Better Auctions and Better Products

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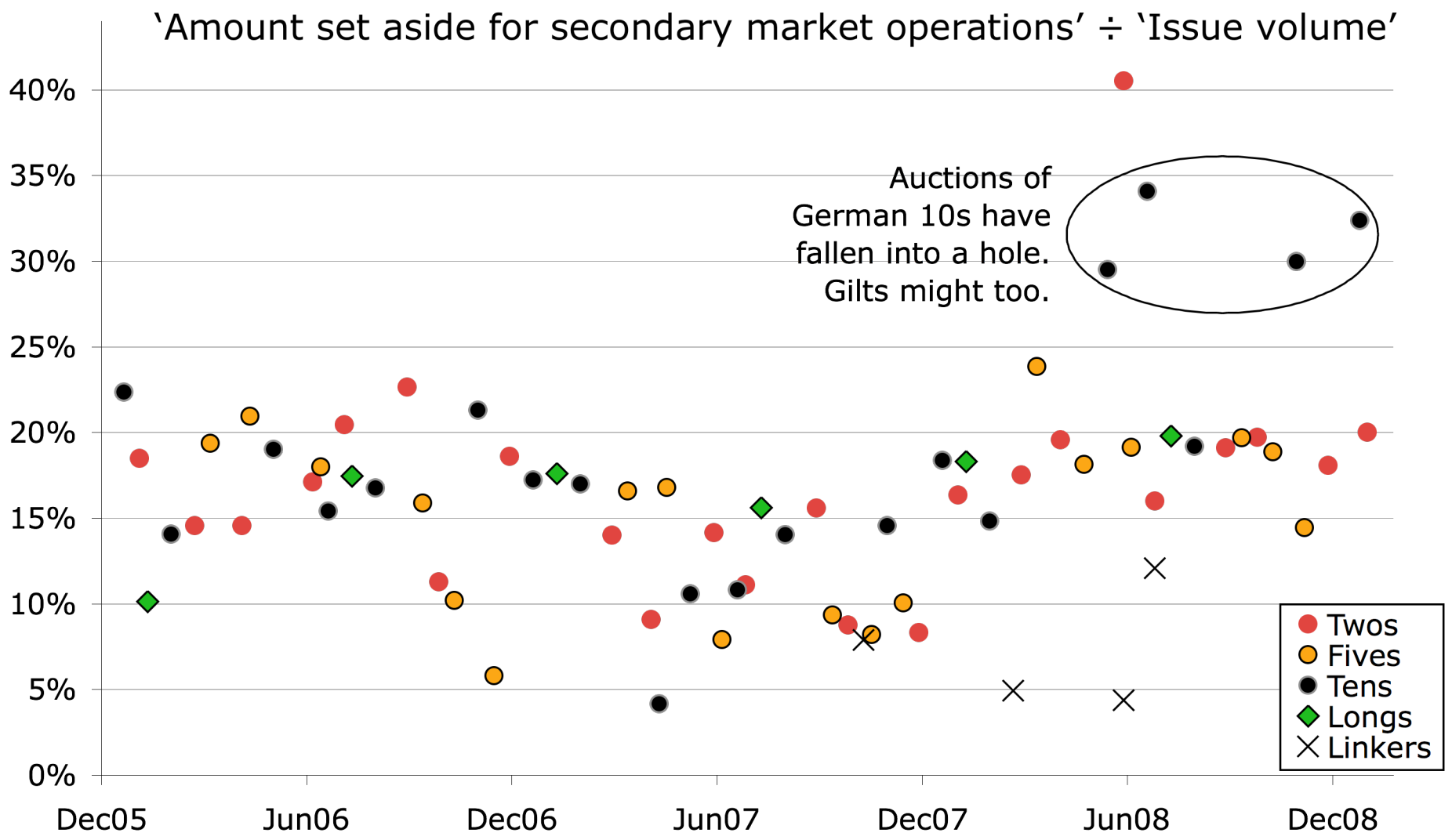
The price is how ‘good’?

- Hitherto, just before an auction, there has been a self-fulfilling belief that the market price is good in enough billions for an auction to clear near that price.

- For German 10s, this belief has gone.

Germany: unsold proportion



Three Possibilities

- There are only three possibilities:
  - Don’t fall in the hole (= proactive);
  - Climb out of the hole (= reactive);
  - Stay in the hole (= pessimal).

- The Deutsche Finanzagentur is in the hole (= belief that prior market price won’t clear).
- UK DMO can choose a better plan:
  - know that the hole beckons.

Failure of auction mechanism

- Commentators: “too little demand”.
- But if those Bunds had been for sale at a fixed price, say €90, there would have been plenty of demand.
- Rather, the auction mechanism failed to find the price at which there was €6bn of demand.

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MOST IMPORTANT SLIDE

Why failure to find price?

- Auctions sell stuff, and provide information about the demand.
- But that information, if available to bidders, helps them learn the price.
- Gilt auction reveals that info too late.
- Christies / Sothebys / Bonhams / etc use English auctions, as bids inform bidders. But wrong for divisible goods.

