



FEDERAL RESERVE BANK *of* NEW YORK

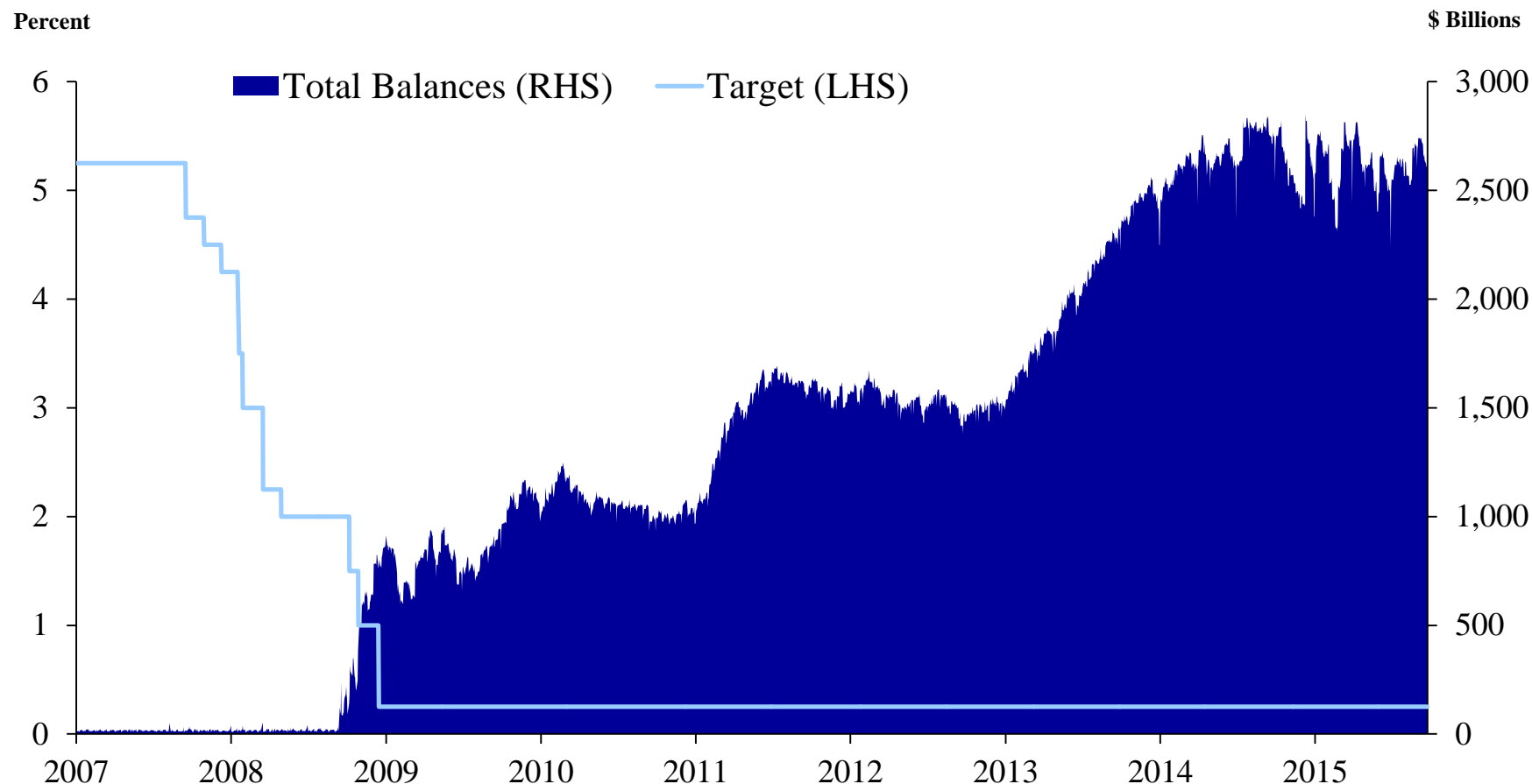
Implementing Monetary Policy: Transition Tools

Julie Remache

Central Banking Seminar – Oct 6, 2015

The views expressed in this presentation reflect the author's and do not necessarily reflect that of the Federal Reserve Bank of New York or the Federal Reserve System.

