What is Happening to Bond Market Liquidity?

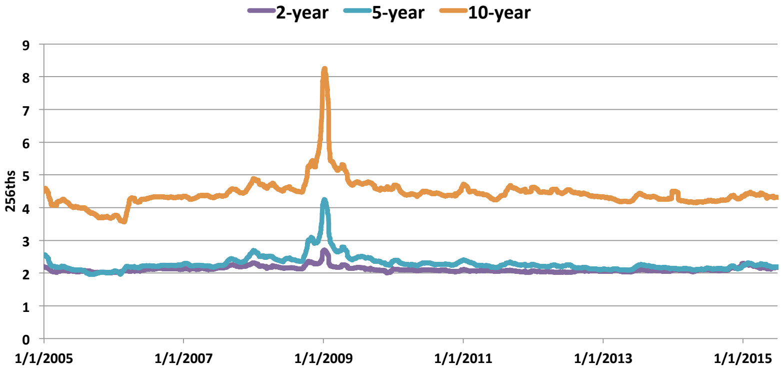
Darrell Duffie
Stanford University

Asian Bureau of Finance and Economic Research (ABFER)
4th Annual Conference, Singapore May 2016

Yes, Liquidity Has Changed

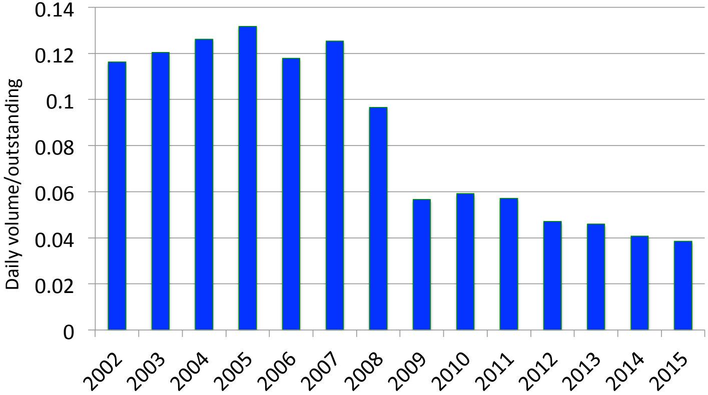
- Some market makers are giving up some franchises.
- Large market makers hold much smaller inventories.
- Smaller trades sizes are offered, and turnover is lower.
- HFT firms, asset managers, bond funds, hedge funds, and electronic trade platforms are playing bigger roles.
- There is a higher cost and lower volume of securities financing.

At treasury electronic trade platforms Bid-ask spreads are narrow and stable



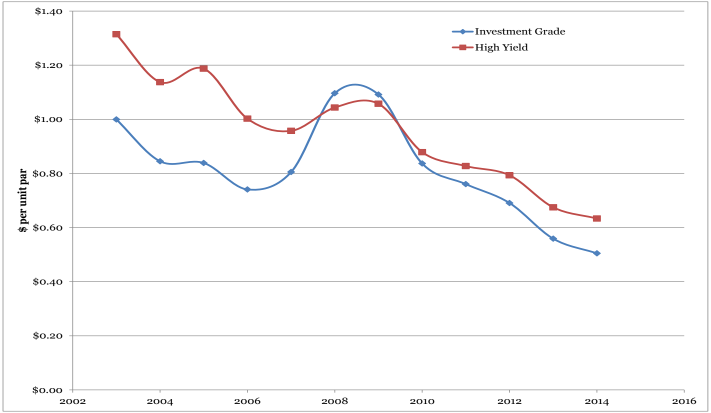
Source: Adrian, Fleming, Stackman, and Vogt (2015) (BrokerTec data)

