Alternative Price Discovery Methods
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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
  – Investors and others need to mark to market
    • Portfolios, assets and liabilities; and 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
  – 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 spreads and profits
  – Too much post-trade transparency increases market makers’ risk of loss when covering their positions
Finding a Price: Call Markets

• Creating a price fix: the call auction
  – Concentrates buyers and sellers in a specific time interval

• Three related functions
  – Stimulating liquidity; finding the price; and 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

• Delivery venues
  – Electronically, or trading floor, or 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, although also collects OTC)
  - 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; vendors?
  - Who is responsible for quality
  - Is a yield curve a substitute or a complement? What happens when there are no secondary market trades; how 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 (UK B2C market is OTC)
  – Reduces search costs; gives investors confidence to trade
Policing the Market

• The new Libor (so far new rules apply only to 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!