# Introduction

Repo detail--------------------------------------

Daily trillions of dollars are transacted in :the market for repurchase agreements.The repo market has grown into a $4 trillion-a-day funding market to provide liquidity to the Fed’s primary dealers, large broker-dealers, and other financial participants GSEs, MMF, Primary dealers play an important function intermediating US Treasury debt through these markets.

In triparty repo, the “base layer” of repo markets. Here, nearly all players operate solely as cash lenders or borrowers. The Federal Reserve is also active in triparty repo, as it uses the venue to conduct open market operations. The Fed is the only major participant to engage in both triparty repo borrowing and lending.Other participants obtain cash at the cheapest rates primarily from MMFs (money market funds) in triparty repo, then lend at a spread in other repo markets.

Bank reserves and deposits swapped for Treasuries and other securities are then swapped for repos used to fund loans, obtain leverage, and many other functions. today’s repo markets make Treasuries and other government securities virtually equivalent to cash.

1) triparty (yellow)\_— the major dealer funding market,

2) GCF — the interdealer repo market (green), and

3) bilateral BGCR — the dealer-to-customer or “specific collateral” repo market ( blue).

[See concoda repo part 2]

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It is no surprise that that the whole money market rates together with overnight reference rates, the Federal Reserve's policy and administrative rate share many features:

Clearly policy regimes change distributions of rates but policy and money market rates have these features in common:

clustering around the Federal Funds rate (FFR), quick response to changes in FFR and administrative rates, interest on reserves (IOR), the overnight reverse repo rate (ONRRP), large outliers, and heteroskedastcity, volatility that changes over time.

That they differ strongly in central tendencies, clustering, outliers

regimes beg we understand the role of monetary shocks and the Fed's preferences for volatility in managing the FFR within ranges set by the FOMC.

Main features of the U.S. short-term interest rate

- complex conditional heteroskedasticity

- fat-tailed innovations

- pronounced autocorrelation patterns

The market for repurchase 'repo' agreements has grown into a $4 trillion-a-day funding market to provide liquidity to the Federal Reserves' primary dealers who must purchase every new issue of US Treasury securities, large broker-dealers, and other financial participants. Primary dealers play an important function intermediating US Treasury debt through these markets. Other GSEs, MMF,

FOMC policy changes in the FFR changes the distribution of all reference rates.Former scarcity, reserve requirementsm OMO, Under the corridor system that implements the [DATE] ample reserves, the Fed's setting of the IORB and O/NRRP which establish the the ceiling and floor of within which the Fed manages the range of the FFR. Fed temporary draining and adding reserves according to preferences for offsetting volatility in the FFR. But changes in these administered rates also change spreads change trading patterns in these funding markets. When SOFR (Secured Overnight Financing Rate), the Fed’s broadest measure of repo rates, exceeded O/N RRP, cash lenders returns to private repo, while the Fed’s facility took a backseat

When the spread between SOFR and IORB has widened/ significantly, funding market participants allocate cash to repo trades.

The Fed’s O/N RRP had thus begun to determine rates in repo’s primary funding market (triparty repo).Throughout 2022, the rate for dealers to borrow from cash lenders remained tightly pinned to O/N RRP.

wrt to banks, As the central bank pays interest on bank reserves, repo rates must to rise above both O/N RRP and IORB for banks to fund repo trades with reserves, which they’d otherwise park at the Fed for superior returns. Each time the spread between SOFR and IORB has widened significantly, Wall Street behemoths have begun to allocate cash to repo trades, supplying liquidity to the most crucial funding market.

How does this major policy change change all affect the distributions: medians, clustering IQR, outliers Range, time varying volatility

facilities like standard repo facility (SRF) and reverse repo facility

• Fed opens its RRP (reverse repo) facility and accepts offers to lend cash against securities from its mammoth portfolio.SOMA