Treasury market turnover



Data source: SIFMA

Corporate bond – average bid-ask spreads



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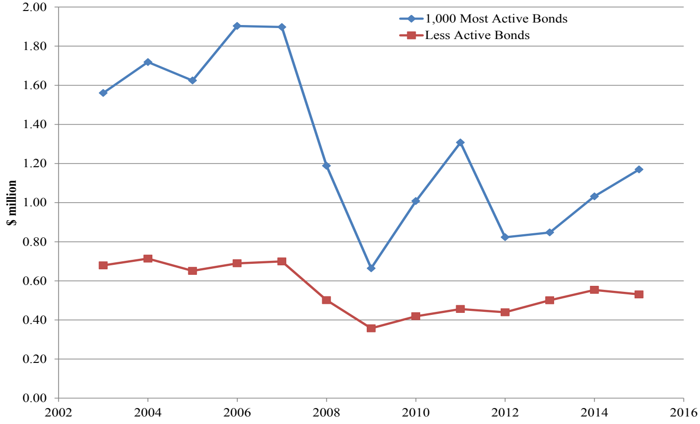
Corporate bond – average trade size



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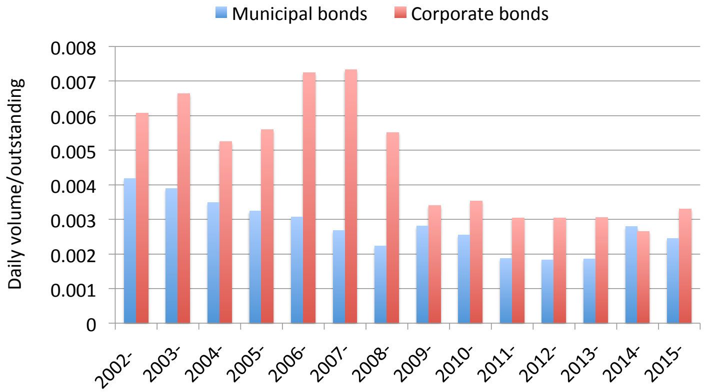
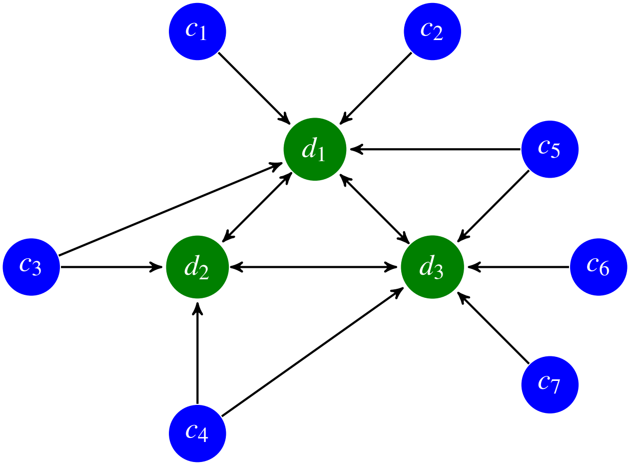
Turnover of corporate and municipal bonds

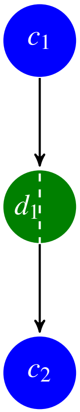


Data source: SIFMA

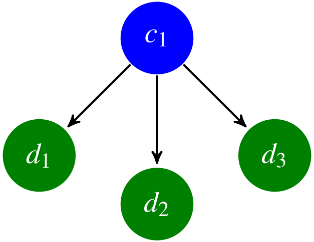
Conventional bilateral OTC markets



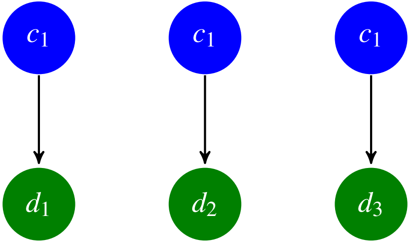
Dealers are increasingly agents, not principals



Customers request quotes from several dealers

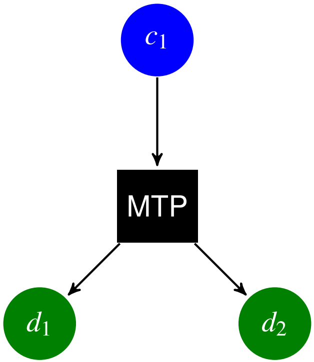


But only one at a time in bilateral OTC markets

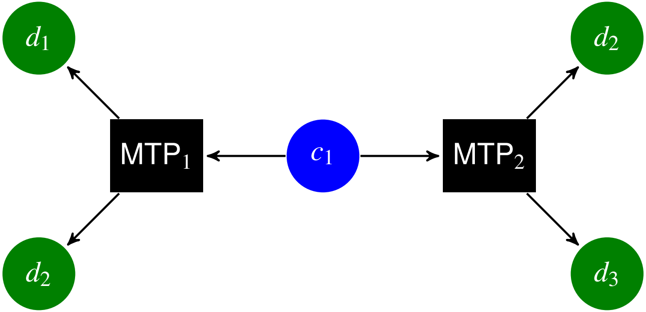


Zhu (2013)

