

CHAZEN INSTITUTE RESEARCH BRIEF

Selling Government Bonds: Why Auction Format Matters

KEY TAKEAWAYS

- ✓ A first-stage auction requires primary dealers to bid their commissions to insure the underlying issue, and foretells the nature of the follow-on public auction, including whether it is likely to fail due to insufficient demand or too-low bids.
- ✓ Underwriting commissions in discriminatory auctions are about twice as high as in uniform auctions. However, there are more auction failures under a uniform format.
- ✓ The most common format globally for a second-stage auction is discriminatory, but each country and case is different. India seems to favor uniform auctions, whereas Japan recently switched to discriminatory auctions for its 30-year bonds.

As governments throughout the world rush to raise cash to fight the Covid-19 pandemic via auctions, finance ministers face a choice: which format offers their bond issues the best chance of netting the most money at the cheapest interest rate while insuring against auction failure?

In “[Underwriting Government Debt Auctions: Auction Choice and Information Production](#),” **Chazen Senior Scholar Suresh Sundaresan**, along with coauthors Sudip Gupta, associate professor of finance at Fordham University, and Rangarajan Sundaram, dean of New York University’s Leonard N. Stern School of Business, examine a novel, two-stage process for selling government securities. The process calls for obtaining underwriting bids from primary dealers in a first-stage auction and then dispersing the securities to a wider public through a second-stage auction.

The Auction Process



In India, the first stage requires all primary dealers to participate in a so-called underwriting auction via a discriminatory format, where dealers bid their fees (commissions) to underwrite the issue. The lowest bidders win the right to underwrite the follow-on auction, and determine the amount each underwrites and the dealer's fees. The underwriters also guarantee, if the Reserve Bank of India (RBI) elects to exercise its option to devolve the main issue, that they will buy shares up to their commitment, or offset their accepted bids against their underwritten amount in the second auction.

Stage two, the main auction in which the primary dealers bid along with the rest of the market participants, provides a choice of format. Most common globally is a second discriminatory auction (DA), but India seems to favor a uniform price auction (UPA), in which the price is set uniformly across all bidders.

Research

The researchers examined 590 reissue auctions of government securities in India from 2006 to 2013. During this period, the auction format switched five times (thrice in 2009, once in 2012, and again in 2013) from uniform to discriminatory or vice versa, resulting in 415 UPAs and 175 DAs.

Discriminatory auctions are more costly to insure. Participants are famous for shading their second-stage

Government bond auctions can fail when the demand falls below the auction supply, which has happened in developed and developing countries from India to Germany. Governments can also decide to change their auction format at any time. For example, the Bank of Japan recently decided to switch to discriminatory auctions for its 30-year bonds.

bids—coming in at lower prices than was reached in the first auction, especially in DAs. This bid-shading is often attributed to the “winner’s curse,” which assumes the underwriters may have overestimated demand in order to win the contract, although other forms of risk aversion may also play a part. A unique feature of this two-stage process is that issues aren’t in danger of failing due to lack of demand, since primary dealers are required to bid at least their entire underwriting commitment. But, if too little money is pledged in the second stage, the issuer may call to devolve an auction by exercising its option that requires the primary dealers to make up the difference. During the period studied, the RBI devolved 73 (or more than 10 percent) of India’s reissue auctions.

Results

The first-stage underwriting auction provides a trove of information that helps inform second-stage participants regarding how to bid, according to the researchers. The aggressiveness of

first-stage bidders and their fee structure essentially predict the likelihood of bid-shading and the probability of devolvement in the second stage.

In general, discriminatory auctions are about twice as costly as uniform price auctions during the first stage, with greater volatility of bids in the second stage. The ex-post net benefit, based on a cheaper interest rate for netting money when demand is low (auction failure), is higher for uniform price auctions. The paper cites the ex-post average net benefit per UPA for the period studied was INR 5.9 million, while the DA format resulted in an average small net loss of INR 1 million.

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