 2025 they were in line with global indices (+ 22 %). These positive market developments happened despite the remaining uncertainties surrounding the medium to long-term impact of global trade policies. Markets also rebounded beyond the April 2025 market correction linked to the US tariff announcement.[8]

The US equity prices increased similarly (+ 18 % gain in 2025). US market gains continue to be driven by technology and AI firms, increasing market concentration. This raised concerns over the main drivers of US equity valuations and the risk of a disorderly correction. In this context, on October 10 the S&P500 experienced its sharpest decline since April 2025 (- 2.8 %), amid the possibility of renewed geopolitical tensions between the US and China, highlighting acute market sensitivity to external events. Concerns also persist over the increasing reliance of AI firms on debt financing as well as financing sources, since they rely not only on US public bond markets and private credit, but also utilize asset-backed securities, and off-balance-sheet structures.[9]

EU indices experienced significant growth in 2H25 (+ 9 %). Earnings expectations improved, with the level of **price-to-earnings (PE) ratios** of European stocks rising above their historical norms for the first time since March 2025, while US ratios continued to rise above their long-term average (Chart 7). Reflecting the risk of a possible market correction, EEA short selling positions reported under the Short Selling Regulation[10] have been showing a gradual uptick in 2H25 (Chart A.44).

The **financial sector** continues to drive the positive European valuations and particularly the valuation of **banks**. While **non-financials** exhibited moderate growth in 2H25 (+ 7 %), banks recorded a significant increase (+ 20 %), resulting in a + 76 % year-on-year rise (compared with + 13 % for non-financials, Chart 19). With bank profitability remaining stable at historically high levels and the decrease of non-performing loans in 2025, the performance of bank loan portfolios and the long-term price-earnings ratios of large, listed euro area banks reached their highest levels since the global financial crisis.[11] Other financial services observed more modest growth (+ 2 % and + 5 % in 2H25 for financial services and insurance sectors respectively).

Chart 7
EA and US equity price-earnings ratios
European price-earnings above long-term average



Note: Price-earning 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.

After the April 2025 market turbulence, **volatility** in equity market receded and stabilized at lower levels. Both the VIX and VSTOXX indices remained mostly below their long-term average in 2H25 (Chart 18). An increase in US market volatility mid-October, and again mid-November, linked to concerns over the evolution of US tariffs, were only short-lived. Similarly, liquidity measures across European markets improved,

[8] ESMA (2025), Trends, Risks and Vulnerabilities (TRV) Report, No. 1, 2025, September.

[9] See for instance Goldman Sachs Research (2025), AI: In a bubble? Issue 143, October, Bloomberg (2025), How AI companies are keeping debt off their balance sheet, October.

[10] ESMA collects short selling data from daily reports sent by National Competent Authorities. These reports are collected under Article 11 of Regulation (EU) No 236/2012.

[11] See EBA (2025), Risk dashboard, 3Q25, December, and ECB (2025), Financial Stability Review, November.

as evidenced by the narrowing of bid-ask spreads since end-June to levels closer to their historical average (Chart A.15).

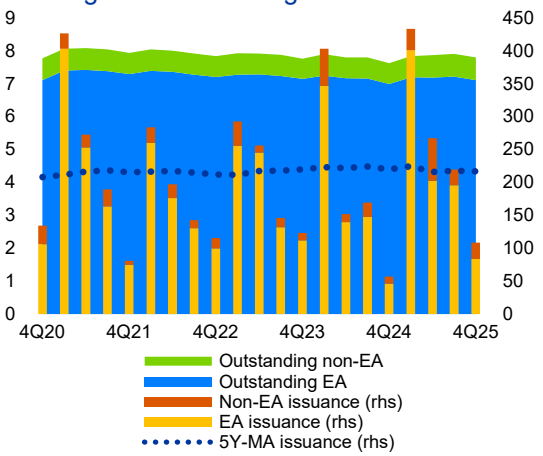
Fixed income: Spreads narrowing

Sovereign bond yields continued to fluctuate slightly above their long-term averages in 2H25, with very low dispersion across EA countries (Chart 20). German yields increased (+ 23 bps in 2H25), while several EA countries observed similar yield increases, notably Denmark (+ 24 bps), Belgium (+ 26 bps) and the Netherlands (+ 16 bps). French yields also rose amid political uncertainty, reaching a peak (3.6 %) in early September following the government's immediate resignation, without apparent contagion to other European sovereign bonds. French yields remain elevated at the end of December (+ 23 bps in 2H25), as is France's redenomination risk (Chart A.27), both reflecting the sovereign downgrade in September (see following sub-section on credit quality). In contrast, Italian yields remained stable in 2H25.

Most European sovereign bond spreads versus Germany narrowed in 2H25, with tightening ranging from 6 bps (NL) to 50 bps (PL). Only few countries did not observe a spread decline, including Sweden (+ 23 bps in 2H25), the Czech Republic (+ 16 bps), and Portugal (+ 7 bps). This tightening in spreads took place amid growing sensitivity of the main European bond yields to global factors (see the market environment in-depth section). In the meantime, the ten-year US Treasury yield declined by 8 bps to reach 4.1 % at the end of December.

European sovereign bond issuance reached its highest level since 2021, reaching EUR 1,028bn in 2025, including EUR 882bn in EA, amid higher defence and infrastructure spending plans (see market-based finance section).

Chart 8
EEA sovereign bond issuance and outstanding
Sovereign issuance at highest level since 2021



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.

With the high level of uncertainty and increased levels of sovereign issuance, overall **liquidity conditions** deteriorated in 4Q25, with bid-ask spreads for European government bonds up by 8bps in 2H25 on average (Chart A.26, A.28).

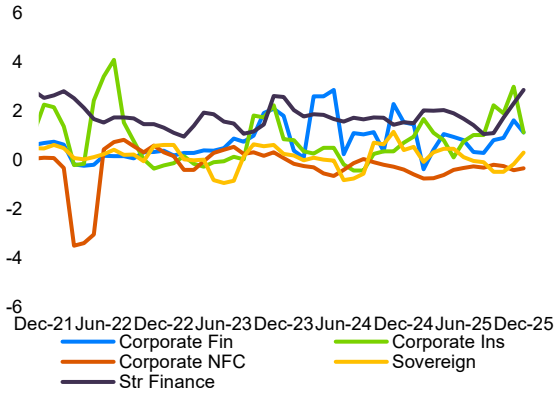
After their significant widening in April, corporate bond spreads continued to decrease in 2H25, both for the investment-grade and high-yield segment, signalling high risk appetite.[12]

Credit quality: mixed signs, US private credit concerns

EU credit risk indicators based on ratings were mixed across asset classes. Ratings drift, a measure of the direction and strength of the net change in credit quality, shows little change overall in ratings for EEA **corporate** non-financials, with drift staying close to zero. Ratings drift for financials was slightly positive, while insurer ratings drift grew and was more strongly positive.

[12] ECB (2025), Economic Bulletin Issue 8, November.

Chart 9
Ratings drift by debt type
Sovereign drift dips into the negative



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.

For EU **sovereigns**, ratings drift fell and turned negative for a time, with the downgrades of Finland (to AA in July by Fitch) and of France (from AA- to A+ by both Fitch in September and by S&P in October) (Chart 9). The downgrades offset the upgrades of Bulgaria (by Fitch in July), Spain (by Fitch, Moody's and S&P in September), Portugal (by S&P in August, and Fitch in September) and Italy (by Fitch in September) to drive overall sovereign ratings drift downwards for a time. The subsequent upgrade of Italy by Moody's to Baa2 in November contributed to the drift turning positive at the end of the year.

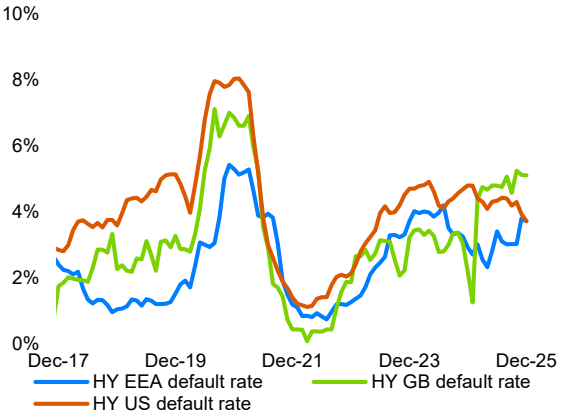
For **structured finance** ratings drift was volatile. It dipped early in the reporting period, falling to levels not seen for a couple of years, but remained positive. The fall in ratings drift was associated with a marked drop in drift for residential mortgage-backed security (RMBS) which fell early in the reporting period but remained positive, and to sharp fall in CMBS drift, which turned strongly negative at the beginning of 3Q25. In contrast, ratings drift for ABS was up and that for CDO was stable, with both positive. By the end of the year RMBS drift jumped sharply and structured finance drift recovered back to levels of peaks of recent years.

Fallen angels (investment-grade EEA ratings downgraded to high yield) fell slightly in 2H25, to 0.13 % of corporate investment grade ratings (down from 0.15 % in 1H25) and 0.22 % of structured finance investment grade ratings (up from 0.12 % in 1H25). Levels remain below or near to historical averages since 2015 (0.26 % for corporates and 0.24 % for structured finance). While current levels remain below average, given current high elevated valuations, if there were substantial market corrections fallen angels could increase and with that, risks of fire-sales by investors.

Looking at **defaults**, high-yield corporates defaults fell sharply to 1.0 % in 2H25 (from 2.2 % in 1H25), this reflects the fact that the surge in 1H25 was linked largely to one issuer. In contrast, defaults for high-yield structured finance in 2H25 remained unchanged at 0.1 %. There were again no reported defaults in sovereigns or in investment grade ratings in any debt category.

Among EEA high-yield non-financial corporates, the fall in the **twelve-month default rate** seen earlier in 2025 stalled, with rate trending back up recently. US high-yield non-financials default rates trends have largely been flat since their April 2024 peak, also close to average levels, while in the UK trends have flattened after a recent increase (Chart 10). Overall, the picture reflects persistence rather than a decline in defaults among non-financials over the past 18 months, likely due in part to continued strain from high refinancing needs under elevated post-pandemic interest rates.

Chart 10
EEA, US and UK 12-month non-financial default rates
Default rate flat trend but volatile



Note: 12-month rolling default rate among non-financial corporates high yield ratings, rated by the Big 5 CRAs by region (defaults in previous 12 months as proportion of outstanding ratings 12 months ago) in percent.
Sources: RADAR, ESMA.

The credit risk indicators presented above focus predominantly on EU market debt and issuers using indicators based on credit ratings. Looking more broadly at credit risk, there are growing concerns about **private credit**,[13] in the US where the market is large and expanding. Reports

[13] See Textbox 1 in ESMA (2024), ESMA Report on Trends, Risks and Vulnerabilities No1-2024, February.

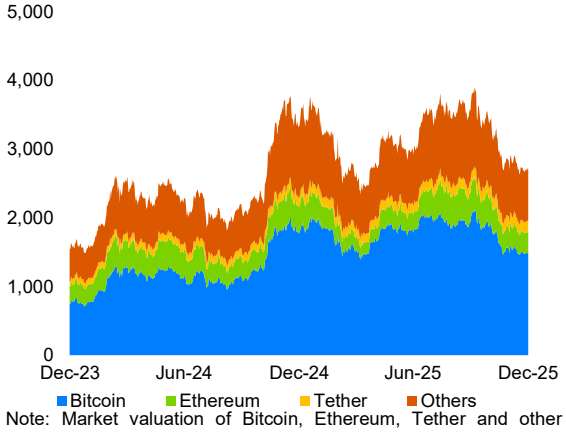
indicate an upward trend in default rates in private credit and leveraged loans, when selective defaults are included.[14] A lack of transparency, particularly regarding loan quality, could lead to unexpected losses and contagion risks, given the high levels of interconnectedness between private credit and other markets.[15]

In September, this risk materialised in the sudden and unexpectedly large losses suffered by two automotive-linked US firms, **First Brands and Tricolor**. In both cases, large losses tied to off-balance sheet exposures were revealed, triggering rapid credit rating downgrades as bankruptcy loomed. Both firms are now under investigation for fraud. The events caused significant losses for exposed banks, such as Jeffries, JP Morgan, and UBS. Following these developments, concerns have grown about increasing risks in private credit and potential parallels with securitised sub-prime mortgages, which played a key role in the 2008 financial crisis.[16]

Crypto-assets: continued sell-off since mid-October

Following another boom that peaked at a new all-time high of EUR 3.9tn in early October, **crypto markets** fell to EUR 2.7tn by the end of December 2025 – wiping out EUR 1.2tn, or 30 %, in less than three months. Investors have been shying away from risky assets amid concerns about Federal Reserve monetary policy and the sky-high valuations of tech stocks have added to the caution. The real spark for the sell-off, however, came from President Trump's surprise announcement on 10 October of a 100 % tariff on Chinese imports, which triggered a flash crash and a chain reaction of automated liquidations tied to margin calls on crypto derivatives. The event highlighted structural vulnerabilities in crypto markets, including extreme price volatility, high leverage, and operational weaknesses at crypto exchanges, which continue to weigh on investors' confidence. Still, prices remain elevated relative to historical levels.

Chart 11
Crypto asset market valuation
10 October flash crash triggered risk-off phase



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

The sell-off affected all major crypto-assets but some still recorded net gains over the period. Ether increased 19 % between end-June and end-December, boosted by technical upgrades and strong inflows into Ether ETPs until early October. BNB, Binance's native coin, gained 32 % following the announcement of former CEO CZ's pardon by the SEC and improved network performance. Meanwhile, Bitcoin, Dogecoin, XRP, and Solana lost 18 %, 27 %, 15% and 18 % respectively.

Trading activity surged during the October market turmoil before gradually normalising. The flash crash exposed significant execution weaknesses at Binance; however the exchange maintained its leading position, although its market share declined slightly to 36 % of spot trading volumes by end-2025.

Stablecoins continued to grow rapidly until October, after which they plateaued, reaching EUR 269bn by end-December, up 23 % since June 2025. In July 2025, the signing into law of the Guiding and Establishing National Innovation for U.S. Stablecoins (GENIUS) Act marked a key milestone.[17] The Act provides legal clarity for payment stablecoins, paving the way for institutional adoption and global expansion. Several major banks have announced plans to issue stablecoins following the Act's passage.[18]

[14] This is where payments-in-kind, where interest is added to loan to ease repayments, are treated defaults. See S&P (2025), Private Credit: The Rising 'Defaults', 4 August 2025.

[15] This risk can also be aggravated by the reliance on private ratings which are opaque. Also, with strong demand by US insurers for favourable ratings and competition by smaller CRAs to build market share, private ratings quality could be weakened further. See BIS (2025) The transformation of the life industry: systemic risks and challenges, October 2025.

[16] FT (2025), 'Andrew Bailey warns 'alarm bells' ringing over private credit market', 21 October 2025.

[17] Public Law No: 119-27, 18 July 2025.

[18] CCN (2025), Top 10 banks racing to launch stablecoins after the GENIUS Act', 21 July.

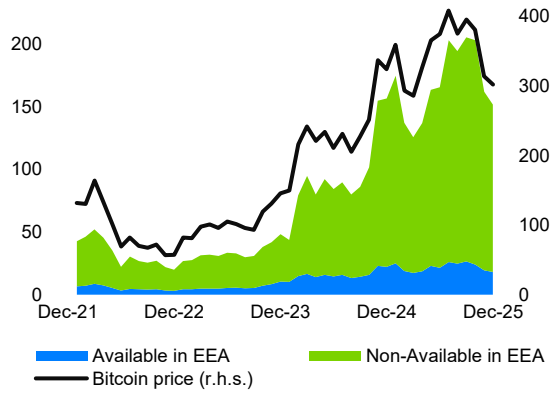
Demand also surged during the October market turmoil, underscoring their role as a liquidity buffer and hedging tool.

The rapid growth of stablecoins is increasing interlinkages between crypto and traditional markets, heightening the risk of negative spillovers through their reserve assets. This trend warrants close monitoring. The extreme concentration – Tether, by far the largest stablecoin, accounts for 59 % of market size as of end-2025 – and the absence of a consistent global regulatory framework are risk-amplifying factors. Given the central role of stablecoins in crypto markets, the collapse of a major stablecoin could destabilize the entire crypto system, with potential negative repercussions for traditional markets.

Euro-denominated stablecoins authorised under MiCA in the EU are expanding, although they remain small. Their monthly trading volume reached EUR 1bn in December 2025 -- equivalent to around 0.3 % of total stablecoin trading volume, up from 0.1 % in June 2025. The issuance of fully fungible stablecoins by entities from multiple jurisdictions not applying the same level of safeguards raise important risks that need to be addressed. The ESRB issued a recommendation to address such risks and not undermine the protections provided by MiCA in the EU. [19]

The sell-off following the 10 October flash crash extended to **crypto investment products**. After strong inflows of EUR 11.9 bn and EUR 9.5 bn between July and early October, US spot Bitcoin and Ether ETPs saw net outflows of EUR 4.9bn and EUR 1.8bn, respectively, between mid-October and end-December. As of end-December, the net asset value of US Bitcoin ETPs stood at EUR 97 bn (down 15 % since end-June), while Ether ETPs reached EUR 15.3bn, (up from EUR 8.8bn in June). We estimate the aggregate size of crypto investment funds and ETPs available in the EEA at around EUR 18bn, down 25 % since January 2025 and 22 % since June 2025, which is explainable by the depreciation of Bitcoin over the period. (Chart 12).

Chart 12
Crypto funds and exchange-traded products
EEA funds account for small share of total



Note: Total value of crypto funds and exchange-traded funds listed or registered for sale in EEA and non-EEA countries, in EUR bn.
Sources: Morningstar, ESMA

An outage affecting Amazon Web Services (AWS) on 20 October highlighted the crypto sector's heavy reliance on critical third-party providers, contrasting with the industry's promise to eliminate single points of failure through decentralization. Prominent centralised exchanges, such as Coinbase and Robinhood, but also on-chain Layer-2 networks were affected by the disruption. According to industry trackers, approximately 37 % of Ethereum's execution nodes are currently hosted on AWS.[20] **Hacks** remain a major concern. Chainalysis reports over USD 2.17bn stolen from crypto services in 1H25—already surpassing all of 2024. The ByBit breach alone, at USD 1.5bn, is the largest in crypto history and part of a broader pattern of North Korean-linked operations. Personal wallets are also increasingly targeted as easier entry points. [21]

[19] European Systemic Risk Board (2025), Recommendations on third-country multi-issuer stablecoin schemes (ESRB/2025/9), 21 November.

