WORLD BANK GOVERNMENT BOND MARKET CONFERENCE AND TECHNICAL WORKSHOP

Developing Local Currency Bond Markets in Emerging Economies

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Alternative Price Discovery Methods

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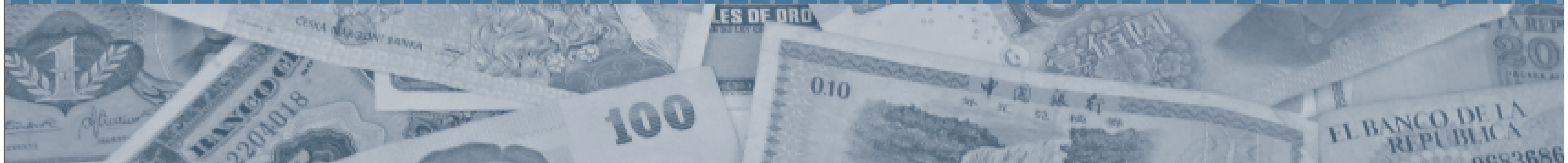

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Why is Price Discovery Important?

- Investors have confidence that:
  - The price quoted is close to the "true" price
  - The price is "fair", and not being manipulated
  - Information is shared
- Reduced uncertainty increases trading and liquidity, reduces costs. Benefits investors and the authorities:
  - Debt manager: reduces issuance costs, increases demand
  - Central Bank: facilitates transmission mechanism
- Prices also need to be disseminated
  - Gives uninformed investors a benchmark, improving confidence, stimulating trading
  - Investor and others need to mark to market
    - Portfolios, assets and liabilities
    - Collateral

Price Transparency

- But the "price" is unknowable
  - There is no "model", only supply and demand
- Market inefficiencies/imperfections
  - Trading costs, fragmentation, uneven order flow
- Price discovery depends on micro-structure; and the optimal market structure depends on
  - Stage of market development; type of security; type of traders
  - Degree of capitalization and competition; trading expertise
  - Requirements of the authorities: debt managers want immediacy & low execution risk
- Drives choices…
  - Periodic v continuous markets (or mixed?)
  - Dealer/quote driven v auction-agency
  - OTC v on-exchange, etc
- …which impact on transparency

Impact of ETPs

- Potential benefits from:
  - Real time information, centralised data
  - Automated transactions
  - Reduced operational costs (although upfront investment)
  - Improved surveillance, real time auditing
- Provides a vehicle
  - To discover prices, through quote obligations
  - To disseminate pre and post-trade prices, as well as trade information
- But does not resolve the trade-off between liquidity & transparency
  - Excessive price transparency increases the risks of trading, especially for market makers with large orders
  - Too much pre-trade transparency erodes the market makers' profit margin: narrows the spread between bid & offer prices
  - Too much post-trade transparency increases market makers' risk of loss when covering their positions

Finding a Price: Call Markets

- Three related functions
  - Stimulating liquidity – bringing buyers and sellers together
  - Finding the price
  - Disseminating the price
    - Many users want a single price – reduces search costs and will specify the fix price for their transactions
- In liquid markets, aggregate and publish the trades on the consolidated order book
  - Records buying and selling interest expressed as limit orders
  - But not realistic in most government securities markets
- Creating a price fix: the call auction
  - Concentrates buyers and sellers in a specific time interval
  - Electronically, or trading floor, or the coffee house [compare gold fix]
  - Through firm price quotes, bid and offer, on an ETP (eg MTS, 3 times a day) or actual trades (FX fix, Brazil OTC market)

Call Markets: Some Questions

- All bonds, benchmarks, or the less liquid bonds, minimum number of quotes?
  - What happens if no one turns up?
- Who is the auctioneer
  - the DMO, central bank, stock exchange, ETP, a broker, bankers' association, …?
- Should the debt manager play an active role in the fixing session?
  - Compare market maker of last resort
  - Must act as price stabiliser not price setter!
- How to avoid insider trading, conflicts of interest, front running, collusion…
  - Compare current criticisms of gold fix, and FX fix

Indicative Prices

- Indicative prices from market participants
  - Primary dealers or a broader group? [Should be part of PDs' obligations]
  - Collected direct from ETP (Malaysia)
  - Provided by dealers (Brazil, Romania, UK)
  - Cannot be used directly for trading; but used for valuation, yield curve calculation; and tomorrow's benchmark
- Questions
  - Real trades or virtual trades; mid market prices or spreads?
  - Too risky in an illiquid market?
  - Coping with conflicts of interest and collusion (Libor problems)
  - Who consolidates prices in a dispersed market: DMO, central bank, exchange
  - Who is responsible for quality
  - Is a yield curve a substitute or a complement?
  - What happens when there are no secondary market trades; how should can a yield curve be calculated?

UK Arrangements

- At end of each day all market makers submit closing prices for all gilts to UKDMO
  - Conventional and index linked, whether or not traded (but not strips nor those with tiny outstanding volumes)
- DMO knocks off outliers, publishes averages by 5 pm
  - Prices also sent to Euroclear, used to value collateral in automatic repo facility
  - Prices of strips calculated from the yield curve
- DMO emphasises that it has no quality control responsibility
  - Sees its role as purely mechanical; a service to the market
- DMO also publishes in close to real time a screen which averages the marker makers' indicative prices of benchmark bonds
  - Reduces search costs; gives investors confidence to trade

Policing the Market

- The new Libor (so far only Libor)
  - Statutory regulations by UK Financial Conduct Authority
  - Independent agency – can impose a required code of conduct
  - Greater use of actual transaction data to corroborate submissions
  - Widening number of contributors
- The analogue in government securities markets?
  - DMO publishes the raw data (with a lag?)
  - Confine to benchmarks only?
  - DMO publishes prices of non-traded bonds on basis of own (published) algorithms, and/or yield curve
  - Whose responsibility: the DMO or market conduct authority?

The Role of Vendors

- Is their role different from DMOs (or central banks)?
- Should they collect the data; does it matter where from?
  - ETP, dealers, settlement system…?
- How independent are vendors?`
  - Does their commercial objective compromise their independence
  - Dangers of choosing preferred ETPs
  - Are Stock Exchanges less conflicted?
- Who regulates them?

A final thought for the discussion

- ❖ Techniques to encourage price discovery are only one part of the wider secondary market reform programme
- ❖ Abstracting today from wider issues of micro-structure, infra-structure, supply and demand
- ❖ The focus is on what debt managers (and others) do or can do to facilitate price discovery and subsequent price dissemination

Thank You!