

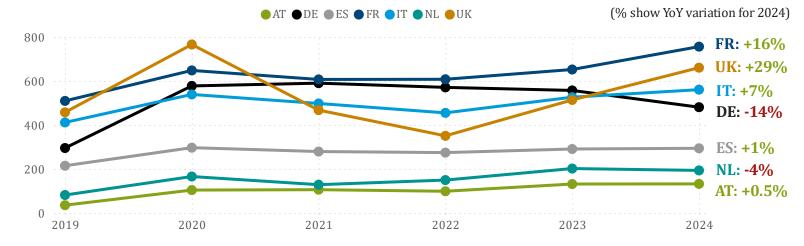
afme/Contents Finance for Europe

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1. European (EU+UK) government bond and bill issuance (EUR bn, 2019-2024)



2. Government bond and bill issuance in selected countries (EUR bn, 2019-2024)



Source: ECB, National Debt Management Offices and UK Debt Management Office.

EUR 892 bn bonds and bills issued in Q4 2024 as European quarterly issuance volumes increase 15.1% (YoY)

Total quarterly gross issuance in Europe (EU Member States, UK and EU Commission) was EUR 892 bn during Q4 2024, up 15.1% compared to Q4 2023 (YoY) and down 5.5% from Q3 2024 (QoQ) (see Chart 1).

Excluding institutional issuance from the EU Commission, EU Member States and the UK issued EUR 845 bn in bonds and bills during 4Q24¹, representing an increase of 13.8% (YoY) and a decrease of 5.8% (QoQ).

The EU Commission issued an additional EUR 47 bn in EU-bonds and EUR 15 bn in EU-bills during Q4 2024, representing 5.3% of total European sovereign issuance, up from 5.0% in Q3 2024, and up from 4.2% in Q4 2023.

In 2024FY, total annual gross issuance in Europe (EU Member States, UK and EU Commission) was EUR 3,910 bn, an increase of 8.9% from the EUR 3,589 bn issued in 2023.

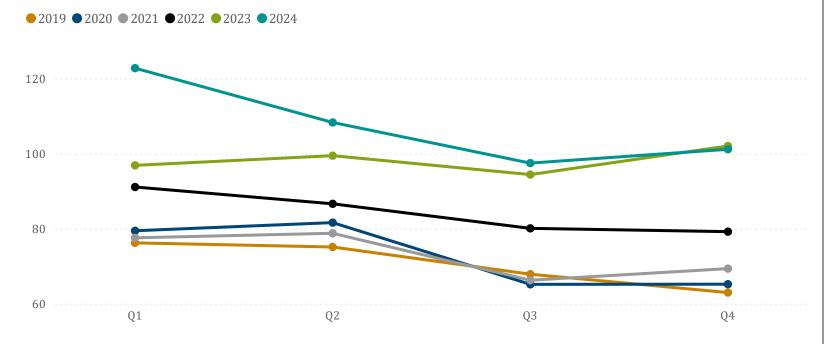
Most major sovereign markets observed an increase in nominal gross issuance during 2024FY (see Chart 2).

Total (bond and bill) issuance increased 29% YoY in the UK during 2024, which represented the largest relative increase in total issuance across major European sovereign markets. Currently UK bond sales are forecast to rise again during 2025 to their highest level ever, excluding the exceptional issuance surge during the 2021-21 pandemic period.

In Germany, issuance decreased 14% YoY during 2024, representing the only major sovereign market where total issuance has fallen for two consecutive years (in 2023 issuance decreased 2% YoY).

¹Total EU+UK bond and bill issuance and percentage changes may show minor variations, including to that shown in Chart 1, due to rounding.

3. European Government bond average daily trading volumes (EUR bn)



Average daily trading volume in European (EU+UK) government bonds increased 9% YoY during 2024FY as Trax records highest annual average traded volumes

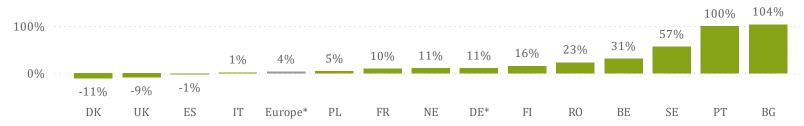
According to TraX data from MarketAxess, trading activity remained robust in Q4 2024, with average traded volumes decreasing by 1% YoY and increasing 4% QoQ. This represents the fourth-highest average daily traded volume on record for a single quarter.

In 2024FY, average annual trading volumes were up 9%, compared to 2023, and up 28% compared to 2022. Average daily trading volumes in 2024FY continued to reach record levels (since 2014), driven by consistently strong activity throughout all quarters of the year and reflecting the sustained growth in European trading volumes observed by Trax since 2022 (see Chart 3).

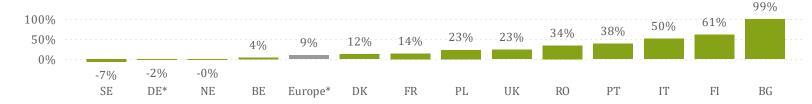
4. Annual changes in Government Bond average daily trading volumes (4Q24 vs 4Q23) Selected European jurisdictions



5. Quarterly changes in Government Bond average daily trading volumes (4Q24 vs 3Q24) Selected European jurisdictions



6. Annual aggregate changes in Government Bond average daily trading volumes (2024 vs 2023) Selected European jurisdictions



 $Source: AFME \ with information \ from \ European \ DMOs \ and \ other \ agency \ sources \ and \ Market Axess \ TraX.$

*Europe (EU+UK) total and German turnover is sourced from MarketAxess TraX as the quarterly variation of average daily volumes of government and sovereign bonds.

European government bond trading decreased 1% YoY and increased 4% QoQ in Q4 2024

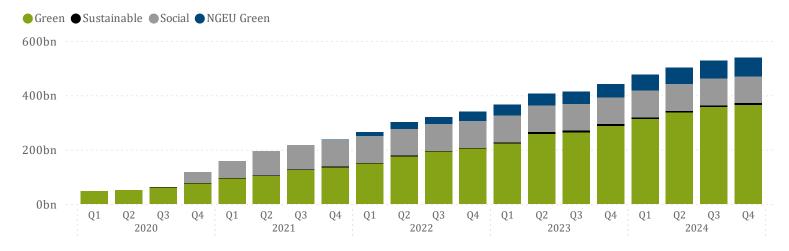
Average daily trading volumes of European government bonds were supported by a significant increase in trading in Portugal (167% YoY), Bulgaria (97% YoY), Romania (64% YoY), Italy (39% YoY), Finland (35% YoY), Belgium (32% YoY), Poland (15% YoY), France (12% YoY) and the UK (9% YoY). There was a decrease in trading in Denmark (-28% YoY), Germany (-10% YoY), Sweden (-9% YoY) and the Netherlands (-5% YoY) (see Chart 4).

Annual aggregated European government bond trading volume (2024FY) increased by 9% compared to 2023 and 28% compared to 2022 (see Chart 6).

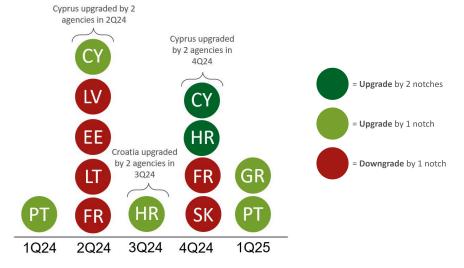
In Portugal, trading volumes increased 167% YoY and 100% QoQ during 4Q24, which represented the highest quarterly trading volume for Portuguese bonds and bills since Q2 2022. The large YoY increase reflects a partial recovery in Portuguese sovereign trading, after volumes decreased to a 12-year low in Q4 2023.