Federal Funds Target Rate and Reserve Balances



Policy Considerations around the Exit

Normalization

- Steps to raise the federal funds rate/other short-term interest rates and to reduce the Fed's securities holdings
- Current plans reflect changes in SOMA portfolio and enhanced tools since original principles which were released in June 2011
 - Higher levels of excess reserves
 - Larger, more complex securities portfolio with longer maturity profile
 - Introduction of overnight reverse repos (ON RRP)
- Fed has been using and testing various tools for some time



Policy Normalization Principles and Plans

September 2014 FOMC Minutes

- When conditions warrant, the Committee will:
 - Raise the target range for the fed funds rate
 - Increase the IOER compensation rate
 - Use the ON RRP and other supplementary tools as needed to help control the fed funds rate. ON RRP will be used “only to the extent necessary.”
- SOMA security holdings will be reduced in a gradual and predictable manner
 - (Intend to) phase out reinvestments **after** increasing target range for fed funds
 - Committee does not anticipate selling agency MBS
- In the longer run, portfolio will hold primarily Treasury securities and will be only as large as necessary to implement monetary policy efficiently



Policy Normalization Principles and Plans

March 2015 FOMC minutes

- FOMC minutes augments the September 2014 guidance:
 - Initially
 - Target a fed funds range that is 25 basis points wide
 - Set IOER at the top of range and ON RRP at the bottom of range
 - Allow temporarily elevated ON RRP cap to support policy implementation; expect to reduce the capacity fairly soon after policy firming
 - Adjust IOER rate, parameters of ON RRP, and use other tools (such as term operations) as necessary for appropriate monetary control



Transition Tools

Tools for Managing Short-term Rates

- As part of prudent planning, the Federal Reserve has discussed a range of possible tools to manage short-term interest rates. Some notable ones:

Tool	Term	Allocation	Eligibility	Date Announced
Interest on Excess Reserves (IOER)	Overnight	Fixed rate (administered)	Depository institutions	October 2008
Reverse Repos	Overnight	Fixed rate ¹	Primary dealers and expanded counterparties ²	Exercise initiated in September 2013
	Term	Fixed quantity		Exercises since December 2009
Term Deposit Facility	Term	Fixed quantity or fixed rate	Depository institutions	April 2010, testing began in May 2010

- IOER to serve as the Committee's primary tool to manage the FFR with other tools playing a supporting role

¹Under the most recent parameters, if the amount of bids exceeds the aggregate cap, an auction will take place to determine the stop-out rate for that operation.

²Expanded counterparties include 2a-7 money market funds, GSEs, and banks and savings associations.

Interest on Excess Reserves

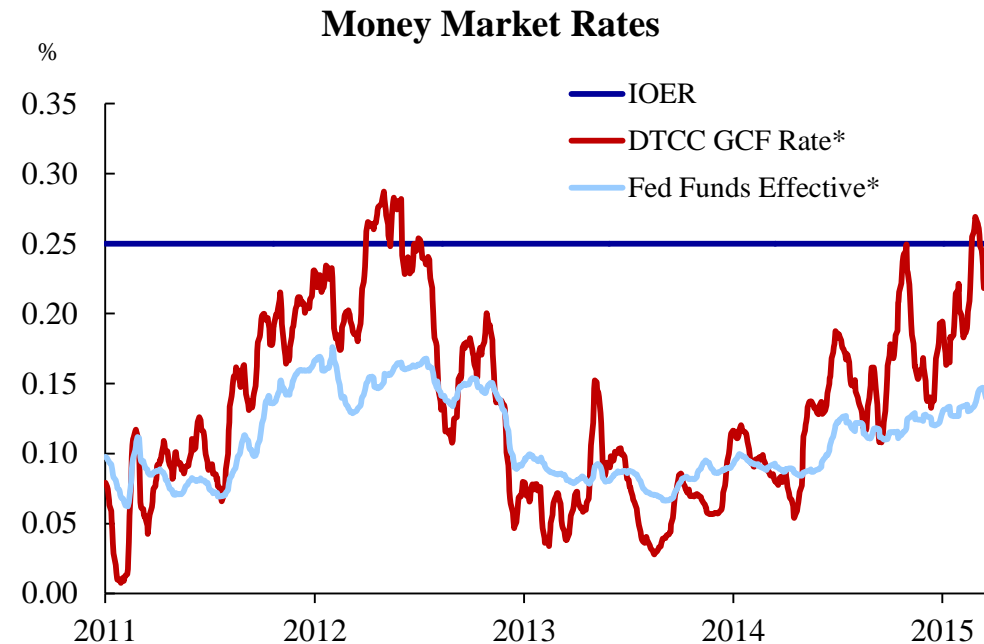
Interest on Excess Reserves (IOER)

