

Government Bond Data Report

European market data update

Q3: 2018



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Highlights and Market Environment

This report provides a comprehensive data source with updated statistics of the Government bond² primary and secondary markets in Europe (EU28).

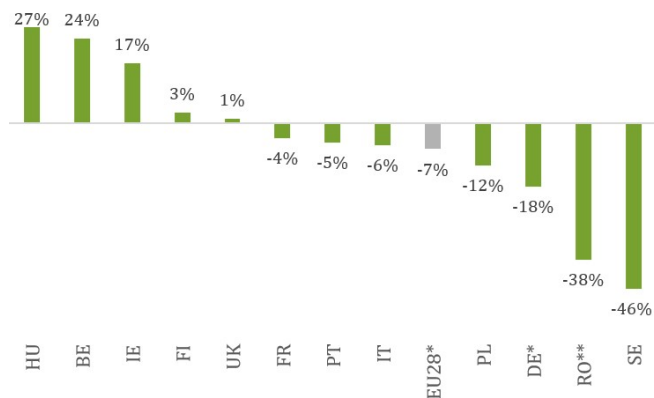
Among the main findings of this report are:

- **Average daily trading volumes** of European government bonds decreased by 7.2% YoY during 3Q18, driven by a significant decrease in Sweden (-46% YoY) and German (-18% YoY) trading, only partially offset by increases in Ireland (17% YoY), Belgium (24% YoY) and Hungary (24% YoY). This quarter also saw the lowest trading volume since records began in 2013 according to MarketAxess.
- **European Government bond and bills gross issuance** totalled €574.2 bn in 3Q18, a decrease of 2.1% from the volume issued in 2Q18 (€586.4 bn) and 2.6% below the volume issued in 3Q17 (€589.5 bn).
- **The average bid-cover ratio** (demand/amount allocated)³ was 2.19 in 3Q18, showing no YoY change from 3Q17 however an increase from 2.16 in 2Q18. The UK bid-cover ratio, at 2.33, was the lowest since 2Q15, contrasting with the record high of 3.44 observed in 2Q17.
- During 3Q18 there were **6 long-term credit rating upgrades for EU countries** (following 8 in 1Q18 and 3 in 2Q18) and no downgrades. This reflects significant credit quality improvements of European sovereign issuers, particularly of southern European and CEE countries, bringing the YtD total to 19 upgrades and 1 downgrade (2 further upgrades so far in 4Q18 and 1 downgrade).

“EU government bond trading volume¹ decreased 20.3% quarter-on-quarter and 7.2% year-on-year in 3Q18”

Annual change in Government Bond average trading volumes

(3Q18 vs 3Q17) Selected European jurisdictions

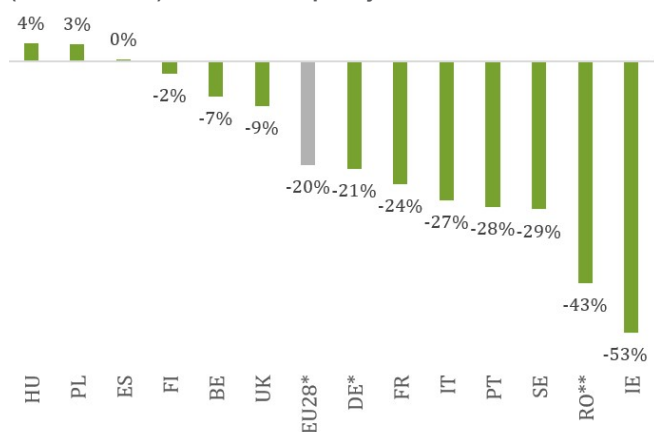


Source: AFME with information from European DMOs and other agency sources and Trax, a MarketAxess subsidiary. See section 5 for details on aggregation basis and sources. *Europe total and German turnover is sourced from Trax Facts as the quarterly variation of average daily volumes of government and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

**Romanian turnover volume calculated using outstanding volumes in Section 3.

Quarterly change in Government Bond average trading volumes

(3Q18 vs 2Q18) 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.

NOTE: Some reduction in trading due to seasonal factors – see graph on next page.

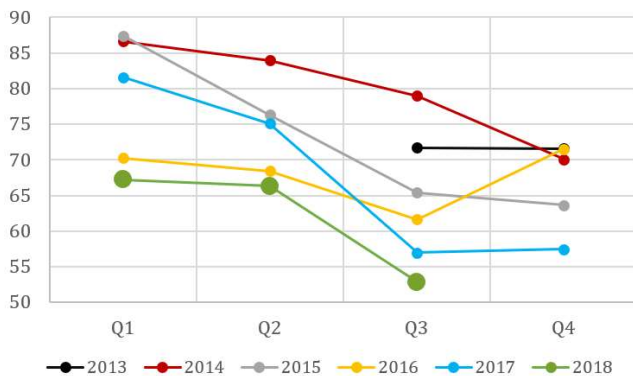
¹ Total EU government bond trading volume data is sourced from Trax

² Fixed income securities issued by central governments. The report includes Bonds and Treasury Bills and excludes agencies and Central Bank origination.

³ Weighted average (by issuance volume) of bid-cover ratios in the United Kingdom, Spain, France, Italy, Germany, Belgium, Sweden, Netherlands, Denmark and Austria.

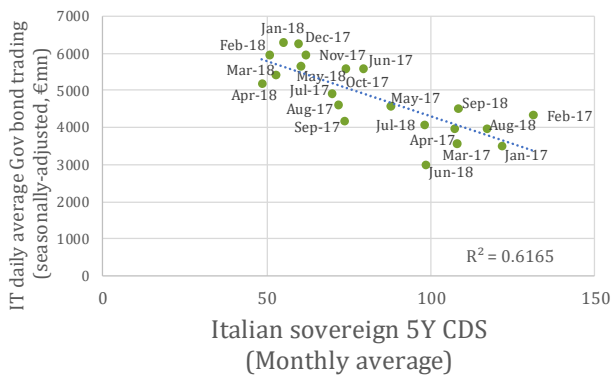
	2014	2015	2016	2017	2Q 2018	3Q 2018
Gross Issuance (€ bn)	2719.9	2595.6	2547.1	2474.4	586.4	574.2
Bonds (€bn)	1260.1	1210.0	1178.0	1224.9	288.8	250.0
Bills (€bn)	1459.8	1385.6	1369.1	1249.6	297.6	324.2
Outstandings (€ tn)	9.32	9.73	9.60	9.64	9.86	9.93
Bid-cover ratio	2.29	2.22	2.16	2.13	2.16	2.19
Average daily turnover (% YoY change)	-	-8.4%	-7.2%	-0.3%	-11.8%	-7.2%

Seasonality of EU government bond trading (quarterly trading volumes, average daily, EURbn)



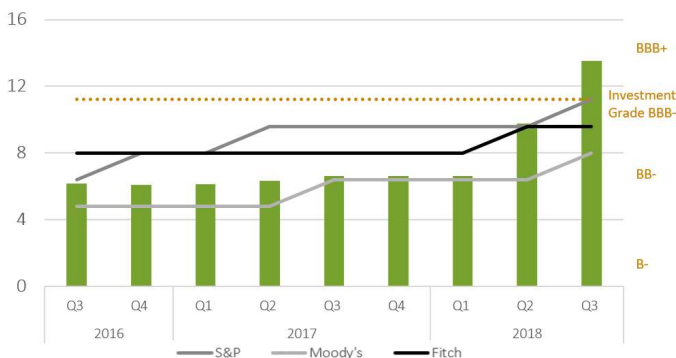
Source: Trax, a MarketAxess subsidiary

Italy: Average daily trading volume (bonds and bills) and 5Y CDS. E-trading



Source: Italian Dipartimento del Tesoro and Datastream

Cyprus: Outstanding amount of government bonds, (EUR bn), credit rating by 3 agencies



Source: Thomson Reuters Eikon

Highlights

3Q 2018 EU Government Bond trading volume at new low, with large national variations in average daily turnover

Government bond trading in 3Q18 was the lowest volume ever recorded, with 1Q18 and 2Q18 both being the lowest recorded for those quarters respectively (see chart on top left).