Trading volumes continued to surge in Bulgaria, with volumes in 4Q24 up 97% YoY and 104% QoQ. High levels of trading in Bulgaria continue to be partially driven by parliamentary elections, with the sixth election since 2021 held in October 2024.

7. European outstanding ESG sovereign bonds (EUR bn, 2020-2024)



8. European rating actions on long-term sovereign credit ratings (2024FY and 2025-YtD)



Source: Refinitiv Eikon, European Commission [Chart 7]. Fitch, Moody's, S&P [Chart 8].

Outstanding amount of European government ESG bonds reach EUR 538.3 bn in Q4 2024

Outstanding amount of ESG government bonds reached EUR 538.3 bn during Q4 2024 (see Chart 7), with volumes driven by tap issuance by France (EUR 3.4 bn), the UK (EUR 2.7 bn), Spain (EUR 1.8 bn), Germany (EUR 1.0 bn), Austria (EUR 0.7 bn) and Denmark (EUR 0.2 bn) in their respective green programmes.

The European Commission issued EUR 3.0 bn in Q4 2024, via tap issuance of an existing green bond.

During Q4 2024 there were 4 upgrades and 2 downgrades in long term credit rating changes for European nations

This follows 1 upgrade and no downgrades in 1Q24, 2 upgrades and 4 downgrades in 2Q24, and 2 upgrades and no downgrades in 3Q24, bringing the 2024 full-year total to 9 upgrades and 6 downgrades (see *Chart 8*).

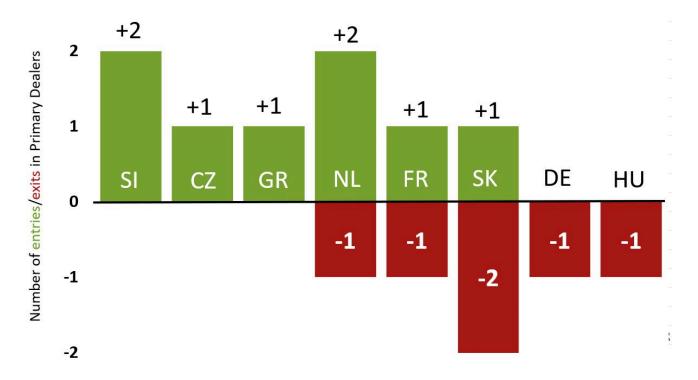
Notably, Cyprus was upgraded by 3 of the main credit rating agencies during Q4 2024, including a rating action that included an upgrade of 2 notches.

Most recently in Q1 2025, the credit quality of Portugal and Greece improved after both countries were upgraded by 1 notch in credit rating. Greece, which was upgraded in March 2025, is now rated as investment grade by 2 of the 3 main credit rating agencies.

Government Bond Data Report – Q4 2024 & 2024FY / 6



9. Changes in numbers of Primary Dealers across European countries and the EU PDN (December 2024 - January 2025)



There were 8 entries and 6 exits in European Primary Dealership from December 2024 to January 2025 with a net change of +2

Changes in primary dealership from December 2024 to January 2025 affected sovereign debt markets in France, the Netherlands, Germany, Czech Republic, Greece, Hungary, Slovakia and Slovenia (*see Chart* 9).

This follows 2 entries and 1 exit in total of banks to primary dealer systems in Germany, Italy and Portugal from October to December 2024.

After the most recent changes, there are now 16 primary dealers in the Dutch sovereign market, representing the highest number of active participants since August 2017. In Slovenia, the recent entry of 2 primary dealers has increased the amount of active participants in the sovereign market to 19, the highest on record (since June 2008).



Major upcoming regulatory, legislative and policy initiatives

There are several regulatory initiatives currently being considered at the European and national level with expected impact on the government bond markets. Some of the key initiatives recently implemented or soon to be applied include:

- Basel III
- CSDR
- EU T+1 Settlement
- Fundamental Review of the Trading Book (FRTB)
- Prospectus Regulation
- MiFID Regulatory Technical Standards (RTS) Review

AFME and its members actively contribute on all of these and other initiatives.

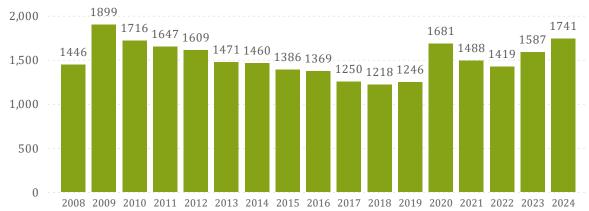


Issuance

afme/ Gross Issuance Finance for Europe

1.1 European (EU+UK) Government Bond gross issuance (FY, EUR bn)

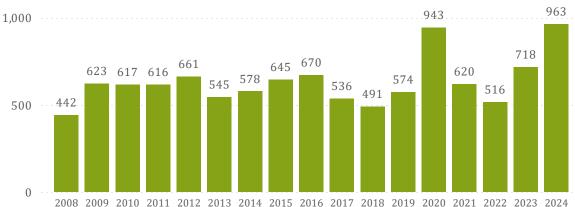
1.2 European (EU+UK) Treasury Bills gross issuance (FY, EUR bn)



1.3 Eurozone bonds and bills gross issuance (FY, EUR bn)

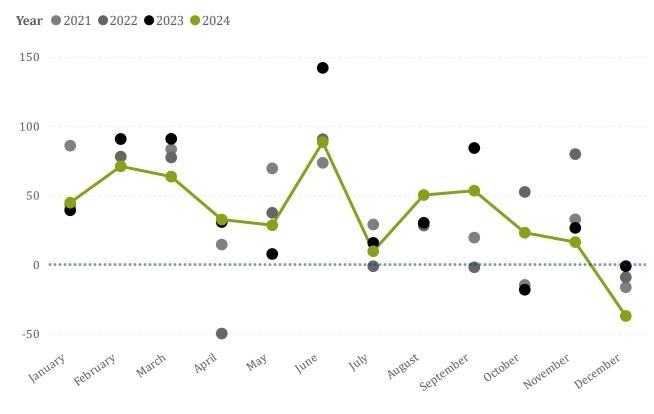


1.4 Non-Eurozone bonds and bills gross issuance (FY, EUR bn)

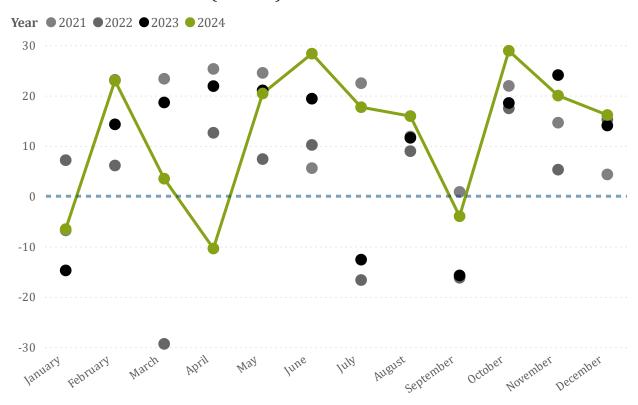


afme / Net Issuance Finance for Europe

1.5 Euro area net sovereign debt issuance (EUR bn)



1.6 UK Gilts net issuance (GBP bn)



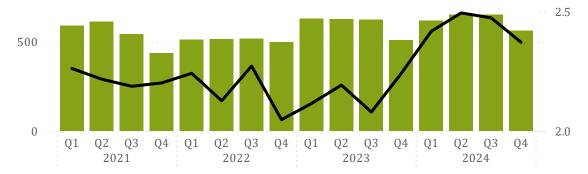


Recent Auctions and Primary Dealers

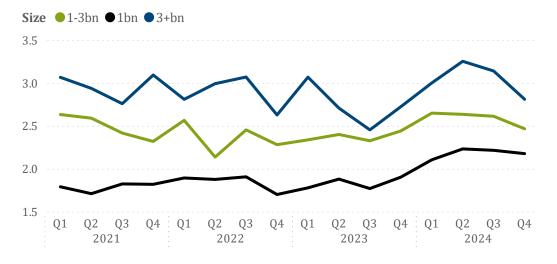
afme/ Recent Auctions Finance for Europe

