



Joint work with Iain Hardie and Arjen van der Heide.

Photograph: NY2, the single most important site of trading of Treasuries.

# Why Hasn't High-Frequency Trading Swept the Board?

## Shares, Sovereign Bonds and the Politics of Market Structure

Donald MacKenzie and Charlotte Rommerkirchen

A Manhattan dealing room, Oct 2017. \$50 million Treasurys to buy.

BrokerTec: places bid in anonymous electronic order book.

Bloomberg FIT (fixed-income trading): non-anonymous 'request for quotation' to Primary Dealers, authorised by Federal Reserve Bank of New York.

Federal Reserve Bank of  
New York



Two different market structures:

- 1. High-frequency trading (HFT)/anonymous order book (eg BrokerTec)**
- 2. Dealer-client (eg Bloomberg FIT)**



1. **‘Materialised’ political economy:** past conflicts give rise to crucial predictive signals. MacKenzie, ‘Material Signals’, *AJS*, 2018.
2. **Current material arrangement,** ‘pinch points’ (eg exact microwave frequencies, places on datacentre roofs, etc.) and alternative arrangements.
3. **Politics of market structure:** why some markets (eg US and European shares) dominated by ultrafast high-frequency trading while HFT excluded from other markets (eg European sovereign bonds).

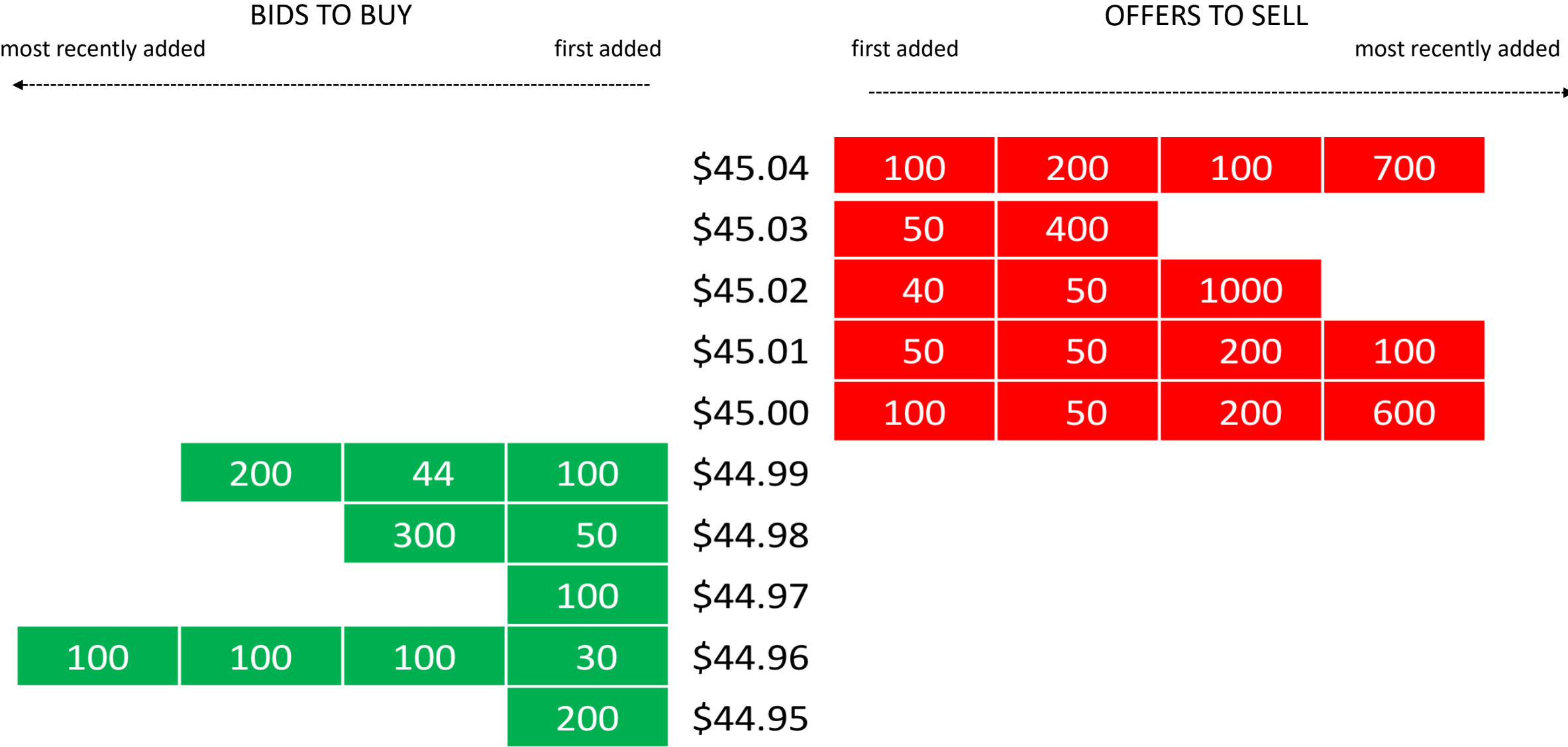
331 interviewees (including multiple interviews with 43), of which 84 high-frequency traders; visits to two datacentres; participation in industry meetings and training course, etc.



