EUROPEAN CENTRAL BANK

EUROSYSTEM

Fixed income market liquidity: Where do we stand?

An overview of the main issues

Martin Scheicher, ECB

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The opinions in this presentation do not necessarily reflect those of the ECB, the SSM or the Eurosystem.

Covid Crisis, bonds and "Over the Counter" trading

- **Covid crisis in March 2020 => Collapse of market liquidity in US Treasuries** ("World's safe asset", unique SR episode)
  - Large and liquid market trading low-risk instrument saw severe dislocation
  - Several recent stress events in US and Europe (Bund tantrum in 2015)
- Functioning of bond market depends on **robust liquidity,** which is driven by the structure of trading
- Unlike stocks, bonds and swaps are not traded on exchanges, but "**Over the Counter**" in opaque bilateral transactions
- OTC trading needs **Dealers** (GSIB banks) as market makers

This overview in a nutshell: Determinants and resilience of market liquidity for US and EU bonds / swaps and policy measures to foster liquidity

Three interconnected themes for today:

1. **Rising importance of bond intermediation** due to higher issuance (Nexgen and UST) and shrinking central bank purchases (bonds as core instrument for conduct of monetary policy)
2. **Changing structure of bond intermediation**: Bank – light and technology-heavy mechanism
3. **Declining robustness of intermediation**: During last decade increased stress => implications for central bank role as "Dealer of last Resort"

What determines liquidity of bond market?

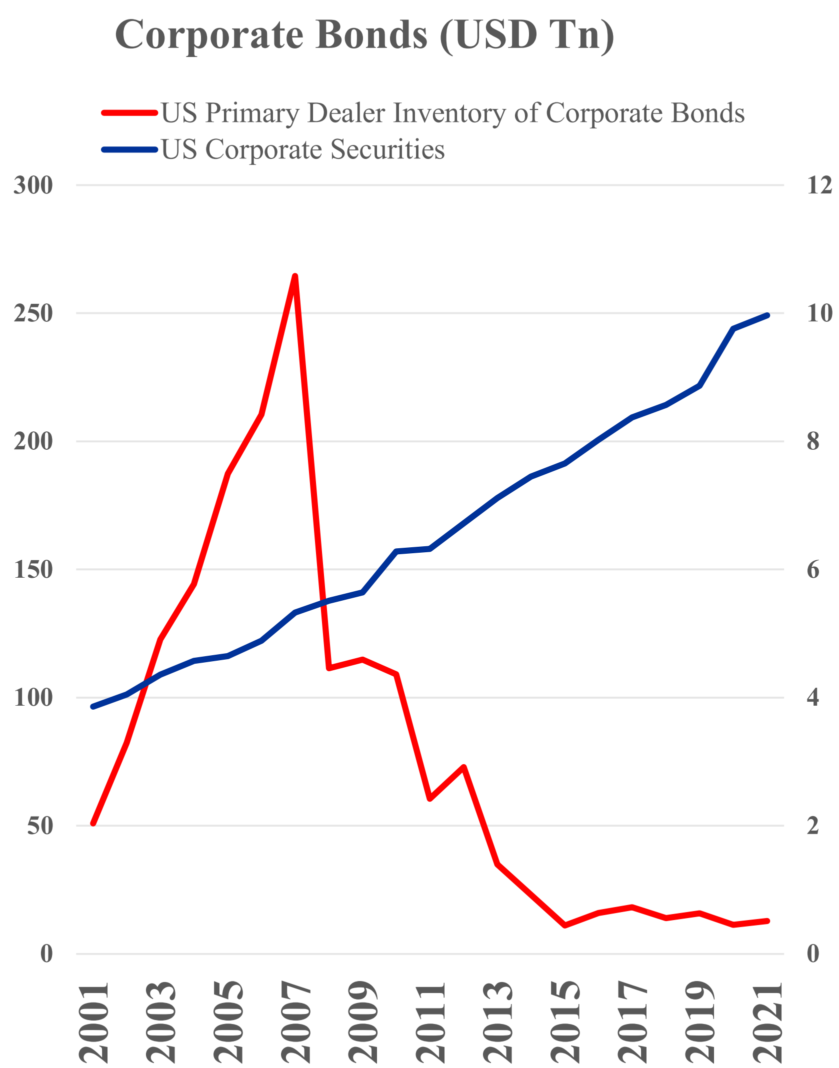
- Market liquidity = ease with which trader can buy or sell at a price close to the current market price
  - Key elements: Direct transaction costs (e.g. bid-ask spread), speed of execution or price impact of trades
- Bond (and swap trading) is **decentralised**
  - **Centralised**: Exchange with transparent anonymous central limit order book & CCP; "all to all"; order driven **-> Equity**
  - **Decentralised**: Two segments = Inter-Dealer and Dealer-client; Bargaining, quote-driven trading **-> Bonds & swaps**
- Decentralised structure requires intermediary to link buyer & seller: **Dealers** provide liquidity

Who is a “Dealer” and what do they do?