[20] Elevenews.com (2025), AWS outage exposes crypto core vulnerability: a test for decentralization, 21 November.

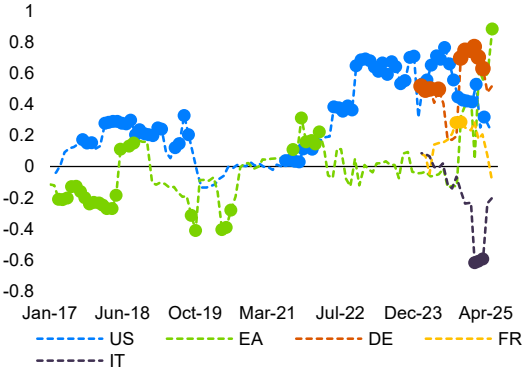
[21] Chainalysis (2025), 2025 Crypto crime mid-year update: stolen funds surge as DPRK sets new records, 17 July.

In depth: Sensitivity of the EU sovereign bond market to unexpected events

In this section, we investigate the sensitivity of euro government bonds to employment and inflation surprises (where a data release differs from that expected) for a selection of two-year sovereign yields (euro area, Germany, France, Italy).[22] This replicates an analysis by the BIS of the responsiveness of US treasury yields, applying their approach to the EU.[23]

A particular aim is to assess whether the BIS finding of increasing sensitivity of US treasury yield changes over 2023-24 to surprises in employment and inflation indicators also holds for the EU.[24] A first result is that we largely replicate the sensitivity patterns found by BIS for the US, particularly for the period of 2021 onwards.

Chart 13
Sensitivities to inflation surprises
Recent sensitivity rise for euro-area, high for DE

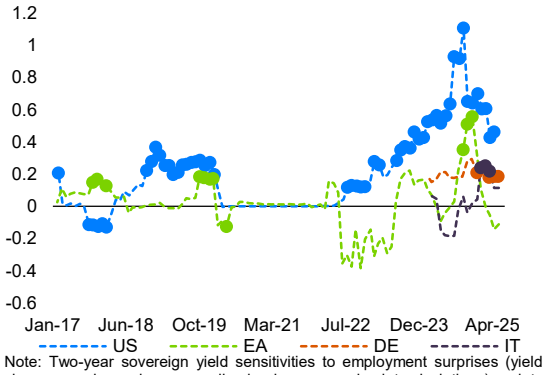


Note: Two-year sovereign yield sensitivities to inflation surprises (yield change and surprises normalised using mean absolute deviations), points are shown where sensitivities are significant at 90% confidence. EA - euro area, and ISO 3166-1 alpha-2 country codes.
Sources: Refinitiv Elkon, ESMA

Looking at inflation (Chart 13), we see the BIS pattern of increasing sensitivity of US yield changes on days of the month when there are inflation indicator releases. EU patterns are generally less pronounced. Yet, for Germany we see high sensitivities over the period of measurement, and signs of a step increase with higher levels in late 2024-early 2025. Euro-area sensitivities are lower, but with a sharp increase in sensitivity at the very end of the period, with sensitivities reaching levels higher than Germany or the US. French sensitivities are generally lower and only briefly statistically significantly non-zero. Italian sensitivities are similarly significantly non-zero, but negative.

Except for the sharp US peak in summer 2024, sensitivities are lower for employment than inflation surprises (Chart 14). EU sensitivities are also lower than those for the US. There is some indication of an increase in sensitivity for the euro-area around the same time as the US peak, which as discussed in the BIS work, is likely linked to the volatility surge in early August 2024 with the disappointing employment indicators. We also see statistically significant positive sensitivities for Italy and Germany in 2025, but these remain low in absolute terms.

Chart 14
Sensitivities to employment surprises
Lower sensitivity to employment



Note: Two-year sovereign yield sensitivities to employment surprises (yield changes and surprises normalised using mean absolute deviations), points are shown where sensitivities are significant at 90% confidence. EA - euro area, and ISO 3166-1 alpha-2 country codes, France omitted due to lack of data.
Sources: Refinitiv Elkon, ESMA.

In sum, we observe evidence of increasing bond market sensitivities in Europe over the past two years, particularly for German and euro-area yields for inflation. Sensitivities to employment surprises are lower, but with a peak for the euro-area in summer 2024, without statistically significant increases for Germany or Italy.

[22] Following the BIS analysis, surprise is defined as the difference between the actual indicator and the forecast (median consensus) for that indicator. More generally that the methodology used for measuring sensitivities (time weighted regressions of yield changes vs surprises in indicators over 24 months) follows that of the BIS to the extent possible. In contrast to the BIS, we use Refinitiv EIKON for yield changes, employment and inflation consensus forecasts and indicators. Due to data limitations our analysis of euro-area and US sensitivities starts from 2017 (later than the BIS) and from 2022 onwards for the Member States covered. We also normalise yield changes to enable comparisons.

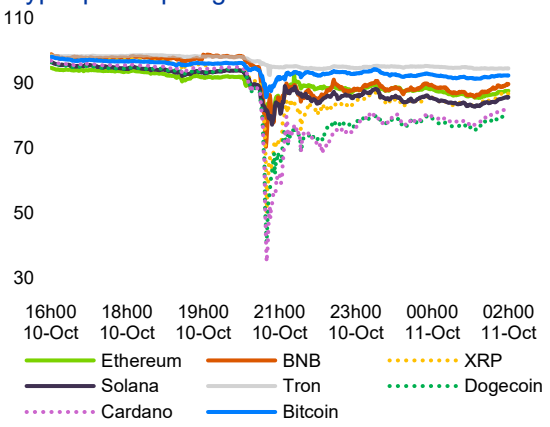
[23] See 'Markets' increasing response to labour market conditions in the United States', Xia and Zhu in *Carry on Carry off*, BIS Quarterly Review, September 2024.

[24] Available datasets start two years earlier as regressions used for the estimation of sensitivities run over 24 months.

In depth: 10 October crash exposes vulnerabilities in crypto market structure

On 10 October, President Trump's surprise announcement of 100 % tariff on Chinese imports shook global financial markets but crypto markets reacted far more violently. Bitcoin and Ether plunged over 12 % and 15 % within hours, while XRP, Cardano, and meme coins like Dogecoin saw intraday drops of 40 %-60 % before partial recoveries (Chart 15). The sharp decline triggered a wave of automated liquidations of derivatives positions totalling USD 19bn (equivalent to EUR 16.3bn) according to market estimates--the largest liquidation day in crypto history. [25] A total of 1.6mn traders were reportedly affected, representing a mix of retail and institutional investors, although little is known about them or their linkages to the core financial system.

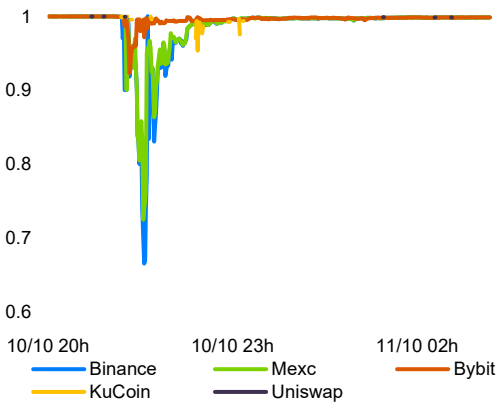
Chart 15
Price of selected crypto assets between 10 and 11 October
Crypto prices plunged within hours



Note: Indexed prices of selected crypto-assets (Price of 10th October at 00h00 = 100)
Sources: Kaiko, ESMA.

At the same time, technical failures at major exchanges amplified panic selling. Users reported slowdowns and outages preventing them from closing or hedging positions, fuelling suspicions of market manipulation. One exchange warned of "latency or degraded performance". Analysts have argued that a coordinated exploitation of Binance's pricing system contributed to the crash as well.[26] Binance's Unified Account model valued collateral using internal prices rather than external markets. Attackers seemingly exploited this vulnerability to dump large amounts of certain tokens, collapsing their prices locally on Binance: the algorithmic stablecoin Ethena USDe plummeted to USD 0.65 (Chart 16) and two wrapped tokens, wBETH and BNSOL, de-pegged from their reference asset. This wiped out collateral values, triggering forced liquidations and cascading sell-offs. Market makers were hit hard, reducing liquidity and amplifying volatility. Binance subsequently announced a compensation plan for affected users and enhanced risk control and token adjustments.[27]

Chart 16
Ethena USDe's price across selected exchanges
Ethena USDe plummeted on Binance



Note: Market prices (in USD) of Ethena USDe stablecoin, by exchange.
Sources: Kaiko, ESMA

The event had no observable spillover effects on traditional markets. However, it underscored structural vulnerabilities in crypto markets--extreme price volatility, thin liquidity, elevated leverage, operational fragilities at exchanges and flawed pricing mechanisms. It also highlighted the urgent need for global safeguards to protect investors and financial stability as crypto markets continue to grow.

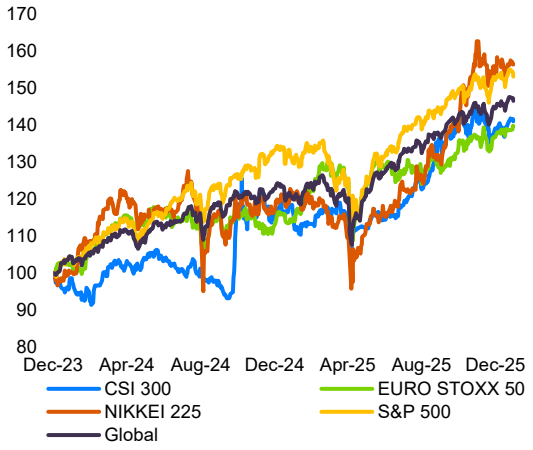
[25] CCN (2025), Oct 10 Crypto Flash Crash, 13 October. However, this is likely to be an underestimate and some analysts suggest the real figure could be USD 30-40bn. By way of comparison, the next largest liquidation for crypto-asset derivatives led to losses of USD 9bn in April 2021 according to Coinglass.

[26] Coinpedia (2025), Was Binance behind the USD19bn October Crypto crash or the target of it?, 4 November.

[27] Binance (2025), Resolution of USDE, BNSOL, and WBETH price depeg and risk control enhancements, 11 October; and Binance announces the USD 400mn "Together Initiative" - An industry recovery and confidence rebuilding plan, 14 October.

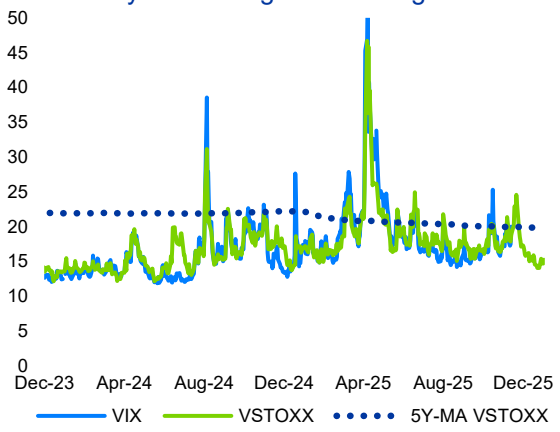
Key indicators

Chart 17
Regional equity market performance
EU markets continue their rebound



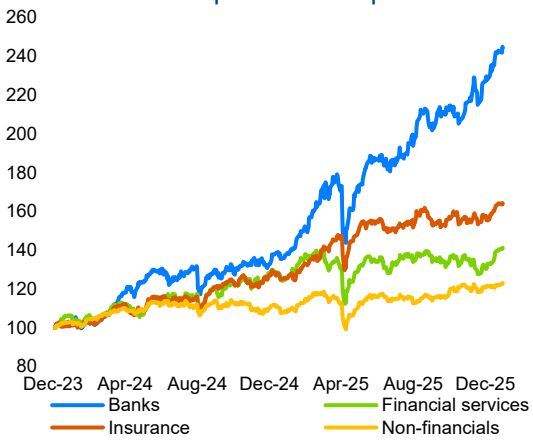
Note: Regional equity return indices. 01/12/2023=100.
Sources: Refinitiv Datastream, ESMA.

Chart 18
Equity market volatility indices
EU volatility below long-term average



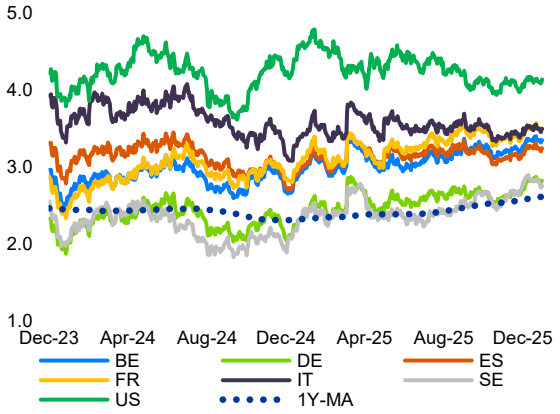
Note: Implied volatility of EURO STOXX 50 (VSTOXX) and S&P 500 (VIX), in %.
Sources: Refinitiv Datastream, ESMA.

Chart 19
Equity price performance in Europe by sector
Banks relative outperformance persists



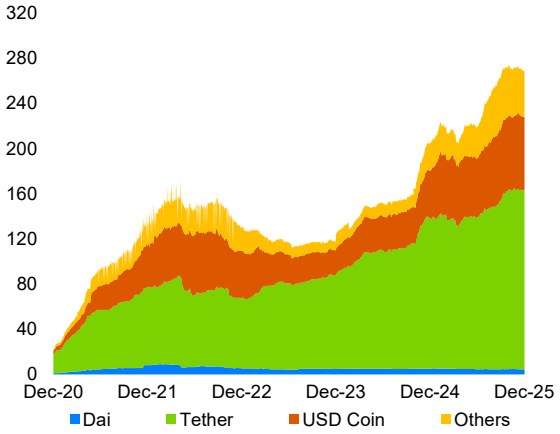
Note: STOXX Europe 600 sectoral return indices. 01/12/2023=100.
Sources: Refinitiv Datastream, ESMA.

Chart 20
EU and US sovereign bond yields
Slight increase in yields in the EU



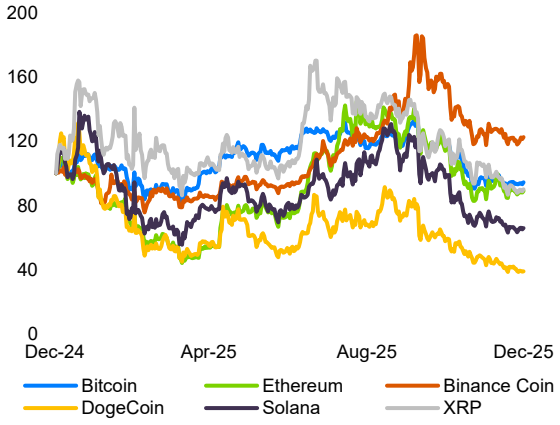
Note: Yields on 10Y sovereign bonds, selected countries, in %. 1Y-MA=one-year moving average of EA 10Y bond indices computed by Datastream.
Sources: Refinitiv Datastream, ESMA.

Chart 21
Stablecoin market valuation
Stablecoins growth cool after rapid surge



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

Chart 22
Crypto-assets prices
BNB and Ether outperform in bearish market



Note: Indexed price of selected crypto-assets (price of 1st January 2025 = 100)
Sources: Kaiko, ESMA

Asset management

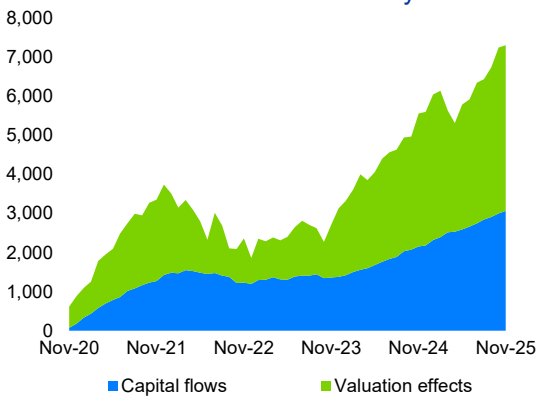
US exposure drives the growth of EA fund sector

The **performance** of investment funds increased further in 2H25. Despite the April 2025 market turbulences, equity funds have gained 0.8 % per month on average in 2025 (10.1 % annualised), up from 0.4 % between June 2024 and June 2025. Similarly, the average monthly performance of mixed funds increased from 0.3 % to 0.5 % while bond funds decline from 0.3 % to 0.1%.

Fund **flows** were positive in general but did not follow fund performance. Especially, flows into equity funds remained muted (0.1 % of NAV) – which has been the case since 2022. Moreover, flows into equity funds were concentrated in ETFs, while non-ETF equity funds experienced outflows. This reflects a persistent trend in flows from actively managed funds to ETFs. In contrast, despite their lower returns, flows were more important in bond funds (+ 4.2 % of NAV) and MMFs (+ 2.9 % of NAV) than in equity funds, and within bond funds there was a preference for EU assets over US assets.

The size of the EA fund sector increased by 30 % since 2022, up to EUR 21.5tn of AuM (+ 7 % in 2H25). Two thirds of this increase are due to **valuation** effects (Chart 23).

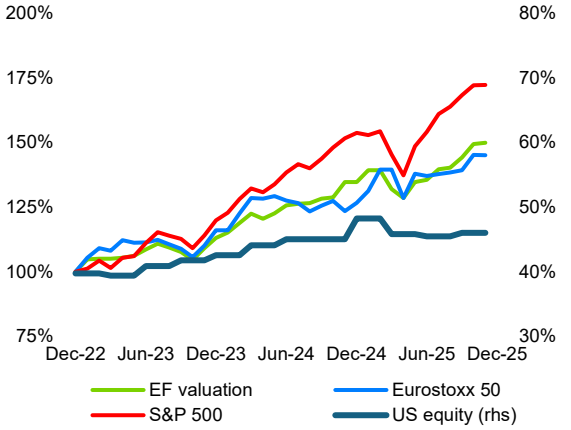
Chart 23
EA investment funds: flows and valuation effect
Growth of the fund sector driven by valuation



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

This is especially pronounced for **equity funds**, with 79 % of their increase in AuM linked to valuation effects. The valuation of equity funds has been driven by their increased exposure to the **US market**. The portfolio share of US equity increased from 40 % in 2022 to 46 % in 3Q25. This mechanically reflects the outperformance of US stock indices (S&P500: + 68 %) over EU indices (Eurostoxx 50: + 39 %) during that period. In contrast, the share of US equity was only 27 % ten years ago. Therefore, the valuation of equity funds is now increasingly tied to US indices: before 2Q24, half of the EA fund valuation increase was attributable to their US exposure; since then, two thirds of the valuation increase is attributable to US equities.