2.1 Average bid-cover ratios and issued volumes in selected jurisdictions (EUR bn)

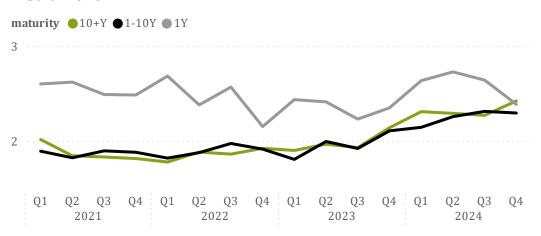
● Total quarterly issuance (EUR bn) ● Bid Cover ratio



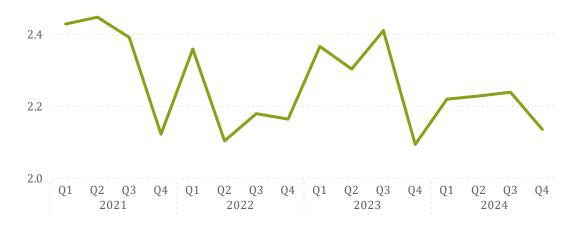
2.3 Average bid-cover ratios by size of issued instruments



2.2 Average bid-cover ratios by tenor (years) of issued instrument

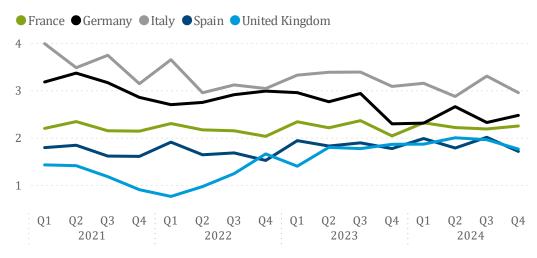


2.4 Average auction size in selected European jurisdictions (EUR bn)

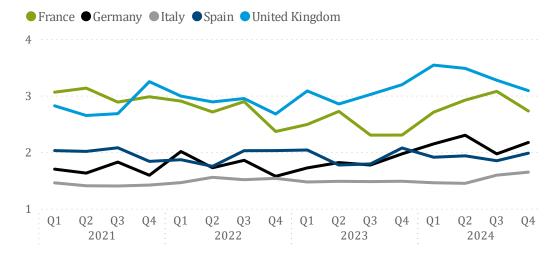


afme/ Recent Auctions Finance for Europe

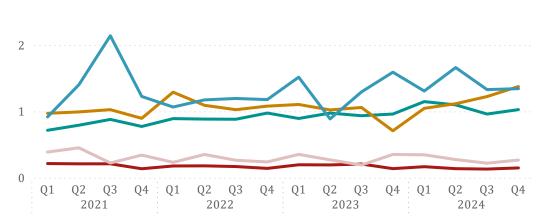
2.5 Average auction size in selected jurisdictions (EUR bn)



2.7 Average bid-cover ratios by jurisdictions

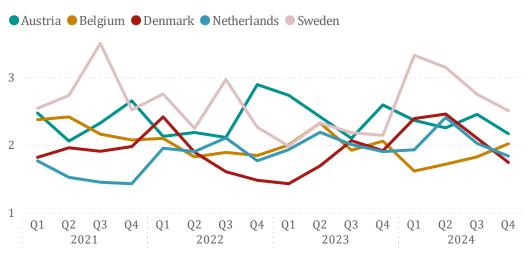


2.6 Average auction size in selected jurisdictions (EUR bn)



2.8 Average bid-cover ratios by jurisdictions

● Austria ● Belgium ● Denmark ● Netherlands ● Sweden

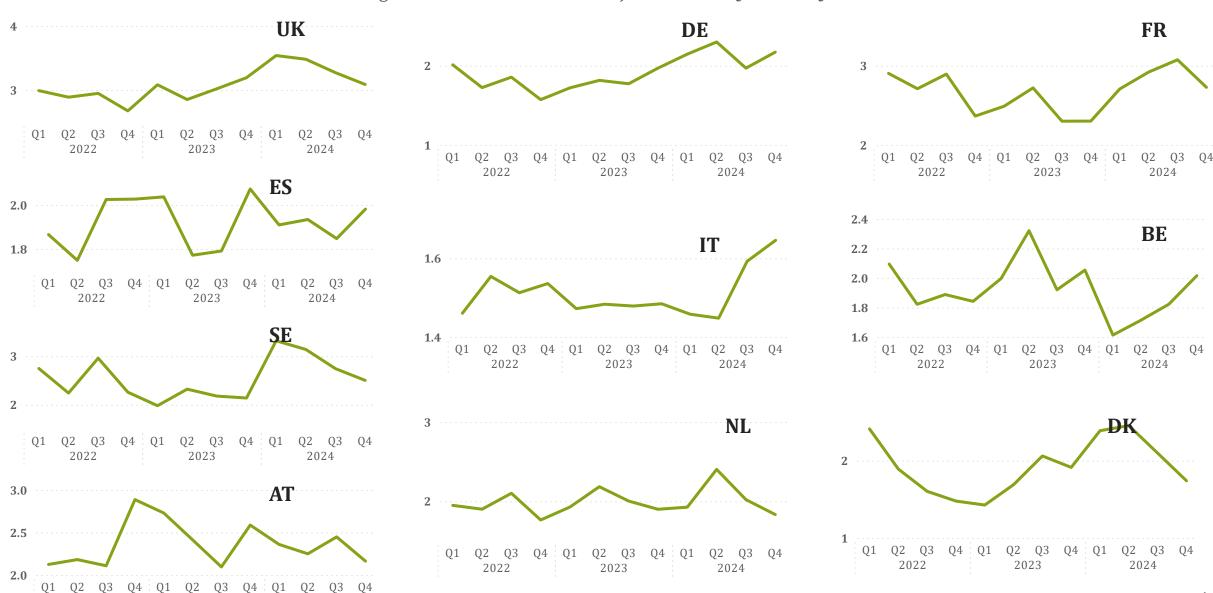


afme/ Recent Auctions Finance for Europe

2023

2024

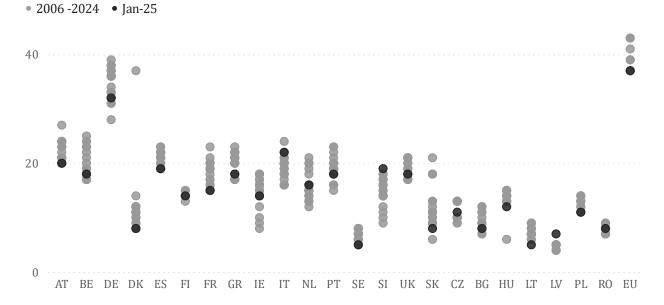
2.9 Average bid-cover ratios in selected jurisdictions: Q1 2022 - Q4 2024



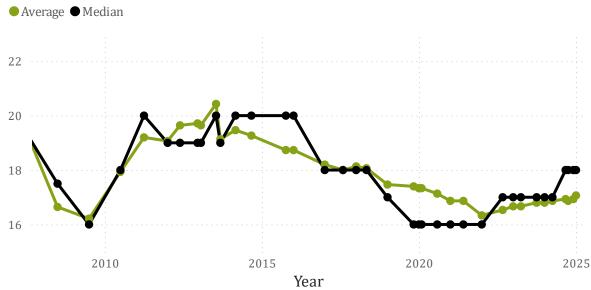
Source: Refinitiv Eikon.