- Effective October 2008, the Fed is able to pay interest on depository institutions' reserve balances
- This rate is currently 0.25%
- Introduction of IOER enhanced the Fed's ability to control short-term interest rates despite its reserve-expanding credit programs and asset purchases
 - Supply of reserves would have far exceeded demand given the significant expansion of Fed's balance sheet
 - Banks unwilling to lend fed funds below IOER (25bps) as they can leave funds at the Federal Reserve and earn IOER



Interest on Excess Reserves (IOER)

- FFR and other market rates often trade below IOER
- Why?
 - Not all money market participants have access to IOER (e.g. GSEs cannot earn IOER)
 - Balance sheet costs create a “wedge” between the Fed funds rate and IOER (e.g. FDIC assessment fees, regulations such as leverage ratio)



*10-day rolling average
Source: FRBNY, DTCC

Reverse Repo Exercises – Overnight and Term

ON RRP Exercise Background

- The minutes from the July 2013 FOMC meeting reported that the Desk briefed the FOMC on the potential for a fixed-rate, full-allotment ON RRP facility.
 - Could complement IOER and would be available to a broader set of counterparties
 - Could be used to enhance control of short-term interest rates
- At the Sept 2013 FOMC meeting, the FOMC authorized the Desk to conduct a limited technical exercise for overnight RRP.
- The objectives of the exercises are two-fold:
 - Gain operational experience with larger scale operations
 - Learn something about how ON RRPs could impact markets and whether they could be used to create a floor on short-term interest rates

ON RRP Exercise Background

- Parameters of the ON RRP exercise :
 - ON RRP rate between 0 and 5 basis points, has been as high as 10 bps
 - Per-counterparty bid has been raised several times, currently operating at \$30 bn/day per counterparty
- In September 2014, an overall operation size limit was introduced, total operation size is capped at \$300bn
 - Fixed rate operation at an offer rate (currently 5 basis points) if participation falls under the overall size limit
 - If the sum of all bids exceeds the overall size limit, awards will be made at the rate at the stop out rate with all bids below awarded in full and all bids at this rate awarded on a pro rata basis

