

# How Fragile Are Loan Mutual Funds

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# The Rise of Corporate Loan Mutual Funds

- Fixed-income mutual funds: \$0.5 trillion in 1995; >\$5 trillion in 2022
- Loan funds have rapidly grown in size even compared to other fixed income mutual funds

Figure: The Growth of Loan Funds



# Loan Mutual Funds are Economically Important and Fragile

Open-ended fixed income funds engage in liquidity transformation

- Hold Illiquid assets
- Issue shares redeemable upon short notice
- → provide liquidity like banks do
  - Hold cash buffer (Chernenko and Sunderam 17)
  - Provide a fifth of liquidity per \$1 as deposits (Ma, Xiao, and Zeng 21)
- → vulnerable to runs like banks are (Chen, Goldstein, and Jiang 10)
  - 1 Investor redemptions
  - 2 Liquidation of illiquid assets
  - 3 Fund NAV is slow to incorporate liquidation costs
  - 4 First-mover advantage to redeem first

**This paper provides new and important insights on the fragility of loan mutual funds.**

- ① Loan funds appear less fragile than corporate bond funds
  - Surprising, as loans  $\uparrow$  opacity should  $\rightarrow$   $\uparrow$  illiquidity
- ② Explanation: CLOs supply arbitrage capital for loans not bonds
  - CLO claims are not redeemable upon short notice
  - Incentivized to buy underpriced loans – par building
  - $\rightarrow$  CLOs buy when loan funds sell

**Overall, it is an interesting and thought-provoking paper!**

My main thoughts:

- 1 Are loan funds less fragile than high yield bond funds?
- 2 What is driving the variation?
- 3 What is the takeaway? Do CLOs resolve loan fund fragility?

# 1. Are Loan Funds Less Fragile than High Yield Bond Funds?

## Abstract

There are two major institutional investors in the syndicated loan market: collateralized loan obligations (CLOs) and bank loan mutual funds. CLOs are closed-end funds while bank loan mutual funds are open-end funds that issue claims that are redeemable on demand. In this paper, we examine whether CLOs loan purchases serve to reduce the fragility of loan funds. **Despite differences in the way loans and bonds are traded, we find little evidence of greater fragility among loan funds than corporate bond funds.** Indeed, most of our tests suggest lower arbitrage costs and lower fire-sale discounts for loan funds than for high yield bond funds. We provide evidence that the resilience of loan funds arises, in part, from CLOs providing liquidity through par building trades in discounted loans when loan funds experience large outflows.

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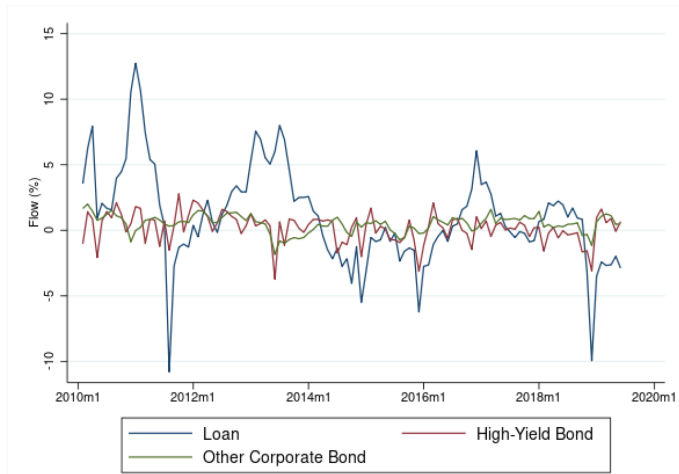
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- Not so sure that this is the right takeaway

# Loan Funds have Larger Outflows in Bad Times

Figure: Fund Outflows





# Loan Funds Have a More Concave Flow-to-Performance Relationship

- Outflows alone may not indicate runs, outflows could be fundamentals-driven
- Chen, Goldstein, and Jiang 2010: When there are strategic complementarities in redemptions, outflows are sensitive to bad performance more than inflows are sensitive to good performance
- Cetorelli, La Spada, and Santos 2021 run this test for loan versus bond funds
- They find a more concave flow to performance for loan funds → indicative of larger run risk at loan funds

# Why Are the Results Different?

- Maybe not the right specification?
  - No results on flows
  - Not conditioning on bad performance, which is the key indicator for strategic complementarities in redemptions

$$\begin{aligned} EReturn_{i,t} = & \alpha + \beta_1 Flow_{i,t} + \beta_2 Flow_{i,t} \cdot IlliqPeriod_t \\ & + \beta_3 IlliqPeriod_t + \beta_4 Alpha_{i,t-1} + \gamma' X_{i,t} + \theta_t + \varepsilon_{i,t} \end{aligned} \quad (5)$$

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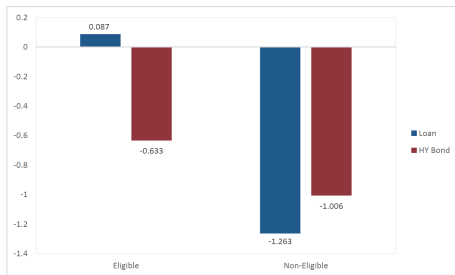
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- Maybe the results should be mixed?