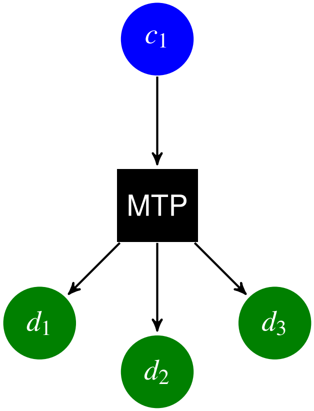
Or request quotes at multilateral trading platforms



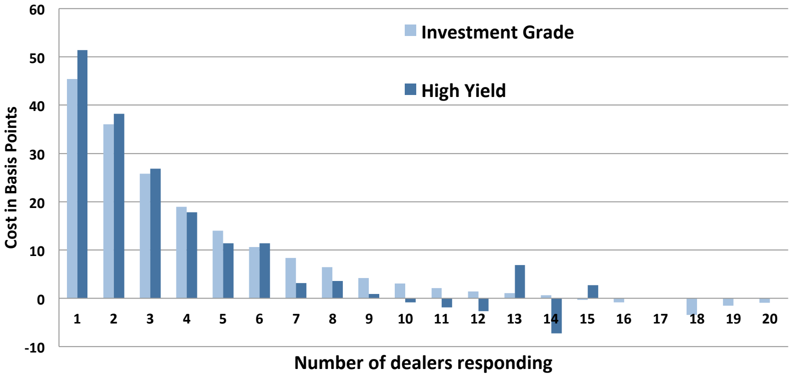
But trade is fragmented across platforms



Reducing fragmentation improves competition

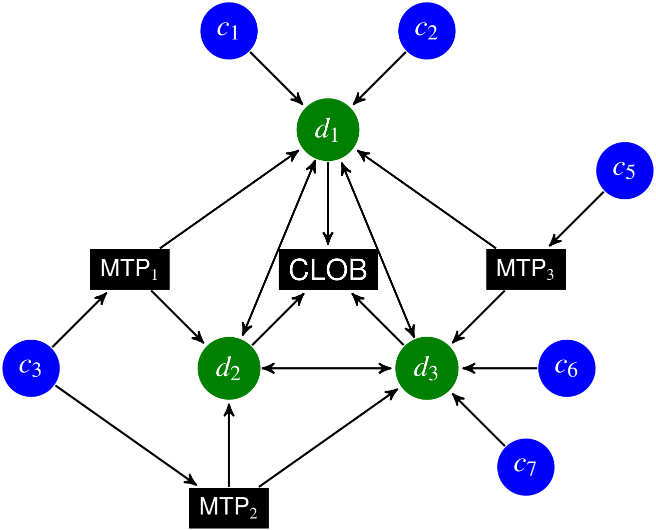


At corporate bond platforms
Dealer competition lowers buyside trade costs

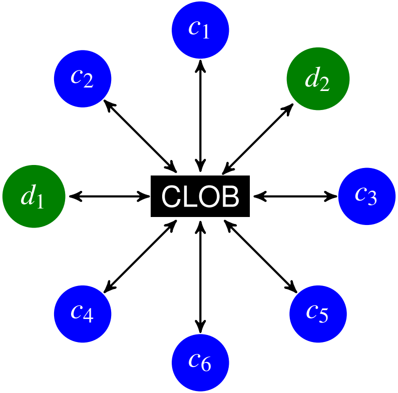


Source: Hendershott and Madhavan (2014)

