

Discussion of "The Value of Trading Relationships in Turbulent Times"

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Mandatory disclosure

This presentation represents the views of the presenter and should not be thought to represent those of the Bank of England, Monetary Policy Committee or Financial Policy Committee members.

Personal disclosure

Discussion by a non-expert, from "policy" perspective

Outline

- Overview of the paper
- Discussion of methods
- Discussion of evidence
- Summary and extensions

1. Importance of network for fragility ("too connected to fail")
2. and growing importance of opaque OTC trading ("blamed for persistent illiquidity")
3. BUT we don't understand how large financial intermediary's behavior impact market liquidity in OTC markets
4. Rich dataset allows [empirical analysis of dealer's network role](#) in US corporate bond markets
5. How does it affect [transmission of risk](#) and [market liquidity](#)?

Brief description of network, used to answer the main questions:

1. Are relationships and network structure important?
2. Do dealers' liquidity provision and importance of relationships/network change in turbulent times?

To identify turbulent times use (i) VIX/MOVE and (ii) sample split Jan05-Aug08 and Sept08-May09

3. How does network respond to failure of "flagship" dealer?

use narrow window around failure of the dealer for identification

1. Clear and persistent core-periphery network structure
2. Large spreads from clients, on average 50bps higher than other dealers!
3. Between dealers, relationships and network centrality matter
4. Liquidity provision falls sharply in periods of stress, relationship matters at the expense of periphery/clients
5. Centrality becomes more valuable during turbulent times
6. Dealers lowered inventories on bonds with more selling pressure
7. More pronounced for bonds intermediation chains increased the most

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Focus on two main points:

1. Choice of sample
2. Choice of controls

Both will matter for interpretation of results and identification of "shock"

Have universe of transactions [for 2005-2013 period](#) (maybe typo, really 2011?)

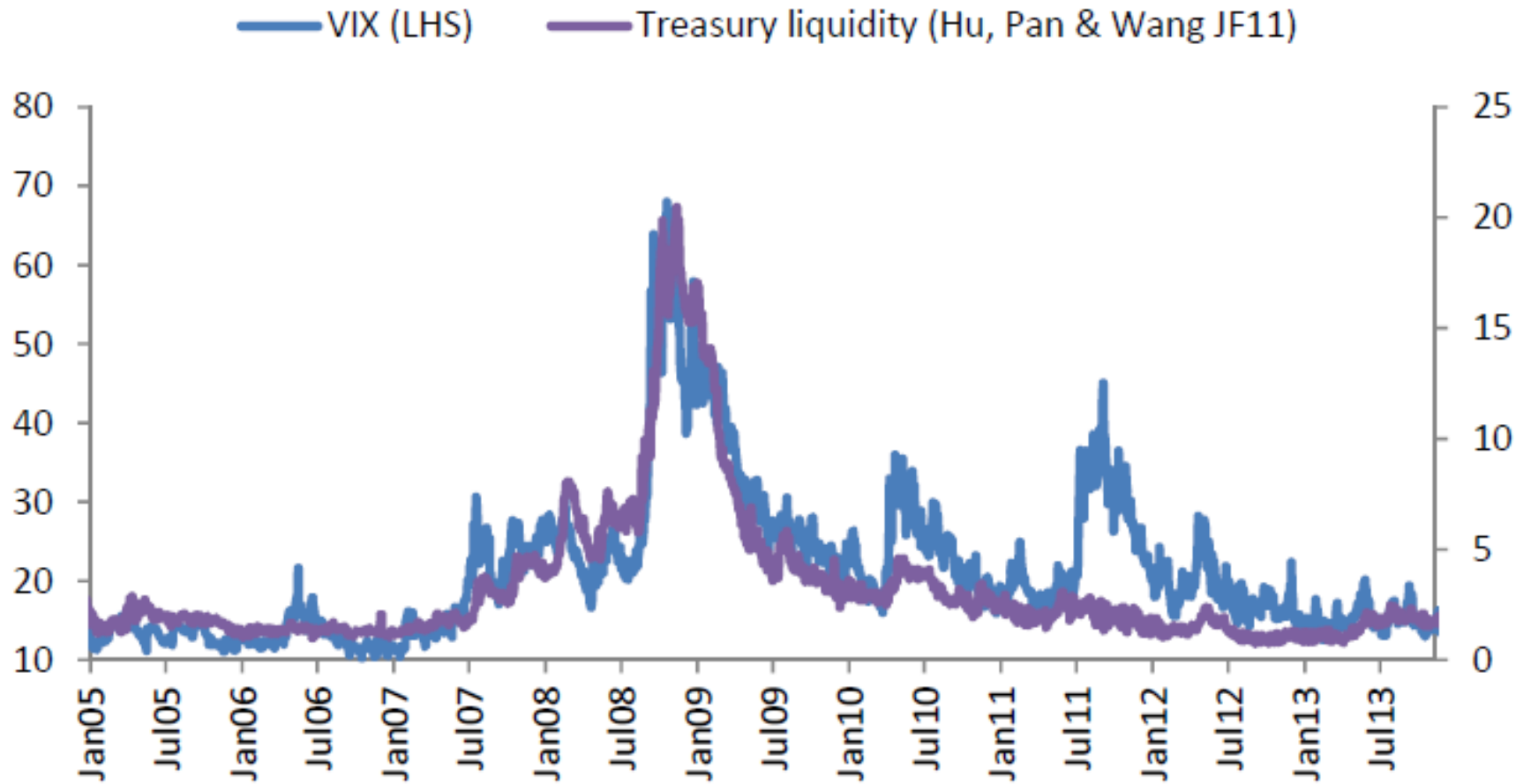
Most results [only use the subsample 2005-2009](#), with only a few using data through 2011(summary statistics, tables 10-11, figures 3 & 5)