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2.10 Number of primary dealers relative to historic number

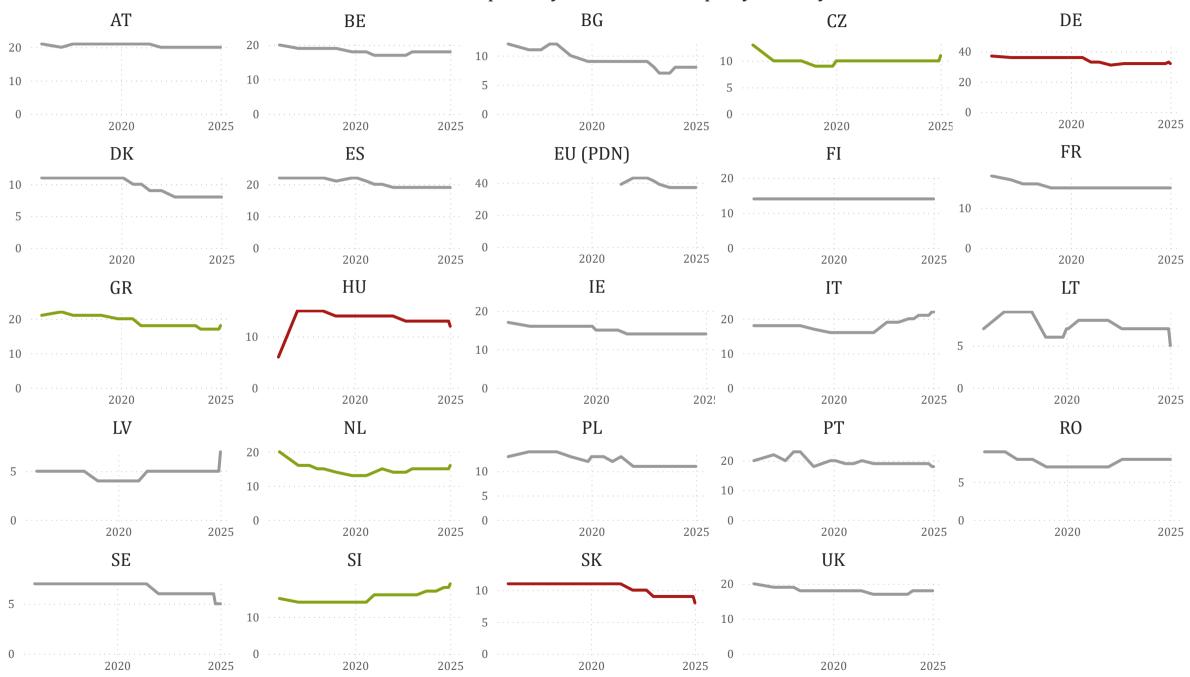


2.11 Average and median number of primary dealers in selected European countries





2.12 Number of primary dealers in Europe by country: 2016-2025

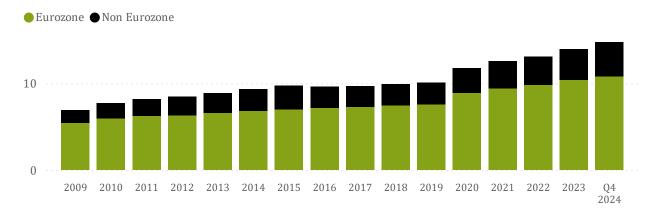




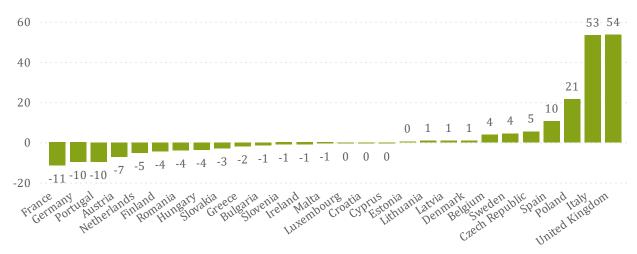
Outstandings

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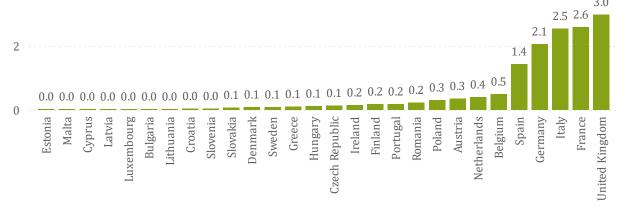
3.1 Outstanding debt securities issued by Central Governments (Nominal, EUR tn)



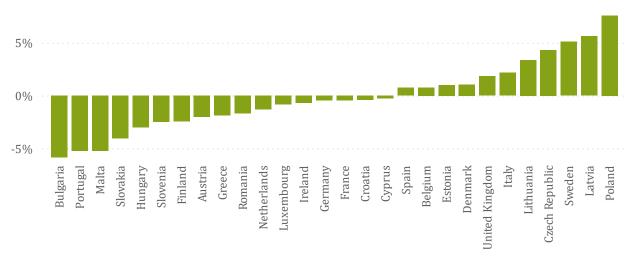
3.3 Change in Outstanding from 3Q24 to 4Q24 (EUR bn)



3.2 European government bonds outstanding by country (EUR tn)

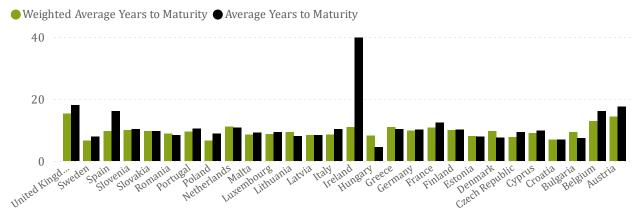


3.4 Change in Outstanding from 3Q24 to 4Q24 (%)

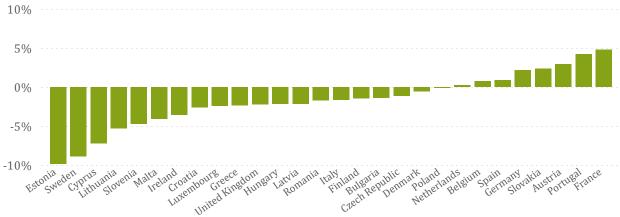


afme / Outstandings

3.5 Average years to maturity for outstanding government bonds in European (EU+UK) countries



$3.6\ Quarterly\ change\ in\ weighted\ average\ years\ to\ maturity\ for\ outstanding\ government\ bonds\ 3Q24\ to\ 4Q24$