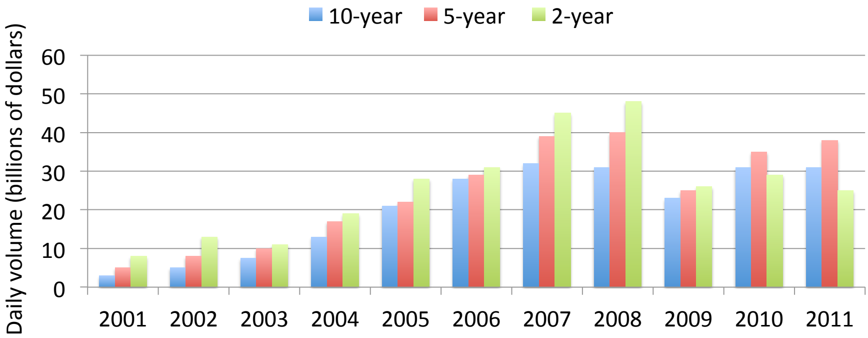
Two-tiered OTC markets



All-to-all central-limit-order-book platforms

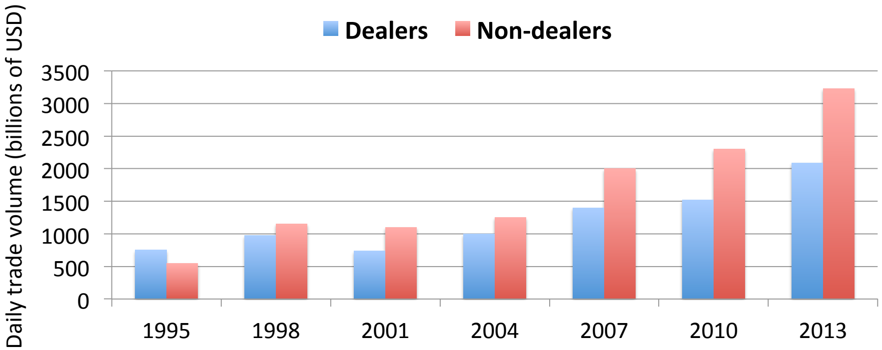


At treasuries electronic trade platforms
Principal trading firms are disintermediating bank dealers



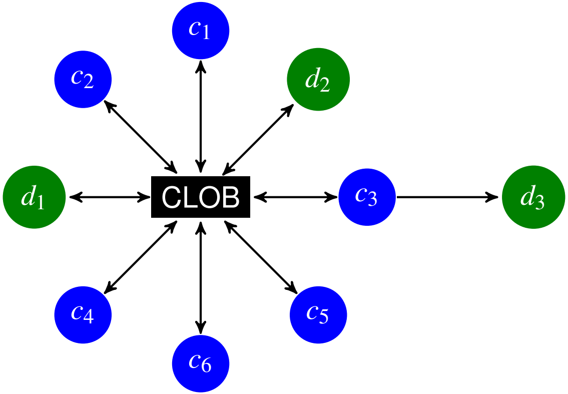
Source: Fleming, Mizrach, Nguyen (2014) (BrokerTec data)

At FX trade platforms: Increasing non-dealer trade

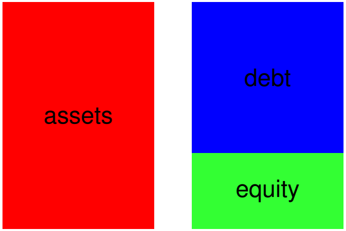


Source: Rime and Schrimpf (2014) (BIS data)

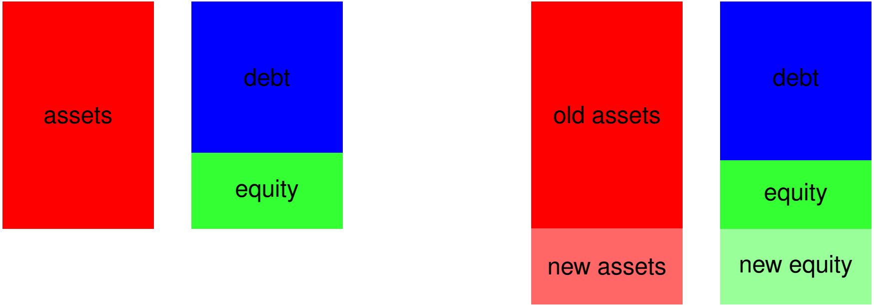
Combined use of exchange and OTC markets