[Why?](#)

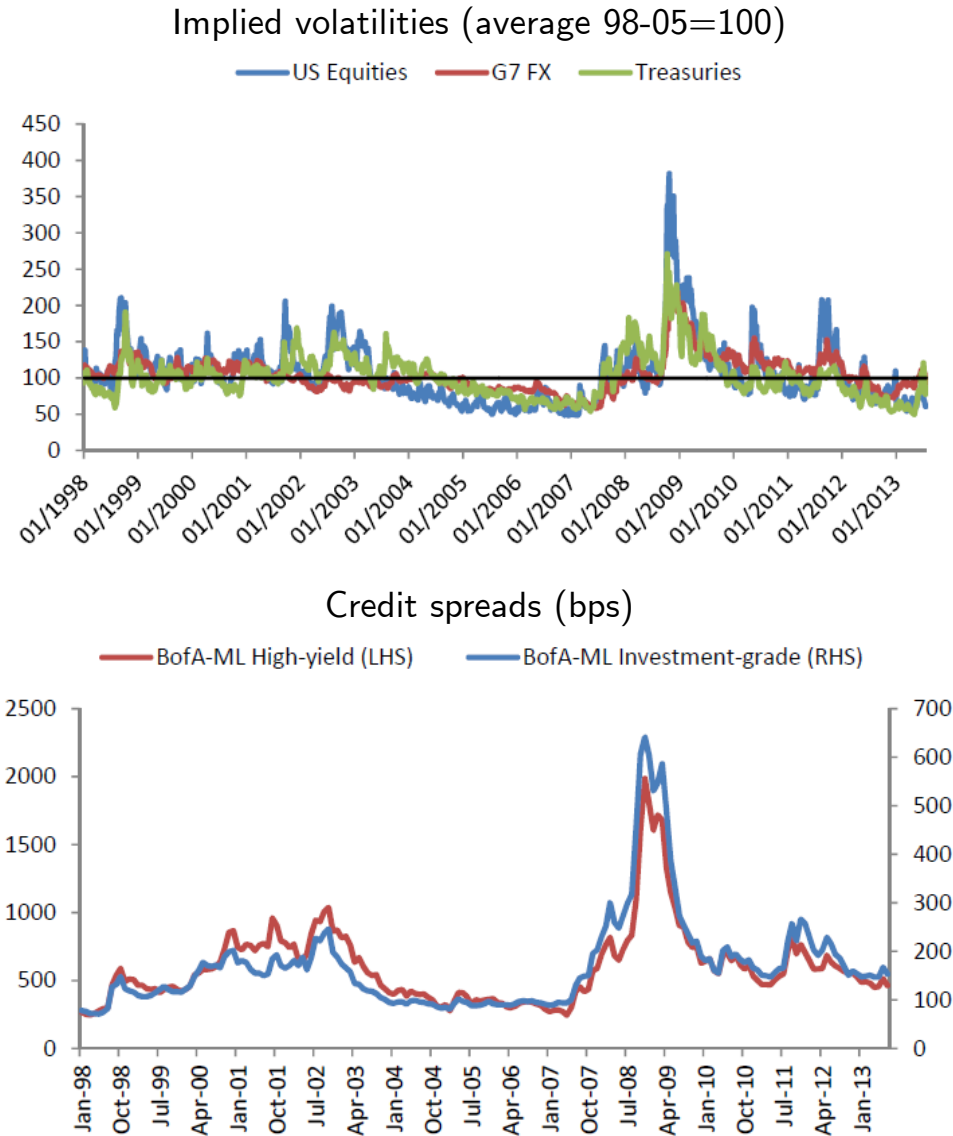
Would be [interesting to explore difference in meaningful subperiods](#): 2 years before crisis, different phases of crisis (Jun07- Sep08, Oct08-May09) and post-crisis (which was still far from old normal)