3.7 European government bonds outstanding by currency (EUR tn)

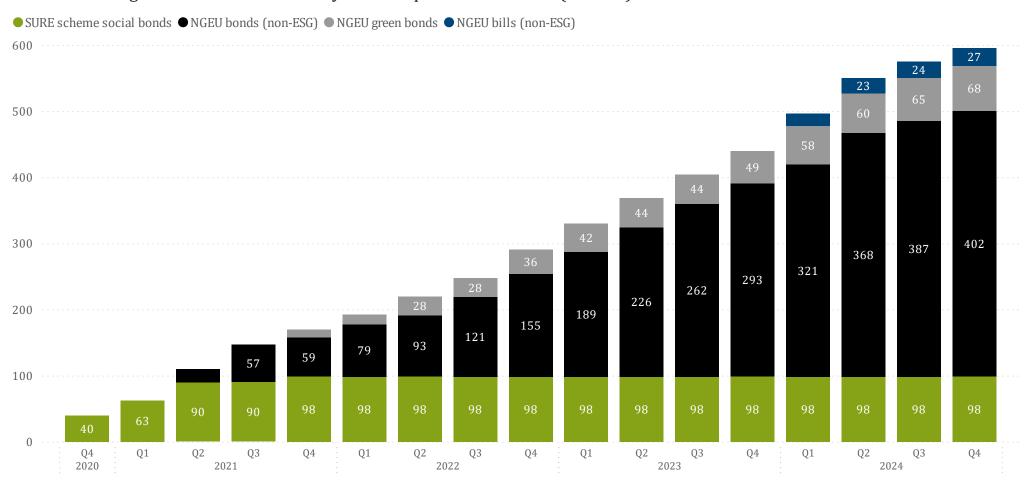


3.8 European government bonds outstanding by current rating of issuer (EUR tn)



afme / Outstandings Finance for Europe

3.9 Outstanding bonds and bills issued by the European Commission (EUR bn)

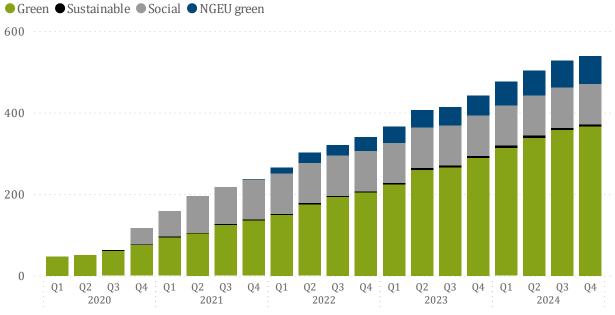


Source: European Commission.

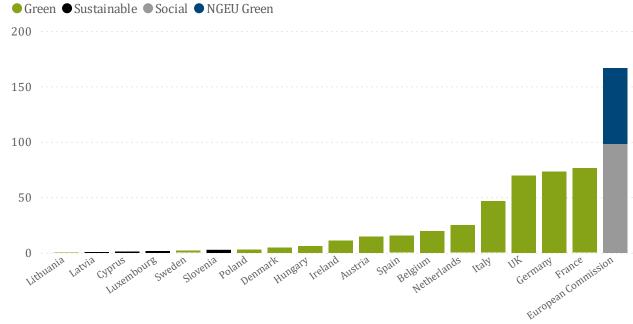
 ${f NGEU}$ refers to bond issuance by the European Commission under the NextGenerationEU scheme.