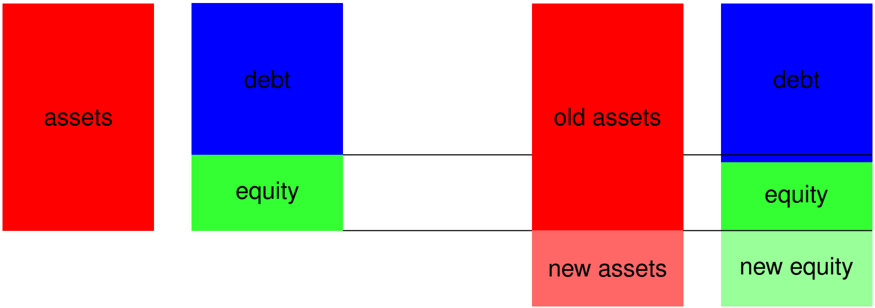
The role of dealer capital structure



More equity to fund more assets

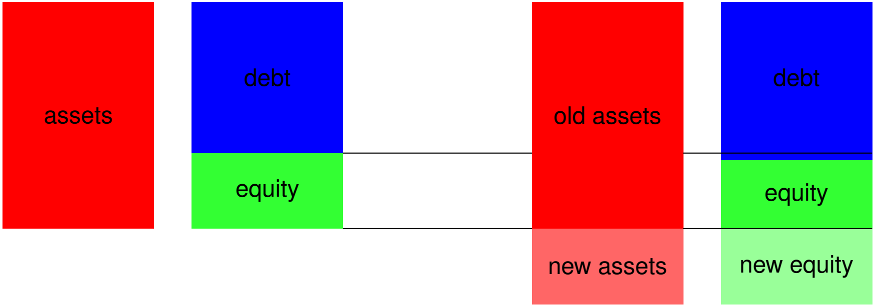


Legacy shareholders have subsidized creditors



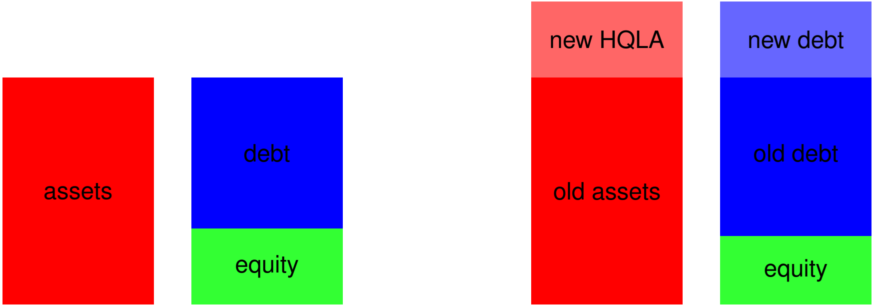
Higher capitalization implies a value transfer from legacy shareholders to creditors.