Paper considers only split pre-Sep08 and Sep08-May09
⇒latter is the "turbulent period"

But some trends (chain length, inventory decline) start well ahead of 2008, coinciding with increasing stress?



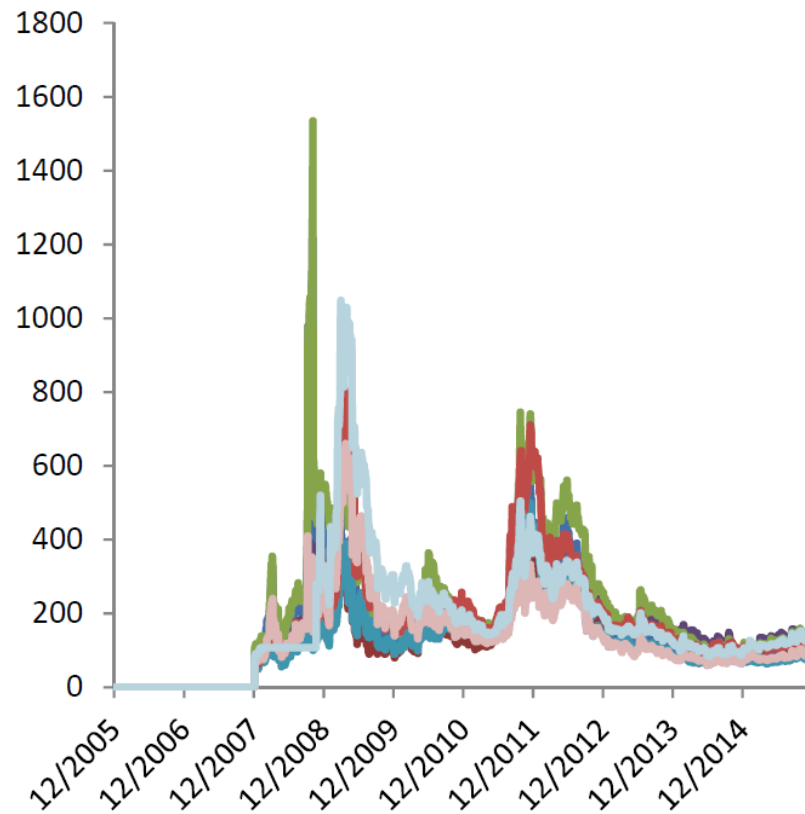
pre Jun07 and Jun07-Sep08 different market conditions