**High-frequency trading and anonymous order books: the 'Treasury triangle' (source: interviewees)**

**NY2:** BrokerTec  
**Nasdaq:** eSpeed  
**CME:** Chicago Mercantile Exchange (Treasury futures)

# Open, anonymous order book

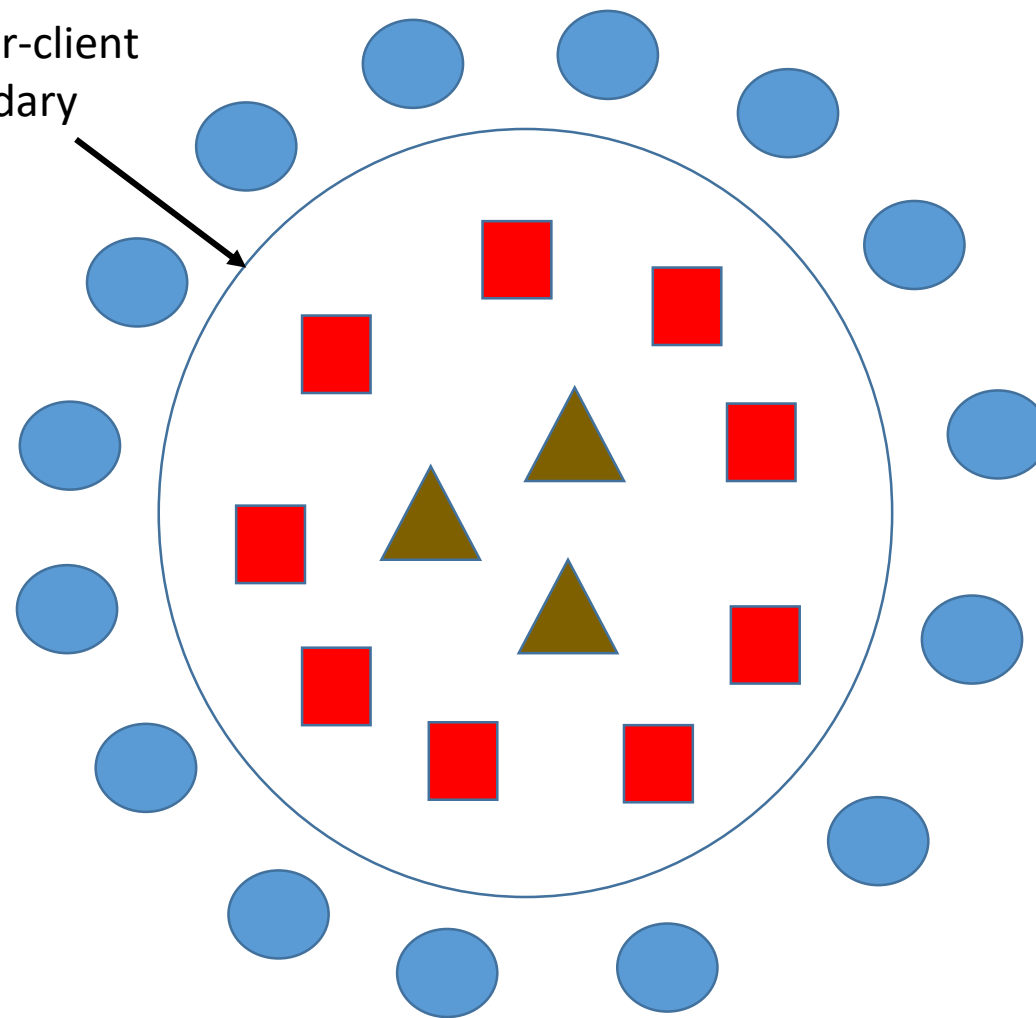


In Treasurys, HFT/anonymous order book  
nested within **dealer-client market  
structure**