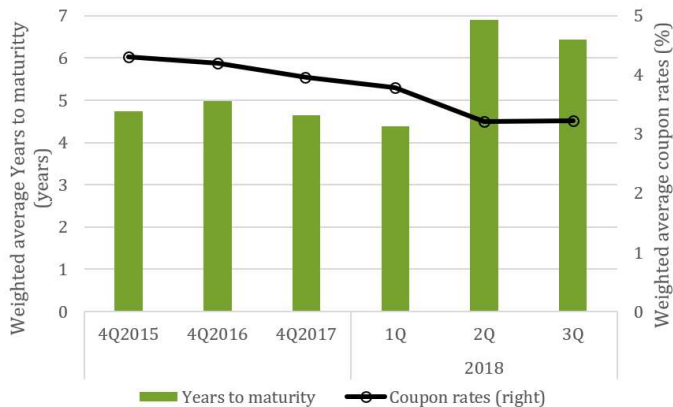
The 7.2% annual fall in government bond trading is of larger magnitude than the annual decline in investment-grade corporate bonds (-3.7% YoY according to Trax) and reduction in global FX trading (-1% YoY, according to CLS). This contrasts with the YoY increase of 1% in both equity turnover volume (according to CBOE markets) and high yield corporate bonds (according to Trax).

In Italy (IT), the lowest average daily turnover on electronic platforms was recorded since Q3 2015, at €3.5bn. The third quarter of the year also exhibited a significant increase in IT credit default swap (CDS) spreads (+39bps QoQ) with the ongoing budget discussions between Italy and the EU. The abnormal risk perception on Italian credit quality may have deterred market participants from trading in larger volumes or at a higher frequency. Over the last two years, we have observed a strong negative correlation between Italian government bond trading (e-trading) and the market-implied risk as measured by the 5Y IT sovereign CDS spread. This correlation may illustrate market participants' preference to trade under more stable market conditions or changes in dealer capacity as perception on the sovereign credit risk quality deteriorates. See chart on the left.

Record breaking Q3 2018 issuance in Cyprus following credit rating upgrades

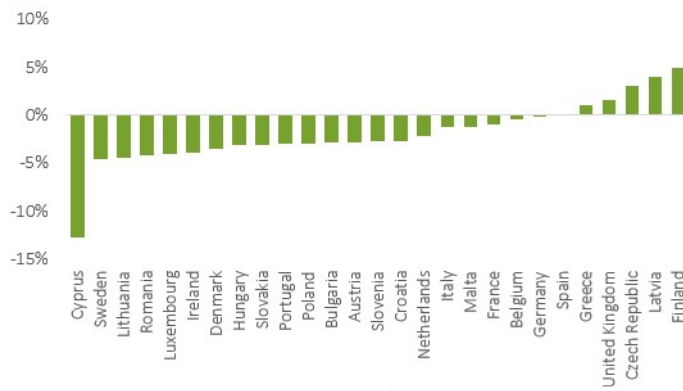
Quarterly growth in outstanding bonds was 38.7% for Cyprus, totalling €13.5bn compared to an outstanding amount of €9.7bn in Q2 2018, and €6.6bn in Q3 2017 (see chart on bottom left). This was driven by the credit rating of Cypriot sovereign debt being lifted by S&P from BB+ to BBB- in Q3 2018 and therefore achieving investment grade status for the first time in 6 years. Multiple large issuances in July and a record breaking 10-year €1.5bn bond issued in September directly utilised the advantageous credit conditions. At 2.35%, the yield on the September bond represents the lowest yield ever achieved in Cyprus for a Euro-denominated syndicated issue. This was the largest syndicated Euro transaction from Cyprus since the return to capital markets in 2014, matching the largest ever

Cyprus: Weighted average years to maturity and weighted average coupon rates of outstanding bonds



Source: Thomson Reuters Eikon. Weighted by amount outstanding for respective time period

Quarterly change in weighted average years to maturity for outstanding government bonds 2Q18 to 3Q18



Source: Thomson Reuters Eikon

transaction for the sovereign in this currency. Continuous improvements in credit quality have allowed Cyprus to issue, on average, bonds with longer maturities and at lower coupon rates relative to previous years (see chart on top left).

More broadly for the EU, the skewed seasonal dynamics of bond issuance across the EU (only 11 countries issued bonds with maturities greater than 2 years this quarter) has meant **weighted average years until maturity decreased for all but 6 EU countries** (see chart on bottom left).

Major upcoming regulatory, legislative and policy initiatives

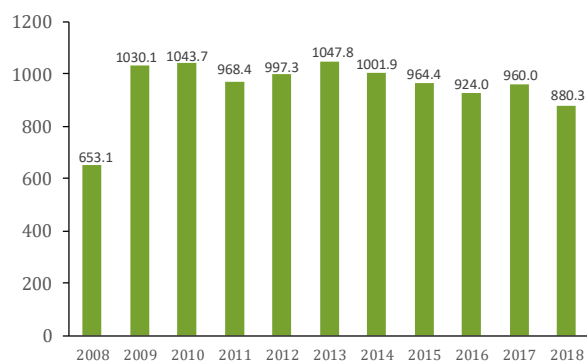
There several regulatory initiatives that are currently being considered at the European and national level with expected impact on the government bond markets. Some of the key initiatives recently implemented or soon to be applied:

- 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.

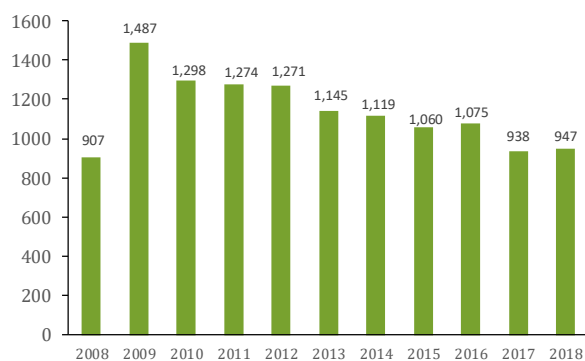
1. Issuance

1.1 EU Government Bond gross issuance (3Q YtD, EUR bn)



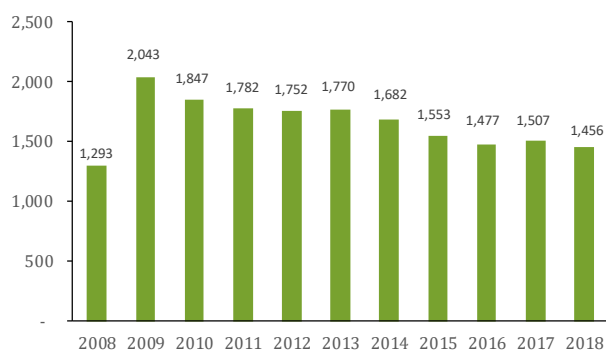
Source: ECB and National Debt Management Offices

1.2 EU Treasury Bills gross issuance (3Q YtD, EUR bn)



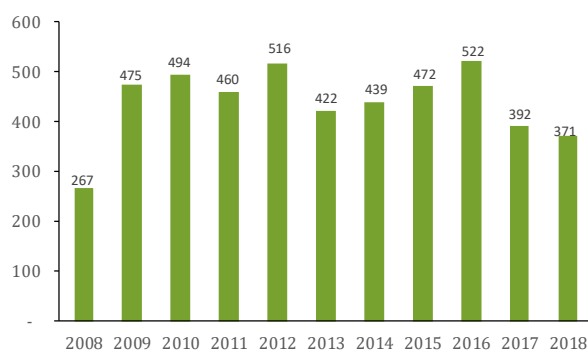
Source: ECB and National Debt Management Offices

1.3 Eurozone bonds and bills gross issuance (3Q YtD, EUR bn)



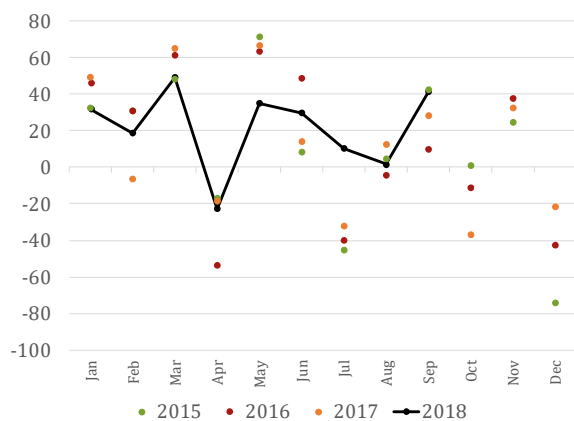
Source: ECB and National Debt Management Offices

1.4 Non-Eurozone bonds and bills gross issuance (3Q YtD, EUR bn)



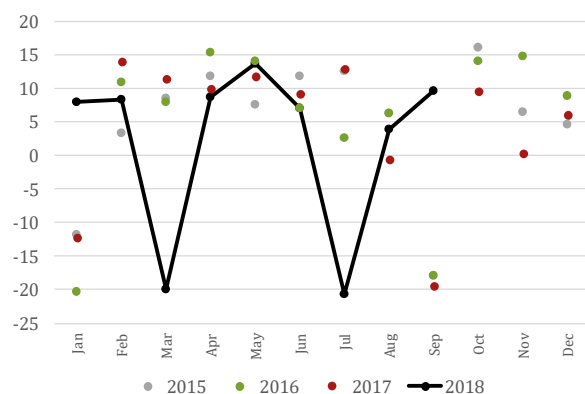
Source: ECB and National Debt Management Offices

