Discussion of "Dealer Funding and Market Liquidity" by Max Bruche and John Kuong

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October 2019 (London)

Overview

- What determines OTC market liquidity?
  - Important for designing market structure and policy
  - Inventory risk-aversion (Stoll, 1978)
    Adverse selection (Kyle 1985)
    Search frictions (Duffie, Garleanu, and Pedersen (2005)
  - This paper: Financing friction stemming from agency problem
- Core mechanism:
  - Moral hazard limits dealer funding
  - Which in turn determines maximum bid (minimum ask)
- Simple setup yields a very rich set of results

1. Intermediation in a single market

- Summary:
  - High valuation only obtained with dealer "effort"
  - Due to competition, maximum bid = maximum pledgeable income
  - Implications:
    Lower liquidity for riskier assets and when dealers suffer losses
- Comments:
  - Is this a main result or rather a sanity check?
  - Corroborates existing literature with exogenous funding constraints
    e.g. Gomb and Vayanos (2002), Brunnermeier and Pedersen (2009)
  - Useful to be more specific about which results in the literature are "robust" to the microfoundation of such funding constraint, and which may not be

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2. Intermediation in multiple markets

- Summary:
  1. Cross-market dealers can intermediate larger trades
     - Cross-pledging increases total plegeable income of trades
  2. Shock to dealer capital causes cross-market co-movement
  3. A higher demand for immediacy in one market can increase or decrease liquidity in the other market
- Comments:
  - Results 1 is a nice application of the cross-pledging intuition that is ex ante not obvious
  - Result 3 is very interesting!
  - But...

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2. Intermediation in multiple markets

1. *For* $q^A < (1-\delta)q^B$,

outcomes \ w	$w \in [0, w_1)$	$w \in [w_1, w_2)$	$w \geq w_2$
Correlation $\left(\frac{\partial b^A}{\partial w} \times \frac{\partial b^B}{\partial w}\right)$	$+$	0	0
Spillovers from B to A $\left(\frac{\partial b^A}{\partial q^B}\right)$	$-$	0	0
Spillovers from A to B $\left(\frac{\partial b^B}{\partial q^A}\right)$	$+$	$+$	0

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2. Intermediation in multiple markets

- For $w < w_1$: Bids in each market can be indeterminate, since only total bids is determined by total pledgeable income
  - All results (e.p. co-movement) are derived assuming an exogenous pricing rule across markets
  - Is a limitation of the model, and suggests that more ingredients are needed to understand co-movements
- Maybe more intuitive to focus on the region of $w \in [w_1, w_2)$, where bids are uniquely pinned down as participating constraint binds in the larger market
  - Be more specific and provide intuition :
    - $+$ spillover if very small market
    - $-$ spillover from medium/small market?
  - But in this region, only the smaller market can has spillover effect on the larger market ($q_A < q_B$), and not the other way round
    - 0 spillover from larger market

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3. Economies of scale or economies or scope?

- Cross-pledgeing effect occurs when the dealer operates in two markets
- What about multiple trades in the same market?
  - As long as the chances of finding each Laetitia not perfectly correlated
- Within market spillover effects?
- Predicts that dealers should all merge?

4. Competition?

p3: *A limit on funding also affects [...] the degree of competition.*

- Not really endogenous competition - equilibrium is competitive
  Dealers earn agency rent, rather than profit from market power
- Nevertheless, would be interesting to consider a model with imperfect competition
  - More sever agency problem may indeed soften competition and increase profit, which in turn mitigates agency problem, resulting in a muted effect on market liquidity
  - More sever competition may lead to squeeze dealer profit and thus harms effort and market liquidity

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5. Connection to the search literature

- The framework bear some resemblance to directed search:
  - No cost to search for low value buyer
  - Must pay a search cost for high value buyer
- However, "partial equilibrium" as the chances of finding high value buyer exogenous
- Might be interesting to embed the deader funding constraint in a search framework and have a more "general equilibrium" of market liquidity

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Summary

- Agency problem in dealer funding as derterminant of market liquidity
- Core mechanism:
  - Moral hazard limits deal funding
  - Which in turns widens bid-ask spreads
- Implications:
  - Dealer networth, asset risk, co-movements (?), spillover effects, ...
- Policy predictions:
  - Restrictions on dealer leverage hurts market liquidity
- Very interesting perspective and rich set of results
- Diver deeper into the interesting ones