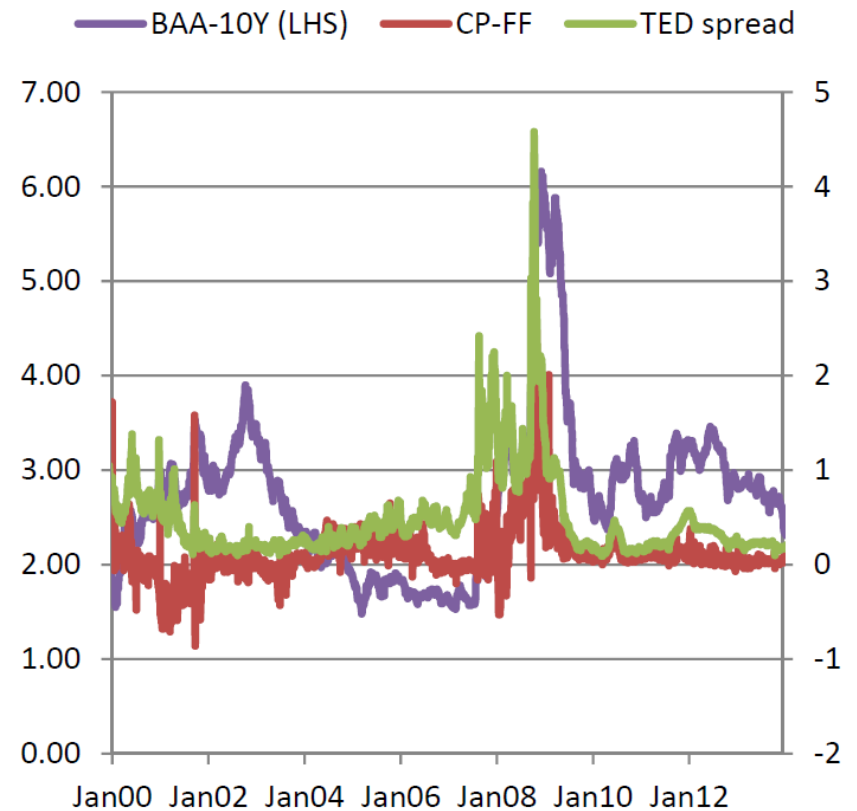
period 2005-mid2007 was a period of compressed volatility/premia? (Fig 3 in paper)

Normal-turbulent market timing depends on indicator: could be useful to distinguish funding disruption, liquidity, asset class risk premia and volatility

US banks CDS



Spread measures



56k bonds traded (52 million transactions), regressions often $>400k$ observations

Good to use bond fixed effects

Lot of aggregate persistent forces in this time period, econometrics not discussed much...

Not author's fault: not a lot we understand about large panels with non-negligible (and persistent) time series.

Though asymptotics may be through N , I worry about T (mix of personal dislike for asymptotics and experience with persistence in panels with financial variables, once bitten twice shy...)

And $\tilde{N} \ll N$ dealers account for most intermediation

Paper relies on weekly fixed effects to deal with unaccounted variation over time...

Why use week fixed effects?

Why not use aggregate liquidity/stress/spreads as controls instead (+ "phase" dummies perhaps)? Why do we trust week fixed effects in these samples to capture the different and persistent macro/market wide factors, instead of some of the proxies for these factors?

Controlling for average over a week may not preclude estimates for included variables capturing some of the effects of persistent variables omitted

Not clear (not discussed) why not including observable proxies for aggregate conditions that could matter in explaining the effect of trader type, relationships or what is specific about one period (turbulent, shock to network)

Related to concern about time series rather than cross-section, should consider Driscoll-Kraay SE? (already have CUSIP fixed effects so robust sd errors clustered on CUSIP less important?)

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Split by 5 main results:

1. Effect of network position (average)
2. Effect of relationships (average)
3. Time-variation: turbulent times
4. Shock to network: failure of "flagship" dealer D
5. Leaning against the wind: inventories

80% of all transactions by top 50 dealers

Persistent core (**top 20–30 dealers?**) - periphery, with robust evidence core profit from position

Persistent trends in median spreads by type of counterparts, in line with compression through 2005-06 and then widening from second half of 07 seen in many other indicators of risk/liquidity

Because of small number of core dealers, effective N is small for some results, but concerns from persistence not as important for average effect as for time variation and effect of relationships

Very large spread to clients: 50bps on average, decreasing on size of transaction, increasing in market share (non-linear), not sensitive to risk of bonds

Also spread to periphery non-negligible, at times as high as for clients (median), sensitive to investment grade

Relationships defined as fraction of previous quarter transactions (selling and buying separately)

Questions:

- [how persistent are these relationships?](#) How many one-quarter stands turn into a lasting relationship?
- implementation details: rolling 1 quarter relationship calculation?

Some [statistics on relationships would help](#) (besides persistence, how many "significant" relationships do core/periphery dealers have, is it clearly different buying/selling, are their pure inter-dealer dealers)

If would be [helpful to discuss more characteristics of the dealers in this market](#) (restriction on identifying them indirectly)

No client relationships? (e.g. no preferred dealers for large institutional investors, asset managers?)

