



FEDERAL RESERVE BANK *of* NEW YORK

# Monetary Policy Implementation

Spence Hilton, Senior Vice President, Markets Group  
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# Monetary Policy Implementation (MPI) Topics

- Traditional approach to targeting the federal funds rate (FFR)
- Execution practices for open market operations (OMOs)
- Implications of recent changes to the Federal Reserve balance sheet and payment of interest on reserves



# Institutional Details for the Tools

- Reserve Requirements
  - 10% of a bank's transaction deposit liabilities
  - 2-week reserve maintenance periods
- Standing Facilities
  - Pre-crisis, the discount rate (Primary Credit Rate) was 100 bp above the FFR target
  - Fed only began to pay interest on excess reserves in October 2008
- Main Types of Open Market Operations
  - Outright purchases of Treasury securities
  - Repurchase Agreements (RPs), collateralized by government securities (Treasury and GSE debt)

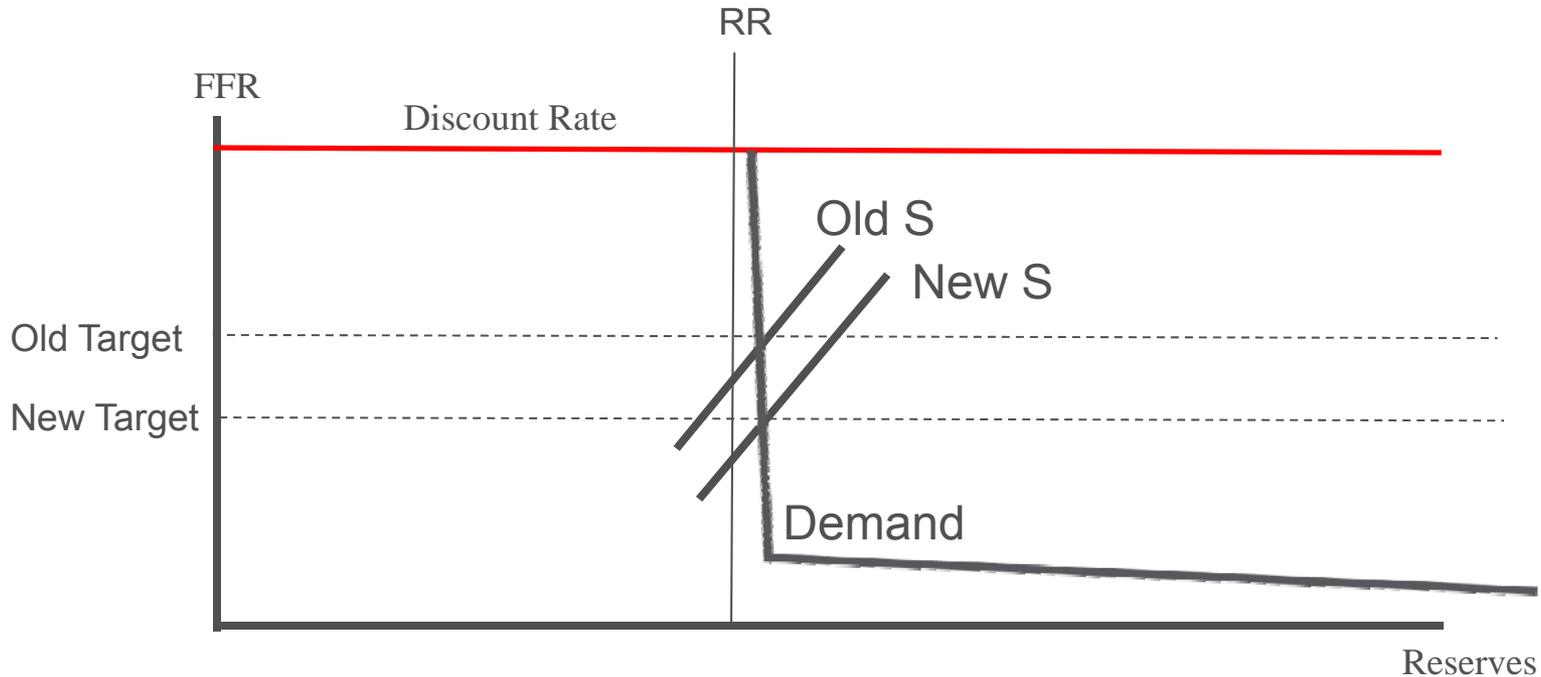


# Use of Tools in the Traditional MPI Framework

- Reserve Requirements (RR) set a minimum demand for reserves
- Interest rates paid on standing facilities set penalties for holding reserves above or below RR
  - Demand for reserves is very inelastic at levels just above RR
  - Demand curve flattens out at rates near zero as reserves rise
- OMOs were used to control reserve supply to keep the FFR around its target
  - Changes in balance sheet items outside the control of the Desk, such as currency demand, also affect reserve supply
  - Other factors can also affect the FFR (banking stresses, high payment volumes)



# An Idealized Picture of the Traditional Framework



- Reserve demand (D) is very inelastic above RR, but flattens out at rates just above zero as reserves rise
- Location of reserve supply (S) affected by OMOs and other factors
