

Reducing Opaqueness in Over-the-Counter Markets

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Recent Innovations in Financial Market Structure

Bank of Canada

Reform of OTC Derivatives Markets

Instability in OTC derivatives markets—and especially poorly managed counterparty credit risk—contributed to the propagation of shocks during the financial crisis.

G20 Reforms

1. Central clearing
2. Trade reporting
3. Higher capital and margin requirements on uncleared trades
4. Move to exchanges or trading platforms, where appropriate

Trading platforms for OTC markets

Least developed commitment, and potentially the most disruptive (in the good and bad sense).

Some advantages:

- ▶ Improve surveillance of market conduct
- ▶ Facilitate process standardization, clearing and reporting
- ▶ Improve transparency and enhance price discovery
- ▶ Encourage competition

May not be appropriate for all products, especially those that are highly customized and illiquid.

Zhong's model: The choice of the trader

- ▶ Search model based on Rust and Hall (2003): Traders can choose to
 - ▶ Trade in the centralized market
 - ▶ Search in the dealer market
 - ▶ Go home
- ▶ Solution obtained by solving for reservation values

Knightian Uncertainty

Contrast between

Risk Agents know the odds but not the outcome —
example of increased risk: mean-preserving spread

Uncertainty Agents don't even know the distribution of
possible outcomes — example of increased
uncertainty: more possible distributions of
outcomes

Search in an environment with Knightian uncertainty modeled
as in Nishimuar and Ozaki (2004):

- ▶ maximin expected utility over all possible distributions.

This formulation creates *uncertainty aversion*.

Main Results

Combining Rust and Hall's (2003) cross-market competition model with Nishimura and Ozaki's (2003) search under Knightian uncertainty, with Knightian uncertainty interpreted as *opaqueness*.

- ▶ The results show that:
 1. Dealers want to **reduce opaqueness** to compete against a **competitive** centralized market.
 2. Dealers want to **increase opaqueness** when the centralized market is **not competitive**.

Uncertainty as search costs

- ▶ Opaqueness comes from uncertainty—acts like a search cost in a traditional search model.
- ▶ Search costs create market power for dealers (and market makers), driving results.
- ▶ The model also has another search cost: the time preference of traders, modeled by a discount factor.
- ▶ Even without uncertainty, can we get the same results simply by varying the discount factor?

Dealers' choice of markets

The competitive environment determines the direction of results. How is this environment determined?

- ▶ In the model, the exogenous distribution of transaction costs drives the results:
 - ▶ Dealers survive as long as they are cheaper than the centralized market.
- ▶ But dealers can choose where to post quotes.
- ▶ OTC dealers have an incentive to post quotes on the centralized market because profits are much higher for the market maker.

Will rules restrict dealers' choices?

Rules will require the use of trading platforms for some OTC derivatives. Will this eliminate the issue modeled in the paper? Not necessarily.

- ▶ Not all products will face mandatory platform trading.
- ▶ Traders can (to a limited degree) choose products that are not subject to mandatory trading.
- ▶ Different kinds of platforms will have different levels of opacity.

What kinds of platforms

A variety of different trading systems might emerge in response to trading platform mandates.

- ▶ Limit order books
- ▶ Request for quote systems
- ▶ Single dealer platforms?
- ▶ Voice brokered platforms?

Competition between dealers

What kind of a model do we need to better understand a dealer's choice of platform?

- ▶ Fixed costs
- ▶ Inventories
- ▶ Information and learning
- ▶ Differentiated traders