



## Evaluating the Post-Crisis Tri-Party Repo Market

The financial crisis of late 2008 to early 2009 has caused regulatory agencies worldwide to re-examine systemic risks, leading to a re-evaluation of the way that many transactions are conducted in various markets. One of the markets affected by these changes is the tri-party repurchase transaction market, or tri-party repo market, which at the height of its popularity financed over \$2.8 trillion in securities. The Task Force on Tri-Party Repo Infrastructure was created in order to identify risks that could be mitigated and to recommend actions to help avoid these risks in the future. While these steps are necessary in order to bolster confidence in our financial markets, financial institutions must look at the costs involved and decide how best to adhere to new initiatives while still maximizing the potential for yield.

### Background

Developed in the mid-1980s, the tri-party repo market is a large and important part of the over-arching U.S. repo market. Dealers use repos (or repurchase transactions) to finance their securities by selling them to counterparties, agreeing to buy them back at a later date. In tri-party repos, a clearing bank acts as the intermediary between a dealer and its counterparty in settling the transaction and providing mark-to-market and other services.

The U.S. repo market as a whole helps maintain liquidity and efficiency in our financial markets, particularly in Treasuries and the Agency Mortgage-Backed Securities (MBS) markets, which collectively make up a majority of the collateral used in repurchase agreements. As clearing banks have developed their capabilities, dealers and cash investors have more flexibility and protection when using tri-party repos, often leading to lower borrowing costs for dealers and more investment opportunities for money funds and other cash investors.

## Times of Crisis

Before the financial crisis began in 2008, the banking system was experiencing a period of relative calm. Since 1934, there had been no significant bank runs, where panicked investors withdrew their deposits from banks. This period, which ended at the time of the most recent financial crisis, was known as the “Great Moderation,” in which many market participants believed that the time of wildly gyrating markets was over. At this time, securities used for collateral in the repo market expanded from the traditional use of Treasuries and Agency MBS to include equities and securitized products such as Collateralized Debt Obligations, which package loans into a single security. Although these securities were inherently riskier than Treasury and Agency securities, the risks were not fully priced into the transactions. At the height of the markets, less-liquid securities made up approximately 30% of the collateral used in repurchase transactions.

As the financial crisis deepened, investors in money market funds began to redeem their investments, causing the money market funds to reduce their repo financing to dealers in order to honor redemption requests. Uncertainty increased as cash investors became unsure of not only the quality of collateral used in repos but also the solvency of the dealers whose collateral they held. In many cases, although collateral offered by dealers might be made up of high-quality securities such as U.S. Treasuries, the solvency of the dealer itself took precedence when cash investors decided whether or not to invest in a tri-party repurchase transaction. Panic took hold, and cash investors no longer wanted to lend money to dealers; instead, they hoarded cash in fear of the unknown risks in the collateral markets. As a result, collateral became harder to come by and liquidity dried up, leading to the demise of Lehman Brothers, Countrywide Securities and Bear Stearns. Exhibit 1 illustrates the decline of the market value of tri-party repurchase agreements with BNY Mellon as clearing bank, which began in late 2008 and continued into 2009. The market value of the tri-party repo market only began to recover in 2010.

**Exhibit 1: Total Market Value of Tri-Party Repo Market (in billions)**



The daily unwind process was particularly problematic for the tri-party repo market when it became uncertain whether dealers would be able to obtain financing through additional cash investors. The unwind process always begins in the morning, when cash investors receive their funds back as the repo trade is unwound, transferring risk to the clearing banks. If it seemed likely that a dealer might default on its collateral, the cash investor might decide not to reinvest in another trade. The less likely it was that a cash investor would reinvest, the more likely it was that the dealer could default, which in turn kept other cash investors on the sidelines. In addition, since clearing banks typically fund repo unwinds, they could also decide whether

they would actually unwind an agreement if it seemed likely that a dealer would default. This made cash investors even more reluctant to invest on concerns that clearing banks would refuse to unwind the trades if there was an increased potential for default. As a result, cash investors began to withhold funding.

The Federal Reserve Bank of New York sponsored the Task Force on Tri-Party Repo Infrastructure to examine the risks in that market and decide what changes needed to be made so that such risks may be mitigated or avoided in future financial crises.

The morning unwind and availability of intraday credit provided by the clearing banks created an unstable market environment, and the heightened risk aversion on the part of cash investors meant that financing evaporated rapidly even as the need for liquidity increased. These outcomes added pressure to an already unstable financial system that was reeling from falling equity prices and the defaults of major financial institutions. For these reasons, the Federal Reserve Bank of New York sponsored the Task Force on Tri-Party Repo Infrastructure to examine the risks in that market and decide what changes needed to be made so that such risks may be mitigated or avoided in future financial crises.