- Even small reserve supply changes could cause big changes to FFR
- Changing the FFR target only required small changes in reserves

# A Typical Day at the Desk (Pre-Crisis)

- Estimate Demand for Reserves
  - Mostly set by RR
  - Current market rates might also indicate special daily needs
- Estimate Supply of Reserves
  - Movements in many balance sheet items, such as demand for currency by the public, affect the supply of reserves
- Calculate OMO needed, and execute
  - Discrepancy between FFR and its target can provide a guide about what adjustments to reserve supply are needed
  - Pre-crisis, OMOs were arranged almost daily (“fine tuning” operations), mostly to offset impact of changes in currency and other factors on reserve supply



# Conduct of OMOs: Use of different operation types

- Temporary transactions (RPs and reverse RPs)
  - Ideal for responding to temporary moves in reserve supply or demand
  - Historically, short-term RPs of all sizes were arranged most days
- Outright transactions (purchases and sales)
  - Used to offset movements in factors that affect reserve supply thought to be permanent
  - Historical growth in Treasury holdings mostly reflects purchases made to offset impact of currency growth on reserve supply



# Conduct of OMOs: Counterparties

- Federal Reserve Act prohibits Fed from increasing holdings by purchasing directly from the U.S. Treasury
  - Must arrange transactions in the secondary market
  - At Treasury auctions, Fed may replace maturing holdings
- OMO Counterparties are the Primary Dealers (PDs)
  - Securities dealers active in secondary markets for govt. debt
  - Secondary markets for govt. debt are highly transparent
- NY Fed sets eligibility rules for PDs
  - Each PD's performance is reviewed periodically
  - Rules and reviews ensure PDs meet our business needs

