Collateral demand and liquidity demand in wholesale funding markets

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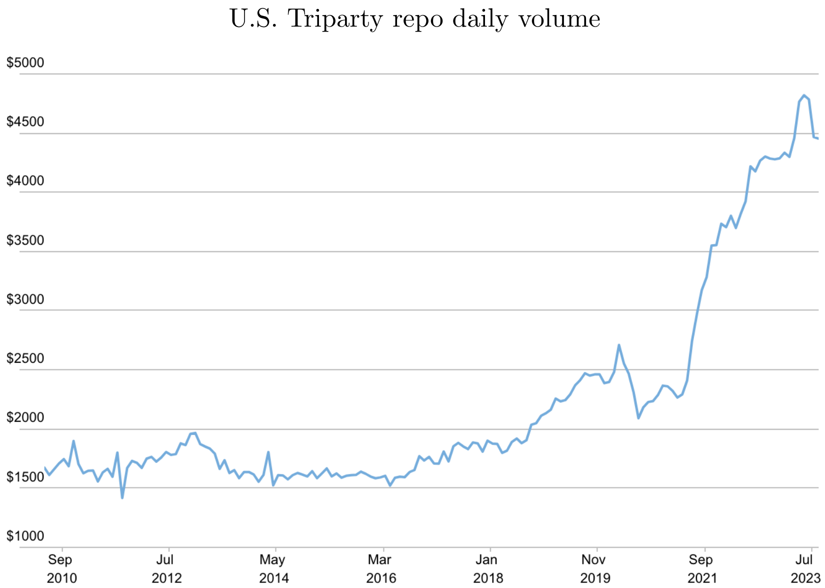
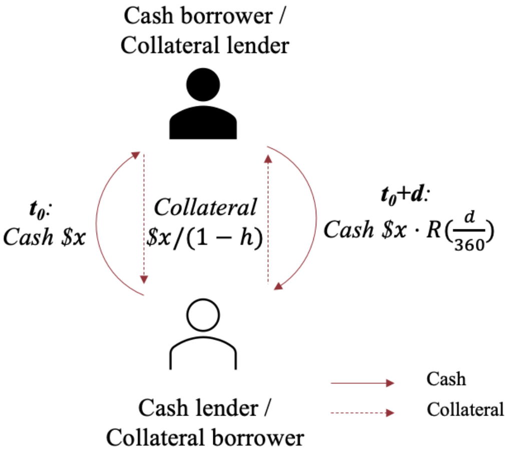
The Wharton School

Yale Junior Finance Conference
September 15, 2023

Repo trading is in the trillions



Repo is integral to advanced financial market



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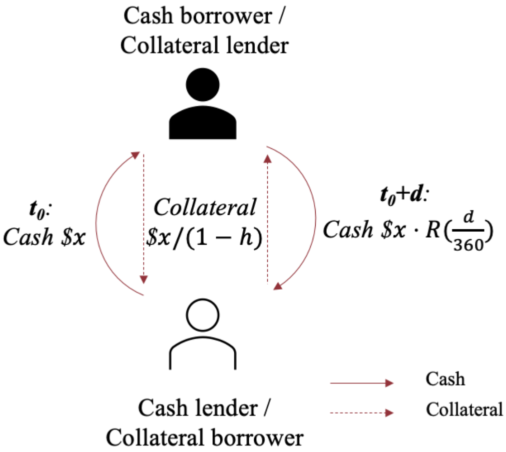

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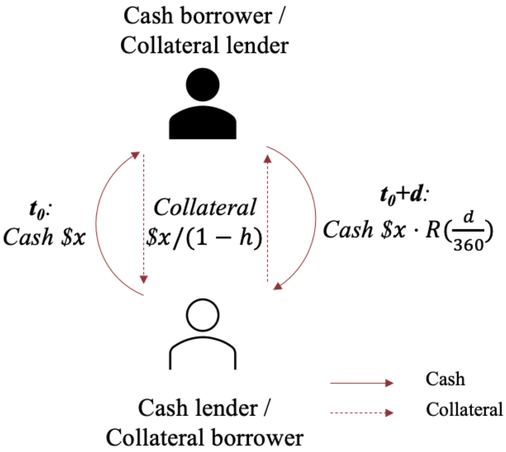

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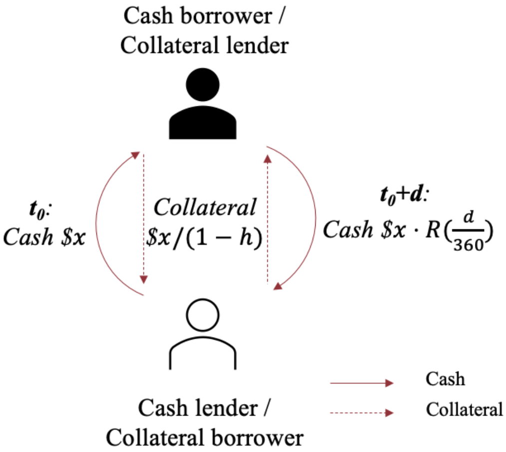

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- Benefit to cash lender:
  - Safe & liquid investment.
  - Source specific collateral.
- Repo = easy shorting / purchase.
  - Underpins Treasury/Agency MBS.
  - Lubricates financial system.
  - Sign of market depth and sophistication.