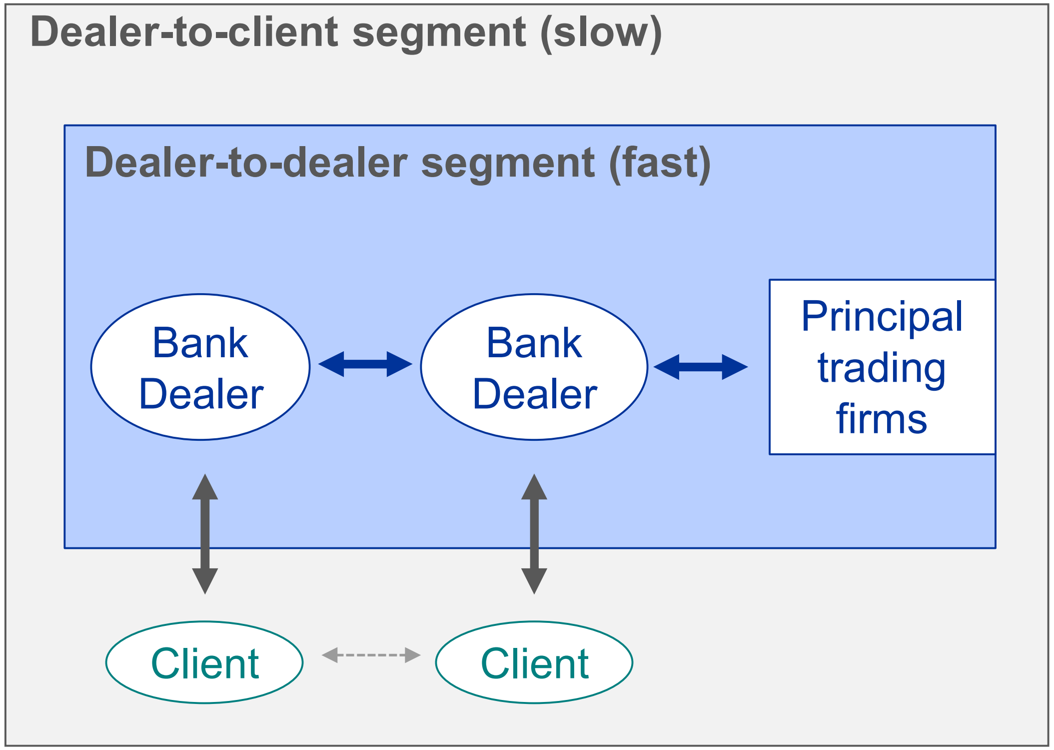
- **Core Dealers: Group of global systemically important banks**
  - For example: BAML, Barclays, BNP Paribas, Citi, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JP Morgan, Nomura, Nat West, Morgan Stanley, Societe Generale or UBS
- **Dealer = Market maker rather than proprietary trader**
  - Strong relationship of Dealer and clients (Client only has few Dealers)
  - For bonds: Dealers put their capital at risk to warehouse against imbalances in order flow => cost of funding & access to Dealer’s balance sheet needs to be compensated
  - For swaps: “Passing hot potato” to achieve flat book (i.e. reduce market risk) => Dealer has high demand for hedging => high Inter-Dealer trading
- **GFC reforms: Dealers face higher capital requirements**
- **Low rates further increase pressure on Dealers**

Dealers react to rising cost of "balance sheet space"

- "*Balance sheet space is treated like expensive real estate, available only to positions that can afford to pay rental fees that are now much larger.*" (Duffie, 2018)
- Bank dealers are moving from market making to match making
- Active **electronic trading** in many OTC segments
- Non-bank Dealers = "**Principal Trading Firms**" grow strongly
- Bank Dealers still dominate Dealer-Client trading



Stylized structure of major bond markets



Bank Dealers

- Actively trade with other Dealers (e.g. PTFs) and with Clients
- Act as Clearing Members in **CCP**s
- Secured funding with bond collateral in **repo markets**
- **Fast trading** due to central limit order book

Clients

- E.g. asset managers, trade with a few Dealers, but rarely with other clients (hence no “al to all”)
- Need high intermediation
- **Slow trading** due to voice / request for quote

