

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

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- Surplus is an upper bound of potential savings to tax-payers

- 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?



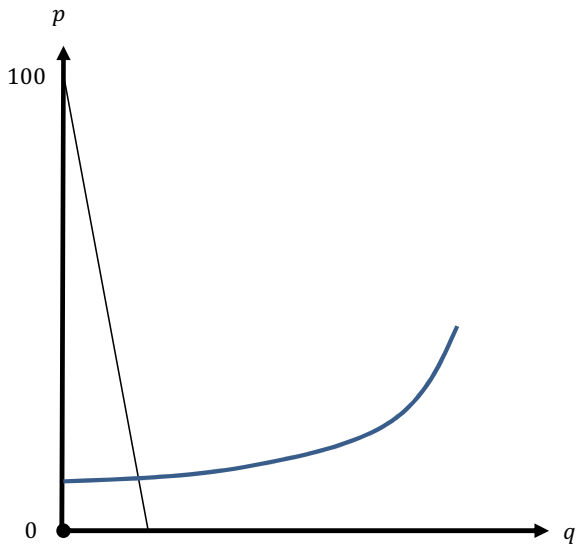
# Data: Motivating facts

- 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

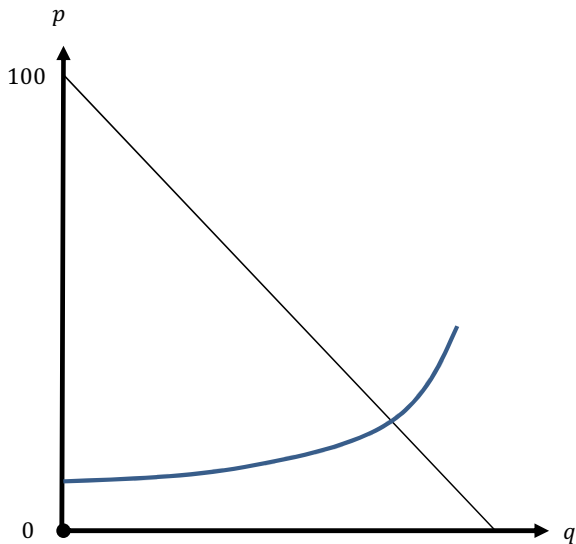
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- Possible explanations:
  - PD have systematically lower willingness-to-pay
  - PD have more elastic demand: they may be willing to buy large quantities at high yields (low prices)
  - PD exercise market power

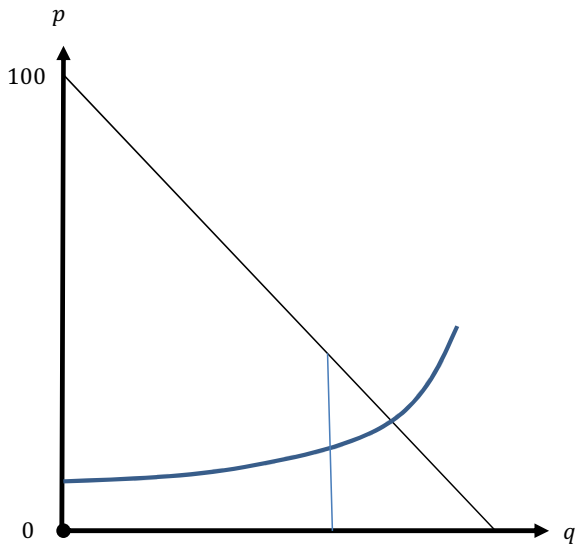
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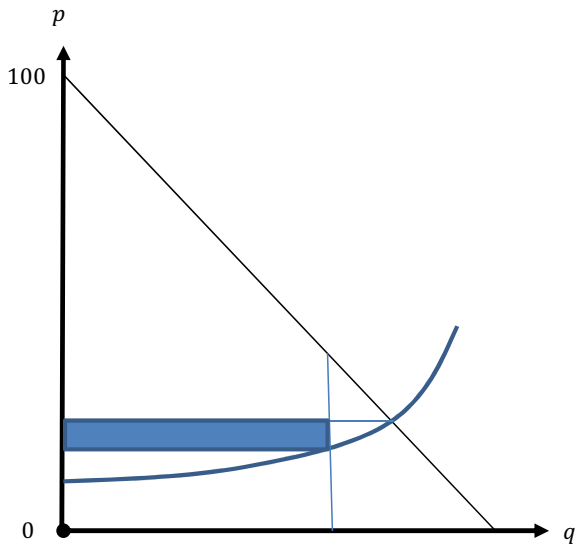
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- Bids = Willingness to Pay - Bid Shading
- Optimal Bid Shading  $\approx$  Quantity  $\times$  Slope Residual Supply
- If bidders are optimizing, their willingness-to-pay can be recovered from the residual supply and observed price and quantity pair

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- PD surplus is 2.3 bp of issuance (\$6.3 bn of \$27 trillion). Total bidder surplus is 3 bp (\$8.1 bn)
- Surplus is an upper bound of potential savings to tax-payers: higher valuations for infra-marginal units, information rents, exercise of market power

# Results in future versions of the paper?

- Decompose bidders' surplus in its three components:
  - Valuation of infra-marginal units
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- Risk-free interest rate: high frequency indicator of the willingness-to-lend
- 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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- Looking forward to reading future versions of this paper
- Hope collaboration will bring about further developments: new economic questions, new methods