

Government Bond Data Report

European market data update

Q3: 2017



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Highlights and Market Environment

This report provides a comprehensive data source with updated statistics of the Government bond¹ primary and secondary markets in Europe (EU28).

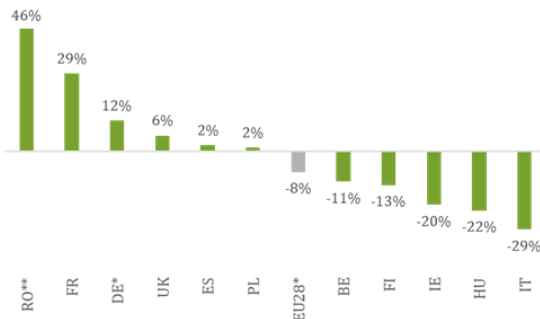
Among the main findings of this report are:

- **Average daily trading volumes** of European government bonds decreased in the majority of jurisdictions between 2Q17 to 3Q17, and fell 24% on aggregate. Even after accounting for seasonality, this is a notable quarter on quarter (QoQ) decline, and the impact of political factors is assessed below. The year on year (YoY) decline in turnover was 7.6%; however, there was an annual increase in four of the larger EU countries - France, Germany, UK, and Spain.
- **European Government bond gross issuance** totalled €591.0 bn in 3Q17, a decrease of 5.7% from the volume issued in 2Q17 (€626.8 bn). This overall decrease was due to a 16.8% fall in bond issuance, as opposed to an increase in bill issuance.
- **Average bid-cover ratios** (demand/amount allocated)² was 2.19 in 3Q17, continuing the increasing trend throughout 2017. Total quarterly issuance via auction fell to €435 bn in 3Q17 from €453 bn.
- The year so far has seen **11 long-term credit rating upgrades for EU countries** compared to 2 downgrades, continuing the trend of increasing credit ratings for Southern and Eastern European countries.

“For EU countries on aggregate, average trading volumes in 3Q 17 experienced a significant decrease of 24% QoQ and 7.6% YoY.”

Annual change in Government Bond average trading volumes

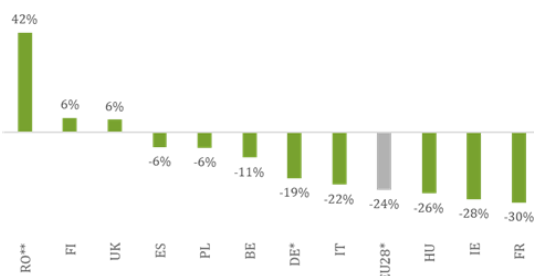
(3Q17 vs 3Q16) Selected European jurisdictions



Source: AFME with information from European DMOs and other agency sources and Trax, a MarketAxess subsidiary. See section 5 for details on aggregation basis and sources. *Europe total and German turnover is sourced from TRAX Facts as the quarterly variation of average daily volumes of government and sovereign bonds. **Romanian turnover volume calculated using outstanding volumes in Section 3.

Quarterly change in Government Bond average trading volumes

(3Q17 vs 2Q17) Selected European jurisdictions



Source: AFME with information from European DMOs and other agency sources and Trax, a MarketAxess subsidiary. See section 5 for details on aggregation basis and sources. *Europe total and German turnover is sourced from TRAX Facts as the quarterly variation of average daily volumes of government and sovereign bonds. **Romanian turnover volume calculated using outstanding volumes in Section 3.

	2013	2014	2015	2016	2Q17	3Q17
Issuance (€ bn)	2805.7	2726.6	2602.7	2546.9	626.8	591.0
Bonds (€bn)	1334.2	1266.9	1216.4	1177.8	325.4	270.7
Bills (€bn)	1471.4	1459.7	1386.3	1369.1	301.4	320.3
Outstandings (€ tn)	8.9	9.3	9.7	9.6	10.1	10.1
Bid-cover ratio	2.18	2.29	2.22	2.16	2.10	2.19
Average daily turnover (% YoY change)	-	-	-8.4%	-7.2%	9.8%	-7.6%

Highlights

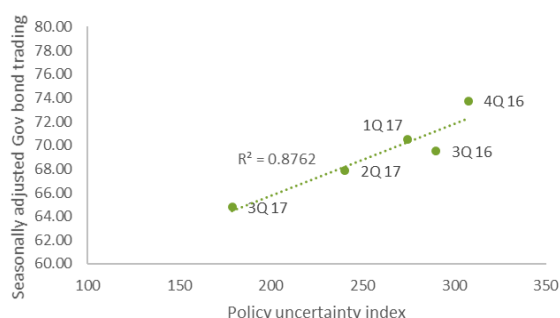
Bond turnover falls QoQ and YoY for EU countries on aggregate

Average daily trading volumes of EU sovereign bonds decreased 7.6% when comparing 3Q17 with 3Q16. The fall in trading volumes was also apparent in when comparing 3Q17 with 2Q17, with a significant overall quarterly decrease of 24% and falls in every country covered in this report except Romania, Finland and UK.

¹ Fixed income securities issued by central governments. The report includes Bonds and Treasury Bills and excludes agencies and Central Bank origination.

² Weighted average (by issuance volume) of bid-cover ratios in the United Kingdom, Spain, France, Italy, Germany, Belgium, Sweden, Netherlands, Denmark and Austria.

European Trading volumes vs. Policy Uncertainty 3Q16 to 3Q17



Source: Trax, a MarketAxess subsidiary, AFME and PolicyUncertainty.com

The decrease of 30% QoQ for France should be put into context as turnover volume has been unusually high for French government bonds in the previous two quarters. As a result, although the QoQ drop from 2Q17 was 30%, there was a 29% YoY increase.

To try to assess whether the quarterly variation in the European government bond turnover volume since 3Q16 has been driven by political developments, namely the various major national elections, AFME ran a correlation with a European Economic Policy Uncertainty Index⁵. The results are displayed in the adjacent graph, where seasonally adjusted trading volumes are plotted against the average policy uncertainty index for the relevant quarter. The result is a strong correlation, thus indicating that political uncertainty has been an important factor in the recent changes in trading volumes.

Q317 Average years to maturity for outstanding bonds in EU countries³

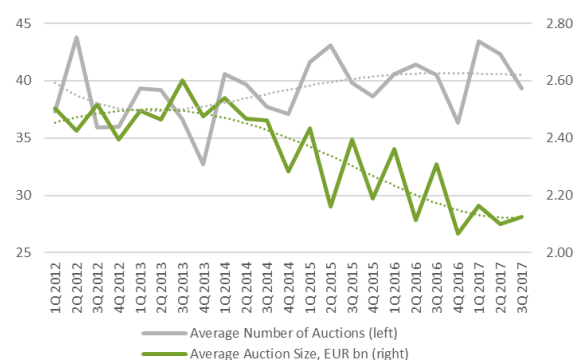


Source: AFME and Thomson Reuters Eikon.

UK and Ireland top years to maturity

The average years to maturity of outstanding government bonds is significantly higher in the UK and Ireland than other EU countries, with Ireland's weighted average maturity at 13.5 years and the UK's at 15.7 years. Eastern European countries on the other hand tend to have much shorter average maturities, with Croatia, Czechia, Hungary, Latvia, Lithuania, and Poland all with weighted average maturities less than 6 years. Sweden notably has one of the lowest average maturities of their outstanding bonds among the EU countries.

Average number of auctions and average auction size⁴



Source: Thomson Reuters Eikon

Sovereign Green Bonds go global

3Q17 has not seen any further sovereign green bond (SGB) issuance after the market was initiated by Poland and France in the last 12 months. The SGB market has though expanded beyond Europe, as Fiji issued a \$50 million SGB in October 2017, with the proceeds supporting the construction of climate resilient infrastructure.

Increasing number of smaller auctions

Since the start of 2012, the overall trend in the average number of auctions per quarter across European jurisdictions has seen a slight increase, whereas the quarterly average auction size has seen a consistent decline (see graph on the left). This suggests that Debt Management Offices have auctioned bonds with a smaller notional amount, on a slightly more regular basis, and the declining average auction size is most notable for Germany in Chart 2.5.

³ Weighted average by issuance volume

⁴ Weighted average (by issuance volume) of number of auctions and auction size in the United Kingdom, Spain,

France, Italy, Germany, Belgium, Sweden, Netherlands, Denmark and Austria.

⁵The index is constructed from three types of underlying components - newspaper coverage of policy-related economic uncertainty, the number of tax code provisions set to expire in future years, and disagreement among economic forecasters.

