

Unrealized Trading Gains by Chuck Fang

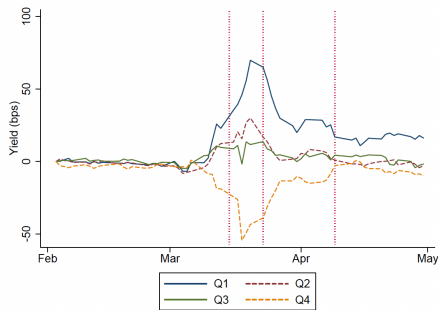
Discussant: Yiming Ma

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Motivation

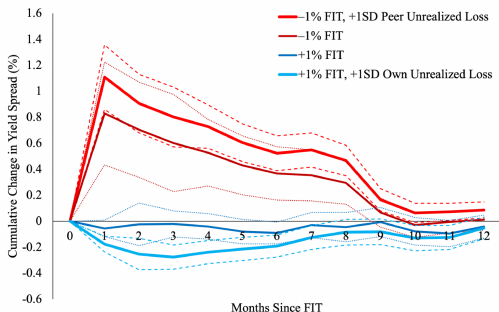
- Non-banks engaged in liquidity transformation are prone to panic runs and fire sales, e.g., bond mutual funds in the Covid-19 crisis
- Dealer banks' balance sheet space is constrained by regulation
- How about non-banks that do not engage in liquidity transformation? Why do they not step in to buy more assets?



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Main Results

- Unrealized losses in held-to-maturity bonds constrain insurance companies' capacity to buy fire-sale bonds
 - Less likely to buy bonds that mutual funds sell if the rest of their portfolio has more unrealized losses
 - Less likely to sell bonds that mutual funds buy if those bonds have more unrealized losses



- The paper's results shed light on three important questions
 - ① The interplay between accounting rules and regulatory capital requirements
 - Not only relevant for banks
 - ② The interaction between non-banks financial institutions with different business models and constraints
 - Understudied; largely separate literatures
 - ③ The determinants of asset market segmentation and asset substitutability
 - Relevant for asset demand estimation

Overview of Comments

- ① Unrealized Losses versus Gains
- ② Dynamic Considerations
- ③ Cash and the Meaning of Liquidity Provision

1. Unrealized Losses versus Gains

- Main specification:

$$\Delta Holding_{i,b,t} = \beta FIT_{b,t} \times UnrealizedLoss_{i,b,t-1} + \gamma Controls + FE + \epsilon_{i,b,t}$$

- *“conditional on -1% flow-induced trading, purchases by insurers are 0.294% smaller if the bond’s peers carry one-standard-deviation higher unrealized losses.”*
- Interpretation: due to regulatory accounting rules, unrealized losses constrain insurance companies’ liquidity provision in bond markets

1. Unrealized Losses versus Gains

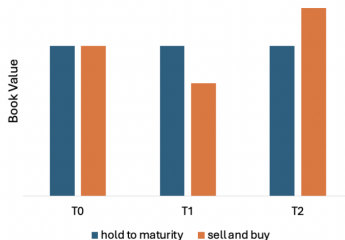
- However, unrealized gains are recorded as negative unrealized loss!
- Hence, it is also true that *“purchases by insurers are 0.294% larger if the bond's peers carry higher unrealized gains.”*
- Interpretation would be different: due to regulatory accounting rules, unrealized gains promote insurance companies' liquidity provision

1. Unrealized Losses versus Gains

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- Interpretation would be different: due to regulatory accounting rules, unrealized gains promote insurance companies' liquidity provision
- Taken together: regulatory accounting rules sometimes constrain and sometimes promote liquidity provision in bond markets. This is a distributionary effect! Is there any net effect?
- Suggestion: Separately look at unrealized gains and losses + rephrase interpretation

2. Dynamic Considerations

- Buying fire sale bonds at a discount by selling bonds with unrealized losses implies losses in the short run but gains in the long run



- Hence, unrealized losses constrain trading only if capital constraints are more binding in the short run, i.e., T1. May not be true if capital constraints are more binding in the long run.
- Trading decisions and capital constraint considerations are dynamic

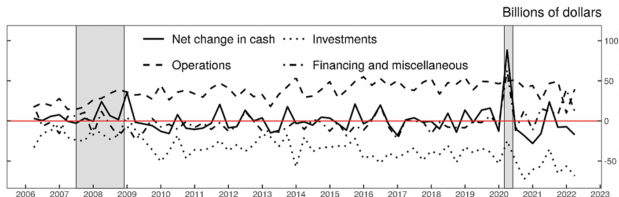
3. Cash and the Meaning of Providing Market Liquidity

- This paper: the purchase of some bonds by selling other bonds
- What does it mean to provide liquidity in bond markets?
 - ① Net purchase: insurance companies buy bonds with cash when mutual funds sell
 - → average overall bond market liquidity and yields
 - ② Relative purchase: insurance companies buy specific bonds sold by mutual funds while selling other bonds
 - → reduce dispersion in liquidity and yields across bonds
- Important but distinct notions

3. Cash and the Meaning of Providing Market Liquidity

- What about insurance companies' net purchase of bonds using cash?
- Insurance companies' cash positions increased leading up to March 2020 and then quickly decreased

Figure 2. Components of the net change in cash for the life insurance industry



Note: The shaded regions indicate periods of stress for life insurers (2007:Q2—2008:Q4 and 2020:Q1—2020:Q2).

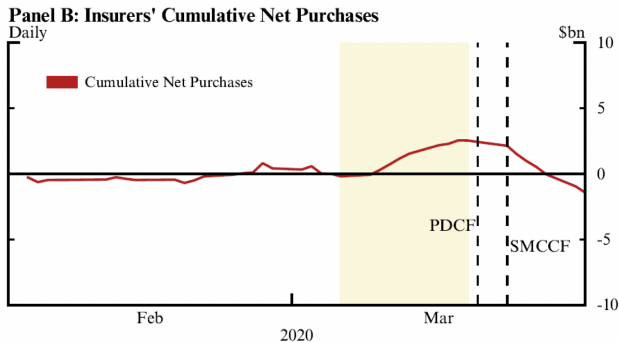
Source: Authors' calculations based on NAIC statutory filings.

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3. Cash and the Meaning of Providing Market Liquidity

- Indeed, insurance companies also increased their **net** purchases of corporate bonds in the Covid-19 crisis



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3. Cash and the Meaning of Providing Market Liquidity

- Suggest to explore how insurance companies' net bond purchases relate to their relative bond purchases
 - When unrealized losses constrain relative purchases, do insurance companies have more or less cash to do net purchases?
 - E.g., when interest rates increase,
 - Unrealized losses on bonds increase
 - New investments offer higher yields but variation margin requirements on interest rate swaps increases the demand for cash
- → more holistic view of insurance companies' role in providing bond market liquidity

Conclusion

- Very interesting paper!
- Important implications for how capital loss reporting rules affect insurance companies' capacity to provide bond market liquidity
- Suggest to rethink the interpretation of the results
 - 1 Unrealized losses constrain trading but unrealized gains promote trading
 - 2 Capital constraints now versus capital constraints in the future
 - 3 Relative purchases versus net purchases
- → especially for quantifying the cost of regulatory capital