Discussion: "Strategic Trading and Manipulation in Trade at Settlement Contracts"

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This paper: Model

- Multi-period rational expectations equilibrium model of trading like Admati-Pfleiderer (1988)
- Three periods: T_1, T_S, T_2. Risk-neutral market maker sets prices to expectation of asset value cond. order flow
- Each period, short-lived informed traders and noise traders
- N_d TAS market makers:
  - Receives TAS order flow F^d (i.e. commits to sell wheat futures at Tuesday settle)
  - Wants to net 0, so needs to buy $-F^d$ futures across T_1, T_S, T_2
  - Profits:

$$\Pi_d = E_d \left[F^d \left[-\phi_1 P_1 + (1 - \phi_s) P_s + (1 - \phi_1 - \phi_s) P_2 \right] \right]$$

This paper: TAS manipulation

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Suppose I'm a TAS dealer

- Customer wants to buy 3 futures at Tues settle: I offer to sell 3 at settle
- I need to buy 3 contracts over Mon - Wed, to net 0
- I get paid 3x Tues settle price, so I want Tues price to be high

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- $\Longrightarrow$ I might want to buy more than 3 wheat futures on Mon and Tues! Sell the extra on Wed after Tuesday's settle
- Futures markets can't tell whether I'm informed or not, so may have partially permanent price impact

This paper: TAS manipulation

- Paper shows that overtrading can occur in equilibrium
- Over-trading happens more when market is concentrated: few dealers, large colluding block of dealers, or probabilistically concentrated markets
- Insights appear to match some episodes of TAS manipulation in practice

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- Insights appear to match some episodes of TAS manipulation in practice
- Aside: manipulation is an interesting case where concentration leads to more, not less, trading!
  - Classic models: more concentration $\implies$ more price impact $\implies$ less aggressive trading
  - (Some) manipulation models: more concentration $\implies$ more price impact, more influence on TAS profits $\implies$ more aggressive trading!

Comments

Cool paper! Two main comments:

- What's the role of correlated shocks across TAS dealers in the model?
- (Speculative) Is there any clean benchmark for "obviously non-manipulative" trading for TAS contracts?

Correlated shocks?

- What does the assumption of correlated shocks to TAS market maker inventory give us?
- My current understanding: largely a modelling device, so that their order flow sums to something that doesn't go to 0? I was a bit confused
- Irrelevant for 1 TAS dealer, hence can't be driving the results
- What's the comparative static? Is over-trading more or less prevalent when shocks are more correlated?

What's the benchmark?

- Overtrading is related to concentration, seems clearly "bad"
- But is there a clean benchmark for "good" behavior in TAS market making?
  - Potentially useful as a "safe harbor": if market participants do this, they cannot get in trouble

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- But it's not easy to construct a benchmark! If I sold 3 wheat futures TAS, should I:
  - Buy 3 contracts immediately at time 0?
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- None of these are riskless, and none "obviously" correct!

Should all trading happen before T_s?

- What about trading very close to settlement?

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  - What if we bought 3 contracts exactly at T_s, just before settlement?
  - But if there was more buying earlier, in T_1, is that manipulation?
  - If we buy 3 contracts exactly at T_s, can't actually profit from this manipulation!

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  - If we buy 3 contracts exactly at T_s, can't actually profit from this manipulation!
- Also not obvious to me, across broader class of models, that in a competitive world there's no buying after T_s
  - If goal is "spread out price impact", buying late could be as good as buying early
  - But buying late can't affect settlement prices
- "Overtrading" seems clearly bad, but is there stuff we can say is obviously "not bad"?

Minor comments

- Expositional: might be good to explicitly say underlying futures market maker is "competitive" and sets prices to conditional expectations (since the TAS market makers aren't)
- For extension work, seems potentially interesting to incorporate risk aversion