Bund Auctions

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In the last year there have been several Bund auctions receiving too few bids, most recently on 7th January 2009[1]. But a failed auction does not represent a shortage of demand: if that Bund had been for sale at a fixed price of €90, there would have been plenty of demand. Rather, the failed auction is a failure of the auction mechanism to find the price at which there was €6 billion of demand.

Co-incidentally, the United Kingdom Debt Management Office recently consulted about how it could better sell gilts. First among the suggestions[2] was a more robust auction mechanism. And the proposed auction mechanism would work just as well for Germany.

What is wrong?

In an auction of a liquid financial asset, nobody wants to be the only bidder. Nobody wants to own a financial instrument that others aren't willing to buy at the same price.

But if selling €6bn as one lump, a bidder is compelled to take exactly that risk. So if there is some reason that causes a possible bidder to think that other bidders might think that other bidders are risk averse, that is a good reason to bid a lower price for a smaller quantity.

If that convoluted risk can be lessened, the paper could be sold more reliably at a higher price. And a better auction would almost eliminate that risk, improving the sale price and the certainty of achieving it.

The new auction mechanism

Basics

The Finanzagentur/Bundesbank should not sell a single lump of €6 billion of Bunds[3]. For the market to absorb so much comfortably, each market participant needs more information about how much other market participants would be willing to pay. So instead such auctions should be split into smaller pieces.

Each auction should consist of 40 'auctionettes'. These auctionettes would be held one minute apart. The 39-minute duration of the auction would be short enough to have the undivided attention of investors, but each auctionette would still be small enough to be absorbed easily.

Minimum prices and quantities

Such a fast pace means that the seller's process must be entirely automated, so each auctionette must be subject to a minimum price. Before the auction the seller would choose a

[1] With €6bn of the Bund 3¾% Jan 2019 for sale on 7th January 2009, there were bids for €5237mn, of which only €4058mn were accepted. www.bundesbank.de/download/presse/pressenotizen/2009/20090107.tender.en.pdf.
Arguably as bad was the auction of the 4¼% July 2018 on 2nd July 2008: with €7bn for sale, there were bids for €4965mn of which only €4615mn were accepted. www.bundesbank.de/download/presse/pressenotizen/2008/20080702_zuteilung.en.pdf.

[2] This comment is derived from the reply sent to the United Kingdom Debt Management Office, which is available at and via www.jdawiseman.com/papers/finmkts/distributing_gilts.html.

[3] Throughout this essay the term "Bunds" embraces all German central-government debt: Federal bonds, five-year Federal notes, Federal Treasury notes and Treasury discount paper.

‘maximum rate of price decline’, perhaps approximating the price value of 1bp of yield. The minimum price for the first auctionette would be the bid yield observed in the market five minutes before the start of the whole process, minus twice the maximum rate of price decline. Each auctionette after the first would have a minimum price of the clearing price of the previous auctionette, minus the maximum rate of price decline. Further, the minimum price for the auctionettes would not be allowed to increase from one auctionette to the next by more than that same maximum rate.

The whole of each auctionette will be sold. Let the number of members of the Bund Issues Auction Group be n, and the nominal size of each auctionette be x. Then each member of the group (each ‘member’) that bids for less than x/n would be deemed to bid for the shortfall, rounded up, at the minimum price for the auctionette. So if each auctionette is €150 million, bidding amounts in integer multiples of €100k, and there are twenty-eight members, then a member not otherwise bidding at an auctionette would be deemed to bid for €5 400k at that auctionette’s minimum price. This is a very small risk for a member, which might occasionally buy cheaply tiny quantities of extra Bunds. Even in the theoretical worst case, in which nobody bid at any of the auctionettes, each member would acquire $^1/_{28} \approx 3.57\%$ of the whole auction, at an average yield of about +21½bp over the bid yield five minutes before the auction started. However, the existence of these deemed bids guarantees to the seller that the whole of each auctionette will be sold, and hence so will the whole auction.

And from time to time there would indeed be a small number of auctionettes receiving too few or even no bids. This would be entirely ordinary, and not a cause for market instability, just a small fall in price and a resumption of bidding.

There could also be a minimum price for the whole auction, merely by specifying that the minimum price for each auctionette not be below that whole-auction minimum.

Information to publish

What information should be revealed after each auctionette? It is important that this not damage the position of successful bidders, so certain pieces of information should not be revealed. For example, revealing the total quantity of bids received in that auctionette would punish a bidder who was one of few bidders, and thus reintroduce needless risk.

It suffices to reveal:

- the amount sold in that auctionette;
- the (uniform) price at which it was sold;
- the proportion of the lowest accepted bids that were filled (the “scaledown”);
- the amount for sale in the next auctionette; and
- the minimum price of the next auctionette.

More information about the number, distribution and size of submitted or accepted bids should not be revealed. If just the above were supplied, then a member who had bid for the whole auctionette would know that other traders would receive information that is, except for the price, maximally bullish. This means that a member who bids for the whole auctionette is reassured that the pattern of other members’ bidding or not bidding could not cause a fall in the price of the newly acquired debt, so a bidder’s risk is further reduced. Indeed, in order to minimise the information released about the distribution of the bids, auctionettes should be uniform-price rather than bid-price; after a uniform-price auctionette it is sufficient to reveal only the lowest accepted price, but after a bid-price auctionette it is necessary to reveal both the lowest and the average accepted prices.

Non-competitive bids

Currently the rules allow members to make a non-competitive bid, which is filled at the auction's average price. Under the new mechanism this would be redundant, as a member wanting to buy €400 million at the average price could just bid significantly above market for €10 million at each auctionette. Hence the non-competitive facility should be scrapped.

Auctionettes—conclusion

Thus splitting an auction into auctionettes would reduce the risks faced by both members of the Bund Issues Auction Group and by the Finanzagentur. The average sale price would be slightly higher, and the authorities could be more confident of selling the whole auction.

Further, during an auction, the quality of price discovery would be very high, improving liquidity to and reducing the dealing cost of end-investors.

Alternatives

Dealers tend to suggest other solutions to uncovered auctions. One is widely liked: dealers are given an option to buy, at the auction's average price, more of the bond being sold. Such options typically have an expiry of one to three days, and the quantity given to each dealer is determined by an average of amounts purchased through bidding at recent auctions. Dealers like being given options.

Such options fool the accounting conventions used by governments. The accounts either record a sale (through exercise), or record nothing, and fail to see that a sale occurs only when at a sub-market price.

Selling call options is good (again, see this author's reply[2] to the UK Debt Management Office), but not in this indirect form. Sovereigns would achieve more reliable financing at a better price by improving the auction mechanism.

Large dealers also like being paid fees to sell debt in a syndicate. But government debt does not need syndication; it needs an auction mechanism that can find the price at which demand matches supply.

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