afme/ ESG Outstandings

3.9 European outstanding ESG (green, social and sustainable) government bonds (EUR bn)



3.10 European outstanding ESG government bonds by country (EUR bn)

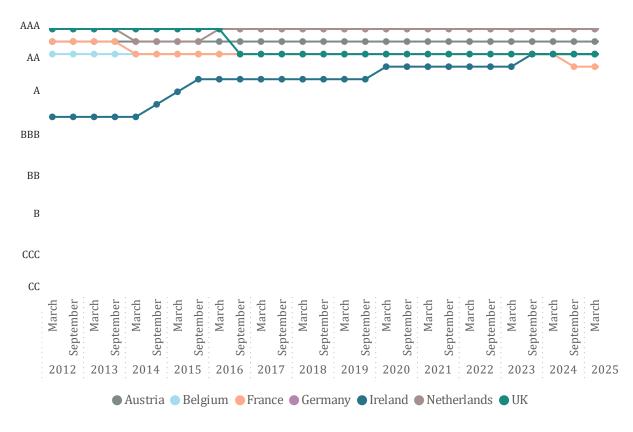




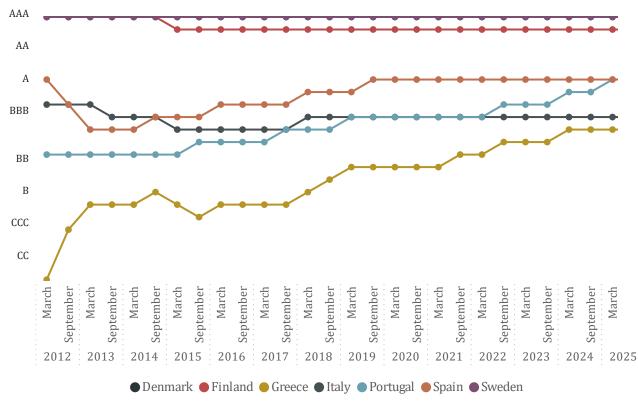
Credit Quality

afme/ Credit Quality Finance for Europe

4.1 Long-term sovereign credit rating (Central and Northern Europe)

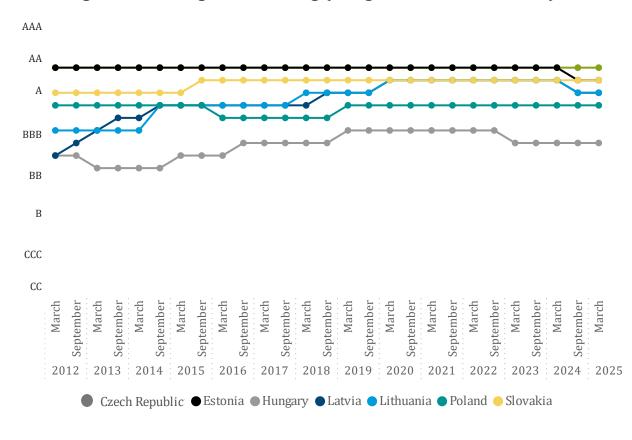


4.2 Long-term sovereign credit rating (Nordics and Southern Europe)

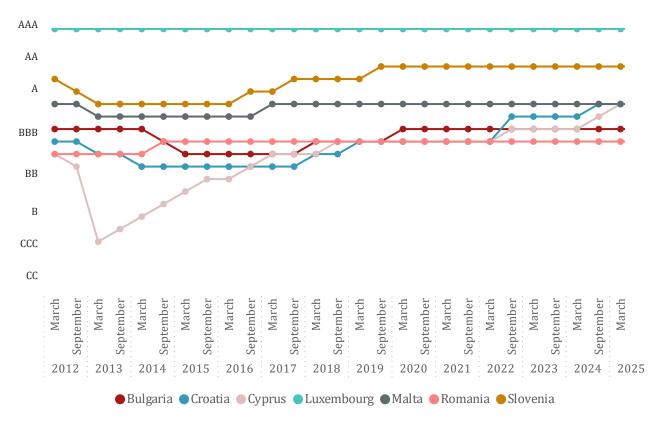


afme/ Credit Quality Finance for Europe

4.3 Long-term sovereign credit rating (Visegrad 4 and Baltic states)



4.4 Long-term sovereign credit rating (Balkans, CY, MT and LU)





4.5 European rating actions on long-term sovereign credit ratings (2024FY and 2025 YtD)

	no Daropean rating actions on long term sovereign create ratings (2021) rating 2020 125						
Portugal	Upgrade to A- (positive) from BBB+	Mar-24	S&P	Continuous improvement in Portugal's external financial balance sheet and the corresponding reduction in external liquidity risks. A consistent decline in external debt over the past decade, leading to steep deleveraging and a shift in Portugal to current account surpluses. Continuation in this trend despite a temporary deterioration during the pandemic and energy price shocks, with expected current account surpluses, the transfer of Next Generation EU grants to Portugal, and continuing private sector deleveraging further improving the country's external position over 2024-2027.	1Q24		
France	Downgrade to AA- (stable) from AA	May-24	S&P	S&P downgraded France's rating due to concerns over its rising debt and persistent budget deficit. Despite prior expectations, France's general government debt is projected to increase to about 112% of GDP by 2027, up from 109% in 2023. The country's 2023 budget deficit was also significantly higher than forecasted, at 5.5% of GDP. Although economic growth and recent reforms are expected to help reduce the deficit, it is still anticipated to stay above 3% of GDP by 2027, signaling ongoing fiscal challenges.	2Q24		
Cyprus	Upgrade to BBB+ (positive) from BBB	Jun-24	S&P	S&P upgraded Cyprus' rating due to its strong fiscal performance, including the highest fiscal surplus in the eurozone. Government debt is expected to fall below 60% of GDP by 2027, supported by solid growth and fiscal management. Although some nonperforming loans remain, Cyprus' foreign-owned banks have improved profitability and capitalization, reducing risks to the government.			
Cyprus	Upgrade to BBB+ (positive) from BBB	Jun-24	Fitch	Fitch upgraded Cyprus due to improved credit metrics, reduced banking sector risks, and strong fiscal performance. The banking sector has stronger asset quality and lower non-performing loans. Fiscal surpluses and declining public debt, forecasted to drop to 65.1% of GDP by 2025, reflect robust revenue growth and prudent spending, supporting the upgrade.			
Estonia	Downgrade to A+ (stable) from AA-	May-24	S&P	S&P downgraded Estonia's credit rating due to the economic impact of the prolonged Russia-Ukraine war and broader geopolitical risks. Estonia's economy is expected to contract for a third consecutive year in 2024, with recovery projected in 2025, driven by domestic demand. Increased defense spending will strain public finances, while pressures on exports and foreign investment could delay a return to pre-COVID growth.			
Latvia	Downgrade to A (stable) from A+	May-24	S&P	S&P downgraded Latvia's long-term credit rating due to the adverse effects of the ongoing Russia-Ukraine war and geopolitical risks on its small economy. Increased defense spending is expected to put pressure on the budget, while heightened security concerns may restrict foreign direct investment, delaying a return to pre-pandemic growth.			
Lithuania	Downgrade to A (stable) from A+	May-24	S&P	S&P downgraded Lithuania's long-term credit rating due to the impact of the ongoing Russia-Ukraine war and geopolitical risks on its economy. Although the Lithuanian economy is expected to grow by 2% this year, pressures on external competitiveness could restrict exports, and heightened security concerns may deter foreign direct investment, delaying a return to pre-COVID growth dynamics.			
Croatia	Upgrade to A- (positive) from BBB+	Sep-24	S&P	S&P upgraded Croatia's credit rating due to its reform progress, stronger integration with global partners, and institutional improvements. Tourism drives growth, with GDP forecasted to grow 3% annualy from 2024-2027, boosting wealth and income convergence with the Eurozone. Reforms and EU funds are also expected to enhance Croatia's growth potential and productivity despite demographic challenges.	3Q24		
Croatia	Upgrade to A- (positive) from BBB+	Sep-24	Fitch	Fitch upgraded Croatia's rating due to strong economic growth, significant debt reduction, and prudent fiscal policies. Croatia's GDP per capita rose to 76% of the EU average in 2023. Real GDP growth is expected to average 3.1% from 2024-2026, outpacing the eurozone. Public debt is declining rapidly, forecasted to fall to 59.3% of GDP in 2024 and further to 55.3% by 2028. Croatia is also expected to meet Maastricht criteria in 2024, with continued fiscal prudence and planned tax reforms enhancing revenue predictability.			
Croatia	Upgrade to A3 (stable) from Baa2	Nov-24	Moody's	Croatia's fiscal strength expected to remain materially higher in the near to medium term, due most notably to a sharp reduction of the government debt burden that is unlikely to reverse. Continued improvement of Croatia's economic strength, driven by significant structural reform and investments under the country's National Recovery and Resilience Plan (NRRP) which supports long-term growth potential.	4Q24		
Cyprus	Upgrade to A3 (stable) from Baa2	Nov-24	Moody's	Material improvements in fiscal and debt metrics in Cyprus that are expected to be sustained. A significant reduction in government debt ratio since its peak in 2020, and which is expected to continue to decline in the medium term, with debt affordability metrics remaining favourable. Solid medium term economic outlook driven by steady expansion of high-productivity services sectors.			
Cyprus	Upgrade to A- (stable) from BBB+	Nov-24	Fitch	Rapid decline in public debt underpinned by high primary fiscal surpluses and strong nominal GDP growth. Limited fiscal risks with a continuation of strong commitment across the political spectrum to maintaining prudent fiscal policies. Strong GDP growth supported by an expanding labour force with an increase in both immigration and domestic employment.			
Cyprus	Upgrade to A- (stable) from BBB+	Dec-24	S&P	Adept management of public finances in recent years, leading to a notable reduction in government debt. A surge in inflow of workers and capital as an indirect effect of regional tensions. Increased banking profitability and a reduction in nonperforming loans and solid moderate expected real GDP growth.			
France	Downgrade to Aa3 (stable) from Aa2	Dec-24	Moody's	Expected substantial weakening of public finances over the coming years with political fragmentation more likely to impede meaningful fiscal consolidation. Increased risk of a durable increase in financing costs, which could further weaken debt affordability, possibly creating a negative feedback loop between higher deficits, higher debt load and higher financing costs.			
Slovakia	Downgrade to A3 (stable) from A2	Dec-24	Moody's	Broad institutional challenges facing the country amid political tensions. A comprehensive reform programme on the judiciary and the media will weaken the country's checks and balances, amplifying a deteriorating trend already captured in governance indicators while increased political fragmentation challenges policymaking. Deterioration of public finances with rising public debt despite fiscal consolidation.			
Portugal	Upgrade to A (positive) from A-	Feb-25	S&P	Expectation of continual improvements in Portugal's external financial balance sheet and corresponding reduction in external liquidity risks, strong budgetary and government debt dynamics and resilient economic growth, partially driven by quicker implementation of NextGen EU funds.	1Q25		
Greece	Upgrade to Baa3 (stable) from Ba1	Mar-25	Moody's	Greater resilience of Greece's sovereign credit profile to potential future shocks. Improvement in public finances quicker than expected and with a stable political environment, substantial primary surpluses are expected which will steadily decrease the high debt burden. Improvement in the health of the banking sector, limiting the risk of a banking sector-related credit event.			

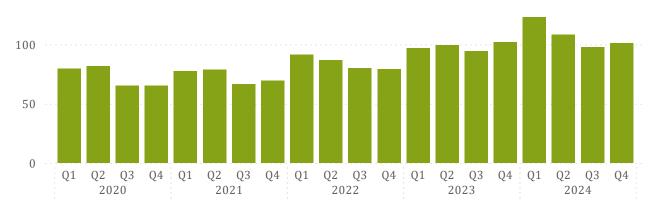
Source: Fitch, Moody's, S&P



Secondary Market Trading Volumes and Turnover Ratios

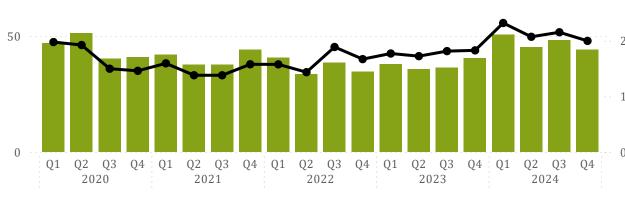
● Bonds ● Bills

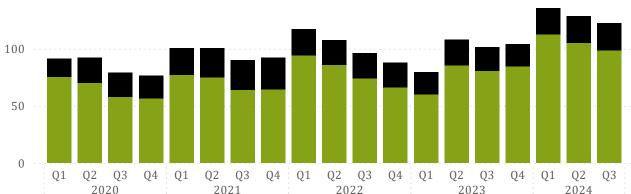
5.1 EU + UK: Average daily trading volumes (Government and sovereign bonds, 5.2 Eurozone: Average daily trading volume (bonds and bills, EURbn) EURbn)