1.5 Euro area net sovereign debt issuance (EUR bn)



Source: ECB

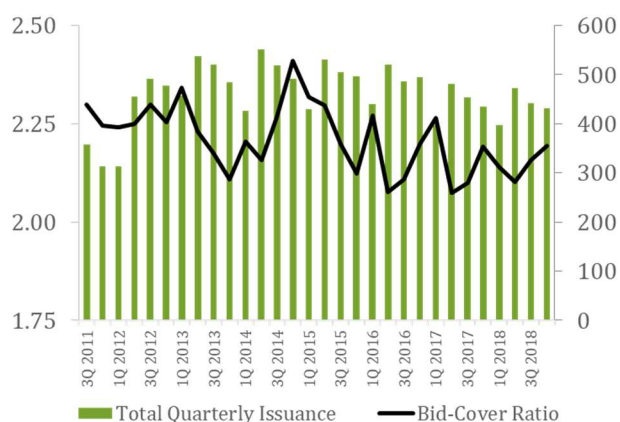
1.6 UK Gilts net issuance (GBP bn)



Source: UK Debt Management Office

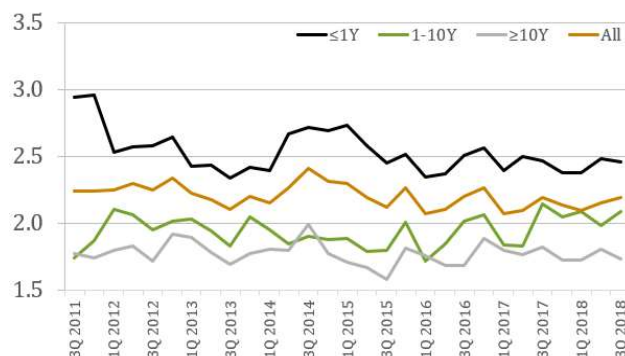
2. Recent auctions and primary dealers

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



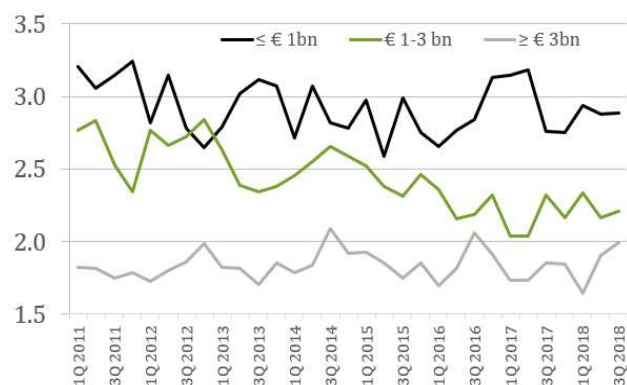
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills

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



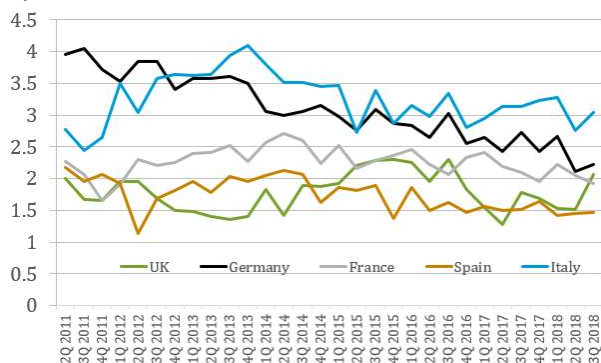
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills

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



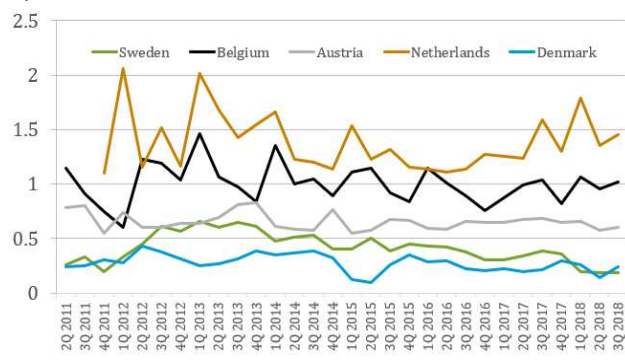
Source: Thomson Reuters Eikon. Weighted average of UK, DE, FR, ES, IT, BE, SE, NL, DK, and AT bonds and bills. Polynomial trendline in grey.