Credit rating upgrades in Southern and Eastern European countries continue

The credit rating upgrades for Italy and Cyprus since the release of the Q2 2017 report reflect the ongoing improvements in credit quality of Southern and Eastern European countries. The only downgrade in this period was the UK, whose economic strength continues to be negatively impacted by the process of leaving the EU.

The improving credit quality in the region was also reflected by the CDS spreads falling further in 3Q17 for Portugal, Spain and Italy. CDS spreads have fallen 167bps for Portugal in the past year (as of 29 November), to a level now on a par with Italy.

Major upcoming regulatory, legislative and policy initiatives

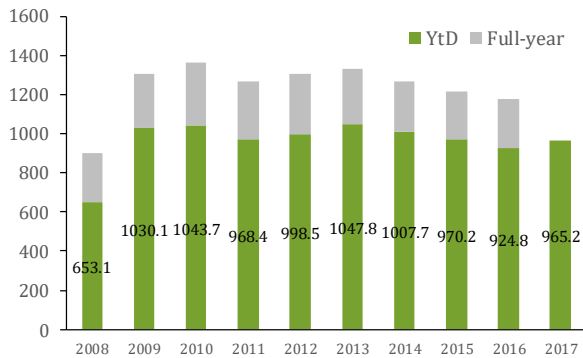
There several regulatory initiatives that are currently being considered at the European and national level with expected impact on the government bond markets. Some of the key initiatives currently being developed are:

- MiFID II/R
- Fundamental Review of the Trading Book (FRTB)
- Basel III
- CSDR
- Prospectus Regulation

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

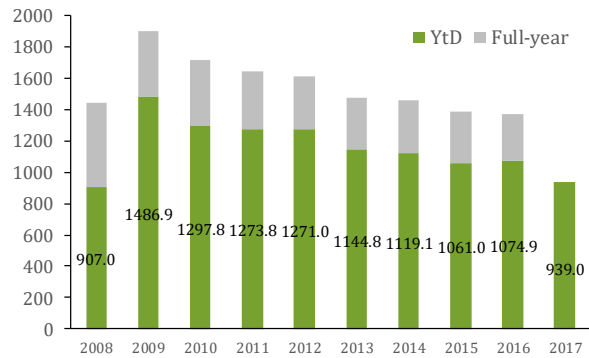
1 Issuance

1.1 EU Government Bond issuance (EUR bn)



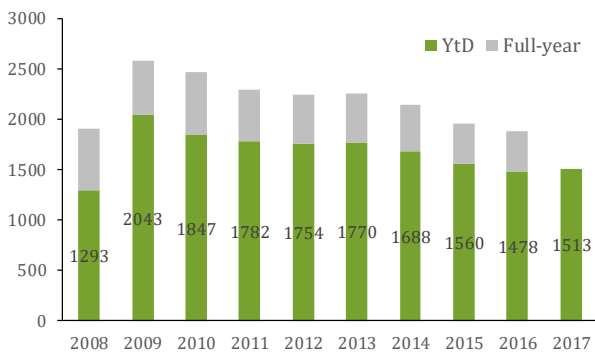
Source: ECB and National Debt Management Offices

1.2 EU Treasury Bills issuance (EUR bn)



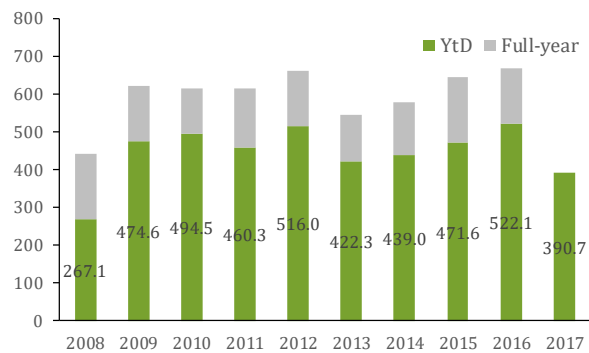
Source: ECB and National Debt Management Offices

1.3 Eurozone bonds and bills issuance (EUR bn)



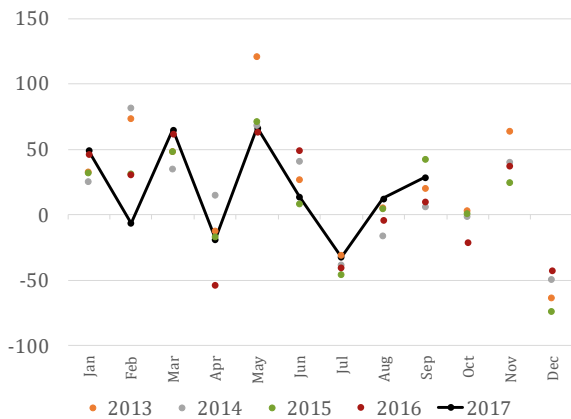
Source: ECB and National Debt Management Offices

1.4 Non-Eurozone bonds and bills issuance by (EUR bn)



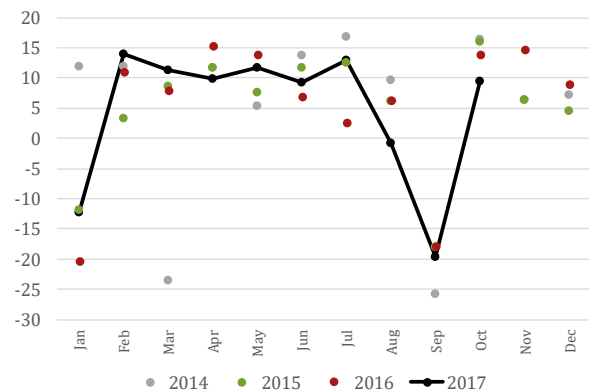
Source: ECB and National Debt Management Offices

1.5 Euro area net sovereign debt issuance (EUR bn)



Source: ECB

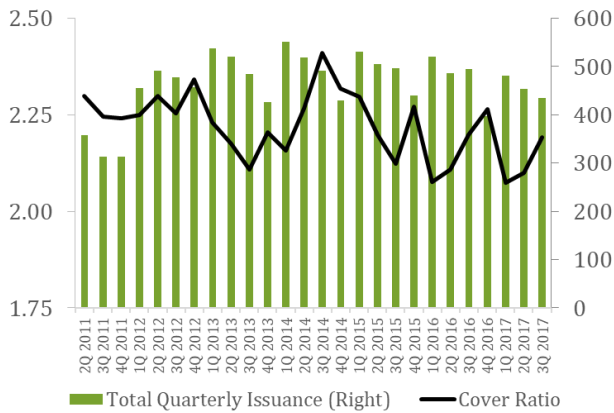
1.6 UK Gilts net issuance (GBP bn)



Source: UK Debt Management Office

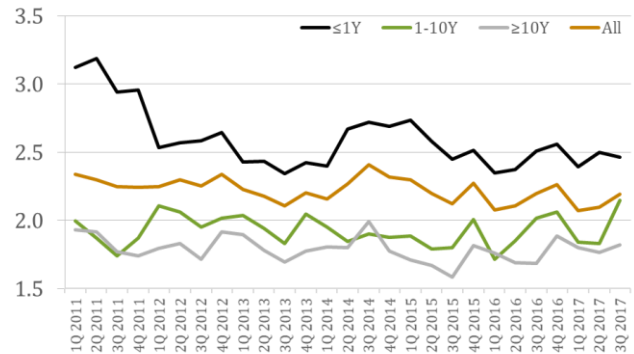
2 Recent auctions and primary dealers

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



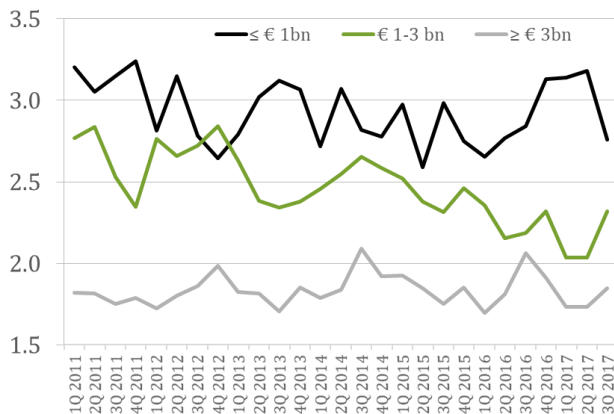
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills

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



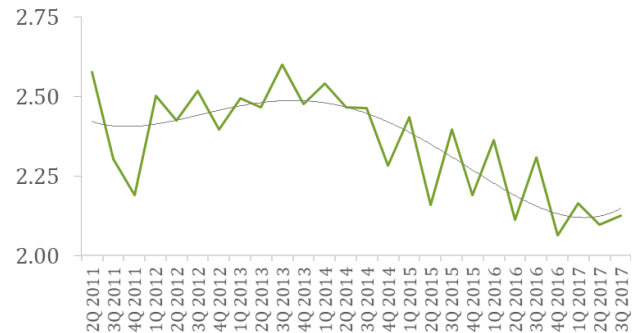
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills

