

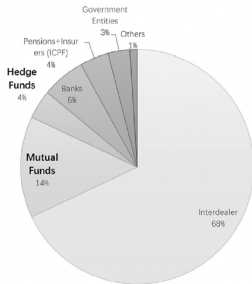
Discussion of Czech and Monroe “Dealers, Information, and Liquidity Crises in Safe Assets”

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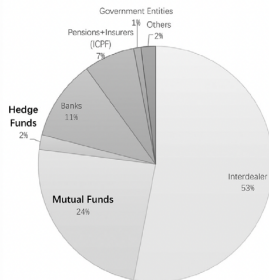
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What this paper does

- The goal is to shed light on the role of information in safe asset liquidity crises
- Studies the 2022 UK LDI Crisis
- During this crisis there was a significant sell pressure worsening the liquidity
- Bond prices collapsed and 30-year gilt yields surged by 130bps in a few days
- The Bank of England intervened on September 28 with a temporary backstop, set to end on October 14, which successfully halted the fire-sale spiral
- Use regulatory MiFID II data for UK government bond (gilt) transactions



Market Share: Volume



Market Share: Number of Trades

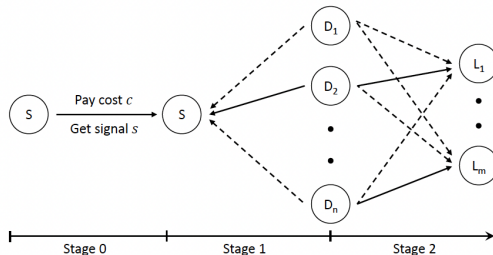
■ Interdealer
■ Mutual Funds
■ Hedge Funds
■ Banks
■ Pensions+Insurers (ICPF)
■ Government Entities
■ Others

Motivation – Model (Pinter, Wang, and Zou 2022)

- Three types of risk-neutral agents:
 - Speculator
 - $N \geq 2$ uninformed dealers
 - mass m of liquidity traders
- One asset:
 - Payoff $v \in \{-1, 1\}$ with equal probability
 - $N \geq 2$ uninformed dealers
 - Mass m of liquidity traders
- Information acquisition (Stage 0):
 - Speculator can acquire a signal $s \in \{-1, 1\}$ with $\mathbb{P}(s = v) = \frac{1+h}{2}$
 - $h \in [0, 1]$ is the signal's precision
 - Speculator chooses h by paying costs $C(h)$
- Stage 0 Valuations:
 - Market: $\mathbb{E}[v] = 0$
 - Speculator (informed): $\mathbb{E}[v|s = \pm 1] = \pm h$

Model – Timeline

- Multi-dealer platform using Request-for-Market (RFM)
- Stage 1:
 - Speculator requests two-sided quotes from the dealers to trade $q \geq 0$
 - Speculator does not reveal desired trade direction
 - Dealer j offers $\{-a_{1,j}(q), a_{1,j}(q)\}$ centered around 0
 - No post-trade transparency
- Stage 2:
 - Each liquidity trader requests $\{-b_{2,j}, a_{2,j}\}$ to trade 1 unit
 - The value of the asset is revealed and payoffs are realized



Model – Solution (sketch)

- Dealer trading with the speculator acquires info $\mathbb{E}[v|\text{Trade } q] = \hat{h}(q)$
- By quoting $a_1(q)$ to speculator dealer loses $q \cdot (a_1(q) - \hat{h}(q)) \leq 0$
- Dealer profits from info in stage 2 are $\pi(\hat{h}(q))$ with $\pi' > 0$
- Info is valuable – dealers compete via Bertrand in stage 1

$$a_1^*(q) = \underbrace{\hat{h}(q)}_{\text{Adverse Selection}} - \underbrace{\frac{\pi(\hat{h}(q))}{q}}_{\text{Info Chasing}}$$

- Speculators select $\{h^*, q^*\} = \arg \max_{h,q} q \cdot (h - a_1^*(q)) - C(h)$ in stage 0
- BNE equilibrium with informed and uninformed dealers **mixing** in stage 2
- Stage 2 bid-ask quotes of the informed dealer $\{b_2^\pm, a_2^\pm\}$ if $s = \pm 1$

$$b_2^- = -\hat{h}, \quad a_2^+ = \hat{h}, \quad b_2^+ \text{ and } a_2^- \text{ are drawn from } G^I(b) = \frac{2}{1 - b/\hat{h}} - 1, \quad b \in [-\hat{h}, 0]$$

- Uninformed dealers bid $-\hat{h}$ with prob $p \equiv \sqrt[n-1]{1/2}$ and otherwise draw bids from

$$G^U(b) = \frac{p}{1-p} (\sqrt[n-1]{G^I(b) + 1} - 1)$$

Model – Predictions

Trading Costs

In OTC markets with non-anonymous trading, informed trades receive lower bid-ask spreads (lower trading costs) than uninformed trades.

$$TradeCost_{idbn} = \beta Post_t \times Informed_i + \theta Connections_{i,day} + \alpha_{dt} + \gamma_{id} + Size_n + \varepsilon_{idbn}$$