2.5 Average auction size in selected jurisdictions (EUR bn)



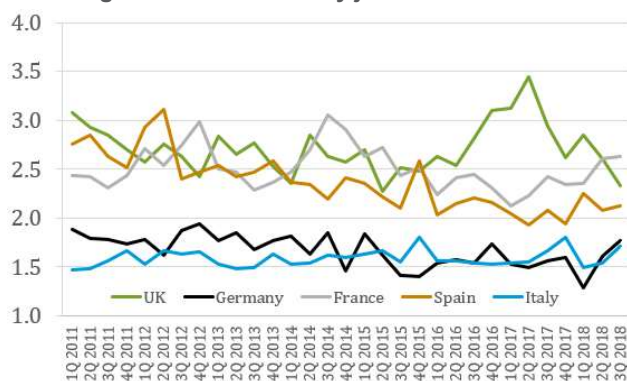
Source: Thomson Reuters Eikon

2.6 Average auction size in selected jurisdictions (EUR bn)



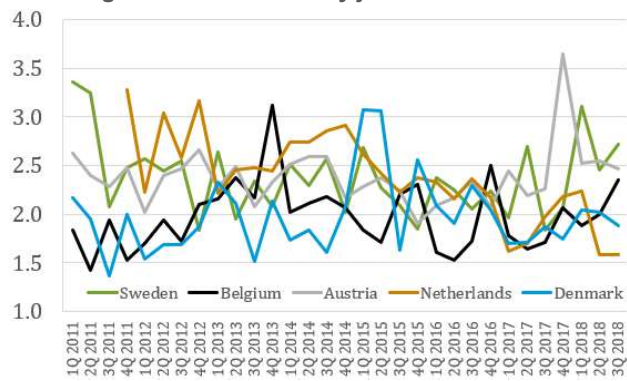
Source: Thomson Reuters Eikon

2.7 Average bid-cover ratios by jurisdictions



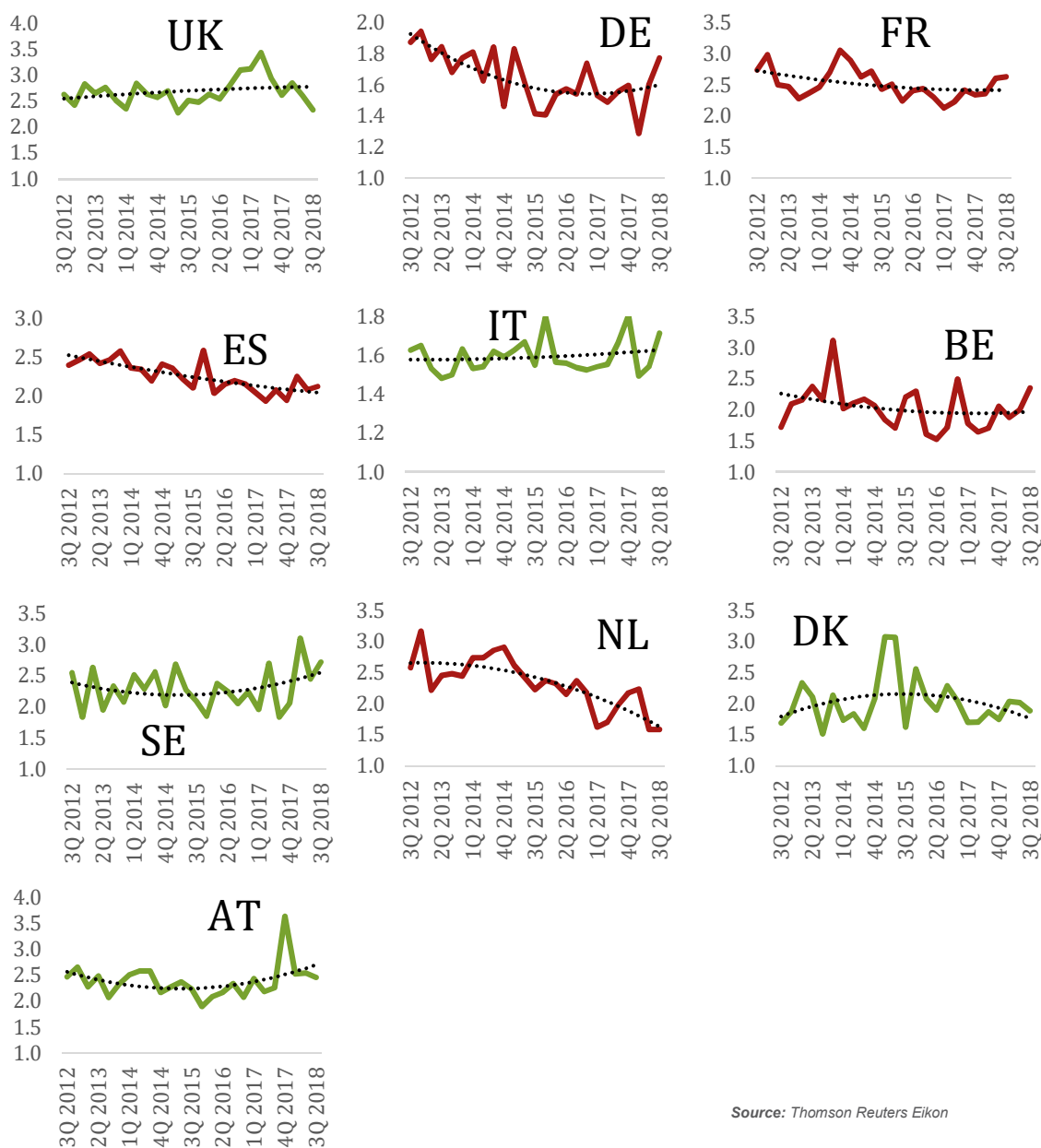
Source: Thomson Reuters Eikon

2.8 Average bid-cover ratios by jurisdictions



Source: Thomson Reuters Eikon

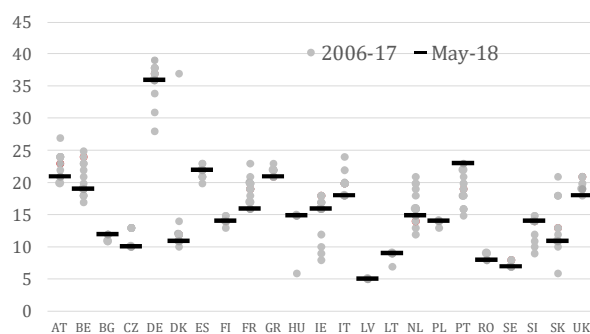
2.9 Average bid-cover ratios in selected jurisdictions: 2011-18⁴



Source: Thomson Reuters Eikon

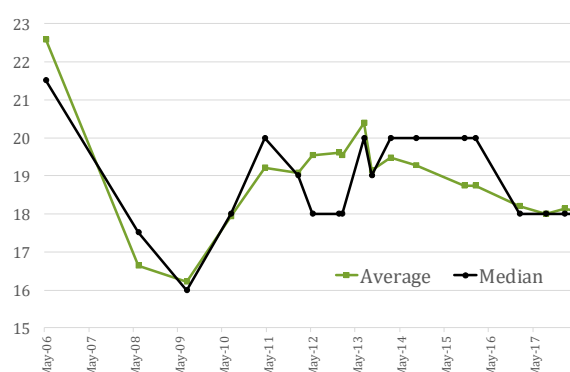
⁴ Chart colour indicates slope of trendline. Green indicates end value of trendline above starting value and red indicates end value of trendline below starting value.

2.10 Number of primary dealers relative to historic number



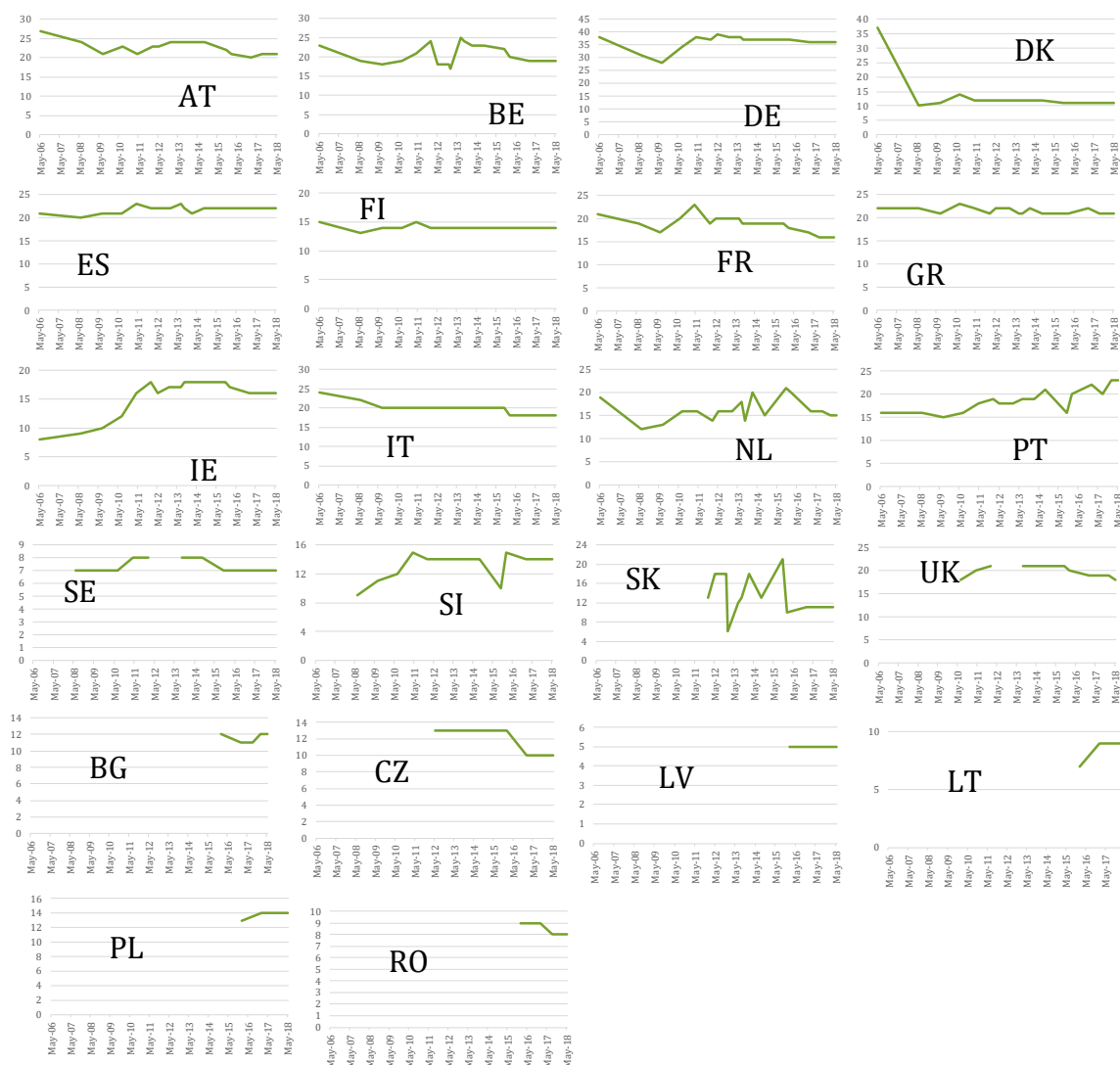
Source: AFME Primary Dealers Handbooks and national DMOs

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 country: 2006-18⁵

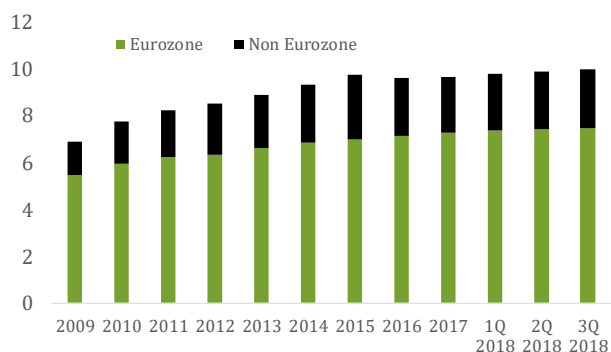


Source: AFME Primary Dealers Handbooks and national DMOs

⁵ The gap in the lines for UK and Sweden indicates data not recorded in the relevant period.