Chart 24
Equity funds geographical asset allocation
Performance increasingly linked to US indices



Note: Evolution of EA equity funds valuation, Eurostoxx 50 index and S&P 500 index since December 2022, in %. Share of US equity in equity funds portfolio, in % (rhs).

Repricing risks at their highest level

The high level of valuation, and the increased exposure to the US, particularly expose equity funds to **repricing risks**. US indices are more susceptible to a potential bubble in the technology sector, as this sector represents one third of the S&P 500 market capitalisation against 18 % in the Eurostoxx 50. Returning to 2022 valuations would result in a loss of around one third of the NAV of US equity held by EU funds. In the joint stress exercise of ESMA and the IMF for the Euro area Financial Sector Assessment Programme (FSAP), the impact of a market shock was particularly high for equity funds and funds of funds, with up to 23 % of their NAV. However, the exercise found that from a financial stability perspective the spillovers are more likely

to affect bond markets due to heightened liquidity demands.[28]

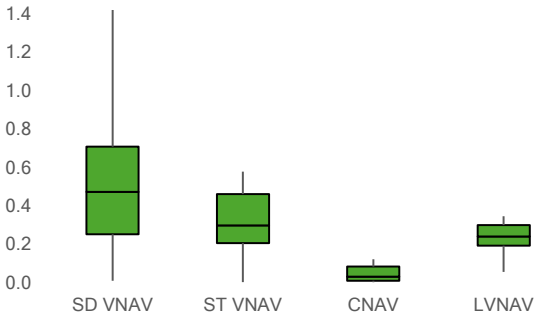
Bond fund holdings of liquid assets remained stable in 2H25, thus bond funds maintained their resilience to **liquidity risk**. HY bond funds doubled their share of liquid assets year-on-year (8.3 % of NAV in 2H25 compared with 4.1 % in 2024; Chart 31). However, in the corporate bond fund category, cash holdings are very limited (1.5 %).

Similarly, the risk of materialisation of **credit risk** remained stable in 2H25 for bond funds and HY funds. For the latter, it has remained between BB- and B+ on average since 2021 (Chart 32).

Interest rate risk was stable for most bond funds, as the effective average maturity of bond fund portfolios remained close to 7.6 years. However, it increased up to 5.3 years for HY bond funds, a 10-year high record (up from the 10-year low of 3.5 years in 4Q22).

In the **MMF** sector, the weighted average maturity (WAM; 46 days) and the weighted average liquidity (WAL; 60 days) remained slightly above their long-term average. Overall, the stress tests reported on a quarterly basis indicate that MMFs are resilient to both market risks and redemption requests. However, credit risk may warrant attention. Under a severe but possible scenario (IG spread: + 140bps), 25 % of Standard VNAV MMFs reported an impact above 0.47 % NAV, which reflects that they invest in longer term assets than other MMFs. However, the impact also exceeds 20bps for nearly 75 % of LVNAV MMFs which, in their case, implies the conversion to a floating NAV (Chart 25).

Chart 25
MMF stress tests
Credit risk warrants attention



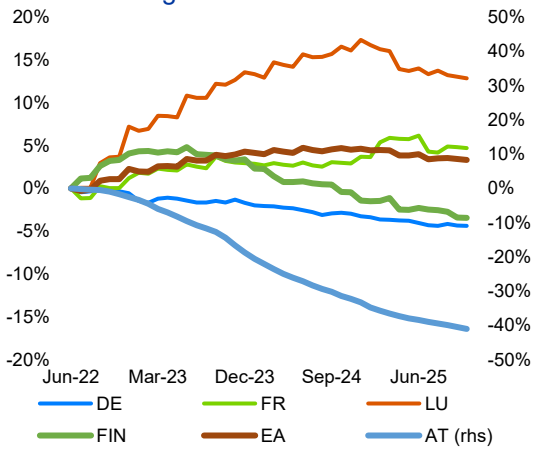
Note: MMF credit risk stress test. Impact in % of NAV, by quartile.
Sources:MMF database, ESMA.

In the **real estate fund** sector, aggregate flows became slightly negative for the first time in 2025 (EUR –13.7bn). Commercial real estate (CRE) market prices remained 14 % below their 2022 level but aggregated flows in real estate funds have remained positive at an EA level, with significant differences between member states (Chart 26). In most countries, outflows were limited in 2H25, with flows into DE funds slightly negative and FR funds still reporting positive flows for 2025 in aggregate. In contrast, LU funds which had benefited from strong inflows until 2024 (NAV + 17.4 % since 2022) experienced noticeable outflows in 2025 (- 4.5 %). Also, AT funds continued to experience outflows, totalling - 41 % of sector NAV since 2022. In that context, the redemption policy and the existence of notice periods (60 % of RE funds offering daily or weekly redemptions have long notice periods) in some jurisdictions may only delay RE fund flows. Due to its market footprint in the underlying RE market, and its interconnections with the banking sector (borrowing represents 15 % of RE funds NAV) the RE fund sector remained closely monitored by authorities.[29]

[28] IMF (2025), Euro Area Policies: Financial System Stability Assessment; IMF Country Report No. 2025/203, July.

[29] Through their annual risk assessment and dedicated investigations, such as BaFin annual survey on liquidity management tools.

Chart 26
RE Cumulated fund flows
Flows turn negative for EA



Note: Cumulated flows in EA jurisdictions since June 2022, in % of AuM
Sources: ECB.

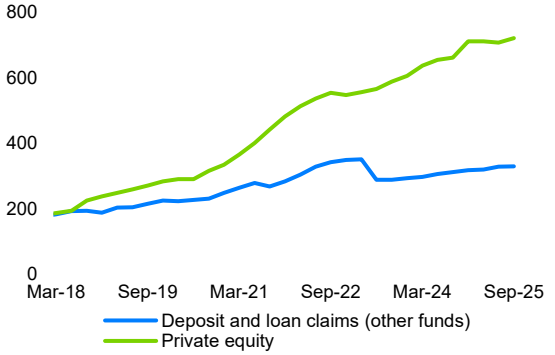
Leverage of alternative funds increased further. At EA level, the ratio of AuM/NAV now represents 154 % compared with 122 % at the end of 2022 (Chart 33). While this is not a comprehensive measure of leverage[30] (which also includes synthetic leverage), this growth of borrowings deserves attention.

[30] There are several definitions of AuM. Under the European System of National Accounts, assets do not include the effects of synthetic leverage.

In depth: Funds exposures to private finance

The development of private finance is a consistent trend in the fund sector. The growth of private equity and private credit funds contributes to the funding of the real economy but could also raise concerns around leverage and increased interconnectedness with financial institutions.

Chart 27
Private assets
Steady growth in private equity

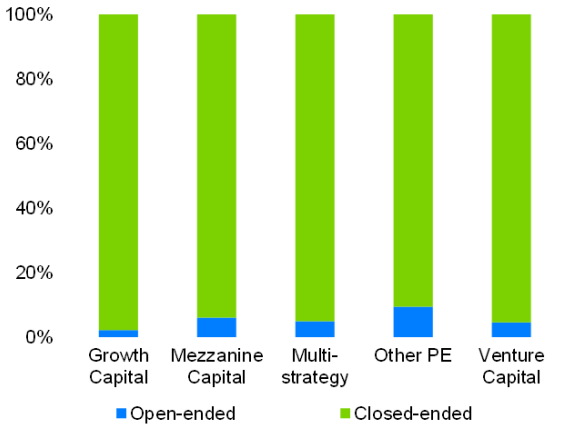


Note: Outstanding amount of equity held by EA private equity (PE) funds; outstanding amount of deposits and loan claims held by EA Other funds, in bn EUR.
Other funds include funds other than equity, bond, mixed, real estate, hedge funds. Deposits and loans claims held by other funds is larger than private debt as it also includes deposits.
Sources: ECB, ESMA.

Private equity funds assets have doubled since 2020 in the EA, up to EUR 721bn in 3Q25. Those assets are held directly as unlisted equity, or indirectly through other funds. The growth of private debt is also deemed significant, but difficult to measure based on available data. Private credit funds generally fall into the undefined "other fund" category of ECB statistics. Against this background, the size of loan and deposit holdings by other funds, which includes private credit activity, increased by one third since 2020, up to EUR 330bn in 2025.

Private equity (PE) funds generally use low leverage at fund level. Substantially leveraged funds only manage EUR 16bn assets in total (EUR 2.6bn NAV).[31] However, the reported leverage of PE funds could be underestimated[32] as leverage is generally not borne directly by the fund but by a holding company or special purpose vehicle (SPV) in which the fund invests. Run risks are limited by design, since 95 % of PE funds are closed ended and most of open-ended PE funds have notice periods longer than three months. However, the risk of fire sales may still exist for PE funds using short term credit lines.

Chart 28
Private equity
Almost all PE funds are closed ended



Note: Redemption rights provided in the ordinary course to investors in private equity funds managed and/or marketed by authorised AIFMs, end of 2023, in % of NAV. PE=Private equity fund. Data for the EEA30.
Sources: AIFMD Database, National Competent Authorities, ESMA.

The growth of **private credit (PC) funds** is explained by the need of funding in some growing business sectors and complements financing from traditional banks. Typically, banks can provide first-lien financing while the riskier second-lien debt is held by PC funds. PC funds may also invest into credit-linked notes or CDSs used by banks to synthetically transfer the credit risk of loans.

Private credit could raise several concerns. First, the use of securitisation methods transfers credit risk but creates vulnerabilities, e.g., unexpectedly high or correlated defaults when the specified conditions are not met.[33] Second, private credit assets are less transparent and liquid than more conventional market segments. In particular, inaccurate firm valuations can underestimate risks. This may expose PC funds to liquidity risks, as 42 % of PC funds are open-ended. [34]

There will be a limit applicable to leverage in PC funds, with leverage ratio limits of 175 % for open-ended funds (300 % for closed ended funds), coming into effect with AIFMD 2.0. But layering of credit risks across the different structures involved, especially in private equity owned companies and SPVs creates credit risk procyclicality.

Finally, the interconnectedness with the financial sector needs to be monitored. EU banks finance and sell derivatives to asset managers. In addition, the

[31] In AIFMD, a fund is substantially leveraged if it displays a commitment leverage ratio above 300 %.

[32] See ESMA (2024) Assessing risks posed by leveraged AIFs in the EU.

[33] See ESMA (2020) Model risk in CLOs, ESMA Reports on TRV, No.2, 2020.

[34] See ECB (2024), Private markets, public risk? Financial stability implications of alternative funding sources.

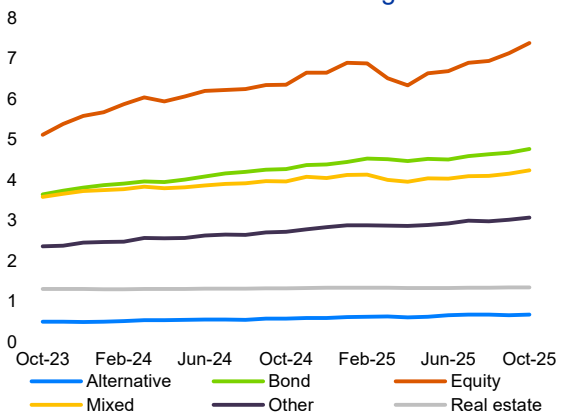
US market shows that synergies may also exist with insurers, making use of the good match between private credit assets and insurers' long-term liabilities.

Key indicators

Chart 29

EA fund assets

Valuation drives EA fund sector growth

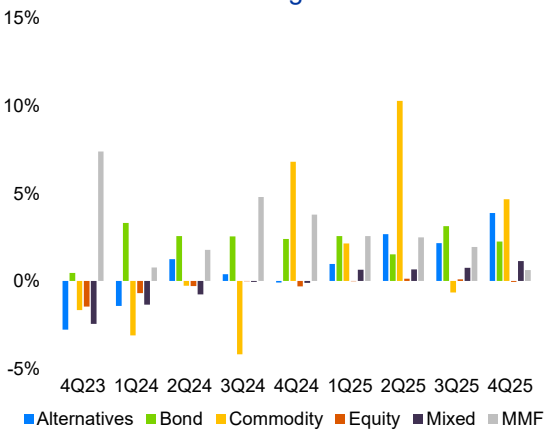


Note: AuM of EA funds by fund type, EUR tn.
Sources: ECB, ESMA.

Chart 30

EU fund flows by fund type

Muted flows across categories

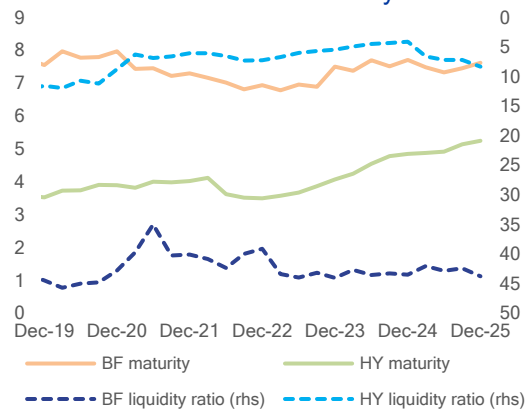


Note: EU27-domiciled funds' quarterly flows, in % of NAV.
Sources: Refinitv Lipper, ESMA.

Chart 31

Liquidity and maturity risk profile of EU bond funds

HY funds increased their maturity

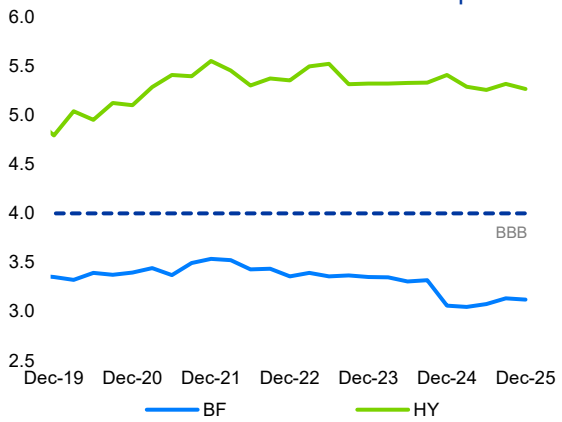


Note: Quarterly effective average maturity of EU27 fund assets, in years; ESMA liquidity ratio (rhs, in reverse order).
Sources: Refinitiv Lipper, ESMA.

Chart 32

Credit risk

Bond funds reduced their credit risk exposure

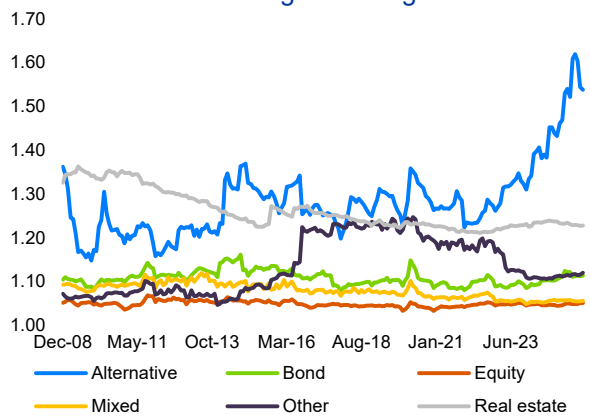


Note: Quarterly average credit quality (S&P ratings; 1= AAA; 4= BBB; 10 = D) for EU27-domiciled funds .
Sources: Refinitiv Lipper, ESMA.

Chart 33

Financial leverage

Alternative funds leverage at its highest level

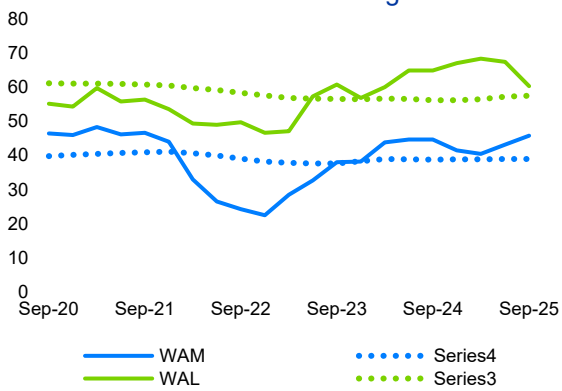


Note: Leverage of EA investment funds by fund type computed as the AuM/NAV ratio.
Sources: ECB, ESMA.

Chart 34

MMF weighted average maturity and life

WAM and WAL still above average



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.

Consumers

Household finances strengthen

Households enjoyed an improving **financial position** in 2Q25, with disposable income growth of 4 %, outstripping inflation (Chart A.98). Annualised returns on financial assets (4.6 %) and real assets (4.7 %) were near their 5Y averages (A.107).

While **investor confidence** rebounded somewhat in 4Q25 as equity markets strengthened (Chart 41), continuing geopolitical tensions and valuation risks tempered the boost to sentiment. Confidence was volatile throughout 2025, against a persistently uncertain economic outlook.

Retail investors seek passive management

ETFs, the vast majority of which are passively managed, continued to attract strong retail investor inflows in 4Q25, especially in the equity segment (annual inflows of EUR 243bn). In contrast, active equity funds had net outflows of EUR 19bn. (Chart A.108). This overall reallocation from active to passive management has persisted since early 2022. Lower management fees among passively managed funds compared to their active counterparts are a structural demand driver and help account for the stronger relative performance of passive UCITS over the last 2Y (Chart A.117).

Retail investor demand for bond UCITS remained stronger than for other asset classes in 4Q25. Annual inflows were EUR 176bn in 4Q25, compared with EUR 11bn and EUR 52bn for equity UCITS and mixed UCITS respectively (Chart 42). However, demand for direct exposure to bonds fell, with near-zero inflows. Instead, households channelled capital to bank deposits (3.2 % of disposable income) and equities or investment fund shares (3 %).

Positive returns

The **performance of retail investments** was positive and above the 5Y average, both in nominal terms and real terms (Chart A.112). The 1Y-MA of monthly gross returns stood at 1.0 % (0.8 %) in nominal (real) terms in October 2025. In 4Q25, **retail fund returns** net of costs were positive across all asset classes, though stronger for equity funds (7.4 %) than mixed (5.3 %) or bond funds (1.2 %), despite the continuing strong demand for the latter.