2.3 Average bid-cover ratios by size of issued instruments



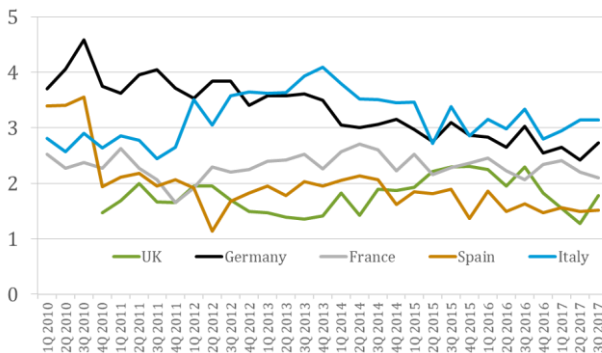
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills

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



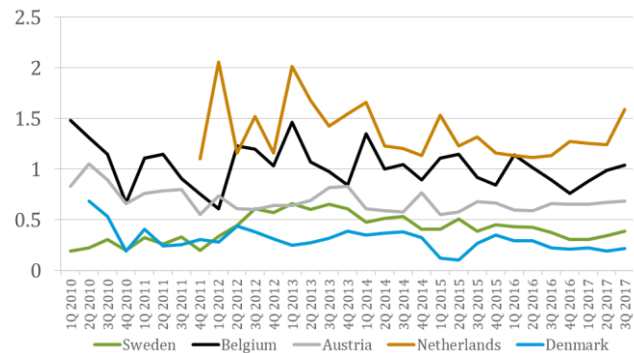
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills. Polynomial trendline in grey.