How to interpret change in magnitude of relationships when adding network centrality (Table 5-6), some asymmetry from buyer/seller relationships and centrality?

Adding back a dummy for core-periphery and periphery-core would allow to see how much these [results could be driven by core-core?](#) (by their dominance, expect more relationships)

Tiny R^2 s when looking at relationships compared to before, when focus was on clients vs the rest (Table 3 vs Tables 5 and 6): market share (omitted) what matters? (not discussed)

→ If so, would (relative?) [market share be correlated/capture some of the effects of relationships?](#)

Effect of "turbulent times" done by: (i) interacting with VIX and (ii) splitting sample 2005-Sep 2008, Oct 2008-May 2009

(i) Interaction terms with VIX (relationships and centrality) highly significant: [relationships and centrality more important in turbulent times](#)

Spread core-periphery and periphery-periphery for non-IG bonds increases by more

Not sure [how to interpret magnitudes reported](#): how big are they relative to the spike in spreads? Does it mean that spreads for good relationships when up by less or actually went down during turbulent times?

Clients do not seem to face higher spreads in uncertain times (surprising), opposite effect on small (smaller) and large client transactions, not clear what rationale for this result could be: is it being swept by week fixed effects?

(ii) When [splitting sample](#) same qualitative results

Some very big effects: more central buyers/sellers increase their margin by many percentage points? (more help with magnitudes)

Previous comments on [choice of controls](#) matter more for this part than for average effects

Could use corporate bond spreads, TED spread or arbitrage violations (CIP) *as alternatives to VIX*? Or financial intermediaries CDS spreads if potential story is balance sheet constraint?

The brief discussion of [sample choice](#) (the different phases of the evolution of the crisis) matters for (ii)

Use failure of "flagship" dealer at same time as Lehman as a shock to network and explore response

Would need even more hand holding from authors: confusing why direction matters (what is the direction of spread relative to fractions defined, which presumably is why fraction bought/sold from dealer D have opposite effects) and buyer/seller fixed effects (along with week fixed effects)

Economic significance: 14 bps increase in the quarter after Lehman bankruptcy is economically significant?

Chain length jumps in response to failure, but returns to pre-Lehman after H1 2009 (was trending up before Lehman)

Chain length and spreads might jump in response to Lehman bankruptcy for a range of reasons other than network, just as many other extreme stress indicators and failure of arbitrage, in many diverse markets, some of which didn't even have Lehman directly or indirectly involved (e.g. trade credit collapsed)

Identification problem? failure was not a random event (no strict exogeneity for a difference-in-difference approach, sort of what dummy does?), result of cumulative stress in the market (funding squeeze, balance sheet deterioration), and those with relationships with failed dealer could share many of the underlying causes of weakness.

Seller/buyer fixed effects solution?

If told this was the question, my natural **instinct would be to attempt a sort of propensity score matching to control for characteristics** (other than relationships, e.g. CDS spreads, specialist dealer vs investment bank/BHC) that could explain relative dealer behavior (not clear fixed effects does the trick)

Also examine evolution of dealer's inventory and intermediation chain length: do they absorb liquidity demand or pile on pressure?

Chain length increases after dealer D collapse

Inventories drawn down, more for the bonds with more selling pressure

But trends started well before dealer D's collapse (so dumping inventories by dealers could impact selling pressure? and not just about "shock")

Not familiar enough with networks to know how to interpret Table 11-13 (spread by position in chain and event windows): shorter window weaker evidence

Worried about reverse causality: if other big dealers in bad shape (for same reason why dealer D failed) then they will draw down inventories and might rush for the exit along with clients (which will increase chain and could in part explain why those bonds have higher selling pressure?)

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Very good paper, using a great dataset to answer questions relevant for network and finance theory, and policy

Readers (like me) would appreciate a bit more help with description of market, calculations and interpreting results

Some questions on choice of samples and controls, and identification of effect of shock

Do results confirm cream-skimming? I think yes (confirmation bias).

Can we use difference in periods of stress in this market with treasury markets to isolate effect of algorithmic trading or differential impact of new regulations?

Paper is light on asset pricing (e.g. controlling for expectations/risk, how some results shed light on non-network literature on liquidity in corporate bond markets or using controls suggested by that literature)