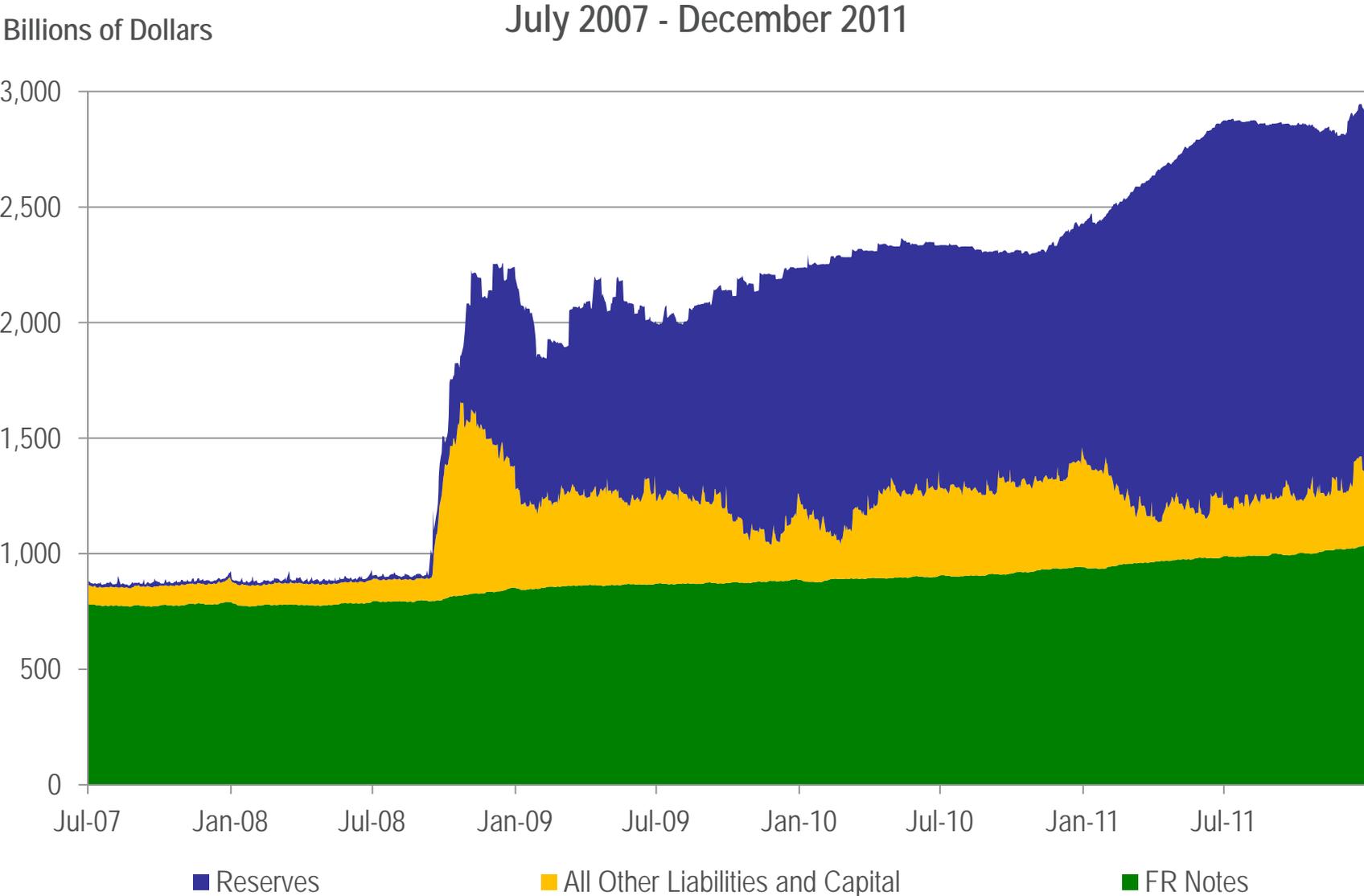


# Conduct of OMOs: Execution method

- OMOs are arranged as auctions
  - All PDs are invited/required to submit bids simultaneously
  - Auction methodology ensures competitive pricing
- FedTrade: the Fed's proprietary electronic auction platform
  - Links the Fed to all PDs
  - Quick processing times also ensure competitive prices
  - Snafus have happened, but recoveries have been quick



# Evolution of the Balance Sheet: Liabilities



Source: Federal Reserve Board

# Evolution of the Balance Sheet: Implications for OMOs

- Changes in the Operating Environment since September 2008:
  - New operating objectives for portfolio holdings
  - Reserves surge as a result of new objectives
  - Fed began to pay interest on reserves (IOR)
  - FFR target set to 0 to  $\frac{1}{4}$  percent, and IOR rate set to  $\frac{1}{4}$  percent
- Temporary transactions (RPs)
  - With reserve levels high and IOR rate low, don't need to “fine tune” reserve levels to keep the FFR in its target range (0 to  $\frac{1}{4}$  percent)
  - Temporary transactions not needed since December 2008



# Evolution of the Balance Sheet: Implications for OMOs

- Treasury purchase programs
  - Frequency of operations increased
  - Average maturity of Treasury securities held has increased
  - Execution method of Treasury purchase operations is much the same
- Agency MBS purchase programs
  - Purchasing and holding MBS new since the crisis
  - Complex nature of MBS themselves and of this market required new execution methods
  - In general, more frequent operations of smaller size are used
  - Initially, some of this work was outsourced, but now is all in house
  - Principle of competitive bidding has remained