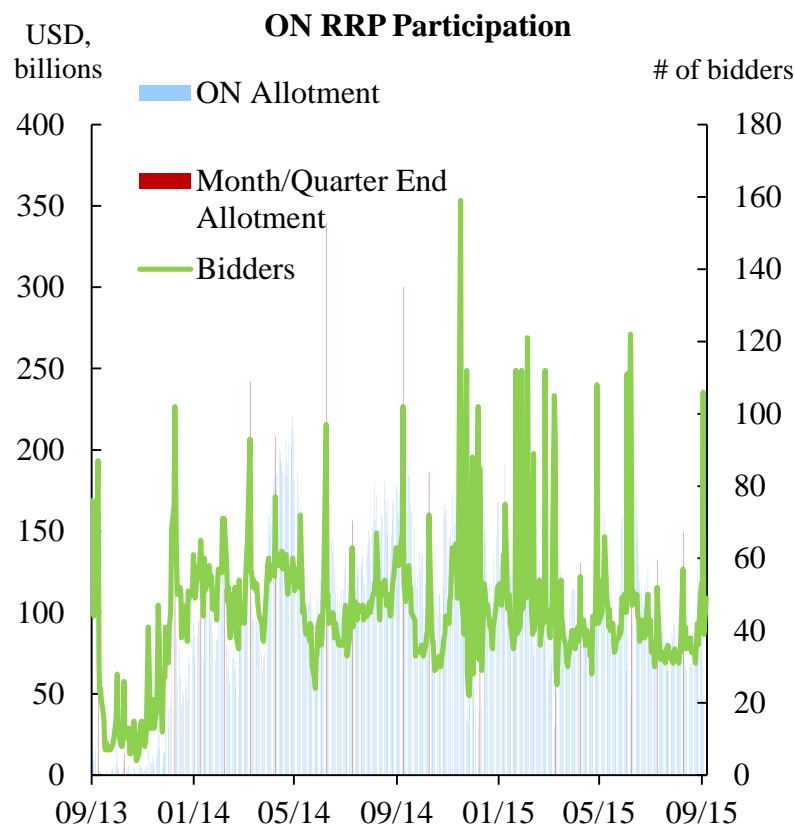
RRP Counterparties

- RRP are available to an expanded set of counterparties:
 - 168 counterparties currently eligible
 - 22 primary dealers
 - 146 expanded RRP counterparties
 - 109 2a-7 money market funds (MMFs) (40 government; 66 prime)
 - 24 depository institutions
 - 13 government-sponsored enterprises
- Counterparty observations:
 - Banks are not particularly active in the ON RRP
 - Primary Dealers are highly rate sensitive, participating only when the ON RRP rate is attractive relative to market rates
 - MMFs typically account for roughly 80% of total participation, with government MMFs consisting of the bulk of the activity. Prime MMFs are more active on month- and quarter-end dates
 - GSEs increase participation significantly ahead of their P&I payment dates

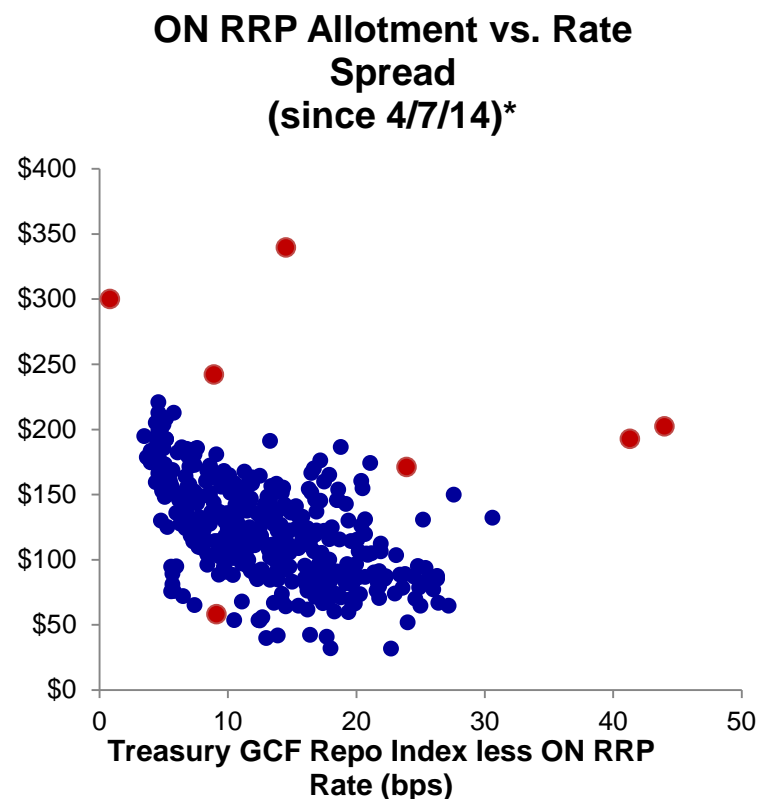
ON RRP Exercise: Operation Results

- Operation execution and settlement has gone smoothly
- Highest award volume to date: \$339 bn on June 2014 quarter-end

- The level of participation in the exercise shows some correlation and sensitivity to prevailing secured funding rates