2.5 Average auction size in selected jurisdictions (EUR bn)



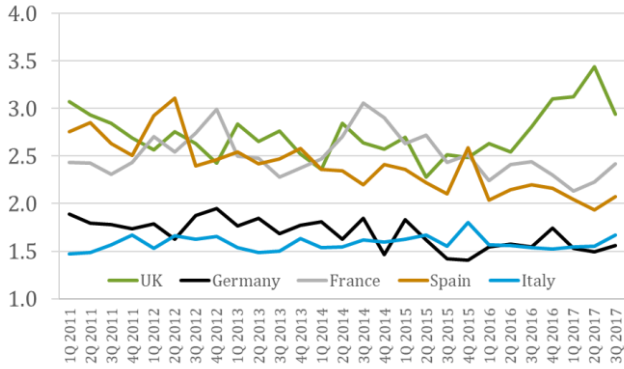
Source: Thomson Reuters Eikon

2.6 Average auction size in selected jurisdictions (EUR bn)



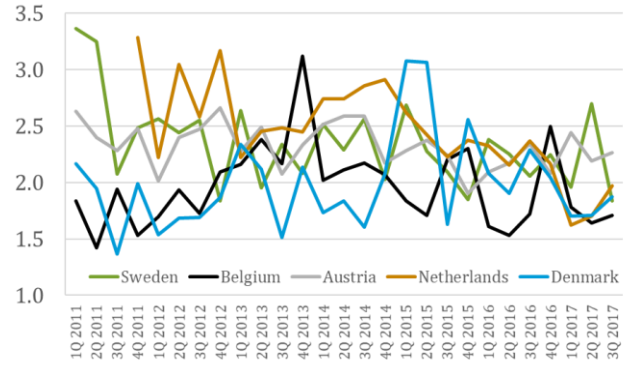
Source: Thomson Reuters Eikon

2.7 Average bid-cover ratios by jurisdictions



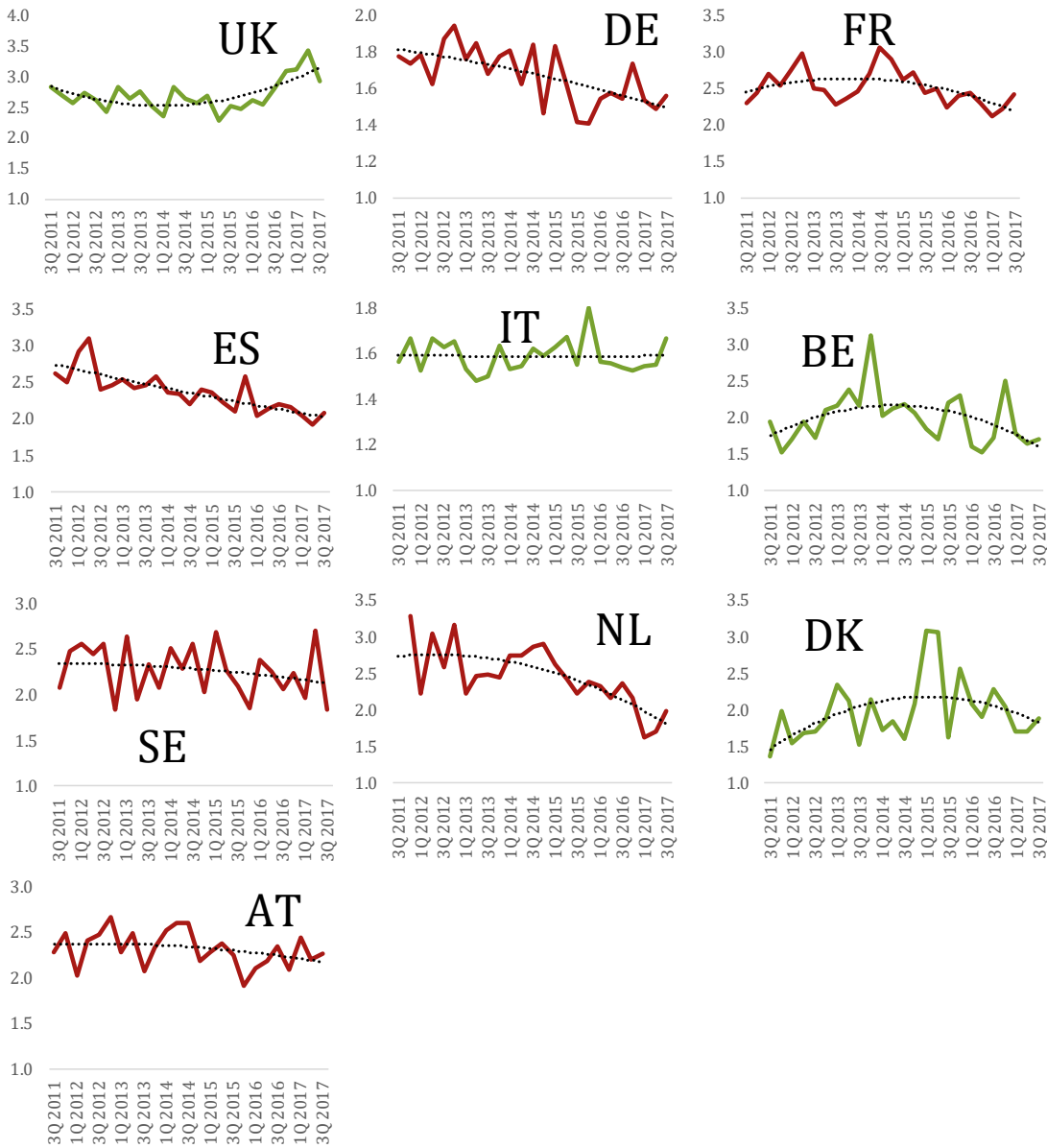
Source: Thomson Reuters Eikon

2.8 Average bid-cover ratios by jurisdictions



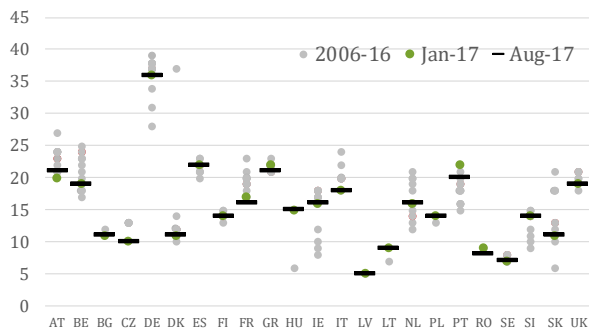
Source: Thomson Reuters Eikon

2.9 Average bid-cover ratios in selected jurisdictions: 2011-17



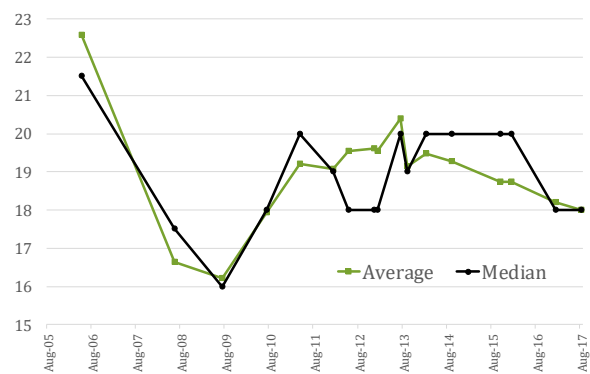
Source: Thomson Reuters Eikon

2.10 Number of primary dealers relative to historic number



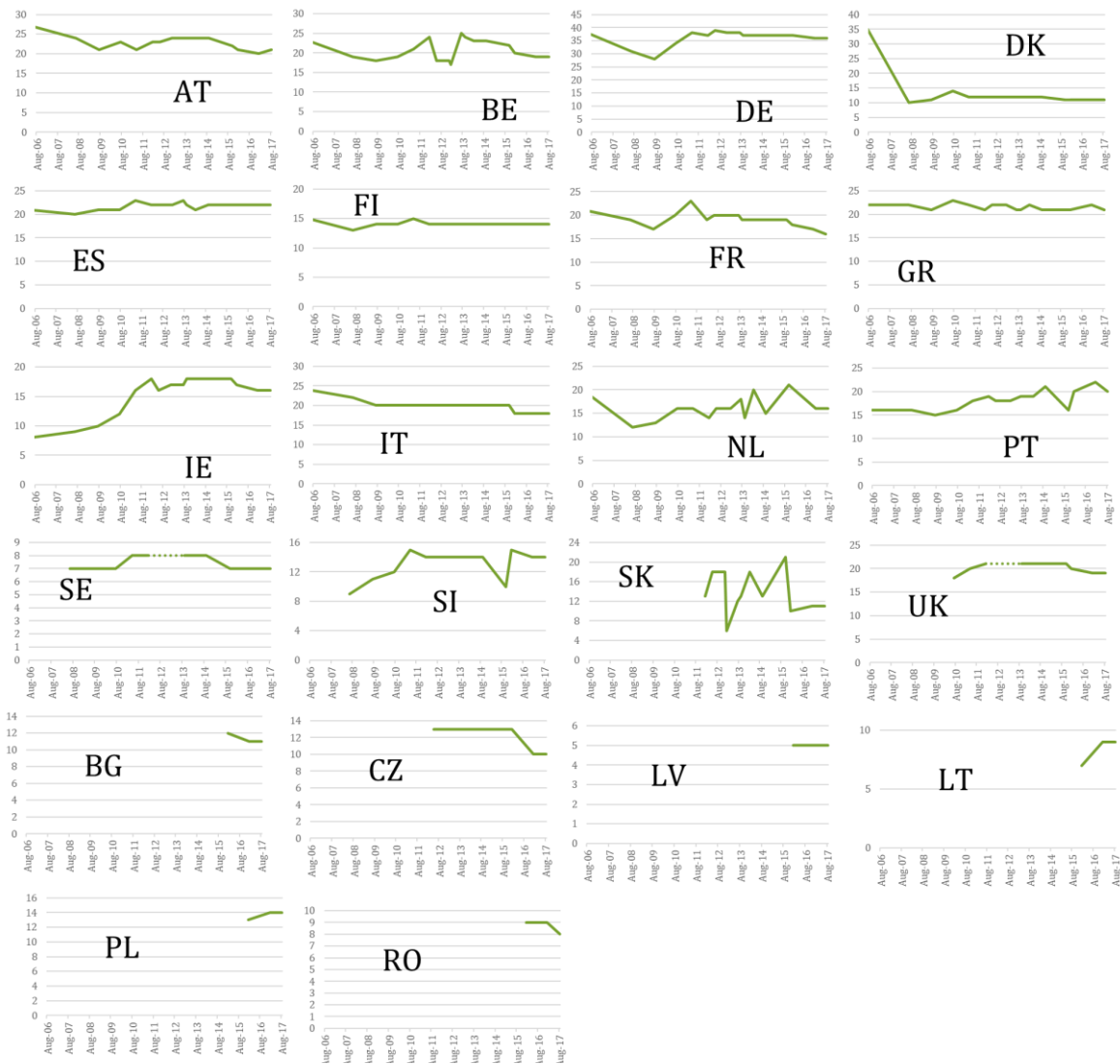
Source: AFME Primary Dealers Handbooks and national DMOs

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



Source: AFME Primary Dealers Handbooks and national DMOs. Average and medians of AT, BE, DE, DK, ES, FI, FR, GR, IE, IT, NL, PT, SE, SI and UK

2.12 Number of primary dealers in Europe by jurisdiction: 2006-17⁶

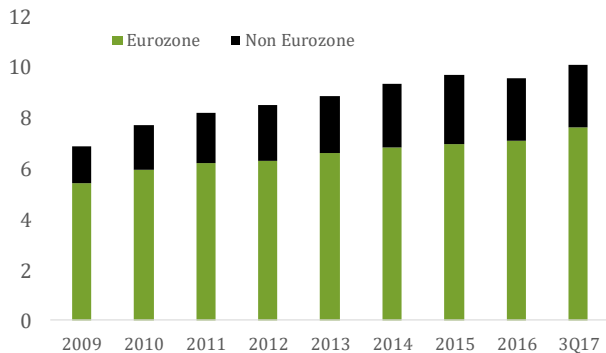


Source: AFME Primary Dealers Handbooks and national DMOs

⁶ Dotted line for UK and Sweden indicates data not recorded in the relevant period.

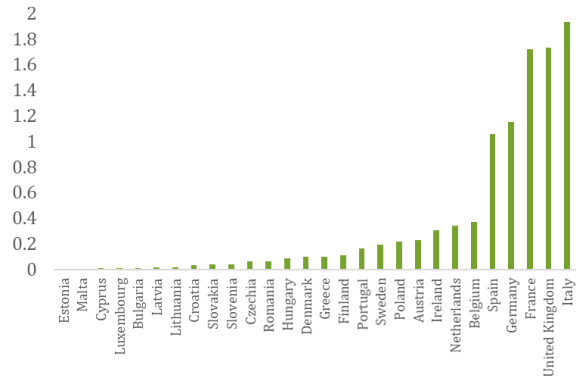
3 Outstanding

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



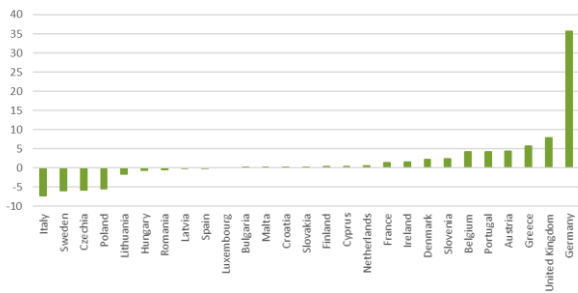
Source: ECB and Thomson Reuters Eikon

3.2 European government bonds outstanding by country (EUR tn)



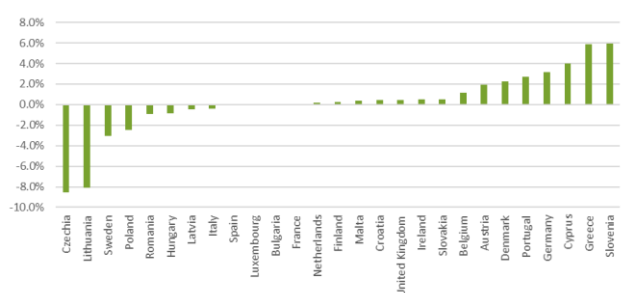
Source: Thomson Reuters Eikon

3.3 Change in outstandings 2Q17 to 3Q17 (EUR bn)



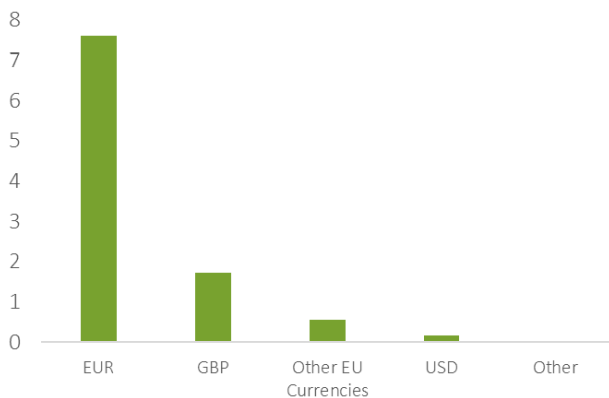
Source: Thomson Reuters Eikon

3.4 % Change in outstandings from 2Q17 to 3Q17



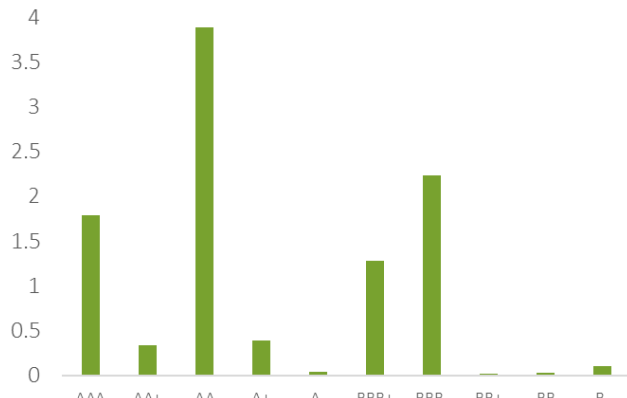
Source: Thomson Reuters Eikon and Standard and Poor's