5.3 United Kingdom: Average daily trading volume (bonds only) and turnover ratio

Average daily turnover (GBP bn)Turnover ratio (right)





5.4 Germany: Average daily trading volume (aggregated bonds and bills) and turnover ratio



Source: TraX data from MarketAxess, EFC Sub-Committee on ESDM, UK Debt Management Office, Deutsche Finanzagentur, ECB. Latest data for Germany as of H2 2023. Individual country volumes do not sum to aggregated trading volume in Chart 5.1 EU+UK, given the differences in the aggregation basis across jurisdictions. The data is not fully comparable between countries. Full Methodology available on page 36 of this report.

me/ Secondary Market Trading Volumes and Turnover **Ratios**

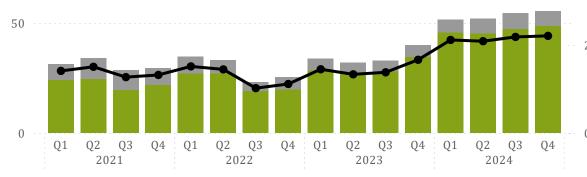
5.5 Italy: Average daily trading volume (bonds and bills) and turnover ratio

● Bonds (EUR bn) ● Bills (EUR bn) ● Turnover ratio (right)

● Bonds (EUR bn) ● Bills (EUR bn) ● Turnover ratio (right)

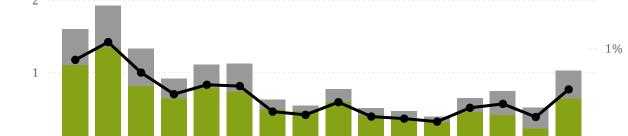
Q2

2021



5.7 Portugal: Average daily trading volume and turnover ratio

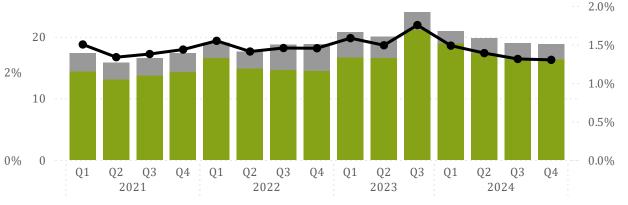
2022



2023

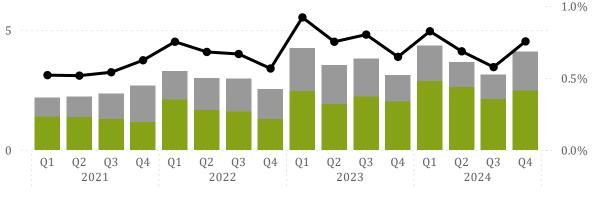
5.6 Spain: Average daily trading volume and turnover ratio





5.8 Belgium: Average daily trading volume and turnover ratio

● Linear Bonds (EUR bn) ● Treasury certificates (EUR bn) ● Turnover ratio (right)



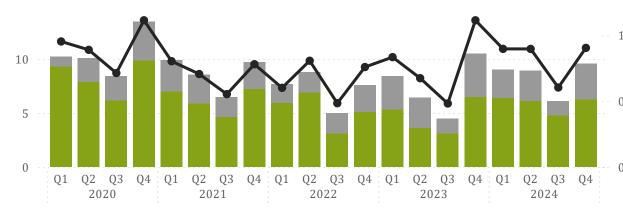
Source: ECB, Italian Dipartimento del Tesoro, BME Market Data and Tesoro Publico de Espana, Agência de Gestão da Tesouraria e da Dívida Pública (IGCP), Belgian Debt Agency. Given the differences in the aggregation basis across jurisdictions, the data is not fully comparable between countries. Full Methodology available on page 36 of this report.

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5.9 Sweden: Average daily trading volume and turnover ratio

● Bonds (SEK bn) ● Treasury bills (SEK bn) ● Turnover ratio (right)

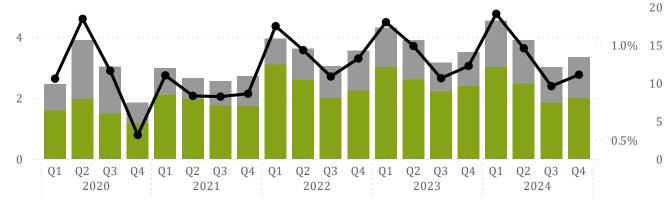


5.10 Ireland: Average daily trading volume (bonds only) and turnover ratio

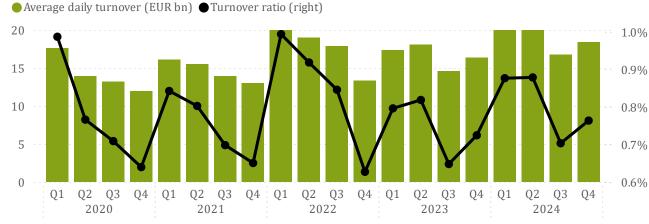


5.11 Netherlands: Average daily trading volume and turnover ratio

● Bonds (EUR bn) ● Bills (EUR bn) ● Turnover ratio (right)



5.12 France: Average daily trading volume (bonds only) and turnover ratio



Source: ECB, Swedish National Debt Office (Riksgalden), Irish Stock Exchange, Ministerie van Financien, Agence France Tresor. Given the differences in the aggregation basis across jurisdictions, the data is not fully comparable between countries. Full Methodology available on page 36 of this report. Chart 5.10: Ireland turnover data has been unavailable since O1 2023

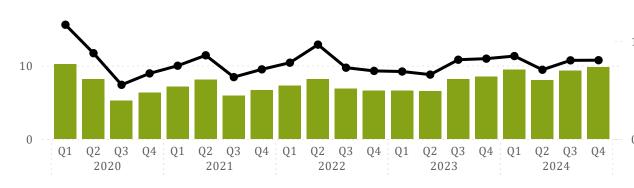
me/ Secondary Market Trading Volumes and Turnover **Ratios**

5.13 Denmark: Average daily trading volume (bonds and bills) and turnover ratio

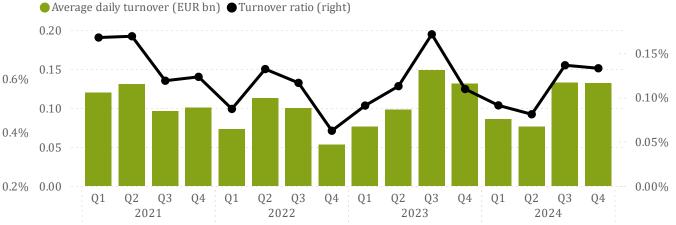


5.15 Poland: Average daily trading volume (bonds only) and turnover ratio

Average daily Turnover (PLN bn) Turnover ratio (right)