Debt overhang

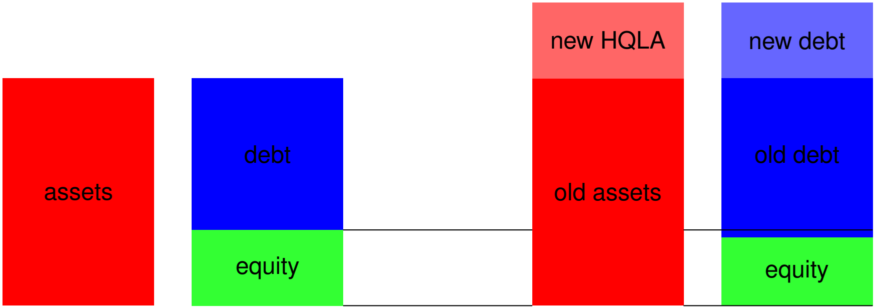


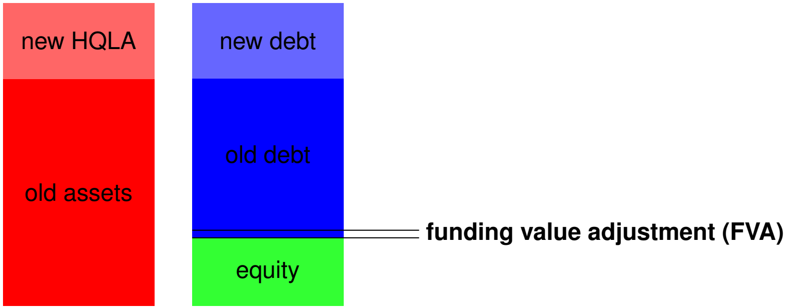
For shareholders to break even, the new assets must be purchased at a profit that exceeds the value transfer to creditors.

When a dealer funds swap collateral with debt



Shareholders transfer value to creditors





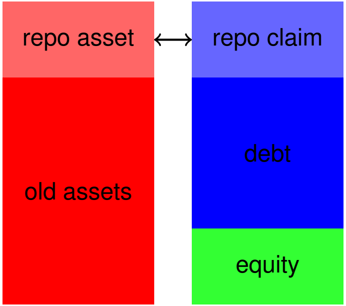
Source: Andersen, Duffie, Song (2016)

Funding value adjustments of swap dealers

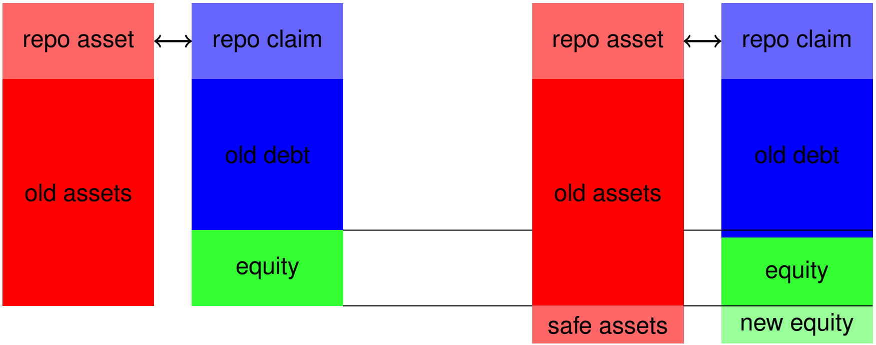
	Amount (millions)	Date Disclosed
Bank of America Merrill Lynch	$497	Q4 2014
Morgan Stanley	$468	Q4 2014
Citi	$474	Q4 2014
HSBC	$263	Q4 2014
Royal Bank of Canada	C$105	Q4 2014
UBS	Fr267	Q3 2014
Crédit Suisse	Fr279	Q3 2014
BNP Paribas	€166	Q2 2014
Crédit Agricole	€167	Q2 2014
J.P. Morgan Chase	$1,000	Q4 2013
Deutsche Bank	€364	Q4 2012
Royal Bank of Scotland	$475	Q4 2012
Barclays	£101	Q4 2012
Lloyds Banking Group	€143	Q4 2012
Goldman Sachs	Unknown	Q4 2011

Sources: Andersen, Duffie, Yang (2016), from supplementary notes of quarterly or annual financial disclosures.