**Big dealers usually major  
banks: ‘price makers’.**

Even biggest investment-  
management firms are  
**‘clients’** and, essentially,  
**‘price takers’.**

Dealer-client  
boundary



Dealer



Inter-dealer broker



Client





1920s:  
telephones  
1960s: brokers'  
screens

Treasurys dealers'  
desks, late 1980s.  
Source: interviewee  
XU



Don't let the old photo fool you! There is 'resistance to technical change' but that's not main story. Rather:  
**a) Who/what** should have access to which systems? **b) How** to 'electronify'?



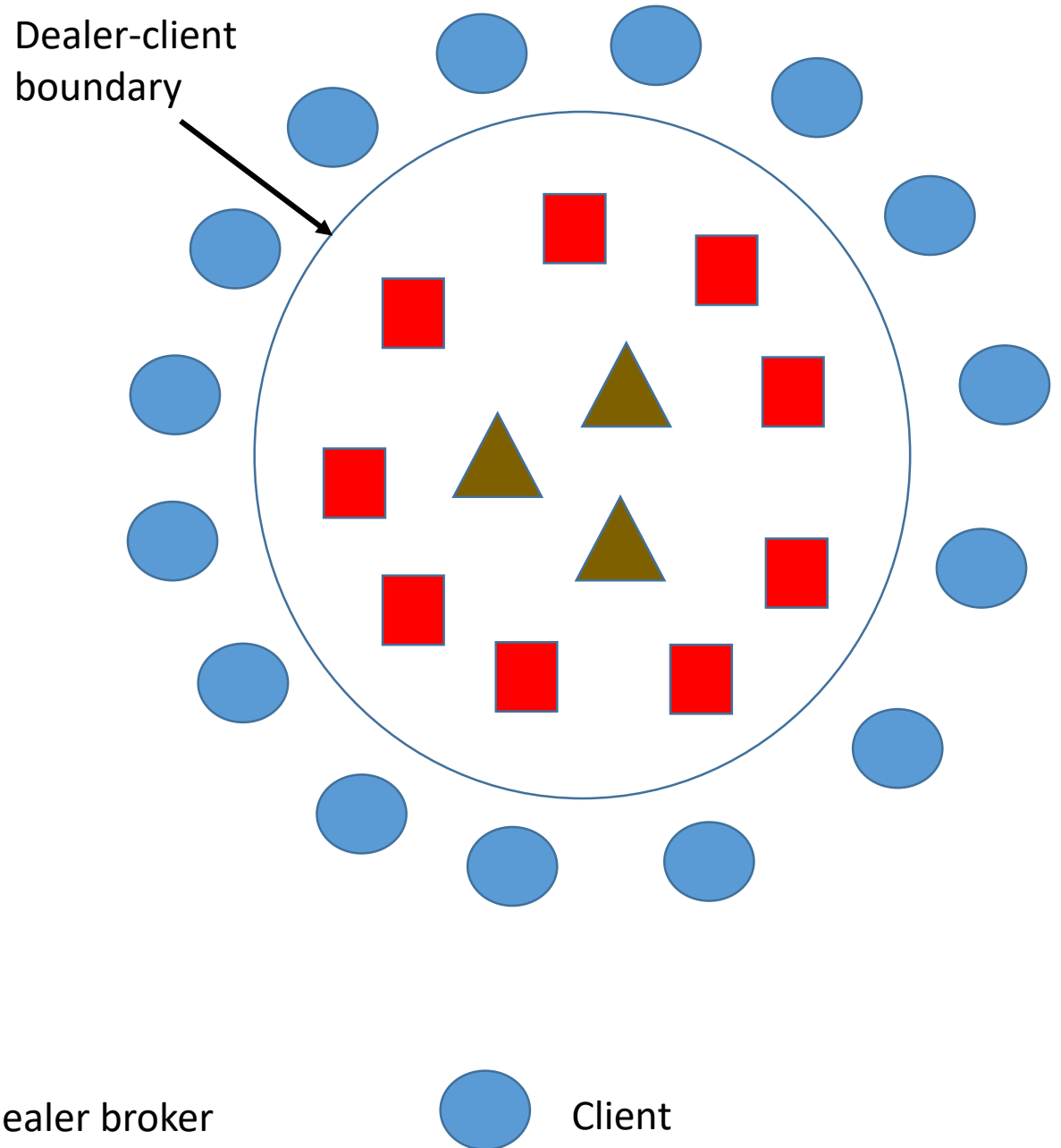
# Dealer-client boundary is **policed**.