Weight of Dealer intermediation and market "speed"

Higher dealer intermediation (‘*slow markets*’)

Lower dealer intermediation (‘*fast markets*’)

	Corporate bonds (US)	US Treasury off-the-run	Bunds	US Treasury on-the-run	Bund & UST Futures
Notional size	$ 9 trn	$ 15 trn	$ 2 trn	< $ 2 trn	**$ 34 trn**
Electr. trading	Low, but growing	Medium	Low	**High**	**100%**
Role of Dealers	**High**	**High**	**High**	Medium	Low (PTFs)
Role of PTFs	Medium	**High**	Low	**High**	**High, HFT**
Role of CCPs	None	Medium	None	Medium	**High**
Trade costs	**~ 40 BP**	> 10 BP	> 5 BP	< 1 BP	< 1 BP
Covid crisis	**Dislocation**	**Dislocation**	**Modest**	**Modest**	**Modest**

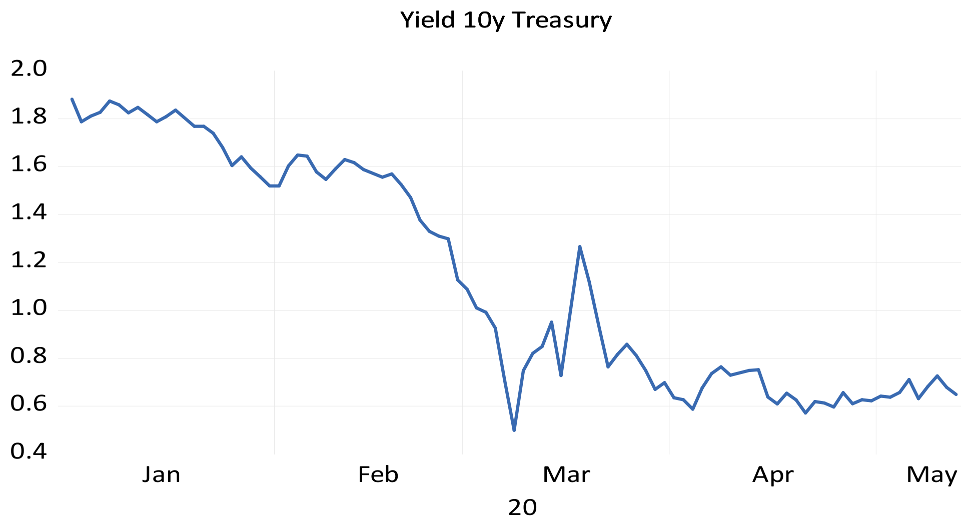
US Treasury trading: An *Iceberg* of market liquidity?

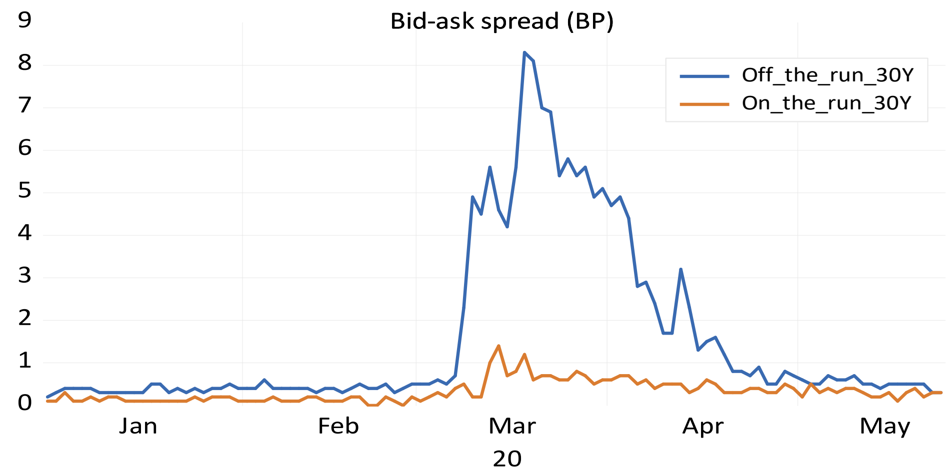
- **On-the-run Treasuries (Notional < 5%): Daily Volume ~ $ 400 BN with bid-ask spread < 1 BP**
  - **Fastest and most active segment of UST = Inter-Dealer trading:** Similar to exchange, hence also very liquid (Central Limit Order Book for most trades); **Non-bank Dealer market share ~ 60 %;** PTFs use algorithmic trading to provide intraday liquidity

- **Off the run Treasuries (older bonds; Notional > 95%): Daily Volume ~ $ 150 BN with bid-ask spread > 10 BP**
  - **Slow** = Bulk of outstanding notional traded via "Request for Quote" or voice, limited PTF participation, hence **largely Dealer-intermediated** trading

Why did Covid crisis cause strains in US Treasuries?