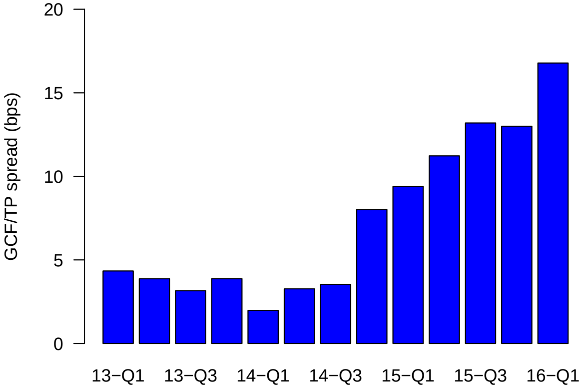
Dealer enters repo



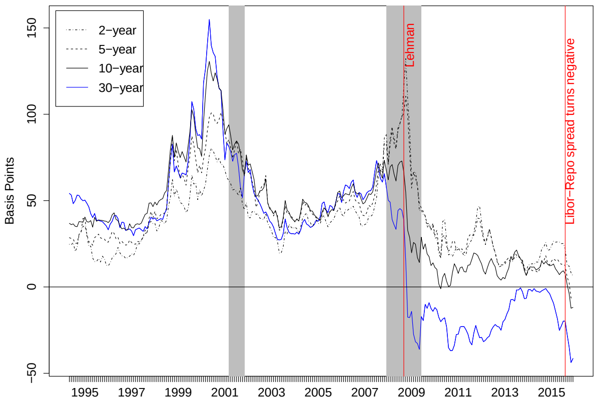
Impact of the leverage-ratio regulation on repo intermediation costs to legacy shareholders



Average overnight repo rate difference
Non-bank dealers versus bank-affiliated dealers

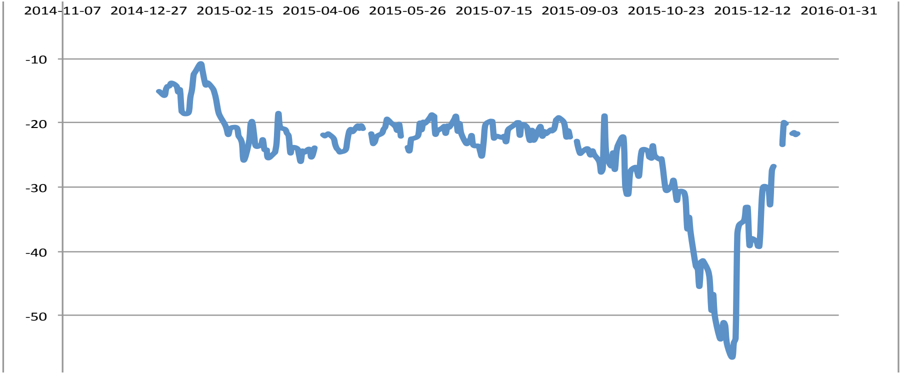


Negative swap spreads



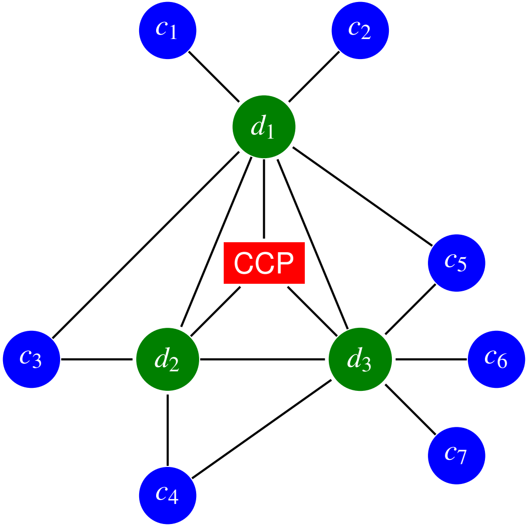
Source: Klingler and Sundaresan (2016)

Covered Interest Parity Basis

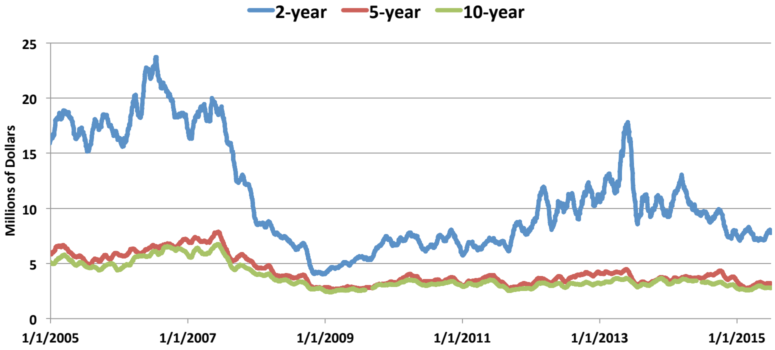


Source: Sundaresan (2016)

CCPs lower dealer capital and collateral needs



But trade size has declined over time



Source: Adrian, Fleming, Stackman, and Vogt (2015) (BrokerTec data)