3.5 European government bonds outstanding by currency (EUR tn)



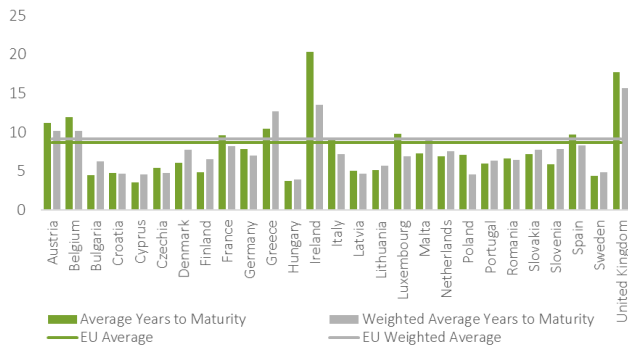
Source: Thomson Reuters Eikon

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



Source: Thomson Reuters Eikon and Standard and Poor's

3.7 Average years to maturity for outstanding bonds in EU countries⁷

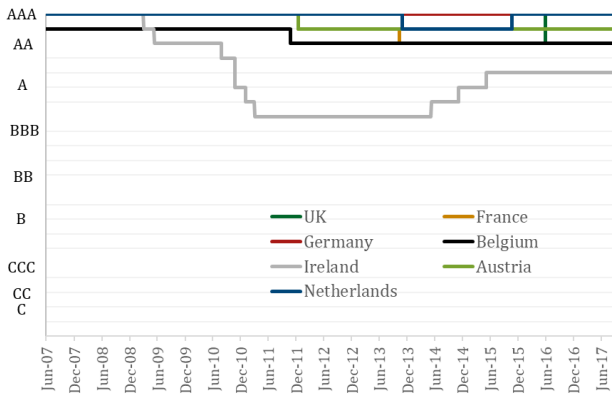


Source: Thomson Reuters Eikon

⁷ Weighted average by issuance volume

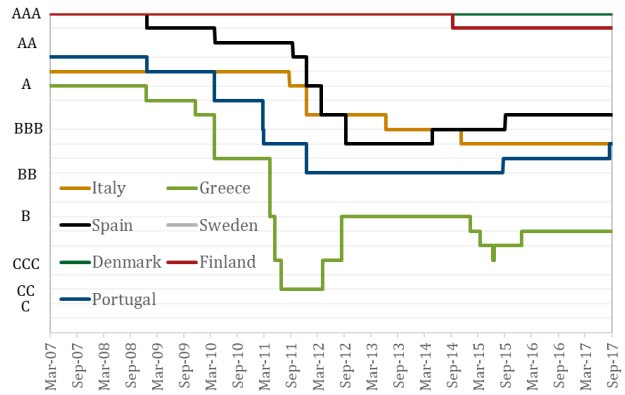
4 Credit quality

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



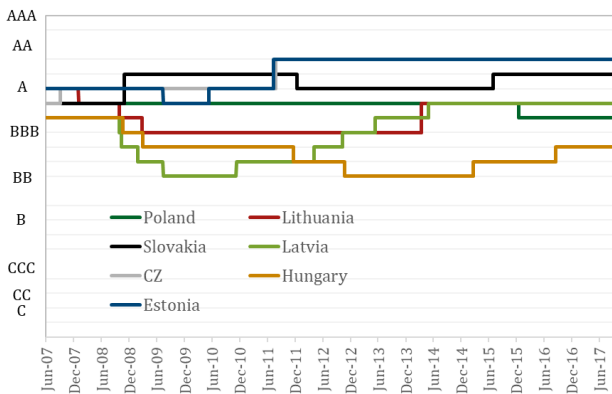
Source: Thomson Reuters Eikon with data of Standard and Poor's

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



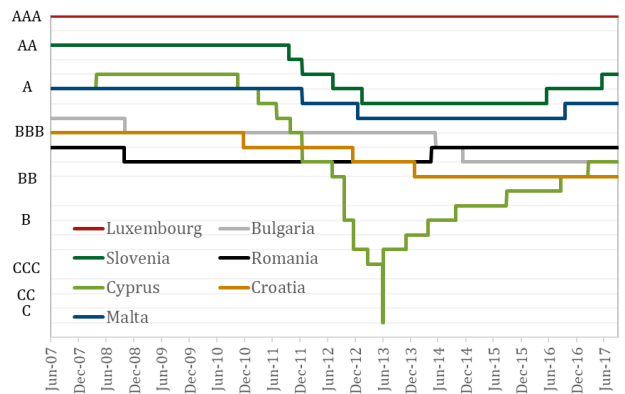
Source: Thomson Reuters Eikon with data of Standard and Poor's

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



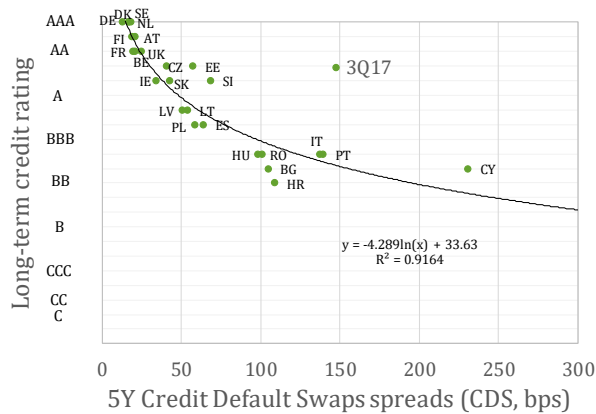
Source: Thomson Reuters Eikon with data of Standard and Poor's

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



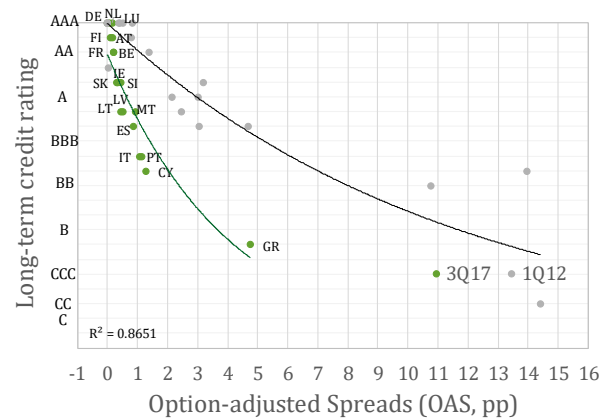
Source: Thomson Reuters Eikon with data of Standard and Poor's

4.5 Long-term foreign currency credit rating and 5Y Credit Default Swaps (CDS)



Source: Thomson Reuters and Standard and Poor's

4.6 Long-term foreign currency credit rating and option-adjusted spreads (OAS)



Source: Barclays and Standard and Poor's

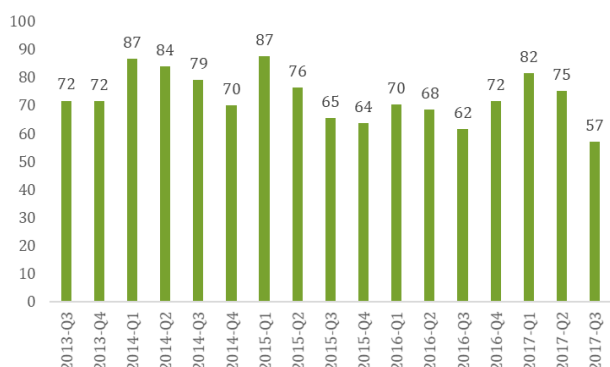
4.7 European rating actions on long-term foreign currency ratings (2017 YtD)