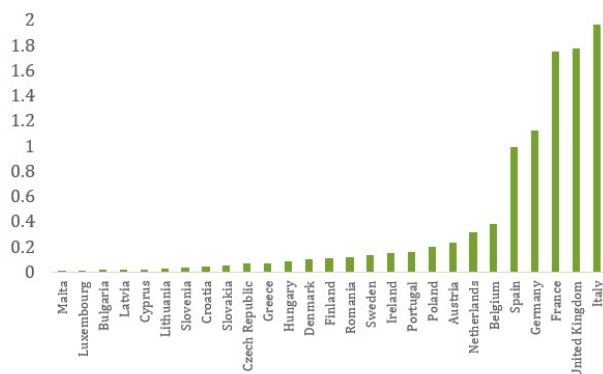
3. Outstanding

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



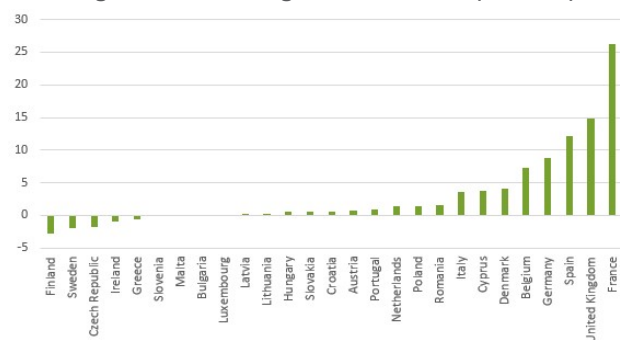
Source: ECB and Thomson Reuters Eikon

3.2 European government bonds outstanding by country (EUR tn)



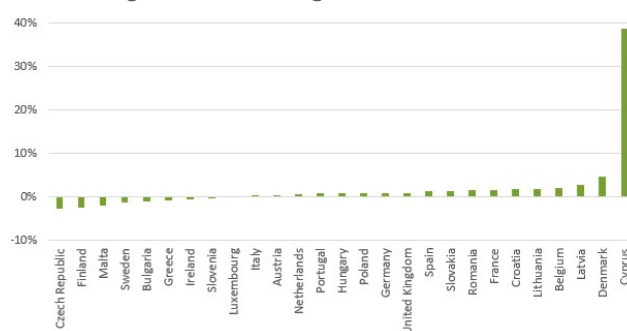
Source: Thomson Reuters Eikon

3.3 Change in outstandings 2Q18 to 3Q18 (EUR bn)



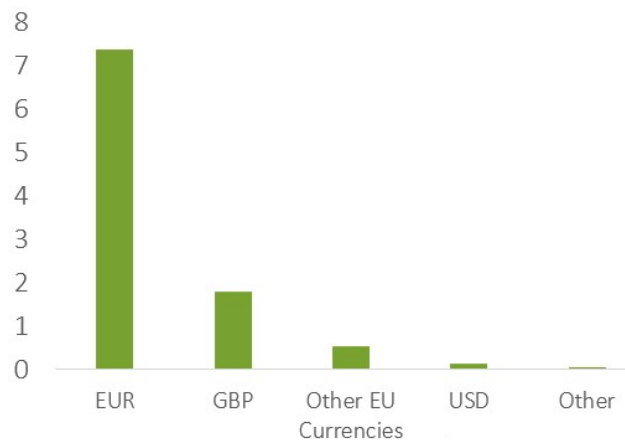
Source: Thomson Reuters Eikon

3.4 % Change in outstandings from 2Q18 to 3Q18



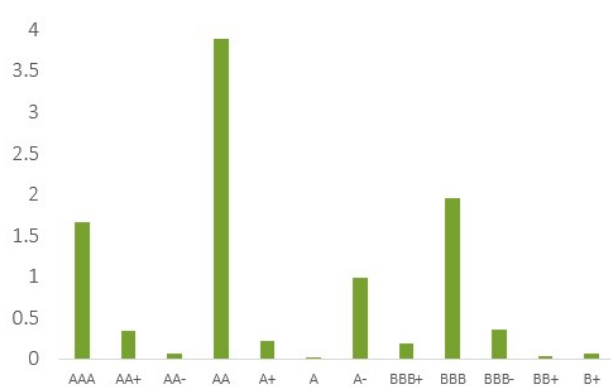
Source: Thomson Reuters Eikon and Standard and Poor's

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)



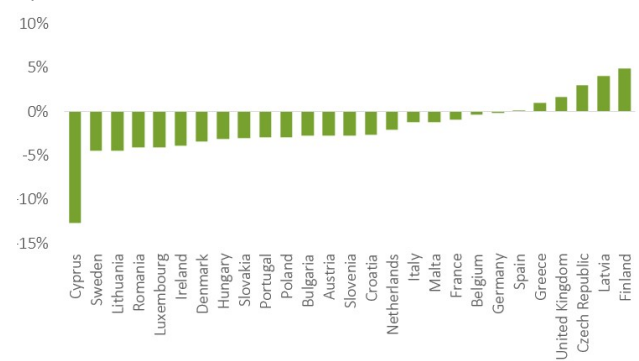
Source: Thomson Reuters Eikon and Standard and Poor's

3.7 Average years to maturity for outstanding government bonds in EU countries⁶



Source: Thomson Reuters Eikon

3.8 Quarterly change in weighted average years to maturity for outstanding government bonds 2Q18 to 3Q18⁷

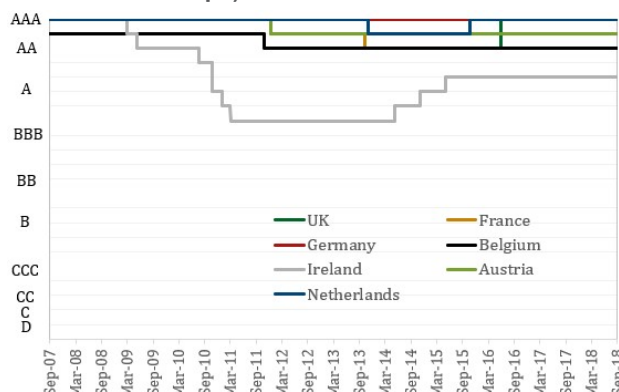


Source: Thomson Reuters Eikon

⁶ Weighted average by outstanding amount
⁷ Weighted average by outstanding amount

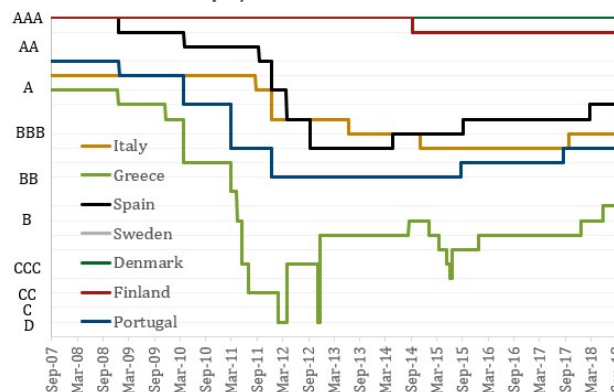
4. Credit quality

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



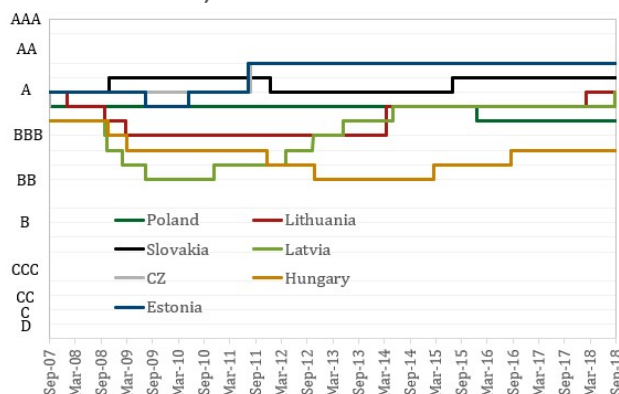
Source: Thomson Reuters Eikon with data of Standard and Poor's

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



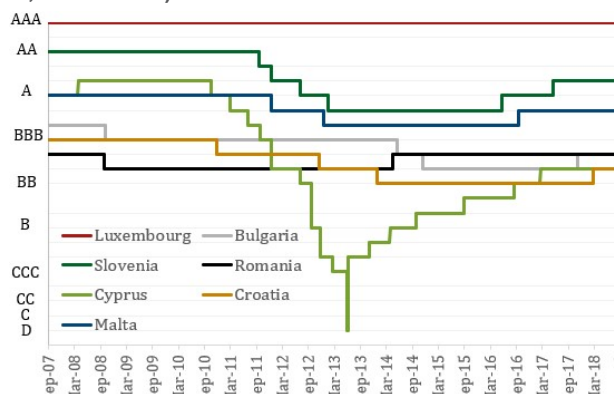
Source: Thomson Reuters Eikon with data of Standard and Poor's

