

Intermediation Networks and Derivative Market Liquidity: Evidence from CDS Markets

Mark Paddrik and Stathis Tompaidis

Discussion by: Filip Zikes, Federal Reserve Board

Central Bank Conference on Microstructure of Financial Markets
Mexico City, November 2024

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Contribution

- ▶ Simple model of two-tiered OTC market
 - ▶ A dealer provides liquidity to clients assuming she will redistribute any new inventory in the interdealer market to minimize inventory costs
 - ▶ To absorb new inventory, other dealers in the network are compensated according to their Shapley value (contribution to the interdealer trade surplus)
 - ▶ Derive implications of the interdealer network structure for bid-ask spreads, volume, inventory
- ▶ Empirical analysis of the CDS market
 - ▶ Provide evidence that the structure of the CDS network affects liquidity provision and transaction costs in the interdealer and dealer-client segments of the market consistent with the model predictions
- ▶ Interesting paper, I learned a lot!

Comments on theory

Can you develop the theory part of the paper a little bit more?

- ▶ All analytical results are expressed in terms of the function $\tilde{c}(v)$
 - ▶ The function incorporates increased inventory costs, share of surplus from rebalancing in the interdealer market, and the length of the intermediation chain
 - ▶ But the function is not explicitly derived and it is unclear how exactly it depends on the primitives of the model
- ▶ Repeated games are assumed but an equilibrium is not defined/derived
 - ▶ What assumptions do we need to sustain the cooperative equilibrium and what are the implications for prices and volumes?
 - ▶ An example in Section C.2 illustrates the main result numerically, but in that example one dealer is strictly worse off by participating in the coalition
 - ▶ Is this the right framework to model interdealer markets in the first place (collusion?)

Comments on link between theory and empirical tests

Can you connect the theory and the empirical analysis better?

- ▶ Network measures and Shapley values

- ▶ The model's central result (Proposition 1) links Shapley values with bid-ask spreads in the dealer-client segment
- ▶ But simple network measures are used in the rest of the paper instead because it is computationally intensive to calculate the Shapley values
- ▶ The justification is that the two are correlated; this is shown by simulations, but the results are not reported
- ▶ Can you shed more light on this relationship? The Shapley values clearly depend on volumes, but the simple network measures do not!

- ▶ Intermediation networks and liquidity

- ▶ In the model, dealers provide liquidity to clients; the interdealer market is not modeled (perfect inventory redistribution is assumed)
- ▶ Would it make sense to focus the empirical work on the dealer-client segment? (see Dunne et al., 2015, JEEA, for a model that links the two segments explicitly)

Comments on empirical analysis

Can you control for risk measures at the trading desk/book level?

- ▶ The empirical analysis is conducted at the reference entity level
- ▶ But risk management at large dealers is done at the trading desk level (VaR limits, position limits, risk-factor exposure limits etc.) and capital for market risk is set at the dealer level (capital requirements)
- ▶ It is therefore unlikely that a dealer manages her inventory of different reference entities separately - the total risk of the trading book matters
- ▶ Consider controls accounting for the total amount of risk (CS01) associated with the CDS (or the whole corporate credit) book including the index
- ▶ Consider controls accounting for dealers' capital and liquidity positions