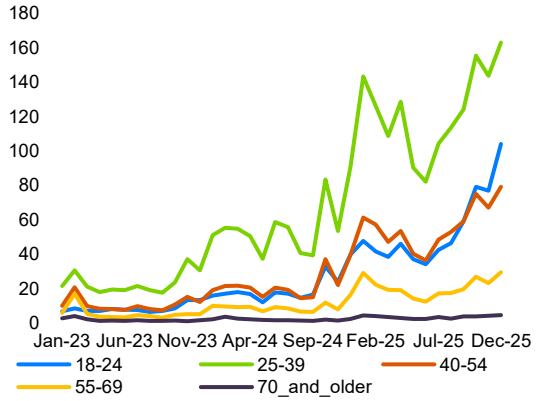
Levels of **complaints** dipped to around 3,200 in 3Q25, below the 2Y average (A.130). In terms of MiFID services involved, most related to the execution of orders. Credit institutions were the type of firm most subject to complaints, while the most commonly cited asset class was equities (A.133).

New investors flock to digital platforms

Digital-only platforms offering investment services have proliferated in recent years, with over 200 such providers operating in the EU by the end of 2025.[35] These innovative platforms are convenient and accessible to many consumers, including cross-border. Attracted by such features, and buoyed by positive market performance, increasing numbers of individuals – especially those in younger age brackets – have started using digital platforms in 2025 (Chart 35).

[35] The digital-only platforms identified include entities that offer digital-only services to clients, such as account opening, investing, customer interaction and analytical tools. They include a wide range of entities including investment firms, credit institutions and other digital-only platforms. This set of entities is broader than the set of neo-brokers analysed in previous ESMA publications.

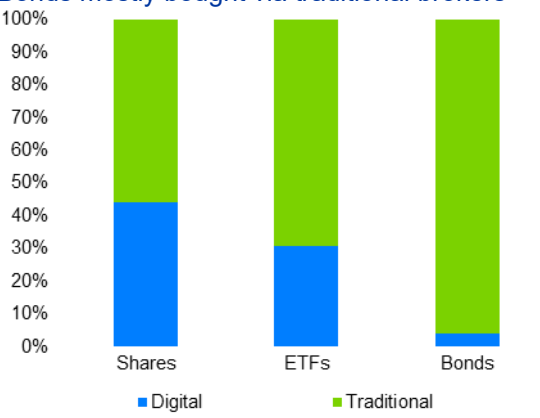
Chart 35
New securities investors on digital platforms
Surge in younger, digital-only new investors



Note: Number of new investors on digital platforms by age bucket, in thousands. Digital includes a sample of 235 neo-brokers, neo-banks and other digital only investment platforms.
Sources: MiFIR, ESMA.

Consumers buying securities for the first time have predominantly been purchasing equities and ETFs, though with occasional spikes in demand for bonds associated with sovereign issuances targeted at the retail market (Chart 44).[36] Retail purchases of bonds remain almost entirely via traditional brokers (Chart 36) and are rarely cross-border.[37]

Chart 36
Transaction volumes by intermediary type and asset class
Bonds mostly bought via traditional brokers



Note: Share of number of purchases by type of intermediary and asset class, in %. Digital includes a sample of 235 entities.
Sources: MiFIR, ESMA.

Recent ESMA analysis has underscored the potential benefits that digital platforms can bring investors and markets, including promoting capital market participation among households.[38]

However, the surge of new clients also brings risks, for example if some investors are motivated by expectations of short-term returns rather than taking a longer-term perspective. Additionally, significant numbers of new investors are trading derivatives, which may include complex or leverage products, as examined in depth later in this section.

Social media attention on AI stocks

An important risk source for consumers is social media activity, which may encourage clients to trade without being fully aware of the potential downsides. In some cases, social media functions may even be embedded into retail trading platforms themselves, increasing its potential influence on investment decisions.

Across several major social media platforms, a significant share (20 %) of messages on stocks referred to AI-related companies in 4Q25 (Chart 46). Over a third (35%) of messages on AI-related stocks expressed positive sentiment, while a quarter (25%) were negative. The enthusiasm for AI-related stocks evident from social media appears reflected in the investment choices especially of younger retail investors (Chart 45). In 2025, over a third of equity invested by adults aged 18-39 was in AI-related companies, versus just 12% among over-70s.

US stocks draw investors

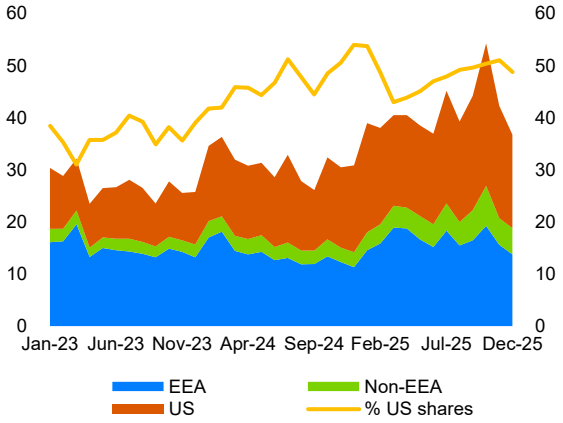
Investments in AI and technology firms have continued to drive US equity valuations higher, raising concerns over the risk of a disorderly correction. While younger investors can benefit from a longer time horizon, allowing them in some cases to allocate more capital to risk assets, they also tend to be less wealthy, heightening their potential detriment if equity prices fall. Additionally, future household participation – an important aim of the Savings and Investment Union (SIU) – may be put at risk, especially if the large numbers of new clients using digital platforms suffer large losses soon after they invest for the first time.

[36] 'Securities' in this context excludes shares in non-listed investment funds, i.e. most non-ETF UCITS and AIFs, which are not covered by the transaction data.

[37] If transaction numbers rather than volumes are compared, digital platforms make up the majority of share and ETF trading. Average transaction sizes are therefore smaller on digital platforms than via traditional intermediaries, consistent with the fact that some digital platforms may facilitate small transactions by offering fractional share trading.

[38] ESMA (2024): TRV Risk Analysis: Neo-brokers in the EU: Developments, Benefits and Risks.

Chart 37
Retail transaction volumes in equities by issuer region
US-issued shares are popular with investors



Note: Monthly number of retail transaction by issuer domicile, in millions. Share of transactions in US shares over the total, rhs, in %.
Sources: MiFIR, ESMA.

US stocks are the most-mentioned across social media, accounting for almost 75 % of total messages, while only one out of the top 100 most-mentioned stocks is EU-based. Against this intense focus on the US market, EU retail investors are highly exposed to US stocks, which represent around 40 % of retail transactions in equities (Chart 37). The prevalence of US stocks poses a challenge to the aim of SIU to help EU issuers gain funding from households, while enabling investors to participate in growth and enjoy diversification benefits.

In depth: Retail investing in leverage barrier products

A major source of risk for retail investors arises from leverage, whether embedded in the product (synthetic leverage) or via margin posted with a broker. A large evidence base – including ESMA's own published analysis – has consistently shown that high leverage leads to poor outcomes for investors, in three ways.[39] First, leverage magnifies the costs of investment – such as spreads, commissions or financing charges – relative to the amount invested. Second, leverage amplifies market risk. Third, high leverage increases the risk that an investor will be 'knocked out' of a position, which can in turn increase costs via repeated entering and exiting of positions.

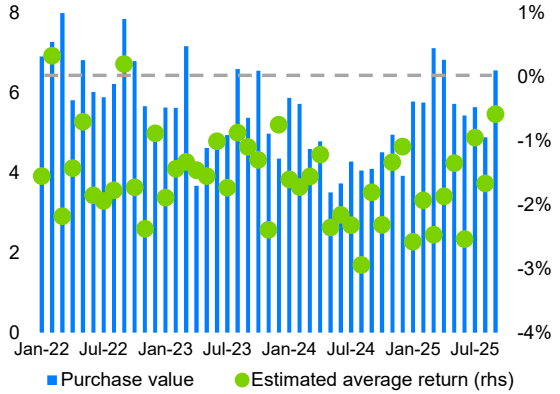
To protect investors, in 2018 ESMA imposed restrictions, including leverage limits, on the offer of Contracts for Differences (CFDs) to retail. The restrictions are now in place at national level on a permanent basis in all Member States.

In 2021, NL-AFM introduced similar restrictions on the offer of turbos to retail investors following detailed study of investor outcomes.[40] Turbos – sometimes known as 'mini-futures' – are securitised leverage products that can be warrants or certificates. They have similar characteristics to CFDs, including financial returns that vary linearly with the price of the underlying. Just as CFD positions are closed out if margin falls beneath a set level, turbos include a 'barrier' below which the position is closed.

In 2025, DE-BaFin announced product intervention measures on turbos, following a market study covering 2019-23.[41] Over the five years, more than half a million retail investors traded turbos in Germany. On average, retail clients lost EUR 6,358 over the study period, with 74.2 % of clients making a loss overall.

At EU level, hundreds of thousands of investors trade in leverage barrier products each month, with the total monthly value invested averaging around EUR 5bn (Charts 38, 39).[42] Estimated monthly returns for investors since the start of the available time series in January 2022 have been consistently negative, with investors making losses on average in all but two months.[43] With an average monthly return of -1.1%, this translates to total monetary net losses of around EUR 700 mn annually for EU retail investors.

Chart 38
Transactions in mini futures with barrier
Persistent losses for investors



Note: Total gross monthly value of purchases of products with CFI RF*T**, EUR bn, and estimated average return (rhs), %. Average returns estimated by subtracting gross purchases from gross sales and adding residual payments to investors estimated as 7% of this difference. Costs embedded in products and prices are included; distribution fees are excluded. Sources: MiFIR, ESMA.

Turbos and similar products can be structured in various ways. For instance, the exercise of the product (i.e. when the investor can exit the position) may be unrestricted or possible only at certain points in time. While the exercise feature tends not to make a large difference to investor outcomes, the type of underlying is a more important factor, with turbos on equities generally

[39] ESMA (2018): Product Intervention Analysis: Measures on CFDs

[40] AFM (2020): Quantitative analysis of turbos distributed to retail clients in the Netherlands.

[41] BaFin (2025): BaFin study: Distribution of turbo certificates to German retail investors (in German). Estimated annualised losses shown in Chart 38 are comparable in magnitude to those in the BaFin study.

[42] This analysis focuses on products with Classification of Financial Instruments (CFI) code of the form RF*T**, which are mini-future certificates, or constant leverage certificates, with an underlying-based barrier. Some other turbo products take the form of warrants rather than certificates, but these are less reliably classified within a particular subcategory of CFI, and are not covered by the analysis.

[43] EU-level reporting of MiFIR transaction data began in January 2022, which is taken as the start of the time series for the analysis. Average monthly returns are estimated by subtracting gross purchases from gross sales, as the latter are a proxy for total realized investor value given short holding periods, and adding residual payments to investors estimated as 7% of this difference. The factor of 7% is calibrated (i) assuming 75% of turbos have zero residual due to being 'Barrer Equals Strike' (BEST) turbos, (ii) the remainder have average residual of 28% of purchase price, based on data listed on a commercial website on residual values of turbos knocked out during the six months to 15 December 2025. Distribution costs are also excluded from the analysis; if included, they would increase the estimated losses. BEST turbos generally pay zero residual when knocked out, though in some cases the investor may receive an extremely small payment (negligible for the overall figures), typically for tax-related reasons.

performing worse than those on indices (Chart 39).

Chart 39

Transactions in mini futures with barrier

Turbos on equities lead to sizeable losses

Monthly averages for January 2022 to September 2025

No. of investors	Amount, EUR mn	Under -lying	Long / short	Investor return, %
92,077	972	Equity	Long	-2.17%
35,821	311	Equity	Short	-1.91%
42,291	1,740	Index	Long	-0.36%
43,075	1,820	Index	Short	-1.26%

Note: Totals based on EU transactions by natural persons in products with CFI RF*T**, for selected underlying asset classes. Investor returns estimated by subtracting their total monthly purchases from total monthly sales and applying a correction factor to account for residual payments. Distribution costs are also excluded from the analysis; if included, they would increase the estimated losses distribution costs.

Sources: MiFIR, ESMA

For given leverage, a more volatile underlying tends to result in greater losses for products of this kind. This result is consistent with the calibration of the leverage limits by asset class for CFDs (and for the leverage limits on turbos in the Netherlands).

In depth: Total costs of investing in UCITS and AIFs

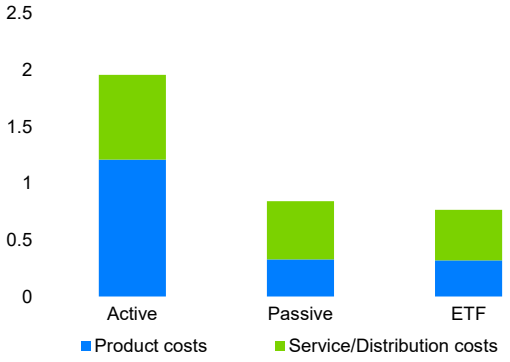
A key objective of SIU is to enable more Europeans to benefit from investing in financial products. Greater transparency and cost awareness for retail investors can support informed consumer decision-making and encourage broader capital market participation.

In November 2025, ESMA published a report on the total costs of investing in UCITS and AIFs[44]. The report offers new insights on fund distribution models and, for the first time, presents a comprehensive assessment of the total costs, including distribution costs, borne by EEA fund investors. It covers two-thirds of UCITS AuM (EUR 7.2tn) and 40 % of AIFs AuM (EUR 2.6tn).

The report shows that most EEA investment funds (> 80 % of UCITS and > 50 % of AIFs) are distributed indirectly via credit institutions and investment firms, rather than directly by the manufacturer. Neo-brokers, which mainly offer execution services, are entering the fund distribution market but remain marginal.

Distribution costs are significant, accounting on average for 48 % of total costs for UCITS and 27 % for AIFs. Total costs, including product and distribution costs, vary significantly across funds. For UCITS sold to retail investors, total costs range from 0.5 % to 2 % of the invested amount. AIFs total costs range from 1.4 % to 2.8 %. Total costs for active equity UCITS are on average double those of passive equity UCITS (Chart 40).

Chart 40
Equity retail UCITS total costs by type of management
Active equity more expensive than passive



Note: Total costs and associated charges for the financial product (blue) and service/distribution (green), based on MiFID II, Annex II, Tables 1 and 2 classification, by equity fund type, in % of the amount invested. Retail clients only. Equity UCITS only. Median across EEA distributors.
Sources: National Competent Authorities, ESMA.

Distribution costs tend to be higher when the distributor is a credit institution or investment firm. Newer digital platforms offering execution-only services through standardised digital channels have lower costs, though they represent, in the sample analysed, only about 1 % of the market. For retail investors in UCITS, non-independent advice is the most expensive distribution service, while execution-only (especially when provided by neo-brokers) is the cheapest.

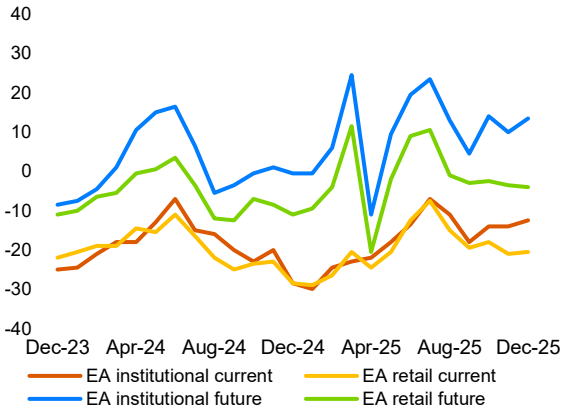
The report also shows that inducement agreements are widespread. On average, when such inducement agreements exist between distributors and manufacturers, these payments account for up to 45 % of ongoing costs for UCITS and 34 % for AIFs. Whilst these arrangements are disclosed under regulatory requirements, they are complex for investors to understand and scrutinise.

The main cost drivers include the type of investor, amount invested, distribution channel and distribution service offered. There is broad heterogeneity across Member States, driven by differences in dominant distribution channels, national regulatory specificities, and local market practices.

[44] ESMA (2025), Total costs of investing in UCITS and AIFs, November.

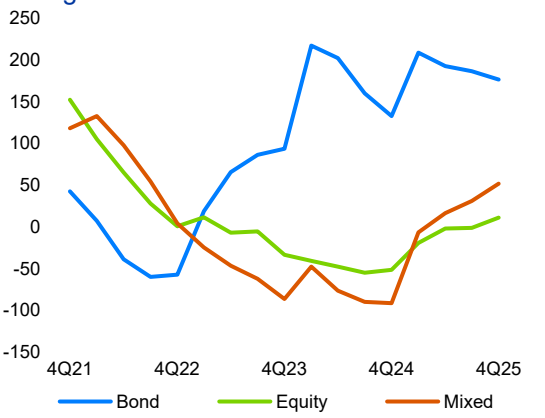
Key indicators

Chart 41
Investor sentiment
Confidence has been volatile



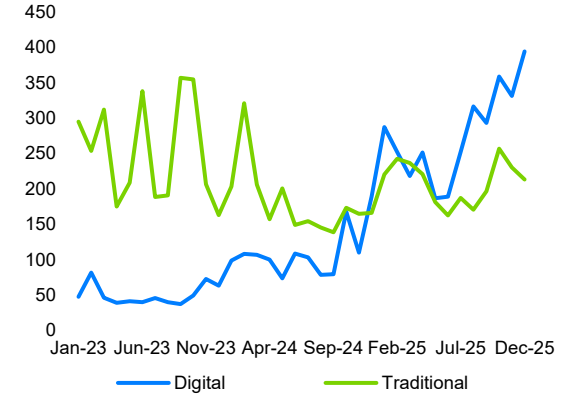
Note: Sentix Sentiment Indicators for EA retail and institutional investors; 'future' = six-month horizon). The zero benchmark is a risk-neutral position.
Sources: Refinitiv Datastream, ESMA.

