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Online appendix to BIS Bulletin no 92: Central clearing in government bond markets

Conditions in government bond markets vary substantially across jurisdictions. There are significant differences in terms of overall size, the level of liquidity and the prevalence of clearing and trading modalities. Table A.1 summarises such differences for the largest sovereign bond markets in the world.

In terms of size and liquidity, the US market is by far the largest in the world. The outstanding amount is approximately $27 trillion and average bid-ask spreads are lower than 2 basis points (bp). Other large markets include Japan and a number of European countries. In terms of liquidity, only the German market is close to that of the United States. In other markets, spreads are around 10 bp.

Trading and clearing modalities vary substantially across jurisdictions. Central clearing is significantly less prevalent in government bond markets, especially in the cash segment when compared with other asset classes. Dealer-to-customer trades are cleared bilaterally everywhere. In the United States and Japan, trades in the inter-dealer segment of the cash bond market are centrally cleared.

In Europe, the situation is complicated by the absence of a unified market for government bonds. Trading methods, market participants, intermediaries and even clearing arrangements vary significantly across national borders. The European market is fully dealer-intermediated, but these dealers often specialise in only a subset of European-issued government bonds. High-speed electronic trading similar to the stock market is common only in one segment, whereas the bulk of market activity uses dealer-reliant strategies, including voice trading. The European Commission has been trying since 2015 to harmonise some of the requirements in the pursuit of its objective to create a single financial market in the European Union through the capital markets union.

Conditions in selected government bond markets

Table A.1

	France	Germany	Italy	Japan	United States
Outstanding volume (USD billions)	2,421	1,954	2,102	8,500	26,853
Bid-ask spread (bp)	7.5	3.3	12	9	1.8
Central clearing	Only repo (50%)	Only repo (80%)	D2D cash and repo (95%)	D2D cash and repo almost fully cleared	D2D on-the-run and D2D repo
Trading protocol	Request for quote and voice	Request for quote and voice	D2D CLOB for benchmarks	Request for quote and voice	D2D CLOB for benchmarks

D2D = dealer-to-dealer, CLOB = central limit order book.

Sources: Federal Reserve Bank of New York; Financial Stability Board; European Securities and Markets Authority; Refinitiv; Bloomberg; BIS.

The analysis of the effect of central clearing in government bond markets focused on the size of netting efficiencies and, more recently, on the additional liquidity that market participants will have to source and manage as the share of securities cleared increases. Table A.2 summarises the results of these studies.

Empirical studies of the effects of central clearing in government bond markets

Table A.2

Study	Effect of central clearing on…	Market segment	Main results
Fleming and Keane (2021)	Netting efficiencies	US cash	Central clearing of cash trades would have lowered dealers' daily gross settlement obligations by roughly 60% in the run-up to March 2020 and by 70% in the most active trading days.
Baranova et al (2023)	Netting efficiencies	UK cash and repo	Better netting in repo markets would have allowed dealers to expand their trading in March 2020 by 2.5 times more than under prevailing clearing rates. The effect in cash markets would have been limited.
FICC (2023)	Changes in margin requirements	US cash and repo	Central clearing would increase daily margin requirements of indirect participants by $26.6 billion, a relatively modest amount compared with initial margins for other asset classes, but a large increase compared with current practice.
Bowman et al (2024)	The leverage ratio	US cash and repo	The impact of central clearing on leverage ratio constraints would be limited, as dealers already structure their trades to maximise netting.
FICC (2024)	Changes in margin requirements	US cash and repo	Central clearing would increase daily margin requirements by $58.4 billion, including the additional margin that existing clearing members will be required to post.

References

Baranova, Y, E Holbrook, D MacDonald, W Rawstorne, N Vause and G Waddington (2023): "The potential impact of broader central clearing on dealer balance sheet capacity: a case study of UK gilt and gilt repo markets", Bank of England Staff Working Papers, no 1,026, June.

Bowman, D, Y Huh and S Infante (2024): "Balance-sheet netting in US treasury markets and central clearing", Federal Reserve Board, *Finance and Economics Discussion Series*, no 057, July.

Fixed Income Clearing Corporation (FICC) (2023): *Looking to the horizon: assessing the potential expansion of US treasury central clearing*, DTCC White Paper to the Industry, September.

——— (2024): *The US Treasury clearing mandate: an industry pulse check*, DTCC White Paper to the Industry, July.

Fleming, M and F Keane (2021): "The netting efficiencies of marketwide central clearing", Federal Reserve Bank of New York, *Staff Reports,* no 964, April.