This paper

- Focuses on collateral borrowers: cash lenders who are after the collateral.
  - Collateral demand: (1) amount desired, (2) contribution to utility, **(3) expected return from collateral,** η_i^a.
- Estimates η_i^a using BoE's transactional data.
- Key result: collateral demand (definition (3)) peaks during crisis.
  - Counterfactual: collateral demand boosts supply of funding, reduces rates, and boosts welfare.

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- Key result: collateral demand (definition (3)) peaks during crisis.
  - Counterfactual: collateral demand boosts supply of funding, reduces rates, and boosts welfare.
- Author: working on establishing broader consequences of collateral demand.
- Discussion: surveying the literature, what we know so far and what would be good to know?

Participants in repo: two paradigms

- Funding Paradigm:
  - Cash lender: MMF.
  - Cash borrower: hedge funds.
  - Dealer is the intermediary who is MMF's cash borrower and hedge funds' cash lender.

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- Observations:
  - MMF does not participate in Collateral Paradigm; they lend to earn return.
    - Cash lender in Collateral Paradigm *pay* to get collateral.
  - Hedge funds are not cash lenders in Funding Paradigm; they don't have capital.
    - Repo rate can never justify hedge funds' cost of capital.

Repo specialness

- Hedge fund looks for specific collateral to:
  - Buy-low-sell-high, e.g., on/off-run Treasury.
  - Satisfy contractual obligation.
- Repo rate for sourcing specific collateral can be lower than market rate.
  - Interpreted as η_i^a in this paper.
  - Known as "repo specialness" more generally: Duffie 1996.
- What could affect specialness:
  - Profit from trading / incentive to short.
  - Collateral availability / constraint to supply.
- Important asset pricing implications: e.g., on/off-run bond price convergence (Krishnamurthy 2002).

Repo specialness and monetary policy: a tool

- Repo specialness can be used as an unconventional monetary policy tool.
- We know: demand for collateral $>$ supply of collateral $\longrightarrow$ repo rate $\downarrow$.
- We could: buy up bonds and not lend bond out so that there isn't enough bonds in circulation.
- ECB did this following QE in 2018 (Roh 2022).
  - Lowered interest rate by an additional 26 bps.

Repo specialness and monetary policy: a challenge

- Repo specialness can be a tool for monetary policy but can also be a challenge.

- New reference rate: SOFR.
  - Volume-weighted median rate on Triparty, GCF, and FICC-cleared DVP repo.
  - Replaced LIBOR, gauge for funding condition, linked to trillions of USD derivatives.

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- New reference rate: SOFR.
    - Volume-weighted median rate on Triparty, GCF, and FICC-cleared DVP repo.
    - Replaced LIBOR, gauge for funding condition, linked to trillions of USD derivatives.
- Triparty and GCF are general collateral (GC), can't be used for Collateral Paradigm.
- FICC-cleared DVP repo is not GC, and can trade "special".
- What the Fed does now:
    - "DVP repo transactions with rates below the 25th volume-weighted percentile rate are removed from the distribution of DVP repo data each day. This has the effect of removing some (but not all) transactions in which the specific securities are said to be trading 'special'."

Taking stock

- Repo trades along two paradigms, can facilitate
  - Borrowing cash.
  - Borrowing collateral.
- When demand for collateral exceeds supply for collateral, repo can trade special (Duffie 1996).
- Repo specialness can be harnessed for monetary policy (Roh 2022).
- Repo specialness can also pose challenge for monetary policy implementation.
- But there are still many open questions.

Open questions

- Who supplies sought-after collateral.
  - We know what drives (hedge funds') demand for collateral.
  - We know very little about what affects supply.
  - Is the cash to supplier lent out again? Thus increasing cash supply?
  - What affects the constraint to supply? Leading to spikes in specialness?

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  - Is it demand: market dislocation creates arbitrage opportunity?
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  - Is it supply: constraint to supply tightens?
  - Is the distribution of repo specialness different? Should we truncate SOFR beyond 25th percentile?
- How does dealer's balance sheet constraint affect repo specialness?
  - Indispensable intermediary.
  - Post-GFC, regulation limits balance-sheet size.
  - Dealers becoming more like "brokers", may not be able to house securities temporarily — increasing repo specialness?

Conclusion

- Repo is critical for (sophisticated) financial market.
- Repo can be used for Funding as well as for Collateral.
- The Collateral Paradigm can be harnessed for monetary policy but can also be a challenge.
- Lots of unanswered questions, important topic to study further.
- Good luck!