Chart 42
Retail UCITS net flows by asset class
Strong inflows to bond funds



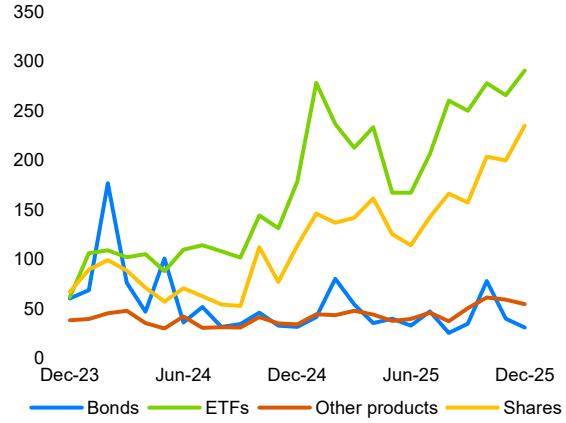
Note: EU27 UCITS annual net flows, retail investors only, at quarterly frequency by asset class, EUR bn.
Sources: Refinitiv Lipper, ESMA.

Chart 43
Number of new securities investors by entity type
Surge in the use of digital platforms…



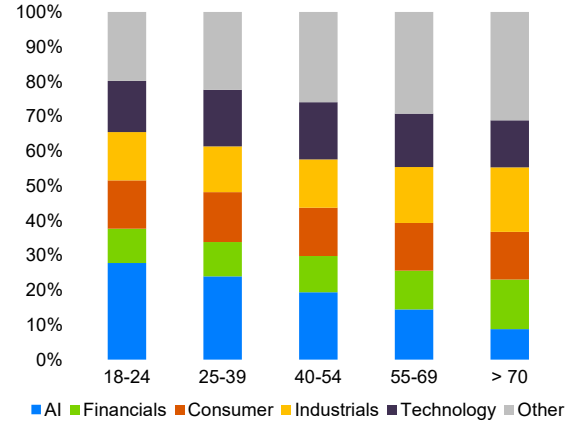
Note: Number of new investors by type of executing entity, in thousands. Digital includes a sample of 235 neo-brokers, neo-banks and other digital only investment platforms.
Sources: MiFIR, ESMA.

Chart 44
Number of new securities investors by asset class
… as new investors buy ETFs and equities



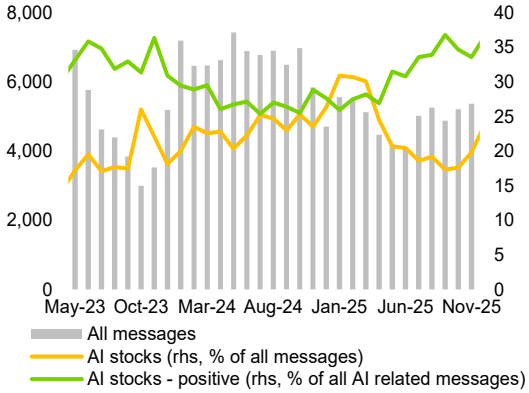
Note: Number of new investors by instrument type, in thousands. Baseline year = 2022.
Sources: MiFIR, ESMA.

Chart 45
Equity purchases by issuer sector and investor age
Younger investors seek exposure to AI…



Note: Share of retail purchases in 2025 by issuer sector and investor age bucket. in %.
Sources: MiFIR, Refinitiv Eikon, ESMA.

Chart 46
Social media messages
… as AI stocks are promoted on social media



Note: Social media messages mentioning identified AI related stocks, both total number of messages (thousands, left hand side axis) and as a percentage of all social media messages (% right hand side axis).
Sources: Stockpulse, ESMA.

Infrastructures and services

Cyber risks: increasing structural relevance for financial markets

Cyber and operational risks remain a key vulnerability for financial markets and their infrastructures. Incident data on cyberattacks across sectors show a marked increase in activity over the last five years, with a particularly strong rise in the early 2020s and only a partial moderation more recently. At the same time, the proportion of reported incidents attributed to the financial sector has risen from low single digits to low double digits, indicating that financial institutions and market infrastructures are increasingly prominent targets. This suggests that, even as overall activity fluctuates, cyber risk for the financial sector remains structurally elevated (Chart 47).

Recent threat-landscape assessments confirm that the finance sector remains among the most targeted in the EU, with attacks frequently exploiting phishing, unpatched vulnerabilities and ransomware, as highlighted in the latest ENISA analysis.[45] These patterns underline that financial institutions and market infrastructures face persistent exposure both to direct attacks and to disruptions transmitted through outsourced IT and other third-party service arrangements.

For financial market infrastructures, cyber and operational disruptions can propagate quickly through payment, clearing and settlement chains due to the sector's high degree of interconnectedness and reliance on shared technical services. Recent evidence from other essential-service sectors with similar digital architectures—such as public administration—shows that high volumes of denial-of-service and data-related incidents frequently affect entities dependent on centralised and outsourced ICT services.[46] These observations reinforce the relevance of upstream vulnerabilities for financial markets, particularly in environments where third-party service providers support multiple institutions or infrastructures simultaneously.

DORA has strengthened EU ICT-risk management and introduced a specific oversight framework for critical ICT third-party providers (CTPPs). In 2025, the European Supervisory Authorities published a guide on oversight activities under this regime and initiated the designation of CTPPs, with the explicit objective of addressing potential concentration and systemic risks stemming from the financial sector's reliance on a limited set of technology providers.[47]

Taken together, available incident data and recent policy developments point to a persistent and, in structural terms, increasing importance of cyber and operational risks for financial markets. The financial sector has a more visible share of global cyber incidents, while infrastructures and critical service providers remain exposed to operational dependencies that can propagate shocks across participants and markets. Against this backdrop, efforts to strengthen operational-resilience frameworks, enhance third-party oversight and improve incident reporting and testing are central to mitigating the potential financial-stability impact of future disruptions.

Trading venues: Decrease in lit equity trading volumes

Equity trading volumes in 2H25 decreased slightly compared to the high volumes observed in 1H25 (- 8 %), while remaining higher than 2H24 (+ 20 %). The heightened volatility environment observed in November was reflected in larger trading volumes, reaching EUR 1.9tn in November 2025.

In terms of composition, the share of trading in EEA lit markets decreased in 2H25 (- 4.8 % relative to 1H25), while the relative share of off-exchange volumes increased over the same period, with higher OTC and systematic internalisers trading activity (+ 2.0 % and + 2.6 %

[45] ENISA (2025), Threat Landscape 2025, October: finance among most targeted sectors; dominant vectors include phishing (~60% of initial access), vulnerability exploitation (~21%) and ransomware as a high-impact threat.

[46] ENISA (2025), Public Administration Threat Landscape, November: high incidence of DDoS (~60–64%), data-related incidents (~17–18%), ransomware (~10%); strong dependence on centralised and outsourced ICT services.

[47] EBA, EIOPA, ESMA (2025), Digital Operational Resilience Act (DORA): Oversight of critical third-party providers, 15 July 2025); and ESAs, Designation of Critical ICT Third-Party Providers under DORA, 18 November.

respectively). No significant changes were observed in the relative share of trading in EEA dark pools and periodic auctions (Chart 48).

Settlement: surge in ETF CSD fails in April

CSDs settled on average about EUR 725tn in value in about 270mn instructions in each quarter in 2025, according to data reported to NCAs under CSDR. In 1H25, EU CSD settlement fail rates in both value and number terms recorded a sharp spike in the middle of April 2025 for ETFs, at a time of heightened trading activity given the rapidly changing US trade policies at that time. Other market segments also showed peaks at the same time though generally smaller than those for ETFs. UCITS and equities also had notable peaks in settlement fail rates in value terms, again at times when overall values increased, in August and September respectively, though peaks were lower than ETFs and were not seen in number terms, suggesting settlement fails were concentrated in relatively few, but larger transactions.

For **Settlement Internalisers** (SetIns) average quarterly values for 2025 were about EUR 200tn in 275mn instructions. Proportions across asset classes were similar to 2024, in terms of both value and number of instructions, with SetIns settlement mostly in sovereign bonds and equities (Charts A.153, A.155). On average per quarter, SetIns covered more instructions in 2025 compared to 2024 (+36pp). In terms of the value of instructions, SetIns also covered more on average per quarter than the value of 2024 (+20pp). Internalised settlement fail rates in 2025 were lower as compared to 2024, both in terms of the number of instructions (2.6 %, - 1.2pp) and in terms of the value (2.3 %, - 8.8pp).

CRAs: EEA outstanding ratings increase slightly

The total **number of outstanding ratings** reported to ESMA increased by 2 % in 2H25, to 582,178 ratings. Among the ratings outstanding, the relative shares were unchanged from 1H25 at 26 % for EEA issuers or instruments, 4 % for the UK and 52 % for the US. Unlike in 1H25 and 2H24, there was an increase in the number of outstanding EEA ratings in 2H25, which rose 1.6 % to 152,454. An increase was seen across debt classes. Corporate ratings outstanding grew to 115,229 (+ 950), due largely to an increase in the number of insurance ratings. Sovereigns grew to 21,264 (+ 555), while structured finance ratings numbers continued on its upward trend to reach 15,383 (+ 854) (Chart 52).

As in previous periods, about half of new ratings for EEA debt were issued by **smaller CRAs**, with 51 % (unchanged) issued by CRAs not among the 'big three' (Fitch, Moody's, and Standard and Poor's). Unlike the previous two periods, smaller CRAs accounted for slightly fewer withdrawals of ratings, 47 % (- 18pp). As a result, we saw slight increase in the share of the smaller CRAs in outstanding long-term ratings, which remained at 64 % (Chart A.158).

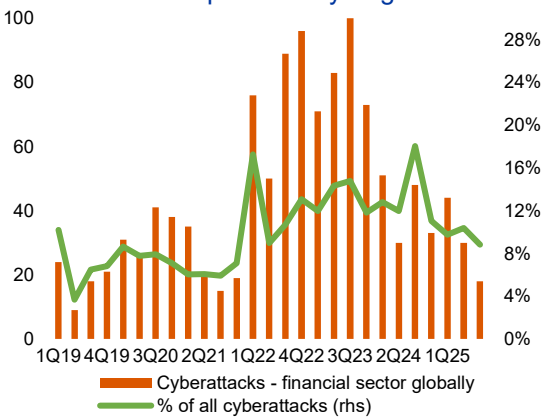
The share of outstanding **ratings solicited by issuers** showed little change and remained highly dominated by the big three CRAs (88 %), with little change across debt types except for sovereigns (90 % for corporates (unchanged), 76 % for sovereigns (- 2pp) and 89 % for structured finance (unchanged)). Thus, rating activity by smaller CRAs continues to be largely focused on the issuance of ratings not solicited by the debt issuer.

Key indicators

Chart 47

Cyberattacks on financial sector entities

Financial sector persistently targeted

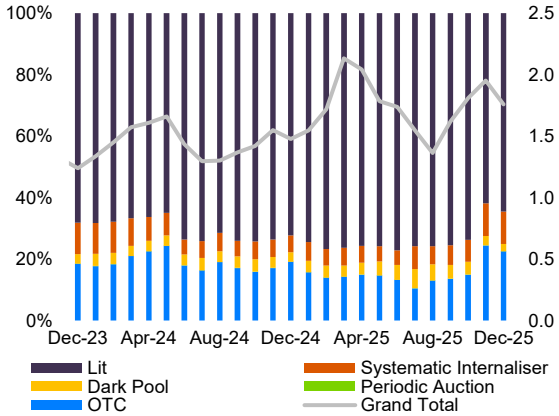


Note: Cyberattacks on financial sector entities globally by quarter, publicly-acknowledged incidents. For details, see *Harry, C., & Gallagher, N. (2018). Classifying cyber events.* Journal of Information Warfare, *17(3), 17-31*
Sources: University of Maryland CISSM Cyber Attacks Database, ESMA

Chart 48

Equity trading volumes

Decrease in lit equity volumes in 2H25

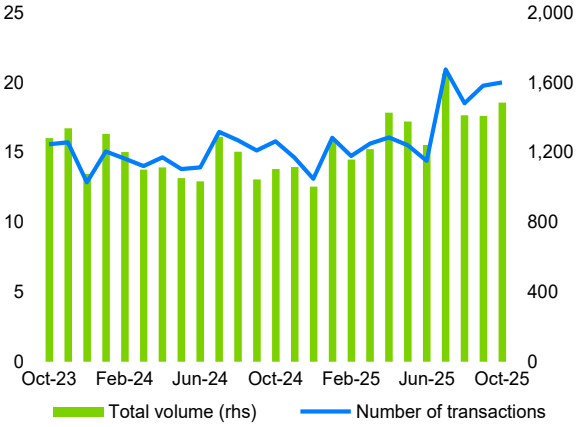


Note: Type of equity trading in the EEA as a percentage of total equity turnover. Total equity trading turnover in EUR trillion (rhs).
Sources: FIRDS, FITRS, ESMA.

Chart 49

€STR rate volumes

Strong upward trend in 2H25

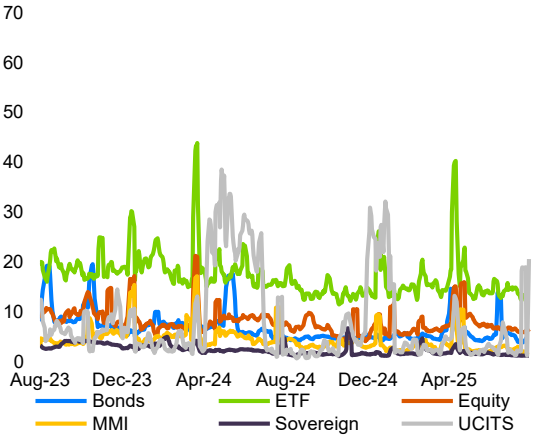


Note: €STR monthly number of transactions, in thousand, and monthly volumes, EUR tn, before trimming.
Sources: ECB, ESMA.

Chart 50

CSD settlement fail rates

Surge in April, particularly in ETFs

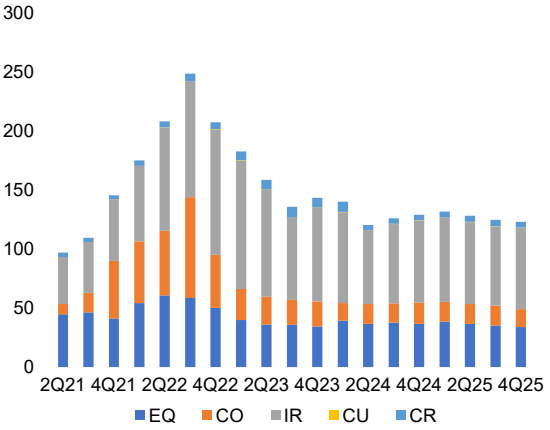


Note: Settlement fails as a % of total value of settlement instructions at EEA level. One-week moving averages. Extreme values removed.
Sources: CSDR7, ESMA

Chart 51

Initial margins collected by EU CCPs by asset class

Stable IMs

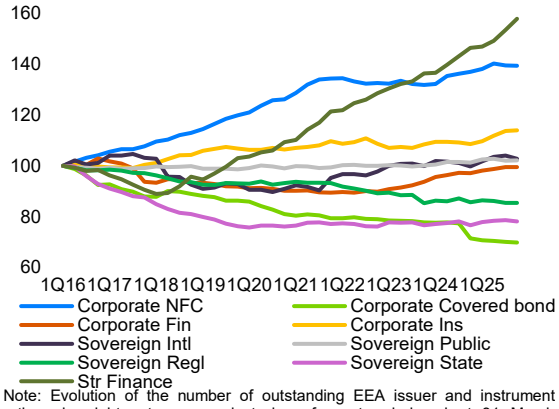


Note: Outstanding amounts of intital margin required and excess collateral received by EU27 CCPs for derivatives in EUR bn.
Sources: TRs, ESMA.

Chart 52

Outstanding ratings

Growth in structured finance continues



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.

Structural developments

Market-based finance

Market-based financing remains uneven amid persistent uncertainty

After two consecutive quarters of decreasing market financing by non-financial corporations 2Q25 shows a slight upward increase (Chart 57). **Market-based financing** in the EEA remained characterised by subdued equity issuance against a backdrop of persistent global uncertainty and weak economic prospects. IPO activity continued to decline, further reducing its share in overall equity fundraising, while secondary offerings provided limited support. Sectoral patterns shifted somewhat, with utilities and energy issuers gaining prominence in 2H25 as activity in industry and services weakened. Corporate bond issuance remained robust, supported by strong investment-grade activity, despite a moderation in short-term issuance and elevated refinancing risks linked to substantial upcoming maturities.

Muted equity issuance amid uncertainty

Equity issuance in the EEA remained subdued amid persistent global uncertainty and a weak economic outlook (see market environment as well as securities and crypto-asset market sections). Primary market activity declined slightly, with the **number of issuances** falling to 209 in 4Q25 from an average of 233 over the past 12 months. The quarterly five-year moving average for IPOs and FOs continued its downward trend observed since early 2024, standing at EUR 23bn in 4Q25 (Chart 58).

IPO activity declined to EUR 5.4bn in 2025 from EUR 9.7bn in 2024, while **secondary offerings** decreased slightly to EUR 61.8bn from EUR 64bn. This further reduced the share of IPOs in total equity issuance, which now accounts for only 6 % of the amount raised (Chart 58).

The comparison between EU and US equity issuance remains broadly unchanged. While there is anecdotal evidence of some EU firms delisting and moving to US markets, this does not appear to be a structural trend. For a detailed analysis, see the in-depth analysis at the end of this section.

From a sectoral perspective, equity issuance by utilities and energy companies picked up notably in 2H25. These firms raised EUR 12.9bn, surpassing issuance by financials. Issuance by financial companies decreased from 1H25 to 2H25 and remains well below long-term averages. Issuance by industry and services declined to EUR 14.9bn in 2H25, compared with EUR 22.1bn in 1H25 (Chart A.167).

From a country perspective, between 2024 and 2025, equity issuance increased in 13 EEA countries, decreased in 14 EEA countries, and remained unchanged in 3 EEA. The highest relative increase in equity issuance from 2024 to 2025 was observed in Denmark (from EUR 0.1 bn to EUR 0.6 bn) and Iceland (from less than EUR 0.1 bn to EUR 0.6 bn).

In **private equity** markets, according to Invest Europe, EUR 54bn were raised in 1H25 from European countries (incl. UK), close to the EUR 53bn raised in 2H24.[48] However, excluding the UK and Ireland – which is likely a much better estimate for EEA fundraising – the figure was about EUR 30bn, down from EUR 38bn in 2H24. Investment in Europe (incl. UK) was EUR 49bn in 1H25 down from EUR 71bn in 2H24. Of the investment in 1H25, EUR 34bn was in European countries besides UK and Ireland, down from EUR 48bn in 2H24. Of the European (incl. UK) investment in 2024, the majority was still in buyouts (EUR 29bn) down significantly from the EUR 53bn in 2H24. This was followed by growth capital (EUR 10bn, up from EUR 9bn) and venture capital (EUR 10bn) which rose by EUR 1bn.