Eg late 1980s: inter-dealer broker  
RMJ starts to provide price  
screens to clients. Dealers  
boycott RMJ:

‘blew up on them, right?’  
(interviewee XV)

‘lost almost all of their [inter-  
dealer] business overnight’ (XP)

RMJ backed down within week.



	US	Europe
Shares	Dominated by HFT/order-book. <b>17%</b>	Dominated by HFT/order-book. <b>18%</b>
Sovereign bonds	Dealer-client, but HFT/order-book in interdealer market. <b>65%</b>	Intact dealer-client market. Almost no HFT.  UK gilts <b>90%</b>  Bunds <b>≥ 95%</b>
Futures	HFT/order-book.	HFT/order-book.
Foreign exchange	Mixed market structure: dealer-client, but major HFT inroads. <b>60%</b>	
Listed options	Order-books, but not classic HFT.	Some order-book trading, but much dealer intermediation.
Interest-rate swaps	Despite order-books, largely intact dealer-client market. <b>90%</b>	Largely intact dealer-client market.

Sources: interviewees;  
**percentages of dealer-intermediated trading**  
 from Anderson et al., Bank of England Financial Stability Paper 34 (2015), except European shares figure from Cave, TabbForum (10 July 2018)



## US shares.

Dynamics of HFT/order-book market structure: mutual reinforcement of

- **Competing** trading venues with: open, anonymous order-books; fast 'matching engines'; small 'tick sizes'; low, tiered fees
- HFT, especially market-making algorithms

*it was the same [HFT] firms who were the big customers of Island and Archipelago, Brut, Attain, Instinet and they all had the same wants and desires out of an electronic trading system. I think that's why ... you start to see market structure coalesce around price-time priority, low latency, pricing tiers, very similar functionality because the same principal actors who were feeding the same list of desires to exchanges globally and they all say if you do A, B, C to X, Y, Z I will be able to do more business on your platform (interviewee DB)*



50 Broad St, Manhattan, location of Island, established 1995. Authors' fieldwork photograph

Foucault: competition not ‘a given of nature’; needs ‘produced ... by an active governmentality’ (*Birth of Biopolitics*, 120-2).

- 1970s’ Congressional reform creates **unified national clearing system** for shares (National Securities Clearing Corporation)
- Securities and Exchange Commission measures such as **order-handling rules** that require Nasdaq dealers to display prices on Island and similar competing venues if better than their own (although effects diluted by on-screen rounding of Island’s  $1/256$ ths to sixteenths of dollar)







## European shares.

Similar process, slightly later:

- New European Multilateral Clearing Facility (EMCF)
- HFT facilitates new trading venues; pressures of competition transform existing exchanges;
- new venues and transformed exchanges facilitate HFT;
- Regulatory reform (esp. elimination of 'concentration rules')



