Liquidity Illusion & Segmentation
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Flash crashes

- Stock market, May 6\textsuperscript{th}, 2010
- US Treasury, Oct 15\textsuperscript{th}, 2015
- Corporate bonds, ????, 201?
Phenomena

1. Liquidity Illusion
   • Market liquidity “seems” to be there in normal times “fair weather liquidity”
   • .... but vanishes quickly

2. Liquidity “segmentation/bifurcation”
   • Liquidity and market making concentrates in certain segments
   • Focus on core markets + (even) clients
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Data: US corporate bond market

- Fender & Lewrick (2015) (BIS)
Data: Outstanding + Bid-ask spread

- Trading volume has not kept pace with issuance
- Bid-ask spread declined

Fender & Lewrick (2015) (BIS)
Data: Dealer Inventory

Fender & Lewrick (2015) (BIS)
1. Liquidity Illusion – Hypothesis 1

- **Hypothesis 1:** Financial regulation make market making more expensive
  - Inventory costs rise
  - Market making becomes less profitable
  - Less market liquidity provision
- **Implication 1:**
  - Bid-ask spread should be wider all the time
  - Volatility should be higher all the time
  - ... No “liquidity illusion”
1. Liquidity Illusion – Hypothesis 1

- **Hypothesis 1:**
  Financial regulation make market making more expensive
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    - ... No “liquidity illusion”
  - **Implication 2: Profit Puzzle**
    - Market making profit of
      - regulated firms
      - unregulated firms
    - Counterexample: Jefferies Group (unregulated)
      - first quarter bond trading revenue dropped 56%
1. Liquidity Illusion – Hypothesis IIa

- **Hypothesis 2a: Margin spiral explanation**
  - VaR regulation: as volatility rises, margins and tightness of regulation rises, fire-sales, higher volatility

- Amplification mechanism – anti-stabilizing
  - **Counter-argument:**
    - But wasn’t regulation procyclical beforehand – so what has changed
  - **Counter-counterargument:**
    - Regulation might be more tight and hence more binding.

- **Policy implication:**
  - Make regulation less VaR dependent, more countercyclical
1. Liquidity Illusion - Hypothesis IIb

- Hypothesis 2b: “Run fear” explanation
  - Market makers own funding is less stable (more short-term)
  - Afraid to experience runs
    - as volatility rises, “Run fear” rises
    - Pull back suddenly
  - Regulation excluded market makers with stable deposit funding (partially due to FDIC insurance)
1. Liquidity Illusion – Hypothesis III

- Hypothesis 3:
  Interaction with low interest rate environment & high frequency trading
  - Low interest rate environment → reach for yield
  - Dynamic strategy:
    - Profit from market making in normal times
    - Manage risk: by withdrawing fast – just before the edge
    - Sudden U-turns/pullbacks
    - In aggregate: crowded trades and liquidity illusion
2. Liquidity Bifurcation

- Two assets which are similar from a fundamental cash flow stream have very different liquidity profile
- Related to “safe asset”

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- **Safe asset tautology** (special form of liquidity tautology)
  - An asset is safe if it is perceived to be safe
  - Multiple equilibrium
  - Coordination of beliefs
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- Jump instead of shifting the boundary – back to time series
Conclusion

- (Fair weather) liquidity illusion - time series
  - Hypothesis 1:
    - simple “regulation explanation” does not cut it
  - Hypothesis 2:
    - “Margin spiral” (VaR) – why now
    - Run prone market makers
      - By excluding market makers with FDIC insurance
  - Hypothesis 3:
    - low interest rate environment
    - reaching for yield by
      - going to the edge
      - sudden U-turn/pullbacks

- Liquidity bifurcation/segmentation - cross section
  - Related to “safe asset status”
Extra slides