Notwithstanding the long-term growth trend in private equity, assets managed by **private equity funds** managed or marketed in the EU fell in 1H25 according to AIFMD data. NAV decreased to EUR 580bn at the end of 1H25 from EUR 960tn at the end of 2024.[49] Of this NAV, 51 % was invested in the EEA as of the end of

[48] Invest Europe (2025),'Private Equity Activity H1 2025', November 2025 and ESMA calculations, 6 November.

[49] Note that size metrics used here for private equity differ from those presented above, in chart 27, for several

1H25 (- 10pp from 2024). In terms of strategy, 31 % were focused on growth capital (-1 pp from 2024), 10 % venture capital (- 1pp), 8 % mezzanine capital (+ 3pp), 4 % (+ 1pp) multi-strategy, with other strategies accounting for 57 % (- 4pp).

Corporate bond issuance stays robust

Corporate bond issuance eased slightly in 2H25 to EUR 1tn but remains at historically high levels. 2025 volumes reached over EUR 2.1tn, up 6 % compared to 2024. Issuance of non-rated bonds accounted for more than 77 % of new issuance in 2H25, while investment-grade bonds represented over 90 % of rated issuance. In absolute terms, this corresponds to EUR 211bn for IG bonds and EUR 18bn for HY bonds in 2H25, with average credit quality remaining slightly above BBB.

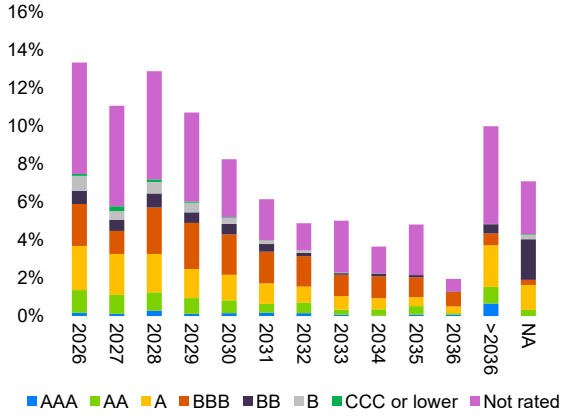
From a sector perspective, mining and energy companies decreased their fundraising from EUR 73bn in 1H25 to EUR 47bn in 2H25. Bond issuance by industry and services companies also decreased slightly from EUR 217bn to EUR 195bn. Financials remained the largest issuer group at EUR 761bn for 2H25 down from EUR 818bn in 1H25(Chart A.172).

Short-term bond issuance (maturities under 12 months) declined from EUR 879bn to EUR 758bn in 2H25, representing 43 % of total issuance - 7pp below the long-term average since 2010. For longer-dated bonds (maturities over one year), the average weighted maturity edged up in 2H25 to 8.7 years (Chart 62).

Refinancing risk amid large upcoming maturities

Elevated uncertainty continues to weigh on corporates' ability to service and refinance debt. EEA firms face significant refinancing needs, with almost 50 % of outstanding bonds maturing within the next four years and a peak expected in 2026 (Chart 53). While lower interest rates may ease rollover conditions, the size of upcoming maturities remains a key risk. Of this amount, 17 % is rated BBB and 11 % high-yield, compared with 20 % and 5 % respectively for bonds maturing in 2030 or later.

Chart 53
Outstanding debt by rating and maturity year
Peak in 2026



Note: The distribution of the total outstanding corporate bond debt by rating and year of maturity in percent. NA includes issuance amounts for corporate bonds whose maturity date is not available.
Sources: Refinitiv Eikon, ESMA.

Covered bond issuance decreasing

Covered bond issuance fell by 38 % from the first to the second semester in 2025, reaching EUR 133.2bn. This decline mirrors the downward trend observed throughout 2024 as well. Outstanding amounts edged lower averaging EUR 2.86bn in 2H25 but remain at their highest level since 2H16.

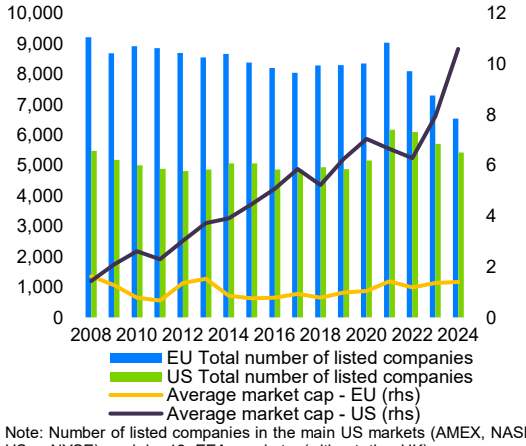
reasons. Here NAV is presented, while total assets is used above. NAV does not include dry powder. Also, the datasets differ, here AIFMD data for the EEA is used while ECB data used is for the euro area.

In depth: Concerns over an increase in EU delistings

Recent delistings[50] from European exchanges, combined with a persistently lower EU listing activity relative to the US, have raised questions regarding the attractiveness of public listings on European equity markets. While individual company decisions often reflect specific strategic or operational considerations, broader structural factors may also be at play. In fact, the persistent global trend of declining IPO activity over the past two decades has been observed particularly in Europe (see previous sub-section).

Using public data from the World Federation of Exchanges (WFE) across 18 European markets (excluding the UK), we observe a decline in the number of listed companies both in the EU and the US, albeit this decline has been sharper in the EU since 2021 (Chart 54). However, the market capitalisation gap has widened significantly: in 2024, the average market capitalisation per company was 7.6 times higher in US markets than in EU markets, driven largely by the rally in Big Tech stocks (see securities markets and crypto-assets section).

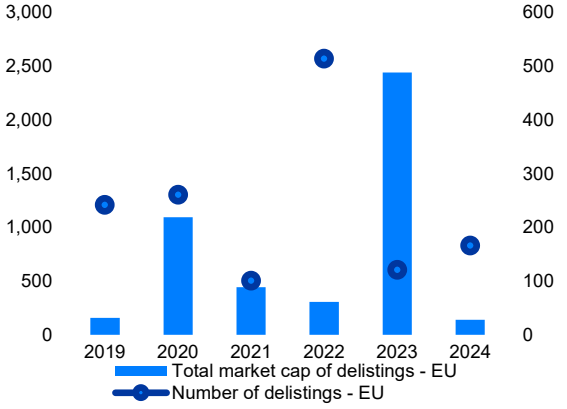
Chart 54
Number of listed companies and market capitalisation
Decline in EU, US number of listed companies



Note: Number of listed companies in the main US markets (AMEX, NASDAQ US, NYSE) and in 18 EEA markets (without the UK), average market capitalisation in EUR bn (rhs).
Sources: WFE, ECB, ESMA.

Concerns about a possible trend of delistings from European stock exchanges do not seem to be supported by aggregated figures. While delistings have attracted increased attention in recent years, they remain a relatively marginal phenomenon in the EU in terms of both the number of companies and their market capitalisation. Between 2019 and 2024, an average of 234 delistings per year was recorded with high variability between years. Market capitalization of delistings also varied significantly, averaging EUR 65bn annually since 2019 (Chart 55). In 2023, relatively large companies were delisted, resulting in an historical peak of EUR 244bn in market capitalisation of delisted companies, significantly higher than in other years. Despite the smallest number of delistings in 2023, this may have contributed to the prominence of the delisting discussion. However, delistings have consistently represented a small share of EU market capitalisation, averaging 0.6 % over the period and peaking at 2 % in 2023.[51]

Chart 55
Average market capitalisation of delistings in the EU
A relatively stable number of delistings



Note: Market capitalisation of delistings in 18 EEA markets, without the UK, in EUR mn (lhs) and number of delistings (rhs).
Sources: WFE, ESMA.

Additionally, the primary reasons for delisting have remained largely unchanged for EU and UK-domiciled companies. Acquisitions, mergers and takeovers continue to represent more than half of the delisting drivers on average.[52] Regulatory barriers to delisting can also influence corporate behaviour, and the lack of harmonised delisting rules combined with wide variation in regulatory costs across EU Member States create differing incentives from one country to another.[53] According to a survey by New

[50] Prominent EU examples in the last years include Linde, Rothschild & Co, Burford Capital, Ferrovial, Okeanis Eco Tankers, CRH, Smurfit Kappa. Examples from the UK are Flutter Entertainment, Ferguson, Indivior.

[51] Unfortunately, similar numbers on delistings are not available for the US.

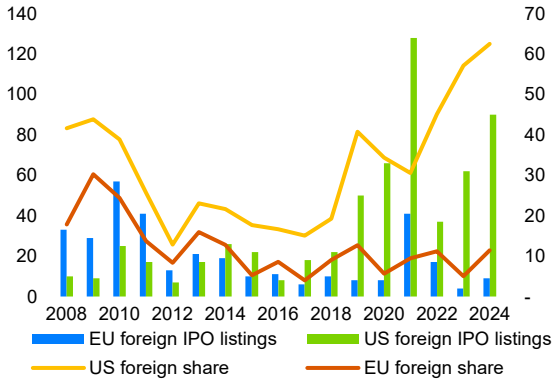
[52] ECB (2024), "Examining the causes and consequences of the recent listing gap between the United States and Europe", part of the Financial Integration and Structure in the Euro Area 2024.

[53] See Chan, J. and C. Gerner-Beuerle (2024), "Delisting Costs and Corporate Mobility in Europe", European Corporate Governance Institute - Law Working Paper No. 813/2024.

Financial, among the 130 companies that moved to the US, most decisions were driven by business-specific factors such as revenue concentration in the US, alignment with peer groups, or domestic market limitations. Furthermore, the survey points towards mixed liquidity performance, with the majority of firms trading below their listing price.[54]

While the delisting trend does not appear alarming based on available evidence, the attractiveness of EU markets to foreign companies is low in comparison to US markets. In the US, listings of foreign companies through IPOs have sharply increased since 2018 (Chart 56). On average, 65 foreign companies have listed in the US annually through IPOs, compared with just 14 in the EU since 2018.[55] In 2024, the share of foreign companies in new IPO listings reached 51 % in the US, whereas in the EU this share has remained largely constant at a low level, averaging 9 % between 2018 and 2024.

Chart 56
Number and share of foreign IPOs in the US
A sharp increase of US foreign IPOs listings



Note: Number of new listings through IPO per region, in the main US markets (AMEX, NASDAQ US, NYSE), and in 18 EU markets, excluding LSEG (lhs) and share of foreign companies listed through IPO as a percentage of new listed companies through IPOs per region (rhs).
Sources: WFE, ESMA.

The attractiveness of US stock markets lies in part in their higher market valuations, but also on the foreign private issuer status granted by the US SEC, which alleviates a considerable share of the compliance costs associated with listing. This status is currently being reviewed,[56] due to concerns that some issuers may lack meaningful oversight in their home countries, potentially exposing US investors to risks.

In the EU, public information on listing and delisting costs is scarce, making comparisons difficult. Recent EU legislative reforms, most notably the Listing Act (2022),[57] aim to reduce the administrative burden for companies of all sizes, especially SMEs. A more comprehensive EU-level framework for data collection and monitoring would be valuable to better assess and monitor the attractiveness of European equity markets and its key drivers.[58]

[54] New Financial (2025), A reality check on international listings, April.

[55] For EU venues, “foreign” companies are non-domestic companies but can be from another EU country, with no possibility to disentangle between the two.

[56] See SEC (2025), Fact Sheet- Foreign Issuers and also SEC Solicits Public Comment on the Foreign Private Issuer Definition, press release, June.

[57] See European Commission dedicated webpage on the Listing Act and ESMA implementation webpage.

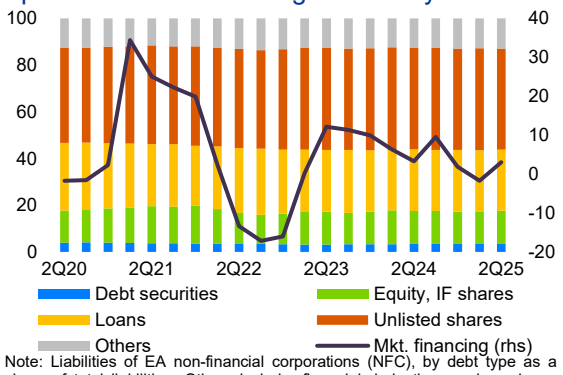
[58] The European Single Access Point (ESAP) Regulation will help provide easier access to public information on companies and financial products. See ESMA’s website for more information on its implementation.

Key indicators

Chart 57

Market financing

Uptick in market financing availability

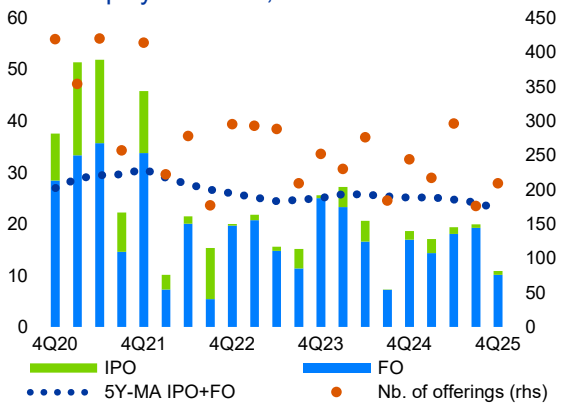


Note: Liabilities of EA non-financial corporations (NFC), by debt type as a share of total liabilities. Others include: financial derivatives and employee stock options; insurance, pensions and standardised guarantee schemes; trade credits and advances of NFC; other accounts receivable/payable. Mkt.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

Chart 58

Equity issuance

Muted equity issuance, IPO share declines

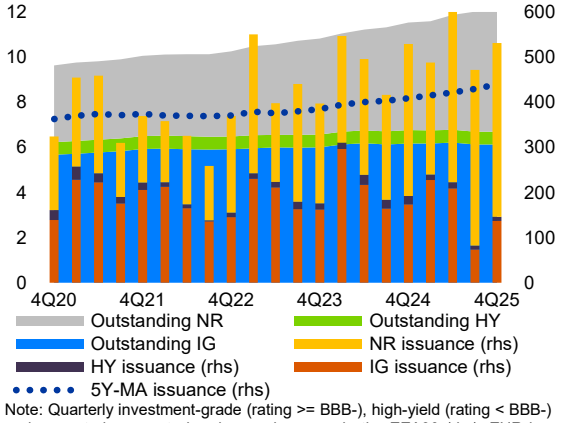


Note: Equity gross issuance in the EEA30 by type, EUR bn, and number of equity offerings. 5Y-MA=five-year moving average of the total value of equity offerings.
Sources: Refinitiv EIKON, ESMA.

Chart 59

Corporate bond issuance and outstanding

Corporate bond issuance remains strong

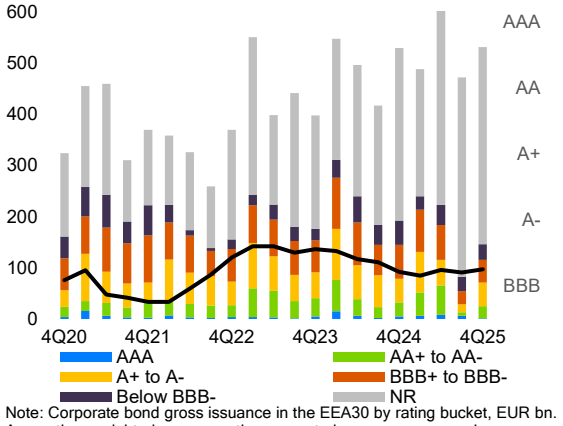


Note: Quarterly investment-grade (rating >= BBB-), high-yield (rating < BBB-) and non-rated corporate bond gross issuance in the EEA30 (rhs), EUR bn, and outstanding amounts, EUR tn. Maturities < 12 months are excluded.
Sources: Refinitiv EIKON, ESMA.

Chart 60

Corporate bond issuance by rating class

Credit quality stable amid high issuance

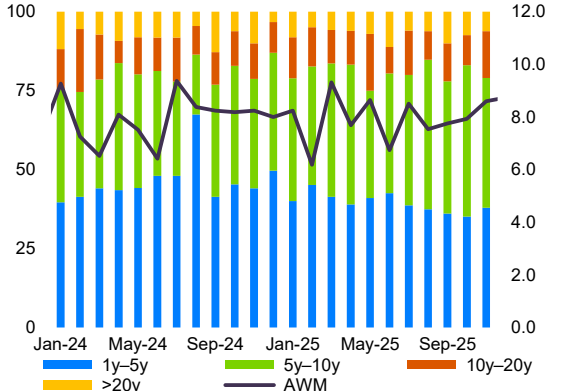


Note: Corporate bond gross issuance in the EEA30 by rating bucket, EUR bn. Avg. rating=weighted average rating computed as a one-year moving average of ratings converted to a numerical scale (AAA=1, AA+=2, etc.) excluding non-rated bonds. Maturities < 12 months are excluded.
Sources: Refinitiv EIKON,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

Chart 61

Corporate bond issuance by maturity bucket

Increase in longer maturities

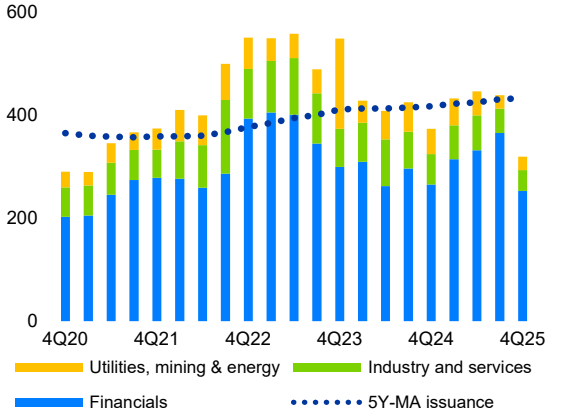


Note: Monthly share of corporate bond issuance by maturity bucket, in % (lhs) and average weighted maturity at issuance (AWM), in years (rhs).
Sources: Refinitiv Eikon, ESMA.