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

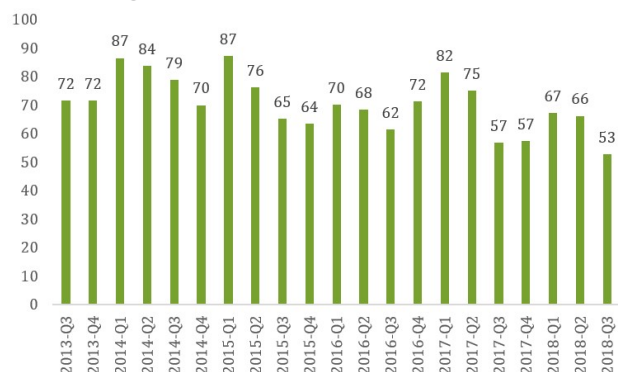
4.5 European rating actions on long-term foreign currency ratings (2018YtD)

Issuer	Rating action	Date	Rated by	Rationale
Croatia	Upgrade to BB+ (stable) from BB	Jan-18	Fitch	Strengthening tourism revenues, a current account surplus, and stronger consumption and investment
Greece	Upgrade to B (positive) from B-	Jan-18	S&P	Steadily improving general government finances and its gradually recovering economic prospects
Spain	Upgrade to A- (stable) from BBB+	Jan-18	Fitch	Reduction in macro imbalances, strong econ. recovery, and limited econ. impact caused by Catalonia's declaration of independence
Greece	Upgrade to B (positive) from B-	Feb-18	Fitch	Improved outlook of debt sustainability underpinned by sustained GDP growth, reduced political risks
Greece	Upgrade to B3 (positive) from Caa2	Feb-18	Moody's	Material fiscal and institutional improvements under its current adjustment programme
Croatia	Upgrade to BB+ (stable) from BB	Mar-18	S&P	External position improving on external deleveraging, current account surpluses, increase in FX reserves. Improved fiscal picture
Lithuania	Upgrade to A (stable) from A-	Mar-18	S&P	Strong economic development over the past years, robust growth prospects in the near term
Spain	Upgrade to A- (positive) from BBB+	Mar-18	S&P	Continuously strong economic performance, accompanied by a solid current account surplus and ongoing budgetary consolidation
Cyprus	Upgrade to BB+ (positive) from BB	Apr-18	Fitch	Strong improvement in the performance of and outlook for its public finances supported by strong nominal GDP growth
Spain	Upgrade to Baa1 (stable) from Baa2	Apr-18	Moody's	Enhanced economic resiliency due to an increasingly balanced growth profile and improved banking sector fundamentals
Greece	Upgrade to B+ (positive) from B	Jun-18	S&P	Debt relief agreement decided by Eurogroup reduced sovereign debt servicing risks
Cyprus	Upgrade to Baa2 (stable) from Baa3	Jul-18	Moody's	Recovery of Cyprus's banking system and positive fundamental trend with respect to the government's balance sheet
Czech Republic	Upgrade to AA- (stable) from A+	Aug-18	Fitch	General fiscal prudence and government budget surpluses and strong external position
Estonia	Upgrade to AA- (stable) from A+	Aug-18	Fitch	Current account surplus and continued deleveraging in the private sector underpinning a strong net external creditor position
Greece	Upgrade to BB- (stable) from B	Aug-18	Fitch	Improving public finances and substantial improvement in Greece's relationships with its European creditors
Cyprus	Upgrade to BBB- (stable) from BB+	Sep-18	S&P	Solid growth, sharp reduction in NPLs, consolidation of public finances and restoration of the health of the banking sector
Latvia	Upgrade to A (stable) from A-	Sep-18	S&P	Reduction in non resident deposits shrinking external vulnerabilities, strong forecasted growth over medium term and low budget deficits
Italy	Downgrade to Baa3 (stable) from Baa2	Oct-18	Moody's	Weakening economic growth prospects due to deterioration of fiscal position and stalling of structural economic and fiscal reforms
Cyprus	Upgrade to BBB- (stable) from BB+	Oct-18	Fitch	Large fiscal surplus due to prudent fiscal policy, continuous growth and reduction in NPL stock
Poland	Upgrade to A- (stable) from BBB+	Oct-18	S&P	Fiscal prudence, diversity and competitiveness of the Polish economy and a stable outlook
Portugal	Upgrade to Baa3 (stable) from Ba1	Oct-18	Moody's	Improvements in reducing the Government debt, broadening of Portugal's growth drivers and structural improved external position

Source: Fitch, Moody's, S&P

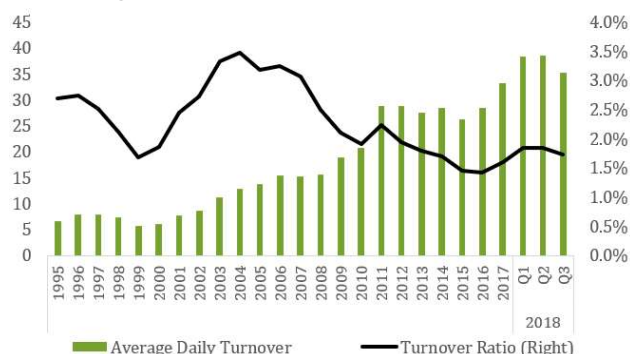
5. Secondary market trading volumes and turnover ratios⁸

5.1 EU28: Average daily trading volumes (Government and sovereign bonds, EURbn)⁹



Source: Trax, a MarketAxess subsidiary

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



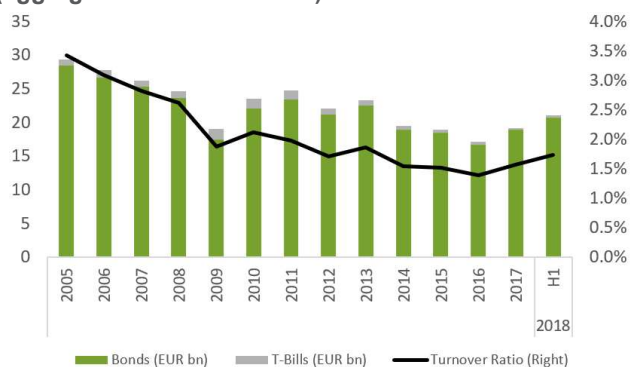
Source: UK Debt Management Office

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



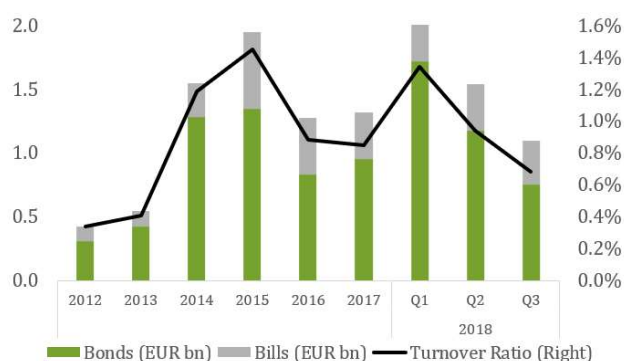
Source: Italian Dipartimento del Tesoro

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



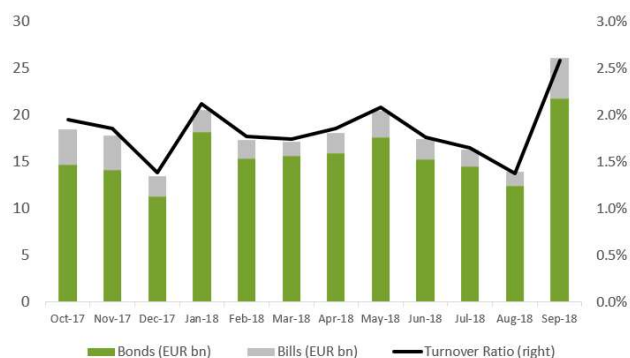
Source: Deutsche Finanzagentur and ECB

5.5. Portugal: Average daily trading volume and turnover ratio¹³



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

5.6 Spain: Average daily trading volume and turnover ratio¹⁴



Source: Banco de España and Tesoro Público de España

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).

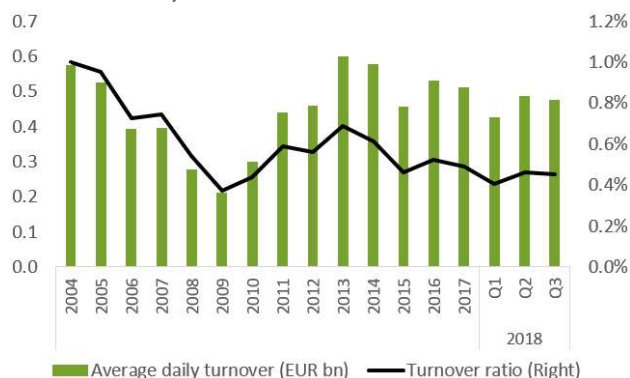
¹¹ Turnover on electronic interdealer regulated market.