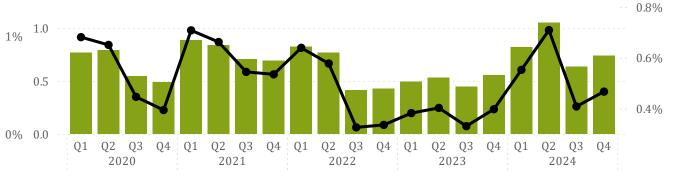


5.14 Greece: Average daily trading volume (bonds only) and turnover ratio



5.16 Finland: Average daily trading volume (aggregated bonds and bills) and turnover ratio

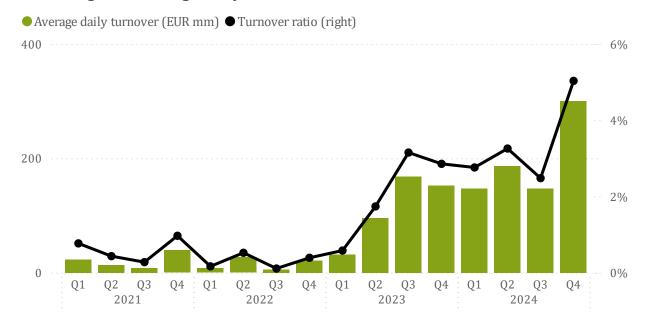
● Average daily turnover (EUR bn) ● Turnover ratio (right)



Source: Denmarks Nationalbank, Bank of Greece, ECB, National Depository for Securities (KDPW), WSE, Finland Valtiokonttor. Given the differences in the aggregation basis across jurisdictions, the data is not fully comparable between countries. Full Methodology available on page 36 of this report



5.17 Bulgaria: Average daily turnover volume and turnover ratio



5.18 Romania: Average daily turnover ratio



Source: ECB, Ministry of Finance of the Republic of Bulgaria, Ministerul Finantelor. **Given the differences in the aggregation basis across jurisdictions, the data is not fully comparable between countries. Full Methodology available on page 36 of this report**

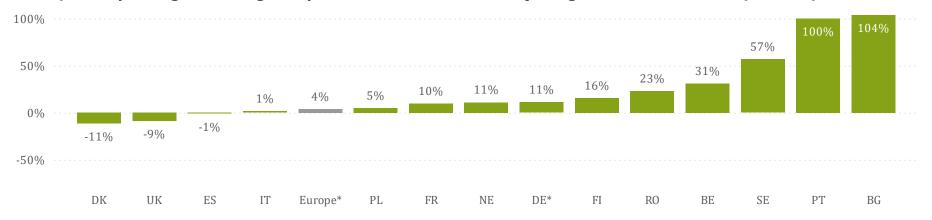


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5.20 Annual change in average daily turnover volumes of European government bonds: 4Q23 to 4Q24



5.21 Quarterly change in average daily turnover volumes of European government bonds: 3Q24 to 4Q24

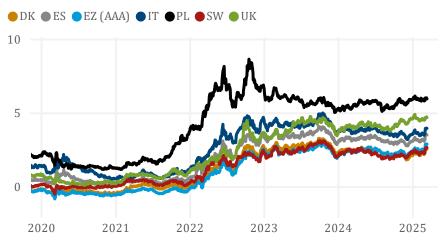




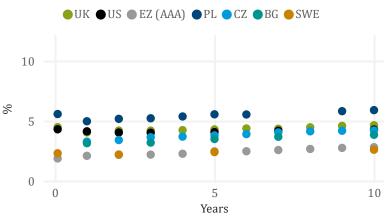
Valuations

afne/ Valuations Finance for Europe

6.1 Selected European 10Y spot yields



6.2 Sovereign spot yield curve of selected jurisdictions: 17 March 2025



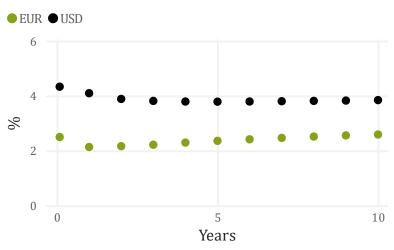
6.3 Slope: 1Y10Y spread (bps)



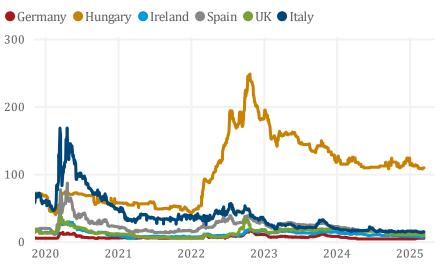
6.4 Market-implied inflation expectations (Eurozone)



6.5 Overnight index swap (OIS) yield curve: 17 March 2025



6.6 5Y Sovereign Credit Default Swap (CDS, bps)



Source: ECB and Refinitiv Eikon



Methodology for secondary Market Trading Volumes and Turnover Ratios in this report

Turnover ratios are calculated as the average daily trading volume relative to total outstandings. Cash trading only (excludes repo and derivatives transactions)

5.1 EU + UK: Secondary Market Volumes (please note this is restricted to 2013-Q3 onwards as split not available prior to this date. Volumes are calculated by converting the individual traded securities to EUR using the prevailing exchange rate on the date of each trade. ADV calculated by dividing the total converted volume by

the number of UK trading days for quarter. Data sourced from Trax. The aggregation of Trax data is agnostic of platform (meaning the trades can be conducted via BBG, TRAX or others) as it is sourced from dealers middle offices, rather than the actual trading venues. The data includes both dealer to dealer activity and dealer to client activity. Data does not consider transaction volume between clients and therefore relies on the degree of dealer intermediation.

- 5.2 Eurozone: Data is published by EFC Sub-Committee on ESDM, and is based on turnover data reported in the Euro Market Activity Report (EMAR), including turnover on a trade by trade basis traded by reporting dealers. A comprehensive list of reporting dealers can be found in the EMAR reports on the website of the Economic and Financial Committee's Sub Committee on EU Sovereign Debt Markets 5.3 United Kingdom: Turnover data reported to the DMO by the Gilt-edged Market Makers (primary dealers).
- 5.4 Italy: Turnover on all trading venues and OTC as per data provided to the Italian Dipartimento Del Tesoro by Primary Dealers through HRF ('single counted' volumes).
- 5.5 Germany: Turnover of both electronic and OTC trading. The traded volume is aggregated for a representative part of the members of the Bund Issues Auction Group with trades with all counterparties, Includes Bubills, Schaetze, Bobls, Bunds and inflation-linked securities, Capital and coupon strips as well as US-dollar bonds are excluded.
- 5.6 Portugal: Turnover of electronic and OTC trading reported on MTS-Portugal, BrokerTec and eSpeed.
- 5.7 Spain: Due to data reconciliation activities of the Bank of Spain, data from April 2018 is from BME Market Data, a subsidiary of Bolsas y Mercados Epañoles. Turnover is derived from settlement data from Iberclear.
- **5.8 Finland:** Turnover of customer trades, MTS Finland and Euro MTS.
- **5.9 Belgium:** Turnover is total outright transactions.
- **5.10 Sweden:** Turnover is total outright transactions
- **5.11 Ireland:** Turnover on Irish Stock Exchange.
- **5.12 Netherlands:** Turnover is customer and interdealer trading. Total outright transactions, including electronic and OTC trading.
- **5.13 France:** Turnover of voice and electronic trading (not including PSPP transactions or trading without an SVT).
- 5.14 Denmark: Turnover of MTS, TradeWeb, Bondvision and trades reported to Nasdaq OMX (including voice trading).
- **5.15 Greece:** Turnover on Electronic Secondary Securities Market (HDAT).
- **5.16 Poland:** Turnover is total outright transactions. Data from KDPW are presented according to the date of the settlement, while data from WSE are presented according to the date of conclusion of a transaction.
- 5.17 Bulgaria: Turnover ratio of the government securities issued on domestic market. Official values reported as average monthly turnover ratios, which have been converted assuming 20 business days per month.
- 5.18 Romania: Turnover ratio of the government securities issued on domestic market. Official values reported as average monthly turnover ratios, which have been converted assuming 20 business days per month. Turnover volume not available.

For a description of the methodology of this report please visit https://www.afme.eu/reports/data/details/Summary-of-the-Methodologies

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