Chart 62

Short-term bond issuance by sector

Short-term issuance stable, utilities gain share



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

Sustainable finance

Global climate policy fragments

Elevated geopolitical tensions and shifting political priorities in several jurisdictions have led to reduced momentum behind international efforts to reduce emissions. This may translate into intensifying natural hazards over time. Global climate policy fragmentation was reflected for example in the failure of the COP30 parties to agree on a roadmap to quit fossil fuels.[59] However, global investments in clean energy continued to increase in 2025.[60] The lower cost of clean technologies and energy security and affordability concerns are fuelling adoption, in the EU and globally.

Climate physical risks have increasingly come to the fore, also due to heightened severity and frequency of natural catastrophes.[61] This has also raised concerns over the future availability and affordability of insurance to cover losses associated with climate change. Meanwhile, alternative risk transfer mechanisms for losses from natural catastrophes such as catastrophe bonds have gained popularity, also among EU funds and investors – see *In-depth* analysis below.

In parallel, the European Parliament and Council agreed to simplify sustainability disclosure requirements to reduce the cost of reporting, in line with the broader EU agenda to improve the continent's competitiveness.[62] However, these changes may also result in reduced availability of information on climate risk exposures, as they will drastically curtail the number of entities reporting and the granularity of the information disclosed.

Against this backdrop, the unravelling of some net zero alliances[63] further creates a challenging environment for European ESG markets, with mixed developments in the ESG fund segment and a slowdown in ESG bond issuance.

ESG fund flows mixed amid valuation risks

Net flows in ESG funds painted a picture largely consistent with the trends observed in 1H25. Funds with sustainable investment as their objective under the EU Sustainable Finance Disclosure Regulation (Article 9 of the SFDR) continued to face headwinds and recorded net outflows of EUR 13.1.5bn in 2H25 (4.2 % of AuM), mainly concentrated in equity strategies, marking their eighth consecutive quarter of redemptions. In contrast, funds promoting environmental and social characteristics (Article 8 of the SFDR) attracted EUR 184bn in net inflows over the same period (2.2 % of AuM) with bond strategies accounting for EUR 133bn of the total. These sustained inflows also reflect broader market trends and investors' appetite for fixed income products amid relatively stable bond valuations. ESG-oriented fixed income products thus provide an efficient channel for integrating sustainability considerations into portfolios.

ESG funds are not immune to concerns over elevated valuations of global equities and especially of AI firms. Article 8 and Article 9 SFDR funds tend to be relatively more invested in AI firms, which make up about 14 % of Article 8 and 9 equity fund portfolios, compared to 10 % for funds without any ESG features (Article 6 of the SFDR) (Chart 63). This might render Article 8 and 9 SFDR funds more vulnerable to potential corrections in tech firm valuations.

[59] See BBC (2025), UN climate talks fail to secure new fossil fuel promises, 22 November.

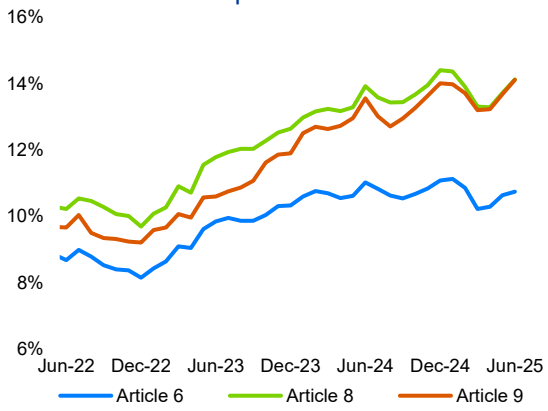
[60] In 2025, around USD 2.2 trillion were invested in renewables, nuclear energy, electricity grids and storage, low-emissions fuels, efficiency and electrification, a 6% increase from 2024. See IEA (2025), World Energy Investment 2025.

[61] See Munich Re (2025), Economic impact of weather disasters, 11 June.

[62] See Consilium Europa (2025), Council and Parliament strike a deal to simplify sustainability reporting and due diligence requirements and boost EU competitiveness, 9 December.

[63] See Financial Times (2025), Climate finance feels the chill as net zero alliances unravel, 9 November.

Chart 63
Portfolio share of AI firms by SFDR fund type
ESG funds more exposed to AI firms



Note: Share of AI firms as a percentage of total fund portfolio for equity funds. An company is classified as AI firm if it is included in at least two AI indices.
Sources: Morningstar, ESMA

First EuGB issuances meet slowing ESG bond market

The EU ESG bond market continued to expand on the back of robust investor demand, despite lower issuance activity. The total value of ESG bonds outstanding from EU issuers reached EUR 2.7tn in 2025, up 8 % from end-2024 (Chart 66). Green bonds remained the main growth driver, although 2025 issuance volumes were down 18 % (to EUR 279bn) from a year earlier, led by steep declines in sovereign and supranational issuance (Chart 67). In contrast, sustainability bond issuance increased by 29 % over the same period to EUR 24bn, highlighting rising interest in projects combining environmental and social impacts.

2025 was also the inaugural year for European Green Bonds (EuGBs), which had been widely anticipated by the market. EuGB issuance volumes amounted to almost EUR 20bn (i.e. more than 8 % of European green bond issuance[64]) from 20 different issuers. Non-financial sector issuers led in volume terms, reflecting the favourable position of specific sectors (especially utilities) with respect to EU Taxonomy alignment.

ESMA Guidelines and fossil fuel divestments

The ESMA Guidelines on the use of ESG or sustainability-related terms in fund names introduced guidance for funds seeking to signal ESG features through their names. Out of 4,000 EU funds using ESG terminology in their names before the publication of the Guidelines in May 2024 (and with portfolio data available), around 1,000 changed name. Many funds also updated their investment policy by adding portfolio exclusions.

A central factor behind these adjustments was the compliance gap with respect to fossil fuel exclusion thresholds aligned with the Paris-Aligned Benchmark (PAB) methodology.[65] Funds with higher exposures to companies breaching PAB revenue thresholds were significantly more likely to drop ESG-related terminology, making the gap a strong predictor of renaming decisions. Through renaming alone, exposure to fossil fuel activities among funds retaining ESG-related terms decreased from EUR 17.4bn to EUR 5.9bn.

The ESMA Guidelines also appear to have contributed to a progressive portfolio allocation response. Funds retaining ESG terms in their names have actively reduced their fossil-fuel holdings around the publication of the final version of the ESMA Guidelines (Chart 64), cutting exposures to companies in breach of the PAB thresholds by roughly 40 % since then – significantly faster than other fund types (both in absolute and relative terms).

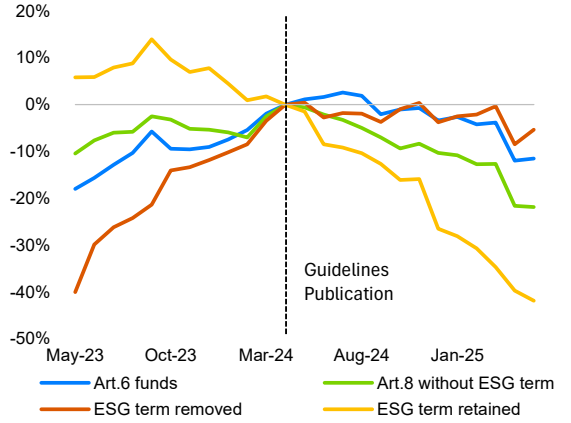
64 See Environmental Finance (2025), 'Growing influence' of EuGB label amid acceleration to 8% market share, 22 October.

65 See Ludwig et al. (2025), Impact of ESMA Guidelines on the use of ESG or sustainability-related terms in fund names, ESMA TRV Risk Analysis, 17 December.

Chart 64

Cumulative changes in fossil-fuel holdings

Funds retaining ESG terms divest faster



Notes: Cumulative monthly changes in fossil-fuel holdings breaching PAB revenue-thresholds for four groups of UCITS funds. Changes are expressed as a percentage of each group's holdings the month prior to the ESMA Guidelines publication (April 2024). The sample includes: (i) Article 6 funds, (ii) Article 8 funds without ESG terms in their name, (iii) all funds that removed ESG terms from their name, and (iv) all funds that retained ESG terms. The vertical dashed line marks the publication date of the ESMA Guidelines.
Sources: Morningstar, Urgewald, ESMA.

These dynamics underscore how the ESMA Guidelines have helped increase convergence in the use of ESG terminology and prompted funds to seek better alignment between their names and respective investment strategy.

In depth: Physical risk and catastrophe bonds

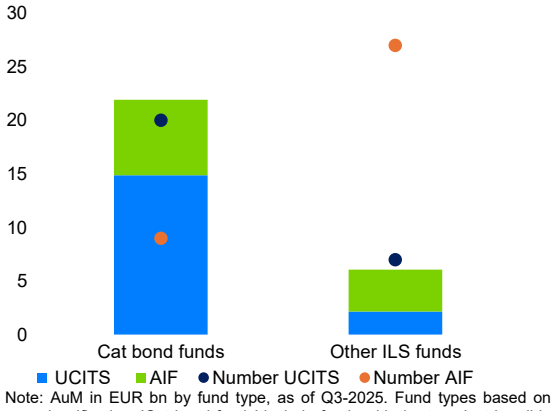
Catastrophe bonds (hereafter 'cat bonds') are a form of insurance-linked security (ILS) transferring peak natural catastrophe risks, i.e. very low probability and high impact events, to capital market investors. The cat bond market has rapidly expanded and currently amounts to EUR 50bn, with a record issuance of EUR 18bn in 2025. Underlying risks range from earthquakes to hurricanes, with the majority of risks covered in the US. Cat bonds typically feature specific triggers that lead to a payout for the sponsor, i.e. the loss of the principal for the investor. Such triggers typically include relative loss shares or parametric criteria (based on e.g. storm strength).

In the fall of 2025, Hurricane Melissa triggered a full payout of the World Bank-issued Jamaica cat bond. This provided USD 150mn of funds for rapid disaster relief, while total damages were estimated at USD 8.8bn.[66] Cat bonds can thus help countries, but also (re)insurance companies, to manage their exposure to physical climate risk. Yet, Hurricane Beryl failing to trigger the Jamaica cat bond already in 2024 had raised concerns around the design of parametric triggers.[67] At issuance, 40 % of the Jamaica cat bond was placed with European investors and some EU asset managers have already confirmed the write-off, highlighting the risk potentially borne by European investors. [68]

EU cat bond funds have grown in parallel to the overall cat bond market expansion. Funds that use the term 'cat bond' in their name or mention it as a predominant element in their investment strategy currently amount to EUR 22bn in AuM (Chart 65). UCITS funds make up more than two thirds of the cat bond fund segment. In addition to cat bond funds, another EUR 6bn are invested in broader ILS funds, which aside from cat bonds invest in less standardised climate physical risk transfer mechanisms such as collateralised reinsurance, but also other types of ILS (e.g. linked to life insurance).

At a combined EUR 28bn AuM, such strategies remain a niche segment of the overall EU fund market (0.1 % AuM). Still, investor interest in UCITS cat bond funds has been strong, attracting about EUR 3bn in inflows (25 % of AuM), while five new funds have been created since 2024. All but three of the UCITS cat bond funds are open to retail investors. Granular portfolio data is scarce and only available for five funds, it however suggests limited portfolio concentration risks, as funds tend to hold more than 100 positions. Liquid asset buffers vary from 5 % to 10 % and mostly include cash and US treasuries.

Chart 65
Cat bond and ILS fund size by legal nature
Cat bond UCITS AuM twice as large as AIFs'



Note: AuM in EUR bn by fund type, as of Q3-2025. Fund types based on own classification. 'Cat bond funds' include funds with the term 'cat bond' in their name or with a reference to cat bonds as predominant focus in their investment strategy. 'ILS funds' include funds with references to the term 'ILS' in their name or strategy, or where the strategy indicates a non-predominant exposure to cat bonds.
Sources: Morningstar, AIFMD, ESMA

On aggregate, the findings indicate that EU cat bond funds might hold up to half of the cat bonds outstanding globally. Cat bonds have so far rarely faced a complete loss of principal, while cat bond funds have earned relatively stable returns, creating a favourable environment for the development of the fund segment. However, the recent triggering of the Jamaica cat bond, together with, for example, the ongoing assessments on payouts of cat bonds related to the wildfires in Los Angeles highlight the potential downside risks. The typically high diversification of cat bond funds could counteract adverse developments, still, the expected increase in frequency and severity of certain hazards might increase the losses borne by cat bond investors.

Against that backdrop, the large share of EU funds in cat bond holdings might warrant further attention, in particular with respect to risks for retail investors. As part of the review of the UCITS Eligible Assets Directive, ESMA published a technical advice in June 2025 proposing to limit the exposure to cat bonds in UCITS to 10 %.[69]

66 See IMF (2025) Jamaica Secures a Package of US$6.7 Billion for Recovery After Hurricane Melissa, 1 December.

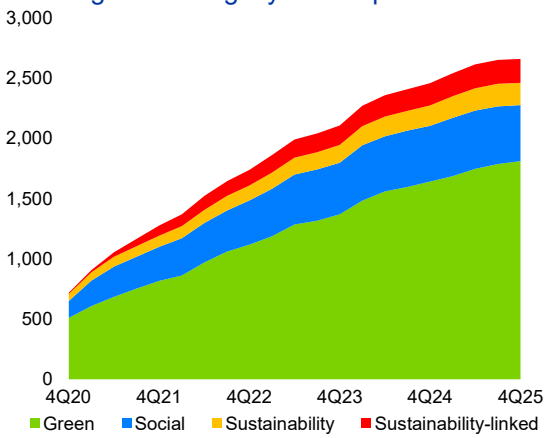
67 See V20 (2024), World Bank should course-correct in the wake of experience with Hurricane Beryl, 22 July.

68 See Bloomberg (2025), Catastrophe bonds absorb 'black swan' event dealt by Melissa, 9 November.

69 See ESMA (2025), ESMA provides advice on eligible assets for UCITS, 26 June.

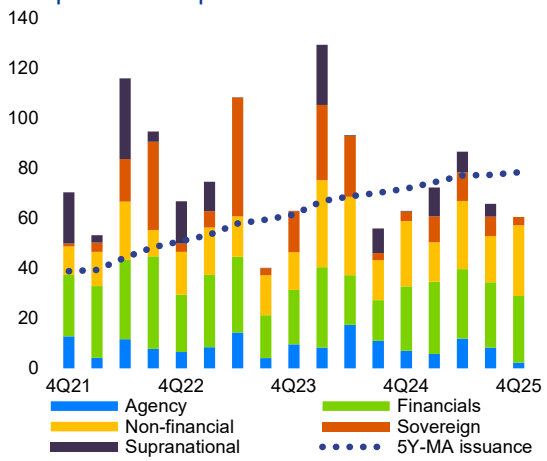
Key indicators

Chart 66
EU ESG bonds outstanding
Market grows at slightly slower pace



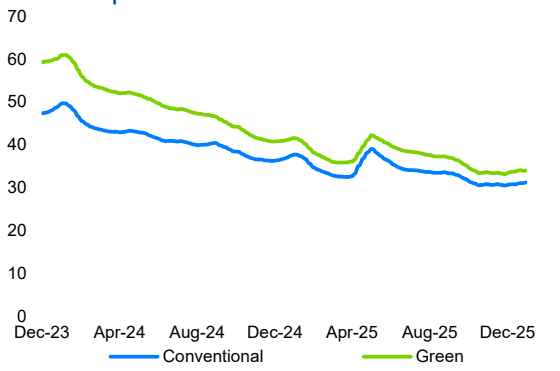
Note: Total amount of ESG bonds outstanding issued by EEA30-domiciled issuers, EUR bn.
Sources: Refinitiv EIKON, ESMA.

Chart 67
Green bond quarterly issuance
Steep decline in public sector issuance



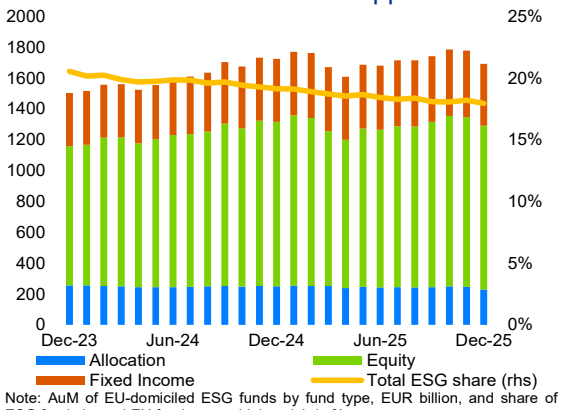
Note: Green bond gross issuance in the EEA30 by sector, EUR bn.
Sources: Refinitiv EIKON, ESMA.

Chart 68
Corporate green bond and conventional bond liquidity
Bid-ask spreads continue to narrow



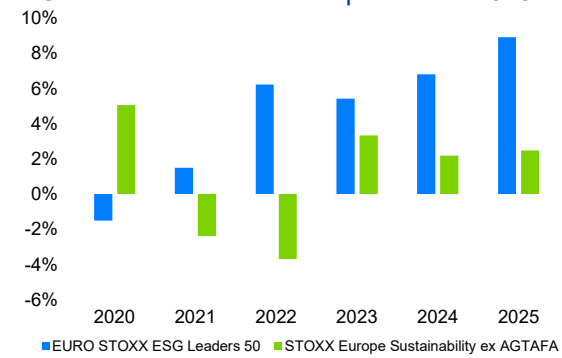
Note: One-month moving average of the bid-ask spread of green and conventional bonds from green bond issuers included in the Markit iBoxx EUR Corporate bond index, in bps.
Sources: IHS Markit, ESMA.

Chart 69
ESG fund assets
ESG fund market share down 1pp in 12 months



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 %.

Chart 70
ESG vs. broad market index performance
ESG indices continued to outperform in 2025



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 (AGTAFA, positive screening and exclusion-based strategy) measured as relative difference to the STOXX Europe 600, in percentage points. 2025 data as of end-November.
Sources:Refinitiv Datastream, ESMA.

Chart 71
Emission allowance prices
Carbon prices rose 15% since June

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

Financial innovation

Tokenisation moves up the agenda

Tokenisation—the process of issuing or representing assets as digital tokens using distributed ledger technology—is attracting increasing attention from market participants and regulators as a potentially transformative force in financial markets. Unlike simple digitalisation, tokenisation has the potential to reshape the core of the financial system by enabling programmable money, real-time settlement, and direct-to-investor distribution models. It also plays a pivotal role in expanding decentralised finance by bringing 'real-world' assets onto blockchain-based platforms, ultimately bridging traditional finance and decentralised finance.