Issuer	Rating action	Date	Rated by	Rationale
Cyprus	Upgrade to BB+ (stable) from BB	Mar-17	S&P	Stronger-than-expected economic growth and fiscal progress
Italy	Downgrade to BBB (stable) from BBB+	Apr-17	Fitch	Track record of fiscal slippage, weak growth, and failure to bring down gov. debt. Political risk and banking sector weakness
Slovenia	Upgrade to A+ (stable) from A	Jun-17	S&P	Improving debt dynamics on the back of economic expansion and recovery of its financial sector
Greece	Upgrade to Caa2 (positive) from Caa3	Jun-17	Moody's	Successful conclusion of the 2nd review adjustment programme, improved fiscal prospects, and signs of the economy stabilizing
Cyprus	Upgrade to Ba3 (positive) from B1	Jul-17	Moody's	Improvements in economic resilience, consistent fiscal outperformance and favourable fiscal outlook
Greece	Upgrade to B- (positive) from CCC	Aug-17	Fitch	Expectation that debt sustainability will steadily improve, reduced political risk and sustained GDP growth
Malta	Upgrade to A+ (stable) from A	Aug-17	Fitch	Public debt dynamics are improving with strong nominal GDP growth and recurrent primary surpluses
Portugal	Upgrade to BBB- (stable) from BB+	Sep-17	S&P	Strong economic and budgetary performance as well as receding external financing risks
Slovenia	Upgrade to Baa1 (stable) from Baa3	Sep-17	Moody's	Favourable debt trend, driven by fiscal consolidation and robust economic growth. Progress in some important structural reforms
Ireland	Upgrade to A2 (stable) from A3	Sep-17	Moody's	Faster-than-expected growth and improvement in fiscal metrics
UK	Downgrade to Aa2 (stable) from Aa1	Sep-17	Moody's	Significant weakening of public finances and erosion of economic strength due to departure from EU
Cyprus	Upgrade to BB (positive) from BB-	Oct-17	Fitch	Strong improvement in the performance of and outlook for public finances
Italy	Upgrade to BBB (stable) from BBB-	Oct-17	S&P	Strengthening economic outlook, growing investment and a steady increase in employment

Source: Fitch, Moody's, S&P

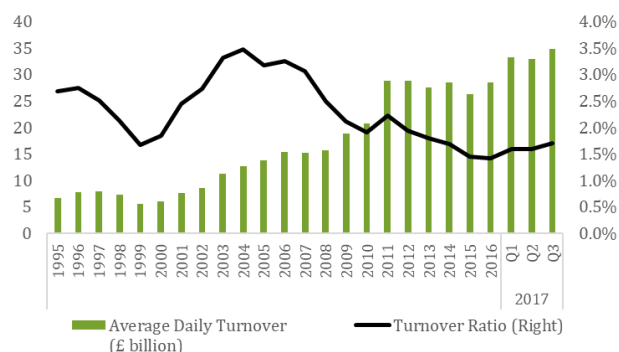
5 Secondary market trading volumes and turnover ratios⁸

5.1 EU28: Average daily trading volumes on MarketAxess (Gov. & Sovereign bonds, EURbn)⁹



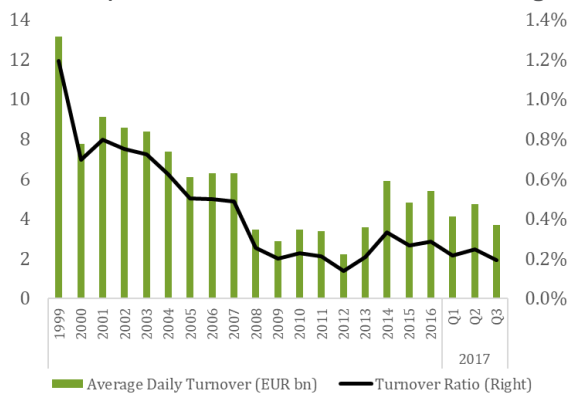
Source: Trax, a MarketAxess subsidiary

5.2 United Kingdom: Average daily trading volume (bonds only) and turnover ratio¹⁰



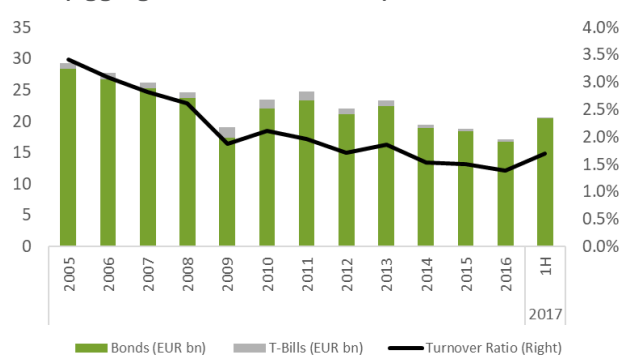
Source: UK Debt Management Office

5.3 Italy: Average daily trading volume (bonds and bills) and turnover ratio. Electronic trading¹¹



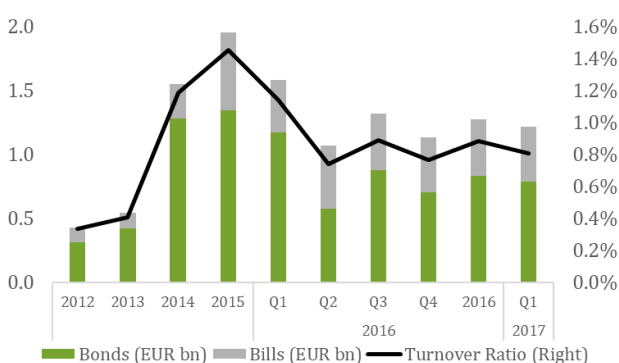
Source: Italian Dipartimento del Tesoro

5.4 Germany: Average daily trading volume (aggregated bonds and bills) and turnover ratio¹²

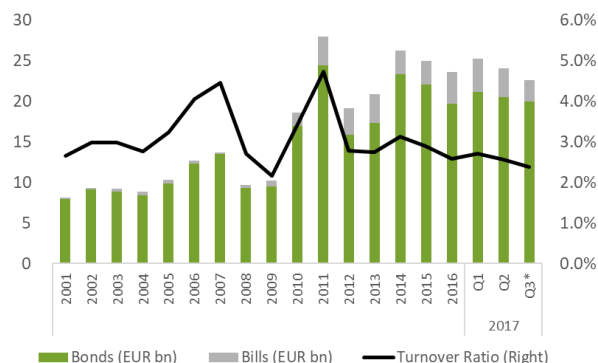


Source: Deutsche Finanzagentur and ECB

5.5 Portugal: Average daily trading volume and turnover ratio¹³



5.6 Spain: Average daily trading volume and turnover ratio¹⁴



⁸ Turnover ratios are calculated as the average daily trading volume relative to total outstandings. Cash trading only (excludes repo and derivatives transactions). Given the differences in the aggregation basis across jurisdictions, the data is not fully comparable between countries.

⁹ 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. Government & Sovereign bond volumes for EU28 member states as per the AFME methodology.

¹⁰ Turnover data reported to the DMO by the Gilt-edged Market Makers (primary dealers).

¹¹ Turnover on electronic interdealer regulated market.

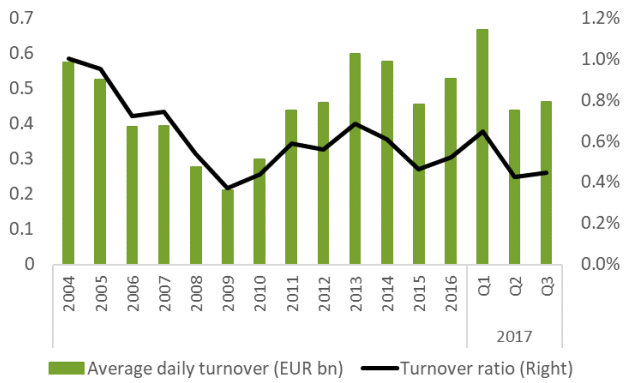
¹² Turnover of both electronic and OTC trading. The traded volume is aggregated for a representative part of the members of the Bund Issues Auction Group with trades with all counterparties. Bubills, Schaetze, Bobls, Bunds and inflation-linked securities. Capital and coupon strips as well as US-dollar bonds are excluded. Data not currently available for 2Q17.

¹³ Turnover of electronic and OTC trading reported on MTS-Portugal, BrokerTec and eSpeed. Data not currently available for 2Q17 or 3Q17.

¹⁴ Turnover is total outright transactions (excluding Repo operations). Includes Treasury Bills, non-stripped Government Bonds and stripped Government Bonds, both in electronic platforms and OTC (second tier and transactions between market members and clients). *Q3 data is July and August only.