Figure 5 TIME-VARYING TRADE COSTS FOR INFORMED INVESTORS

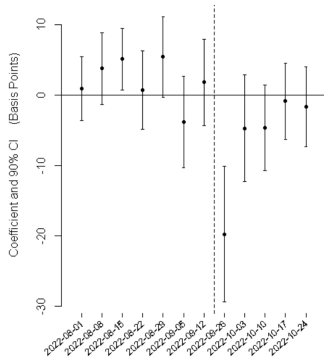
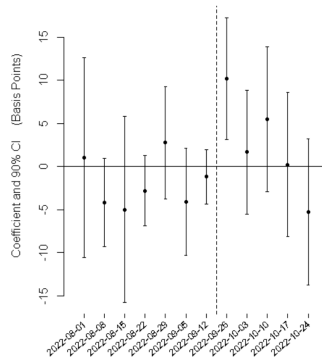


Figure 7 INFORMED DEALERS—TRADE COSTS OF UNINFORMED CLIENTS



Comment 1

- This prediction should not be limited to crisis
- Works in Pinter, Wang, and Zou (2022) who use the same data!

Table 1: Relative Trading Costs of Informed Clients

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Informed Clients	-0.529*** (-3.22)	-0.497*** (-3.54)	-0.455*** (-3.27)	-0.417*** (-2.95)	-0.472*** (-3.33)	-0.464*** (-3.17)	-0.521*** (-3.32)
Client Size			-0.028 (-1.06)	-0.018 (-0.67)	-0.094*** (-2.77)	-0.114*** (-2.71)	-0.111*** (-2.73)
Dealer-Connections				-0.009 (-0.54)	-0.036* (-1.91)	-0.035* (-1.88)	-0.028 (-1.46)
Client Intensity					0.228*** (3.67)	0.250*** (3.33)	0.252*** (3.24)
Trade Size						0.019 (0.62)	0.018 (0.57)
<i>N</i>	542837	538426	538426	538426	538426	538426	455403
<i>R</i> ²	0.010	0.158	0.158	0.158	0.158	0.158	0.340

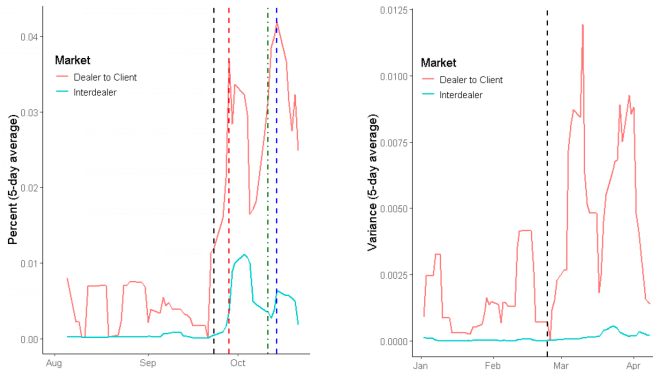
- Need to reconcile the difference!

Model – Predictions and Comment 2

Price Dispersion

In OTC market with non-anonymous trading price dispersion is higher when there are more liquidity traders, and when the marginal cost of information acquisition is lower.

Figure 12 PRICE DISPERSION DURING DASH FOR CASH

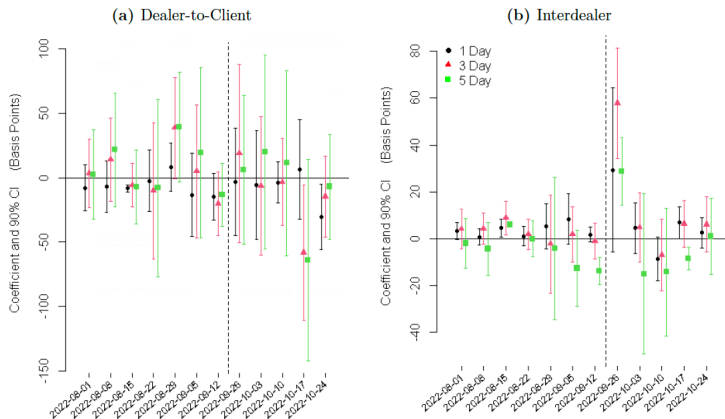


- Price dispersion increases on C-to-D market in both crisis
- Price dispersion increases on interdealer market on September 28

Paper – Info Usage by Dealers

- Informed dealers make profits on interdealer market $\pi(\hat{h}(q)) = ?$
- Specification: $Performance_{idbn} = \beta Date_t \times \widehat{InformedShare}_{d,t-1} + Controls + \varepsilon_{idbn}$

Figure 9 INFORMED DEALERS—TRADING PERFORMANCE



Comment 3

- The market consists of 3,144 investors and 17 GEMM dealers
- Very likely ALL dealers are informed:
 - Competition against other informed dealers diminishes the value of info
 - Dealers are better off trading with uninformed non-relationship clients
 - Model: informed dealer trades against liquidity traders $\pi(\hat{h}(q)) = m\hat{h}(q)/2$
 - Model: different $\pi(\hat{h}(q))$ if trading against informed traders
 - Model: different Stage 2 strategies and thus different Stage 1 bid-ask spread
 - Provide some statistic on how many dealers are informed
 - Compare performance of informed-informed vs informed-uninformed trades
- Competition vs relationship makes the market choice endogenous for informed dealers

THANK YOU!