## Reassessing the Tri-Party Repo Market

There are many areas on which the Task Force has focused, including:

- Operationally, the Task Force has decided that the “practical elimination” of intra-day credit provided by clearing banks in connection with repo unwinds would reduce clearing bank exposure to dealers, thereby realigning the economic risk of the transaction between the two repo counterparties. These efforts include moving the time when tri-party repos are unwound from 8:30 a.m. to 3:30 p.m., meaning that the risk of the trade stays with the cash investor for most of the day. Intra-day credit will be further reduced for term repos by implementing new processes for collateral substitutions, which will substantially reduce the amount of credit provided by the clearing banks to dealers in substituting cash for securities, and instead require dealers to substitute one form of collateral for another within a trade.
- Dealers were unaware that secured financing might be unavailable, even when their collateral consisted of high-quality securities. This is because many cash investors looked at the credit-worthiness of the dealer itself, not just the quality of the collateral. If there were any perceived risks that the dealer might become insolvent, investors were unwilling to lend cash. The Task Force supports the idea that dealers must better manage liquidity risks and establish contingency plans for obtaining both short- and long-term financing.
- As market conditions deteriorated rapidly, margin requirements sharply increased. The Task Force believes that financial institutions should conduct periodic stress tests which, along with statistical analysis and conservative decision-making, should aid in setting appropriate margin levels.
- Cash investors did not adequately anticipate the possibility of a dealer’s default, and lacked strategic plans for an orderly way of managing the liquidation of large amounts of repo collateral. The Task Force recommends that cash investors develop contingency plans to be put in place in the event of a default and regularly review them with senior management to ensure that they are comprehensive and appropriate. Cash investors should closely examine the diversification, volatility and structure of the collateral offered by a dealer to determine whether margin requirements need to be adjusted.
- Much of the information in the repo market is not transparent, including the size, composition, concentrations and margin levels in the market. This made it hard to monitor potential problems that could arise during a financial crisis. The Task Force is establishing a team of valuation specialists to examine collateral pricing methodologies and offer improvements on these procedures.

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## Costs to Dealers

From the dealer's perspective, the most significant impact will be felt from the changes in the unwinding of tri-party repo agreements. Currently, unwinds are funded by the clearing banks at 8:30 a.m., allowing cash to change hands early in the day. Under the new regime, however, tri-party repo agreements generally will not be unwound until 3:30 p.m., reducing dealer liquidity. For money funds acting as cash investors, managing the timing of payments will be increasingly important in order to optimize the fund's yield. As cash will be locked up in tri-party repo agreements until 3:30 p.m. each day, new arrangements will need to be made in order for deadlines to be met.

Further complicating matters are the changes that will occur in 2011 for daylight overdrafts. Currently, financial institutions are charged 36 basis points (roughly \$333.00 per hour) for every \$1 billion in overdrafts. As of March 24, 2011, daylight overdraft fees charged to financial institutions will increase to 50 basis points, making intraday extensions of credit more costly to banks and ultimately to dealers. Banks and service providers will look to lower their overdraft costs, which may place significant constraints on them should they wish to extend credit to their clients. It is important to determine whether a bank has sufficient Fed-eligible collateral to continue to finance these operations. For banks and institutions with robust balance sheets, the impact should be negligible; however, for those with less stable financial situations, the implications for their clients could be severe.

## Summary

Since requirements have become significantly more stringent for both cash investors and dealers, there are benefits to having a relationship with a clearing bank that can help with managing liquidity, valuing collateral and providing detailed information with which to make decisions about risk management. Liquidity management can be achieved by access to intraday and overnight liquidity. Collateral valuations may be conducted independently by the clearing bank, and this collateral may be substituted and allocated to provide optimal usage for the dealer. Clearing banks can also conduct stress tests to examine possible outcomes of a dealer default. For money market funds, a robust platform of data management and reporting can include Form N-MFP reporting as well as the creation of board reports to keep all interested parties informed. In addition, services such as custody, transfer agency and fund administration can be combined to allow a broader picture of the activity occurring in money market funds, allowing for a more effective way to make decisions and manage cash flows.

Because of the new requirements for dealers and cash investors, these institutions will need more support from their third-party relationships. Clearing banks use an array of technology solutions to help cash investors with administration, analysis and reporting of tri-party repos, and those who use them as agents do not have to invest in this type of infrastructure. Clearing banks also offer valuable resources through monitoring risks, eliminating an expensive middle-office function that would otherwise need to be built out by the counterparties themselves. By working together with a clearing bank, cash investors are able to better adhere to new regulations while keeping their costs in check.

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