Available evidence suggests that tokenisation adoption is currently limited, with **mostly narrow applications** and relatively small volumes. However, momentum is building as progress is made in addressing technical and regulatory barriers. BCG and Ripple forecast that tokenised assets, including stablecoins, could expand from USD 0.6tn in 2025 to USD 18.9tn by 2033.[70]

The specific **benefits** expected from tokenisation vary by use case, but its underlying technology promises universal efficiency gains through greater automation and speed. By enabling real-time, atomic transactions, tokenisation has the potential to shorten settlement cycles and reduce counterparty risk. Programmability via smart contracts can contribute to automate complex processes, cutting intermediaries, reconciliation needs, and costs. The International Securities Services Association found that collateral tokenisation could reduce settlement fails by 13 %, primarily thanks to a streamlined transfer and verification process, and unlock USD 340mn in annual savings for Tier 1 firms.[71]

Tokenisation can also offer investors greater accessibility and control. It enables fractional ownership of high-value assets, broadening participation. Digital tokens can trade 24/7 without traditional market frictions, and digital wallets reduce reliance on intermediaries, giving investors more direct control.

Still, many of these advantages are either not unique to tokenisation or remain **unproven at scale**. For example, existing investment vehicles already offer fractional ownership. Some benefits involve trade-offs that may offset gains—for instance, atomic settlement could raise liquidity needs by eliminating transaction netting. Moreover, most advantages depend on broad adoption.

Impediments to wider adoption are mainly threefold: technical interoperability challenges, the absence of widely accepted solutions for on-chain cash payments, and regulatory uncertainty. Many tokenised assets currently use private blockchains operated by a single entity or a small group of market participants, re-creating the silos the technology was intended to eliminate. Several private and public initiatives are working to enable **interoperability** between platforms and with the existing financial system.[72] Technical solutions and common standards are also starting to emerge.[73]

Without **on-chain cash solutions**, such as stablecoins, central bank digital currencies (CBDCs) or tokenised deposits, assets can move on blockchain, but cash settlement still relies on traditional payment rails, offering little commercial advantage. The implementation of MiCA in the EU and the recent adoption of the GENIUS Act in the US mark important milestones by providing regulated on-chain cash in the form of stablecoins. Ongoing CBDC developments also support this direction.

Progress is being made on the **regulatory** front as well. In the EU, the DLT Pilot Regime provides a framework for market infrastructures using DLT, with the aim of supporting tokenisation in a risk-controlled environment.[74] Since the regime's launch in March 2023, six DLT market infrastructures have been authorised. In December 2025, as part of the Market Integration

[70] Ripple and Boston Consulting Group (2025), Approaching the tokenization tipping point, April.

[71] ISSA, (2025), The case for collateral tokenisation, Q3 2025.

[72] Examples of private and public initiatives include SWIFT's interoperability experiments, Canton Network's pilots and projects Pontes and Appia from the ECB.

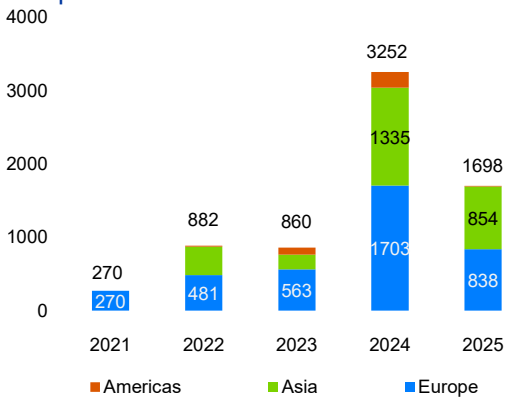
[73] Different models allow blockchains to talk to each other, including notary-based systems, relay chains like Cosmos IBC or omnichain messaging like LayerZero or Chainlink CCIP. See Orbital Exploration (2025), Cross-chain future: Interop standards and liquidity hubs in 2025, 21 November.

[74] Regulation (EU) 2022/858.

package, the European Commission published a legislative proposal amending the DLT Pilot Regime with a view to support larger adoption of DLT in EU financial markets.[75] Outside of the EU, the UK FCA consulted on proposed new rules for fund tokenisation in Q425, with the objective to give firms more clarity and confidence to adopt tokenisation in fund management. [76] In the US, Project Crypto is intended to "modernize the securities rules and regulations to enable America's financial markets to move on-chain." [77]

Looking ahead, **adoption** is likely to occur in phases. Fixed-income securities, money market funds and high-quality assets appear to be the first targets, including because of their importance for collateral operations. [78] Around USD 7bn in tokenised fixed income has been issued since 2021 (Chart 72), although this represents only a tiny fraction of the USD 140tn outstanding globally.[79] Tokenised money market funds are also growing rapidly from a low base.[80]

Chart 72
Issuance of tokenised fixed income
European issuers have dominated so far



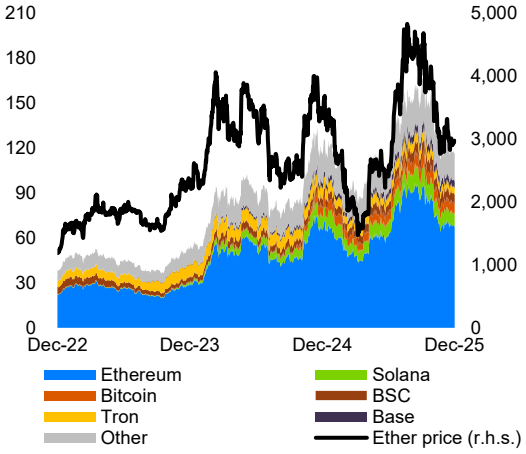
Note: Annual Global DLT Fixed Income Bond Issuance by region of issuer, in EUR mn. All data presented reflects market developments as of September 2025.
Sources: AFME, ESMA.

Tokenisation does not fundamentally change the nature of the assets being tokenised, meaning the **risks** associated with those assets remain broadly the same. But tokenisation can complicate workflows, introduce opaque chains of obligations, or alter investors' perception of risks -- for example by making illiquid assets appear liquid. Broader retail participation and 24/7 trading could also amplify panic selling during periods of stress.

Tokenisation inherits the vulnerabilities of its underlying technology, including security breaches, smart contract bugs, and governance flaws. Tokenised assets depend on digital wallets, which are susceptible to hacking, while smart contracts can contain coding errors that are hard to fix once deployed. It may also create new dependencies on a few tokenisation platforms or specific blockchains. Regulators and supervisors must remain vigilant to ensure these risks are properly addressed. IOSCO's recent report offers useful guidance to enhance regulatory preparedness. [81] Current risks are limited due to low volumes, but this could change quickly.

DeFi: perpetual futures boost DEXs volumes

Chart 73
DeFi Total Value Locked (TVL) by chain
High correlation between TVL and Ether



Note: Daily TVL by blockchain (USD bn) and Ether price (USD, right axis)
Sources: DefiLlama, Kaiko, ESMA.

Decentralized finance continues to evolve quickly with new protocols emerging almost daily and technological advancements, e.g., in relation to Layer-2 scaling solutions and cross-chain interoperability. The Total Value Locked in DeFi

[75] European Commission (2025), Market integration package - Finance, December.

[76] UK Financial Conduct Authority (2025), CP25/28 Progressing fund tokenisation, October.

[77] Paul S. Atkins, Chairman, U.S. Securities and Exchange Commission (2025), American Leadership in the Digital Finance Revolution, 31 July.

[78] For example, S&P Global expect use cases to start with the tokenization of high-quality liquid assets and eventually spread across the credit spectrum. S&P Global (2025). Accelerating value flow in financial markets through tokenization, 26 June.

[79] The decline of European DLT fixed income issuance between 2024 and 2025 is mainly attributable to the conclusion of ECB trials in November 2024

[80] For further details on the growth of tokenised money market funds, see ESMA (2025). Trends, Risks and Vulnerabilities (TRV) Report, No. 2, 2025, 9 September.

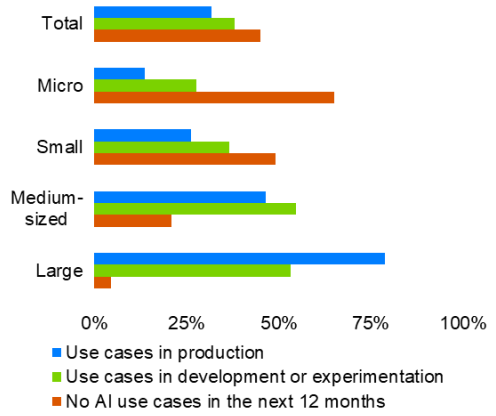
[81] IOSCO (2025). FR/17/2025 Tokenization of Financial Assets, November.

protocols increased by 5 % over the period, reaching EUR 116bn as of end-December 2025, supported by Ether's appreciation despite a bearish crypto market (Chart 73). The phenomenon remains niche at 3.6 % of the crypto market. Available data as of Q325 also suggest that the number of active DeFi users has halved since the peak of May 2025, back to levels seen before the surge of late 2024.[82] Yet, trading volumes processed on DEXs are increasing and perpetual futures protocols are booming (+139 % in trading volumes since end-June[83]). Ethereum continues to be the dominant chain with 58 % of the TVL (to be compared with 56 % end-June).

AI: adoption in securities markets still uneven

While investors' bullish sentiment on the transformative potential of AI has fuelled market valuations of AI-related companies (see Risk Monitor section), the penetration of AI in securities markets' activities remains partial, with 45 % of the respondents to an EU-level industry survey reporting that they had no AI use cases either in production (i.e., fully rolled out in their business) or in development (Chart 74).[84] However, the survey reveals a pronounced **disparity in AI adoption across firm sizes**. The lack of adoption is particularly pronounced among micro firms, 65 % of which had no active or planned AI use cases. In contrast, large firms were at the forefront of AI deployment, with 96% either already using AI or planning to do so. In terms of use case development or experimentation, large and medium-sized firms were similarly represented (respectively 53 % and 55 % of respondents), while small and micro firms lagged behind. Production use cases were most common among large firms (79 % of respondents), with the numbers declining as firm size decreases.[85]

Chart 74
Use of AI in securities markets
Smaller firms trail larger competitors in AI rollout



Note: Answers to the question: "Which of the following best describes your company's current engagement with AI technologies?". Percentages out of the number of respondents in the respective company size category. Multiple answers possible.
Sources: NCAs, ESMA

Looking at how the AI adoption rate varies **across sectors**, credit institutions providing investment services and credit rating agencies (CRAs) appeared the most advanced, with respectively 65 % and 75 % stating that they had fully rolled out at least one AI use case and respectively 17 % and 13 % reporting no use case either in production or in the testing phase. Financial market infrastructures (FMIs) followed, with a larger share of firms reporting no planned AI use (45 %) than fully deployed use cases (40 %). Investment firms and investment management firms trailed the other sectors, with 53 % of the respondents reporting no use cases. However, these sectoral differences largely reflect the different distribution of firms' size across sectors. For example, more than 90 % of large enterprises in any sector are engaging with AI use cases.

The most widely recognised **benefit** of AI was its capacity to enhance data analysis. Among respondents, 75 % cited the ability to process large volumes of structured and unstructured data as a key advantage. This is closely followed by operational optimisation, with 67 % reporting

[82] According to the data provider Statista, the number of addresses that bought or sold assets on DeFi decreased from 27.7 to 13.5mn between May and September 2025.

[83] Source: DefiLlama: Perp Volume by Protocol - DefiLlama

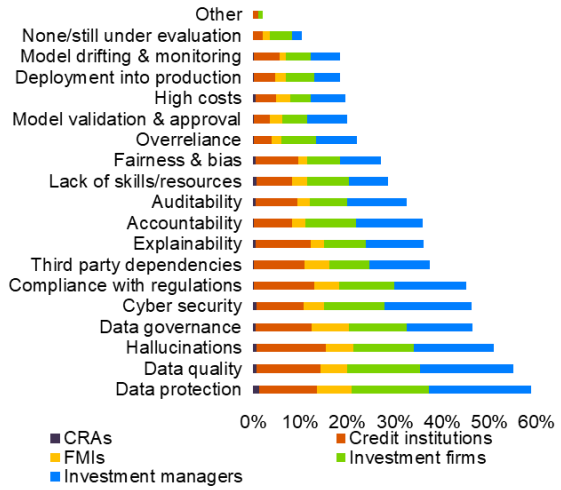
[84] For more information, see ESMA (2026), AI adoption and trends in securities markets: EU evidence, February. The survey was conducted by NCAs and ESMA between June and September 2025. A total of 728 entities submitted their responses, among which 274 investment managers (including AIFM and UCITS management companies, VC fund managers, long-term investment funds and social entrepreneurship fund managers), 262 investment firms, 106 credit institutions providing investment services, 77 financial market infrastructures (including central counterparties, central securities depositories, market operators of trading venues, trade repositories, data reporting service providers, crypto-asset service providers, virtual asset service providers and crowdfunding service providers), 8 credit rating agencies and 1 benchmark administrator. The respondents were domiciled in 19 EU countries, including Portugal (182 entities), Malta (135), Ireland (82), Spain (70), France (68), Belgium (54) and others (137).

[85] Firms are classified as micro when their internal (non-outsourced) staff is below 10 full-time equivalents (FTEs), small if it is between 10 and 49 FTEs, medium-sized if it is between 50 and 250 FTEs, and large when it exceeds 250 FTEs.

improved internal processes and 63 % noting cost reductions.

Firms also appeared to be aware of the **risks and challenges** associated with AI. Data and model-related issues were the most frequently cited risks, with 82 % of respondents identifying at least one data-related challenge such as data protection (59 %), data quality (55 %) and data governance (46 %) (Chart 75). Notwithstanding the continuous improvements in the performance achieved by AI model developers, LLM hallucinations remain a concern for the majority (51 %) of respondents. Cybersecurity and compliance with regulations were also significant concerns, flagged by 46 % and 45 % of firms, respectively. More broadly, 37 % expressed concerns about their reliance on third-party providers. The lack of skills and resources is a notable barrier, with 29 % indicating this as a challenge. Only 19 % of firms cited high costs, indicating that financial limitations are not the main obstacle to AI adoption.

Chart 75
Challenges from the use of AI
Data-related and cyber risks dominate concerns



Note: Answers to the question: "What are the main challenges from the use of AI technologies?". Percentages out of total number of respondents, multiple choices possible. 349 entities did not answer. CRAs = credit rating agencies, FMIs = financial market infrastructures.
Sources: NCAs, ESMA

Quantum computing: growing financial sector interest

Thanks to its ability to solve computational problems that are intractable by classical computers, quantum computing (QC) is attracting unprecedented attention across industries – including in the financial sector. Although today's quantum hardware remains limited and impractical, some financial market participants are actively venturing into QC research, with several major banks, asset managers, and fintech start-ups announcing related initiatives over the past year. Potential finance applications of QC include superior optimisation algorithms (e.g., for portfolio management or capital allocation), stochastic modelling (e.g., for risk management or asset pricing) and machine learning algorithms (e.g., for fraud detection or credit scoring).

At the same time, QC breakthroughs pose a critical threat to cybersecurity, as they could render current cryptographic protocols – essential for protecting financial transactions and sensitive data – obsolete. As a consequence, efforts are underway to initiate the transition to quantum-resistant encryption methods in the financial sector and beyond.[86]

Underscoring recent technological progress, QC companies have shifted toward revenue generation, earning an estimated USD 650mn-750mn in 2024 and projected to exceed USD 1bn in revenue by the end of 2025.[87] After a decline in 2023, start-up investments in quantum technologies rebounded, growing by about 50 % year-on-year in 2024 to USD 2bn, while public funding showed a significant increase from the previous year. In public markets, valuations of several QC stocks soared in the course of 2025, although with large price swings – highlighting that profitability remains uncertain until further technical milestones are achieved.[88] Responding to growing demand, 2025 saw the launch of the first three EU-domiciled QC ETFs, enabling investors to bet on the technology's commercial viability.

[86] European Commission (2025), A Coordinated Implementation Roadmap for the Transition to Post-Quantum Cryptography, 23 June.

[87] McKinsey (2025), Quantum Technology Monitor, June.

[88] Reuters (2025), Futuristic quantum computing stocks take speculators on roller-coaster ride, 5 November.

Annexes

List of abbreviations

1H(Q)25	first half (quarter) of 2025
1Y-MA	1-year moving average
2H(Q)25	second half (quarter) of 2025
ABS	asset-backed securities
AI	artificial intelligence
AIF	alternative Investment Fund
AuM	assets under management
BTC	bitcoin
BF	Bond fund
bp	basis point
CASP	Crypto-asset service provider
CCP	central counterparty
CDO	collateralised debt obligation
CDS	credit default swap
CFD	contract for differences
CISS	composite indicator of systemic stress
CLO	collateralised loan obligation
CLS	Continuous Linked Settlement
CNAV	constant net asset value
CMBS	commercial mortgage-backed security
CRA	credit rating agency
CRE	commercial real estate
CSD	central securities depository
DeFi	decentralised finance
DLT	distributed ledger technology
EA	Euro Area
ECB	European Central Bank
ECONS II	Enhanced Contingency Solution II
EEA	European Economic Area
ESG	environmental, social and governance
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
ETD	exchange-traded derivative
ETF	exchange-traded fund
ETH	Ether
ETP	exchange-traded product
EU	European Union
EuGB	EU-labelled Green Bond
GDP	gross domestic product
GFC	Global Financial Crisis
HY	high yield
IG	investment grade
ILS	Insurance-linked security
IMF	International Monetary Fund
IPO	initial public offering
LDI	liability-driven investment
LVNAV	Low volatility net asset value
MCM	market correction mechanism
ML	machine learning
MMF	money market fund
NAV	net asset value
NCA	national competent authority
NFC	non-financial corporation

OTC	over the counter
PAB	Paris-Aligned Benchmark
PE	price-to-earnings
pp	percentage point
RE	real estate
rhs	right hand side axis
RMBS	Residential mortgage-backed securities
RRE	residential real estate
SEC	Securities and Exchange Commission
SFDR	sustainable finance disclosure regulation
SMEs	small and medium-sized enterprises
T2S	TARGET2-Securities
T2	TARGET2
TIPS	TARGET Instant Payment Settlement
UCITS	undertakings for collective investment in transferable securities
VNAV	variable net asset value
WAL	weighted average life
WAM	weighted average maturity
YTD	year to date

Currencies and countries abbreviated in accordance with ISO standards.

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