# The Results Should be State-Dependent!

- Proposed channel: CLO par-building
- Par-eligible loans: price impact is smaller/absent
- Par-ineligible loans: price impact is larger than for HY bonds

Figure: Price Impact of Flow Pressure by Par Build Eligibility



- Overall results are mixed because they depend on whether par-eligible or par-ineligible loans dominate in the sample

- 1 Modify pitch to be consistent with main findings
  - Rather than: loan funds are less fragile than high yield bond funds
  - Should be: relative fragility of loan funds is state dependent
- 2 Empirical specifications should also consider state dependence
  - For example,
  - Rather than: compare arbitrage costs for HY ETFs to loan ETFs
  - Should: compare relative arbitrage costs by the type of loans ETFs hold
  - Reason: Authorized participants (=arbitrageurs) subject to the same par-building CLOs as loan funds
- 3 Examine flows + condition on bad performance

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- Or, if Investors **believe** redemptions will be large enough

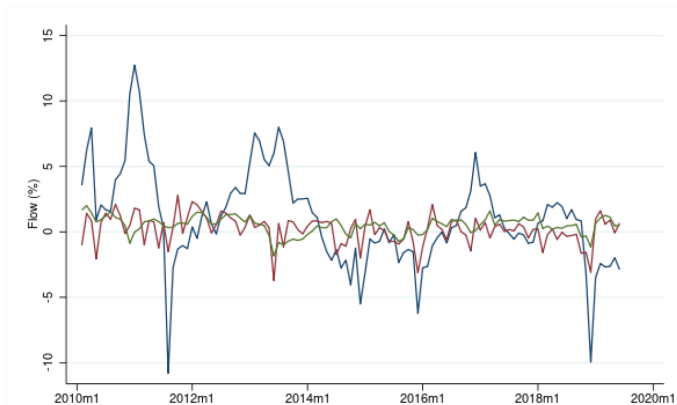


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- The par-eligibility threshold may even become a trigger...
  - Redemption gates and liquidity fees exacerbated runs at prime MMMF during Covid-19 (Li, Li, Machiavelli, Zhou 21)

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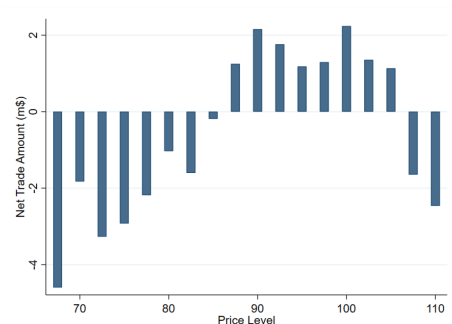
- Potential implication: loan funds remain stable in more states of the world but experience sudden fragility in very bad states of the world...
- Suggestive evidence: fund outflows not as frequent, but more pronounced when they occur



### 3. What Drives the Variation?

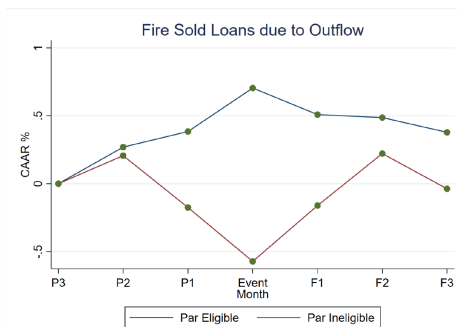
- There are security FE, but what are the characteristics of par-eligible vs. ineligible loans? sold vs. unsold bonds?
- Probably not only due to flow pressure but other fundamental reasons
- This informs the distributionary effects

Figure: Par Building Activity by Loan Price



### 3. What Drives the Variation?

- More importantly, this matters for whether there are really “synergies among institutional investors in the loan market” or whether it is just a shift in credit risk from funds to CLOs?
- Can we really exclude fundamental reasons for the sale of loans?



- CAR reversal for par ineligible bonds
- CAR for par eligible bonds not clear. What is being sold to CLOs?

- New and important insights on the fragility of loan funds. Uncovers interesting interaction between loan funds and CLOs.
- Suggestions
  - ① Align pitch with main results: loan fund fragility is state-dependent
  - ② Discuss implications: loan funds remain fragile in very bad states
  - ③ Examine drivers of liquidations and par eligibility: costs to CLOs?