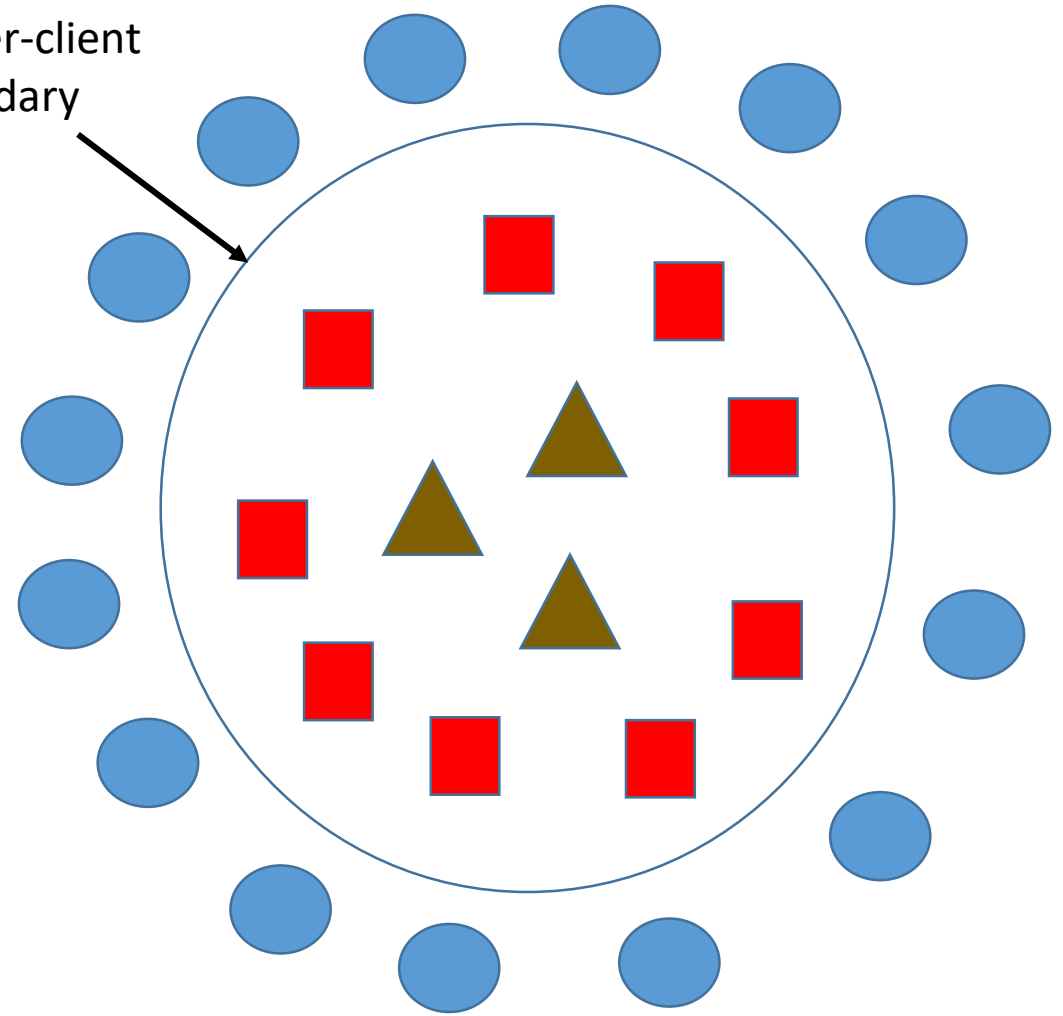
**US Treasurys.** No equivalent regulatory reform. Patchwork of bilateral clearing and bank-dominated Fixed Income Clearing Corporation.

Separate systems for:

- inter-dealer trading (eSpeed, BrokerTec)
- dealer-customer trading (eg Tradeweb, Bloomberg FIT)

*we're not an aspiring Primary Dealer so we can't say that. And anyway, we don't just want to be sneaking in the door [to] some bank club (int CD).*

Dealer-client  
boundary



Dealer



Inter-dealer broker



Client

# MTS launches government bond trading venue for Slovakia

INSTITUTIONAL ⓘ FEBRUARY 27, 2018 —BY VALENTINA KIRILOVA ⓘ 0 COMMENTS



**European sovereign bonds.** Despite largely unified clearing, almost no HFT and dealer-customer market structure almost intact. Key role of MTS (interdealer electronic trading).

MTS founded in 1988 as *Mercato telematico dei titoli di Stato*. ' [A]lmost part of the European *acquis*' (interviewee EK). 2006 crisis as HFT firms seek access. Some in 'dealer community ... just went berserk. They literally went berserk' (interviewee YB).

Two pervasively important factors:

**1. Clearing**

**2. Regulatory intervention or its absence: the limits of neoliberal 'active governmentality'**

In sovereign bonds, dealer-client market structure 'anchored' in primary dealer system (compulsory bidding, etc) and relations to governments:

'Remember, today is a Thursday' (VS)

'[G]uarantee to me that you're going to buy 3% of my debt and get a banking license, come on board. If not, go to hell' (YB).