“Bid Shading and Bidder Surplus in the U.S. Treasury Auction System” by Hortaçsu, Kastl and Zhang

Discussion by Paulo Somaini

MIT, NBER

December 2014
Introduction

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Answer: Primary Dealers surplus is 2.3 bp of issuance ($6.3 bn of $27 trillion). Total bidder surplus is 3 bp

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1. Data: some interesting and motivating facts
2. Economics: PD may be able to take advantage of their position
3. Data & Economics: how to detect the ability to exercise market power
4. Results in the paper
5. Results in future versions of the paper?
Data: Motivating facts

- On average, Primary Dealers bid higher yields and larger quantities than Direct and Indirect bidders
  - Difference in yields: 3 bp for short-term bills, up to 13 bp for ten-year notes
  - Difference in bid-quantities: average PD bids for 10-20% of issuance (other bidders 1-5%)
  - Naturally, PD win a smaller proportion of their tendered quantity
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- Possible explanations:
  - PD have systematically lower willingness-to-pay
  - PD have more elastic demand: they may be willing to buy large quantities at high yields (low prices)
  - PD exercise market power
Figure X

$p$

$q$

$100$

$0$
Economics: Ability to Exercise Market Power

Figure X

\[ p \]

\[ q \]

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Treasury Auctions

December 2014
Key insight: ability to exercise market power depends on the (semi) elasticity of the residual supply curve which can be estimated from the data.
Data & Economics: Detecting market power

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\[ \text{Bids} = \text{Willingness to Pay} - \text{Bid Shading} \]

Optimal Bid Shading \( \approx \) Quantity \( \times \) Slope Residual Supply

If bidders are optimizing, their willingness-to-pay can be recovered from the residual supply and observed price and quantity pair.
Primary Dealers shade their bids 1.4-3 bp more than Direct and Indirect bidders

Surplus is an upper bound of potential savings to tax-payers: higher valuations for infra-marginal units, information rents, exercise of market power
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Value of the information: PD benefit from knowing their customers bids (Hortaçsu and Kastl, 2012)
- Information about the residual supply (competition)
- Information about the value in the secondary market (fundamentals)
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Conclusion

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- Hope collaboration will bring about further developments: new economic questions, new methods