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, Schaezle, Bobls, Bunds and inflation-linked securities. Capital and coupon strips as well as US-dollar bonds are excluded. Data not currently available for 3Q18.

¹³ Turnover of electronic and OTC trading reported on MTS-Portugal, BrokerTec and eSpeed.

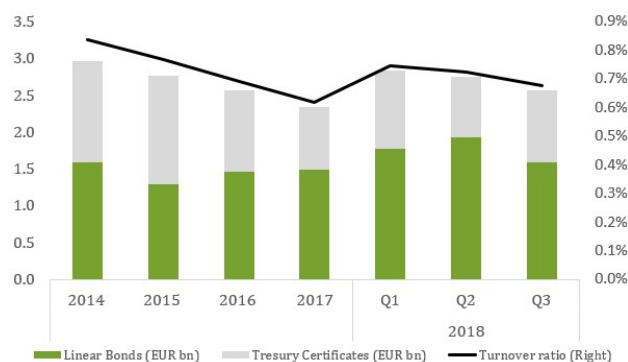
¹⁴ Turnover is total outright spot transactions. Includes Treasury Bills and non-stripped Government Bonds between account holders in the book-entry debt market. Due to changes in reporting, after the introduction of T2S in September 2017 reported turnover is not comparable with previous months. Data from September 2017 is from Iberclear and electronic platforms.

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



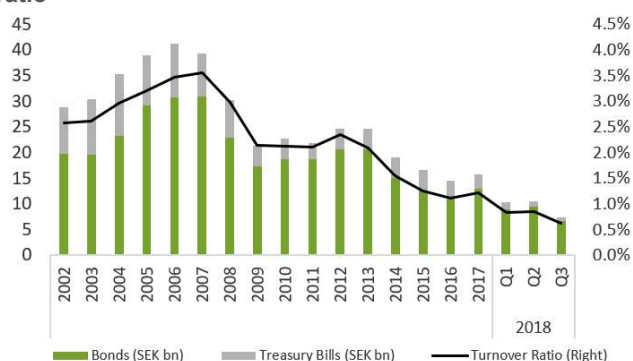
Source: Finland Valtiokonttori and ECB

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



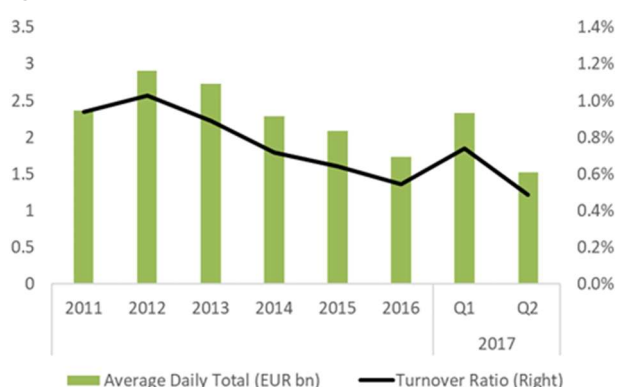
Source: Swedish National Debt Office (Riksgälden) and ECB

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



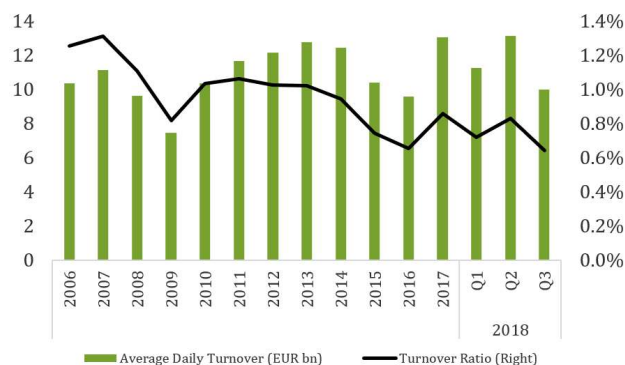
Source: Irish Stock Exchange and ECB

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



Source: Ministerie van Financiën

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



Source: Agence France Trésor and ECB

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

¹⁶ Turnover is total outright transactions.

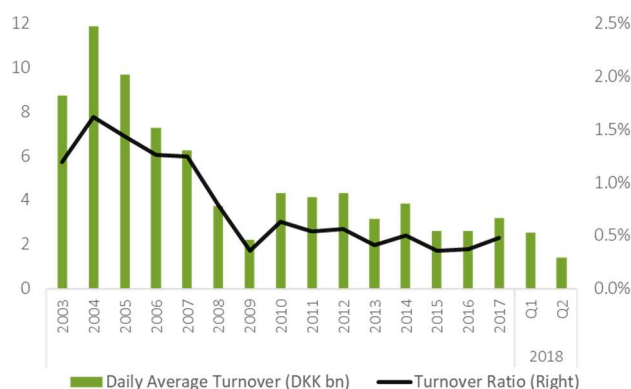
¹⁷ Turnover is total outright transactions.

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

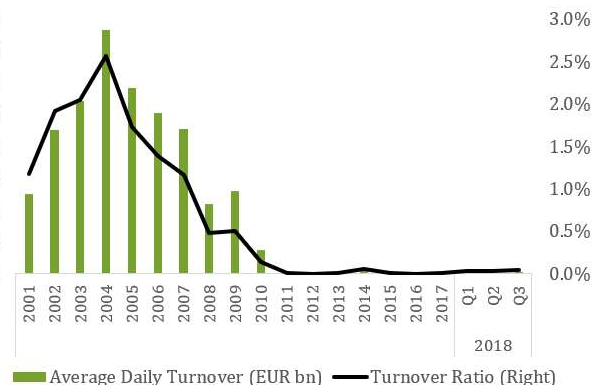
²⁰ Turnover of voice and electronic trading (not including PSPP transactions or trading without an SVT).

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



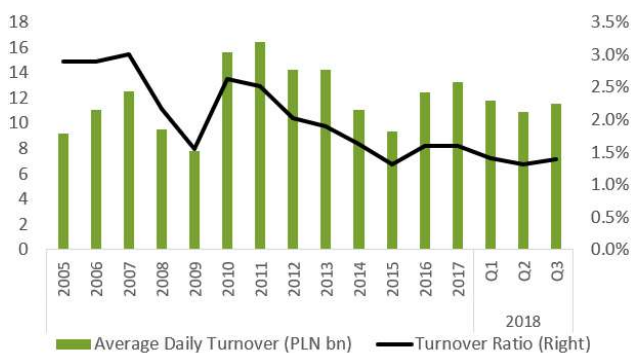
Source: Danmarks Nationalbank

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



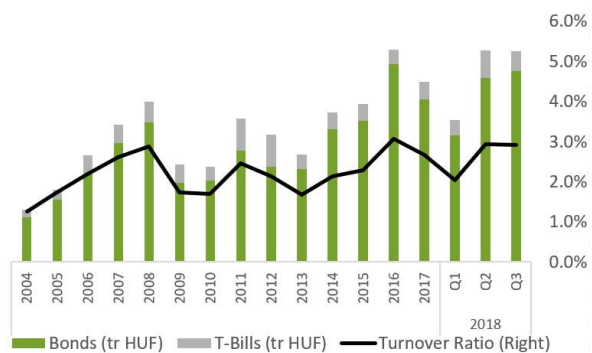
Source: Bank of Greece and ECB

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



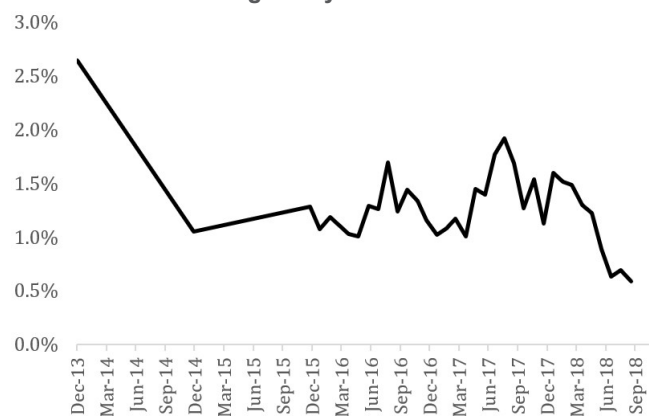
Source: National Depository for Securities (KDPW), WSE

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). Please note that due to changes in reporting after MiFID II, the turnover for Q1 and Q2 2018 is not comparable with turnover in previous years.