- **Stress in "world's safe asset"**
  - Many forced sellers of Treasuries as only asset which can be sold in crisis
  - But few buyers: Rise in Dealers' balance sheet costs has reduced their warehousing capacity
- **Dislocation illustrates close links between funding & market liquidity and systemic risk**
- US repo market again under stress (as in September 2019)
- **Fed reaction**: Massive buying of Treasuries (in particular off-the-runs, unlike GFC), Corp bonds and ABS = "**Dealer of last resort**"

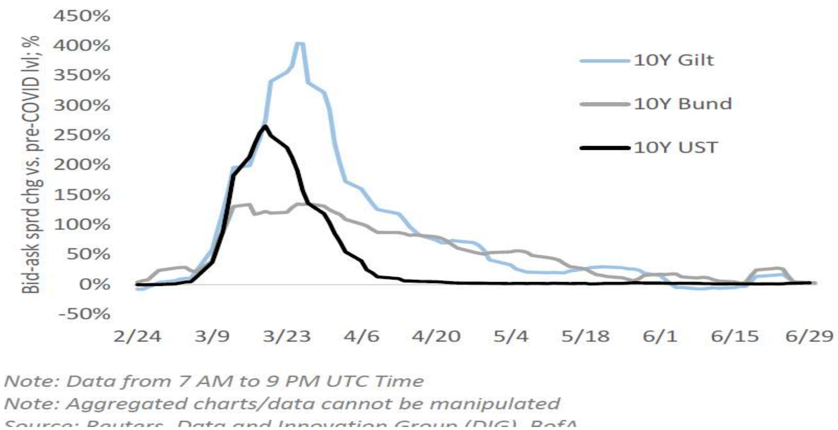


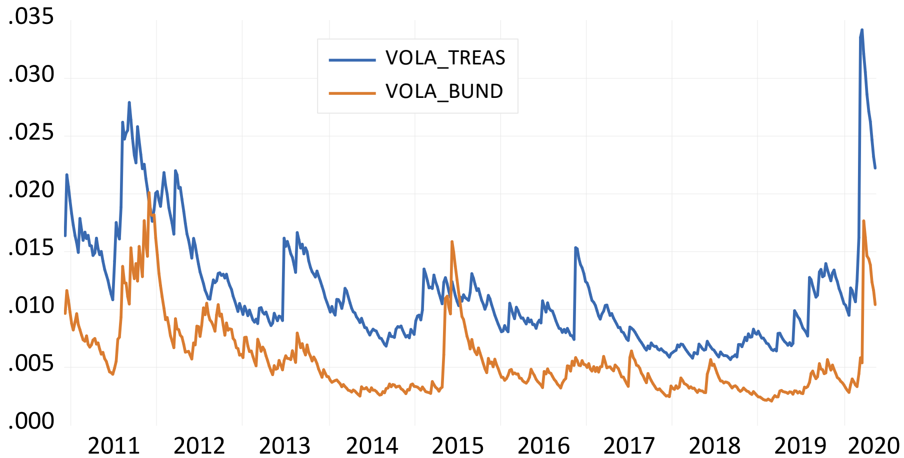


How did euro area bond market perform?

- High volatility in Bund market in March 2020, but lower than US Treasuries and UK gilts
- No breakdown in no-arbitrage relations (ie similar instruments with different prices)
- High frequency trading only prevalent in Bund futures
- Compared to US Treasury on the run trading most EU cash segments still “slow” , many buy & hold investors
- **Eurosystem approach quite different from Fed** (APP, collateral, MFI access)

Bid ask spreads (5day-MA)





Which policies could foster market liquidity?

- CCPs: Reduce pro-cyclicality in CCP margin calls to avoid “dash for cash” (FSB, BoE, ESMA)
- Bank Dealers: Adjust Leverage Ratio to reduce balance sheet burden eg for repos (FSB, G30)
- Market structure: “All to all” trading and central clearing of cash bonds to stabilise intermediation (G30)
- Transparency: Publish comprehensive data on transactions (SEC, ESMA “Consolidated tape”)
- Central Banks: NBFI access to central bank operations and design of “Market Maker of last Resort”

Contact details

Martin Scheicher

Email: Martin.Scheicher@ecb.europa.eu

Tel: +49 69 1344 8337

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