Dealer Intermediation Between Markets

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MOTIVATION
“In my family the biggest sin was to pay retail”

Woody Allen as Howard Prince in *The Front* (1976)
Two-Tier Markets

• **Inter-Dealer or Wholesale Market**
  Highly competitive *between* dealers

• **Customer-Dealer or Retail Market**
  Each dealer has some *market* power over a customer segment
Why Should You Care?

Such-two-tier structures have been very fragile in the recent financial crisis: e.g., the European sovereign bond market.
What Is In This Paper?

• How can such a two-tier market structure be adequately represented in a dynamic framework?

• What are the testable implications of the model?

• What are the policy implications of the model?
Dealers

- Dealers hold inventories (within boundaries)
- Dealers provide inventory-specific quotes to customers
- ‘Excessive’ inventories are offloaded in competitive inter-dealer market
Inter-Dealer Market

• Dealer benefits from market power over customers. This is optimised when her inventories are zero

• Dealer suffers from adverse selection risk coming from changes in aggregate customer demand

• Inter-dealer spread is a balance between these two forces
Customers

- Customer knows demand in advance: source of adverse selection

- Customer benefits from immediacy because of dealer inventories

- Customers submit requests for quotes to dealer. Execution only occurs if private customer valuation exceeds dealer quote
MODEL

Sequence of Trading

- Dealers learn $x_t$
- Dealers set inventory-contingent customer quotes
- Shock to distribution of customer reservation prices
- Customers arrive with probability $q$ and trade if reservation prices are met
- Inter-dealer trading takes place
- Dealers learn $x_{t+1}$
What Drives The Model?

- Dealer-Customer trading is hidden and the dealer has market power
- Inter-dealer trading involves competition and transparency: adverse selection risk is fully felt
Market Quality

- Cross-market spread: extent to which dealer gets a better price than the customer

- Cross-market spread (Ask): Best inter-dealer ask price - customer-dealer ask price

- Cross-market spread (Bid): Customer-dealer bid price - best inter-dealer bid price
Model Predictions
Model Predictions

- Cross-market spread can be negative: for high levels of adverse selection, customer can obtain better price than dealers

- Inter dealer market breaks down first when adverse selection risk exceeds benefit of being able to rebalance

- One-tier market continues to function until adverse selection finally overwhelms dealer market power
Data on European Sovereign Bond Market

• Two Synchronous Data Sets
  MTS inter-dealer platform
  MTS Bondvision customer-dealer system

• Last three quarters of 2005
Results

• The mean cross-market spread is positive for the most liquid (Italian) and non-Italian bonds, for benchmark and non-benchmark bonds and for both bid and ask transactions.

• The mean cross-market spread increases with bond-maturity.

• Inventory imbalances and realized volatility in the inter-dealer market explain cross-market spreads.
Two-Tier Market provides higher customer welfare because customers cannot obtain a full range of quotes when the dealer is unable to rebalance inventories in the inter-dealer market.
What happens if..

• Retail markets are more competitive?

• Transactions costs increase in the Inter-dealer market?
Should we....

• Give customers more direct access to inter-dealer markets?

• Introduce a security transactions (Tobin) tax?
Conclusion

• Two-tier market is beneficial but fragile

• Upper tier is very vulnerable to adverse selection

• Policy should take account of this