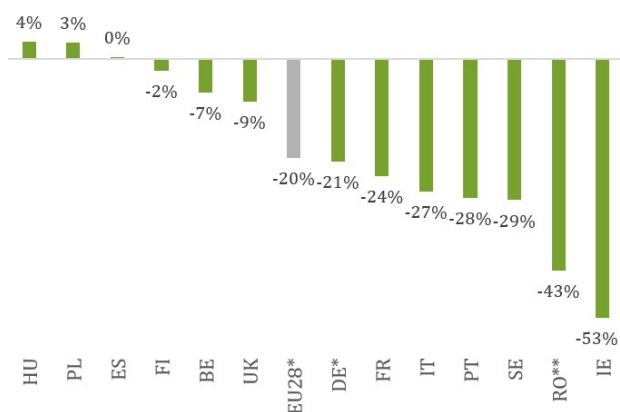
²² Turnover on Electronic Secondary Securities Market (HDAT).

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.

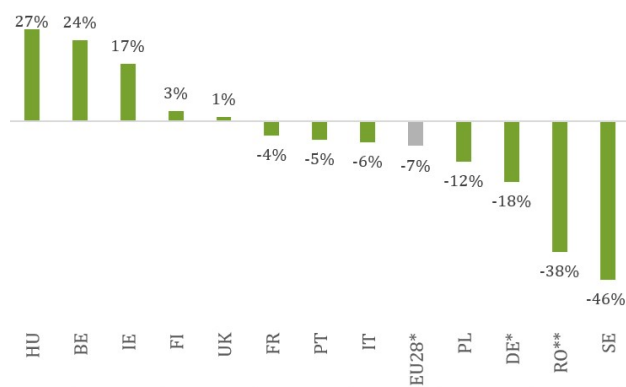
²⁵ Turnover ratio of the government securities issued on domestic market. Official values reported as average monthly turnover ratios, which have been converted assuming 20 business days per month. Turnover volume not available.

5.18 Quarterly change in average daily turnover volumes of EU government bonds: 2Q18 to 3Q18



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.

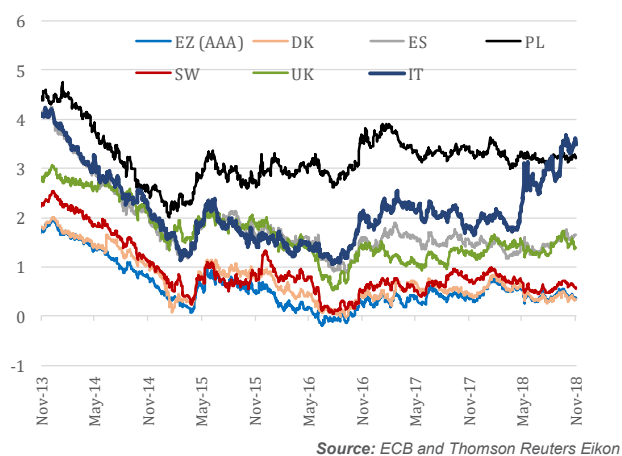
5.19 Annual change in average daily turnover volumes of EU government bonds: 3Q17 to 3Q18



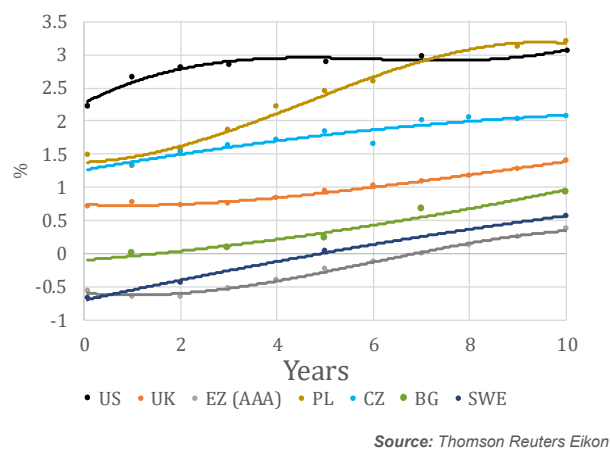
Source: AFME with information from European DMOs and other agency sources. See section 5 for details on aggregation basis and sources. *Europe total and Germany is sourced from Trax Facts as the quarterly variation of average daily volumes of government and sovereign bonds. **Romanian turnover volume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

6. Valuations

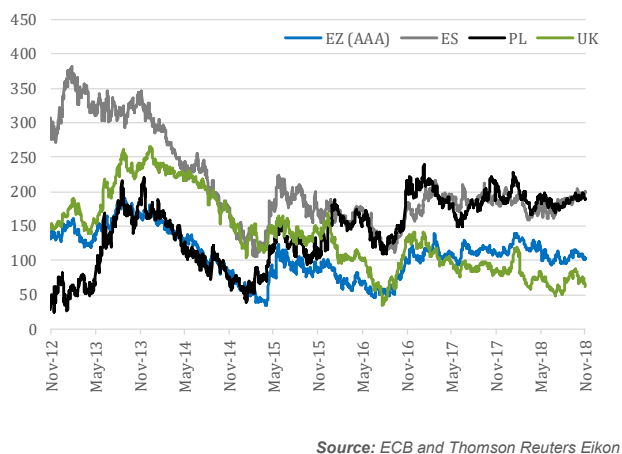
6.1 Selected European 10Y spot yields



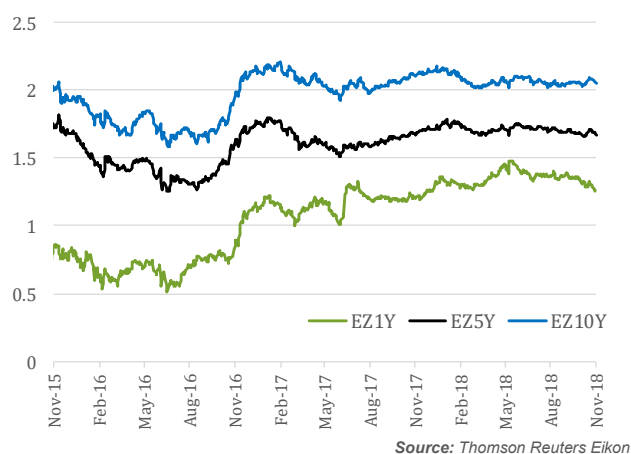
6.2 Sovereign spot yield curve of selected jurisdictions: 22 November 2018



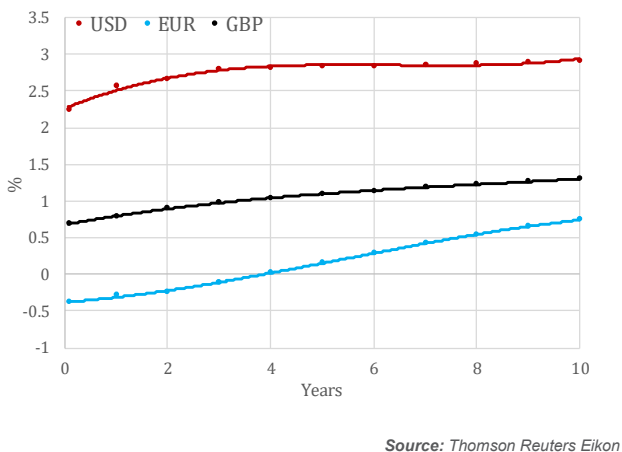
6.3 Slope: 1Y10Y spread (bps)



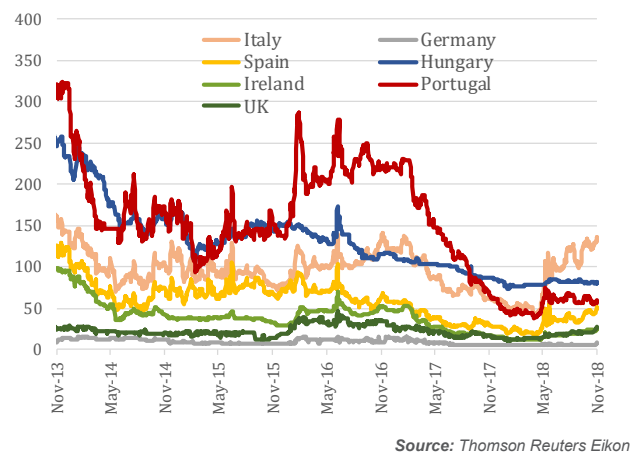
6.4 Market-implied inflation expectations (EuroZone)



6.5 Overnight index swap (OIS) yield curve: 22 November 2018



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



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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