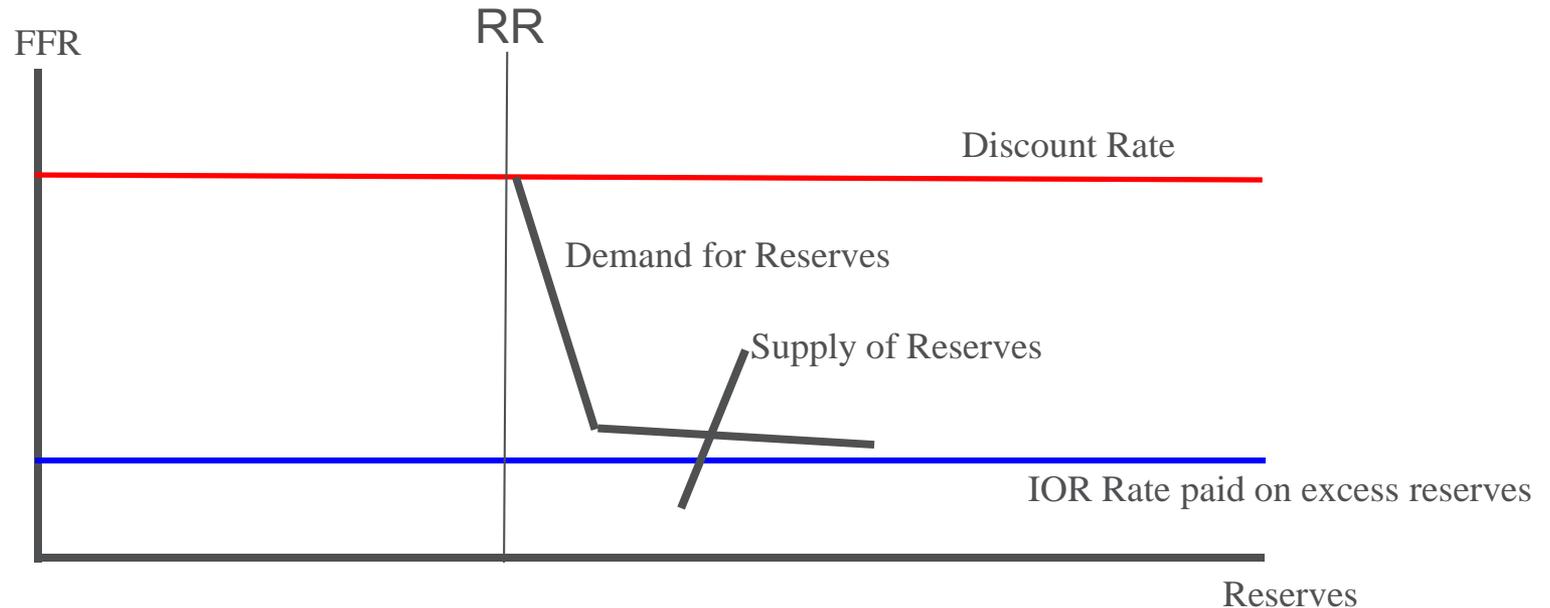


# Targeting the FFR during the exit period and beyond

- How to target a higher FFR if reserves are still large when it begins to remove policy accommodation?
- OMOs could be used to reduce reserves
  - There may be practical limits on rapid large-scale asset sales
  - The Fed has developed the ability to drain large amounts of reserves on a temporary basis (reverse RPs, and Term Deposits)
- Raise the interest on reserves (IOR) rate to the FFR target
  - Shifts up the elastic portion of the reserve demand curve



# An Alternative Approach to Controlling the FFR



- Theory suggests that FFR should be near the IOR rate if excess reserves are large
- Could be a new way to control the FFR: just set the IOR rate at the right level and keep excess reserves high (and RR play no role)

# Thank You

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