How fix?

- So bidders should see some measure of demand before auction finished.
- That entails splitting a £4bn auction, so that early pieces inform later bidding.
- There are messy possibilities:
  - Tap £200mn every day for a month? Yuck.
  - Unpredictable discretionary taps? Yuck.

How to fix, as an auction?

- Keeping the auction concept:
  - Split a £4bn auction into 40 ‘auctionettes’;
  - Hold auctionettes one minute apart;
  - Too fast for human intervention by seller:
    - must be totally automatic;
    - so there must be a minimum price;
  - Say, for a 10-year, min = £0.08 cheaper than clearing price of previous auctionette.

What to reveal about bids?

- Don’t punish a lone bidder!
  - Don’t reveal total number of bids.
  - Don’t reveal total quantity of bids.
  - Don’t reveal gap average–clearing, hence each auctionette uniform price.
- Be nice not nasty to a lone bidder (unlike current auction system).

What to reveal about bids?

- About this auctionette:
  - The amount sold;
  - The uniform clearing price;
  - Prop'n of clearing-price bids filled = scaledown;
- And about the next auctionette:
  - The minimum price;
  - And the (typically unchanged) amount for sale.
- Not the number or quantity of bids, nor the average of their prices (whether of all or of accepted). Be nice to a lone bidder.

Soft pressure

- Optionally, DMO could state that “Wholesale GEMMs are expected to bid for all of most auctionettes”.
- That doesn’t punish if something dramatic happens, but sets an expectation.

A GEMM's Strategy

- Previous auctionette cleared at 100.50 Next £100mn, minimum price 100.42.

- Needs £5mn from each (£200mn total), and wants another £10mn from each (£400mn).

A GEMM's Strategy

- Optimal strategy? Something like:
  - Bid ≥101 for £5mn;
  - Bid 100.51 for £10mn;
  - Bid 100.49 for £25mn;
  - Bid 100.46 for £30mn;
  - Bid 100.43 for £30mn.
- Even if only bidder, not a bad outcome. If others bid for only £50mn, clearing price 100.46, at which ≈£50mn bought. Also OK.

Details: Deemed Bids

- ∃ n GEMMs; size of auctionette = £x;
- Each GEMM not bidding for ≥x/n deemed to bid for deficit at min price;
- Notate bene: NOT additional. Don't punish a lone bidder! If a lone bidder bids for £10mn, that bidder bids for £10mn, not for £10mn+x/n.

Details: Minimum Price

- Minimum price cannot rise by more than 1×DV01 at each auctionette:
  - A player or players might make a mistake, bidding far too high;
  - Restricting the maximum rise to the same 1×DV01 prevents, in the next auctionette, the deemed bids punishing the innocent by more than a trifle.

Details: Squeezes

- Squeeze game: buy the bond at a price of fair+ε, becoming monopoly owner.
- Impossible with auctionettes.
  - Squeezer buys first few auctionettes;
  - Other bidders respond, price rises;
  - Squeeze costs huge, ≥ monopoly profits.
- But DMO might be redundantly cautious: could superimpose a y% rule.

Auctionettes: Q & A

‘Q’ first; ‘A’ second.

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Selling calls on long gilts

- Selling calls means the DMO sells gilts into a rising market;
- Perfect zero-discretion transparency;
- What Plenderleithian taps should be;
- Balance-sheet efficient: £2 not £100;
- Promote gilt rather than swap options;
- High implied means HMT will be paid.

Details: Underlying

- A gilt!
- Conventional gilts with maturity much much longer than option expiry. So any gilt with ≥3 years to go;
- As long gilts can and should be much larger, the 4¼ Dec 2055;
- ILGs later, or never.

Details: Expiry

- Shorter gives more certainty about funding;
- Options always outstanding (ideally several dates), so very short implies very high turnover;
- Compromise: 28 day options:
  - Well-understood sort of horizon;
  - Weekly auctions ⇒ 4 sets outstanding.

Details: Strikes

- Want to sell optionality, so strikes near the money;
- Just ATM strikes would be acceptable;
- But even split of 25%, 50% and 75% δs:
  - Slightly reduces variability of funding;
  - Ensures delta-hedgers stabilise market over good range of prices.

Details: Structure

- OTC?
  - Not transferable.
- ‘Gilt’ with pay-to-exchange rights?
  - At expiry DMO’s counterparty could be anybody, anything, or receiver thereof.
- Listed pay-by-M2M option?
  - Best, but DMO will often be paying margin before receiving premium+strike.

Scale

- Imagine that every week £500mn of each of 25%, 50% and 75% are sold.
- Outstanding would be four series each of three strikes, totalling £6bn nominal. During a year £78bn, being an expected £39bn of funding + ≈£2bn of premium.
- Given size of funding need, about right.

Options as Taps

- Selling call options:
  - The transparent way to do ‘taps’;
  - Slightly market stabilising;
  - HMT should breakeven or better relative to sales of underlying;
  - A little uncertainty about achieved pace of funding, but with 28-day expiries, only little.

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