Source: Agência de Gestão da Tesouraria e da Dívida Pública – IGCP and ECB

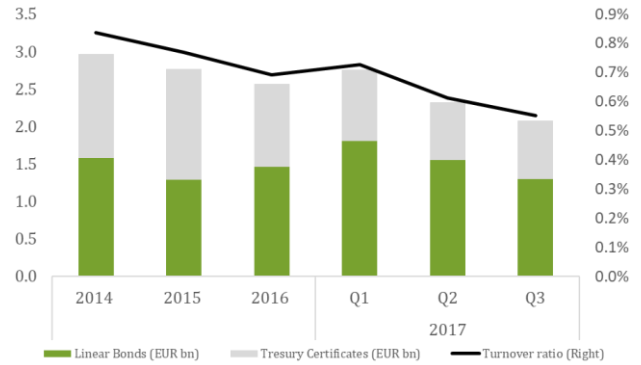
5.7 Finland: Average daily trading volume (aggregated bonds and bills) and turnover ratio¹⁵



Source: Finland Valtiokonttori and ECB

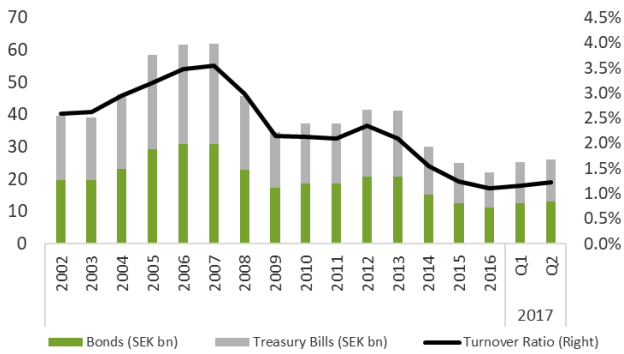
Source: Banco de España and Tesoro Público de España

5.8 Belgium: Average daily trading volume and turnover ratio¹⁶



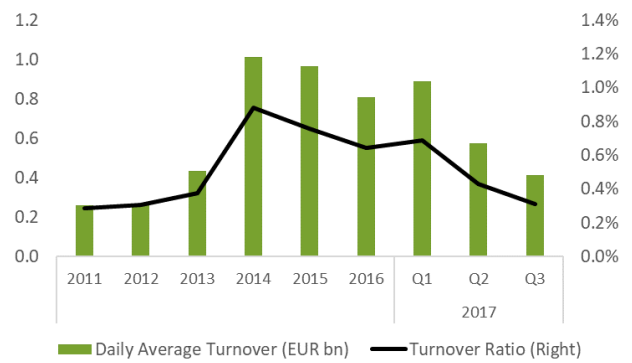
Source: Belgian Debt Agency and ECB

5.9 Sweden: Average daily trading volume and turnover ratio¹⁷



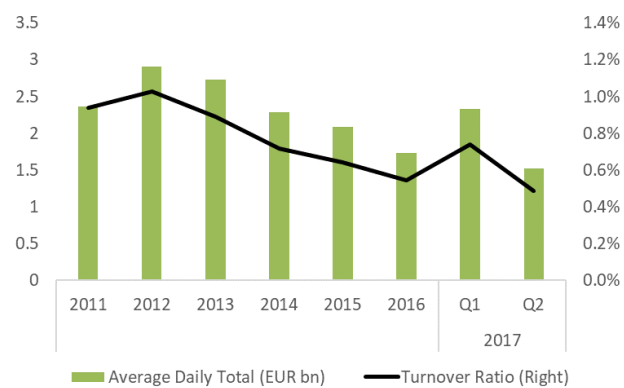
Source: Swedish National Debt Office (Riksgälden) and ECB

5.10 Ireland: Average daily trading volume (aggregated bonds and bills) and turnover ratio¹⁸

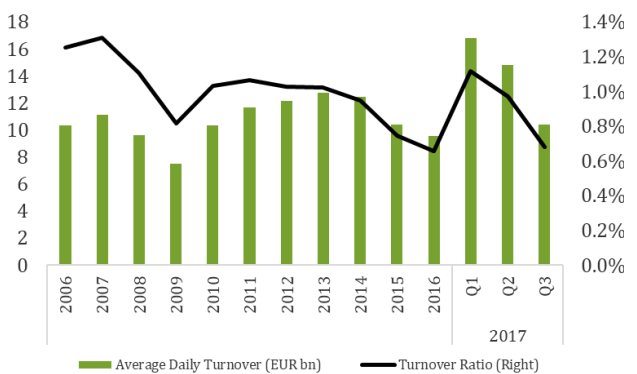


Source: Irish Stock Exchange and ECB

5.11 Netherlands: Average daily trading volume (bonds only) and turnover ratio¹⁹



5.12 France: Average daily trading volume (bonds only) and turnover ratio²⁰



¹⁵ Turnover of customer trades, MTS Finland and Euro MTS.

¹⁶ Turnover is total outright transactions.

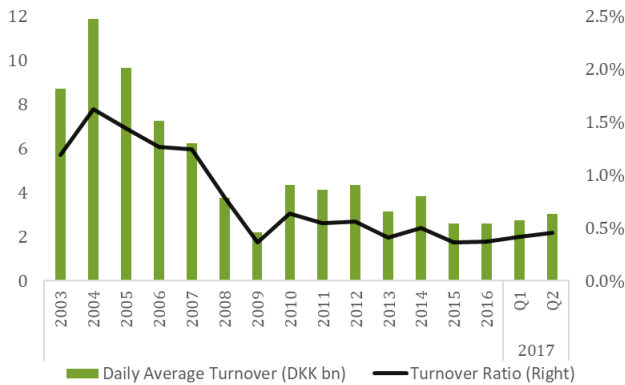
¹⁷ Turnover is total outright transactions.

¹⁸ Turnover on Irish Stock Exchange.

¹⁹ Turnover is customer and interdealer trading. Total outright transactions, including electronic and OTC trading. Data available only as of 2Q17

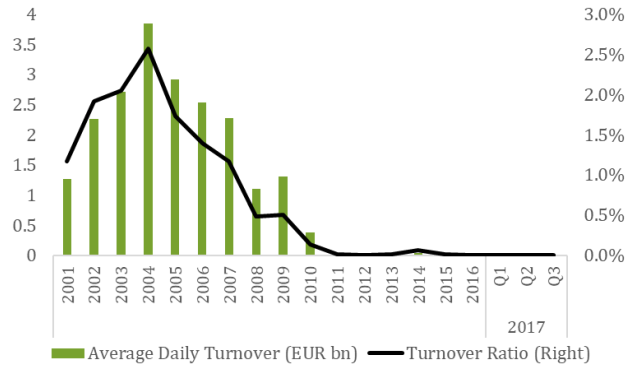
²⁰ Turnover of voice and electronic trading (not including PSPP transactions or trading without an SVT).

5.13 Denmark: Average daily trading volume (bonds and bills) and turnover ratio²¹



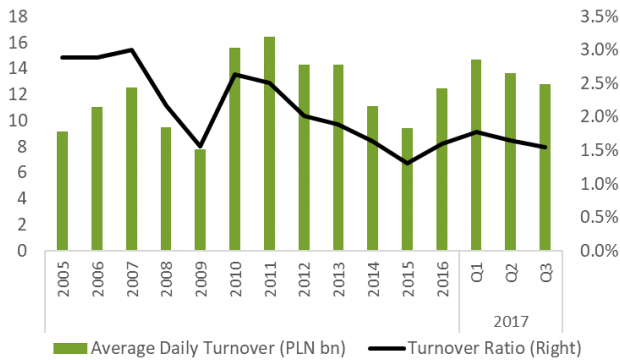
Source: Danmarks Nationalbank

5.14 Greece: Average daily trading volume (bonds only) and turnover ratio²²



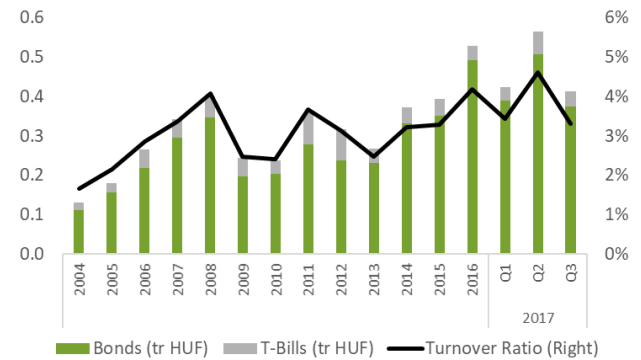
Source: Bank of Greece and ECB

5.15 Poland: Average daily trading volume (bonds only) and turnover ratio²³



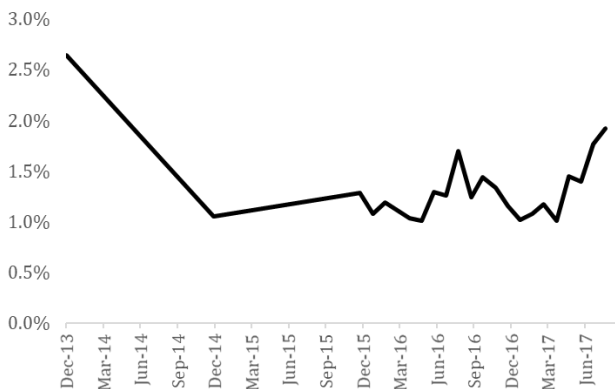
Source: National Depository for Securities (KDPW), WSE

5.16 Hungary: Average daily trading volume and turnover ratio²⁴



Source: ÁKK

5.17 Romania: Average daily turnover ratio²⁵



Source: Ministerul Finantelor

²¹ Turnover of MTS, TradeWeb, Bondvision and trades reported to Nasdaq OMX (including voice trading). Data available only as of 2Q17.

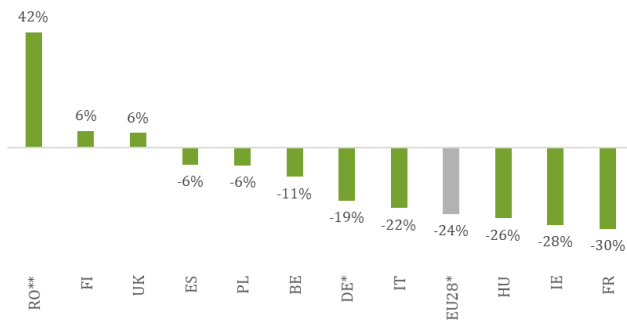
²² Turnover on Electronic Secondary Securities Market (HDAT).

²³ 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.

²⁴ Turnover on MTS Hungary and Keler OTC.

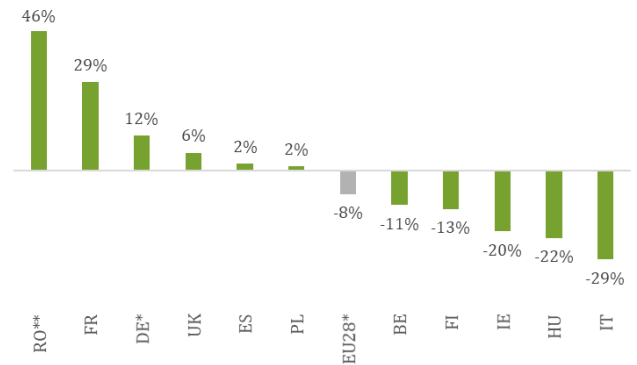
²⁵ Turnover ratio of the government securities issued on domestic market. Official values reported as average monthly turnover ratios, which have been converted assuming 20 business days per month. Turnover volume not available.

5.18 Quarterly change in average daily turnover volumes of EU government bonds: 2Q17 to 3Q17



Source: AFME with information from European DMOs and other agency sources. See section 5 for details on aggregation basis and sources. *Europe total and Germany is sourced from TRAX Facts as the quarterly variation of average daily volumes of government and sovereign bonds. **Romanian turnover volume calculated using outstanding volumes in Section 3.

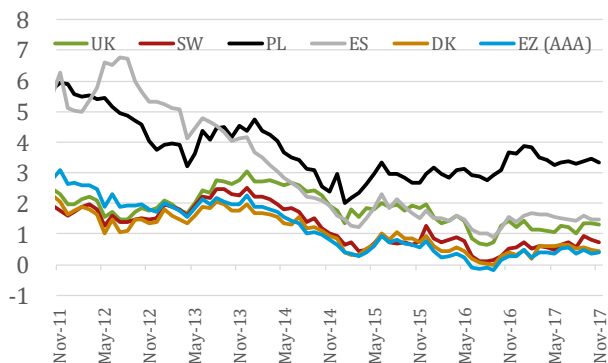
5.19 Annual change in average daily turnover volumes of EU government bonds: 3Q16 to 3Q17



Source: AFME with information from European DMOs and other agency sources. See section 5 for details on aggregation basis and sources. *Europe total and Germany is sourced from TRAX Facts as the quarterly variation of average daily volumes of government and sovereign bonds. **Romanian turnover volume calculated using outstanding volumes in Section 3.

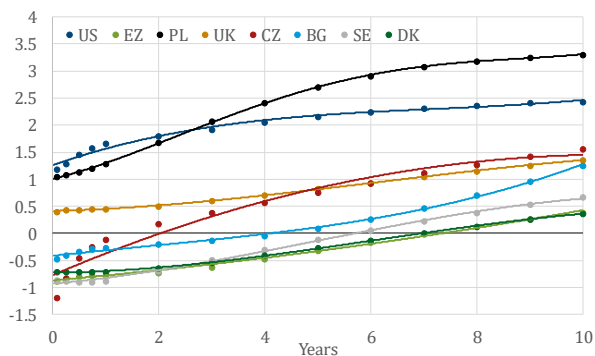
6 Valuations

6.1 Selected European 10Y spot yields



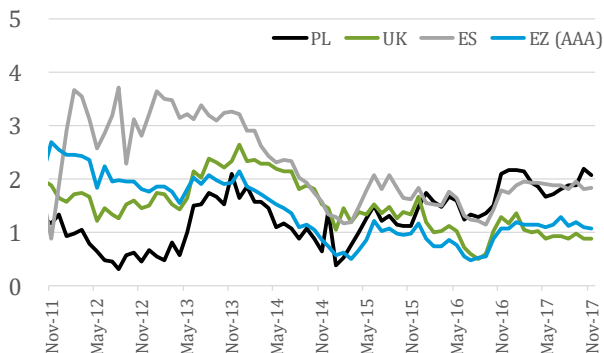
Source: ECB and Thomson Reuters Eikon

6.2 Sovereign spot yield curve of selected jurisdictions: 30 Nov 2017



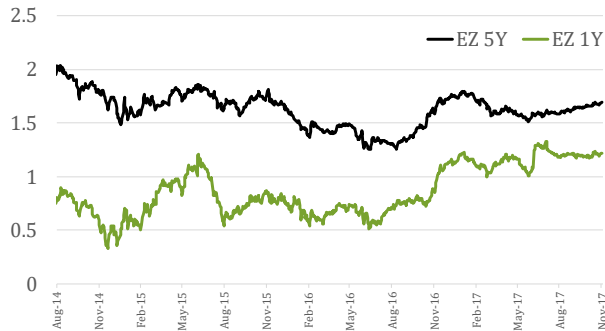
Source: Thomson Reuters Eikon

6.3 Slope: 1Y10Y spread



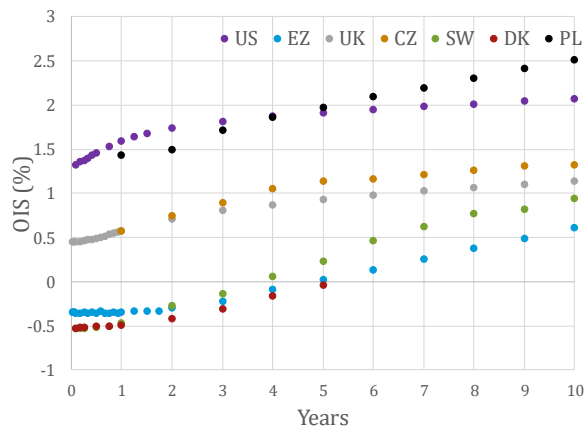
Source: ECB and Thomson Reuters Eikon

6.4 Market-implied inflation expectations (EuroZone)



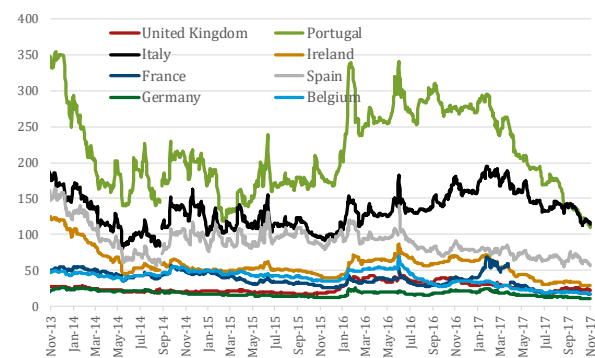
Source: Thomson Reuters Eikon

6.5 Overnight index swap (OIS) yield curve: 30 Nov 2017



Source: Thomson Reuters Eikon

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



Source: Thomson Reuters Eikon



Annex

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Methodologies

A summary of the methodologies adopted for this report is available at <https://www.afme.eu/en/reports/Statistics/Methodologies>

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