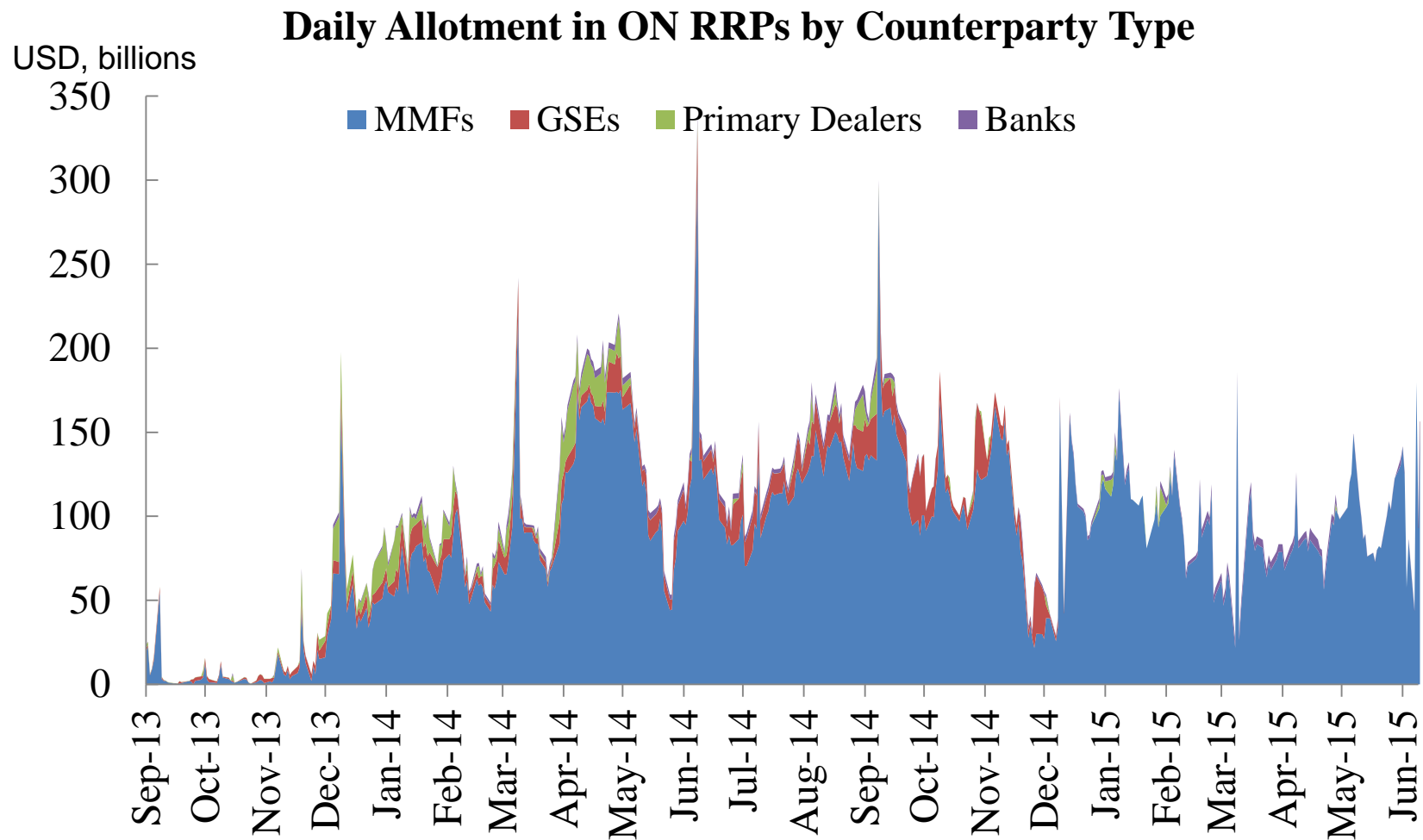
Source: FRBNY, Data as of Sept., 2015



* Quarter ends in red

Source: FRBNY, DTCC, Data as of Sept., 2015

ON RRP Exercise: Take-up by Counterparty Type

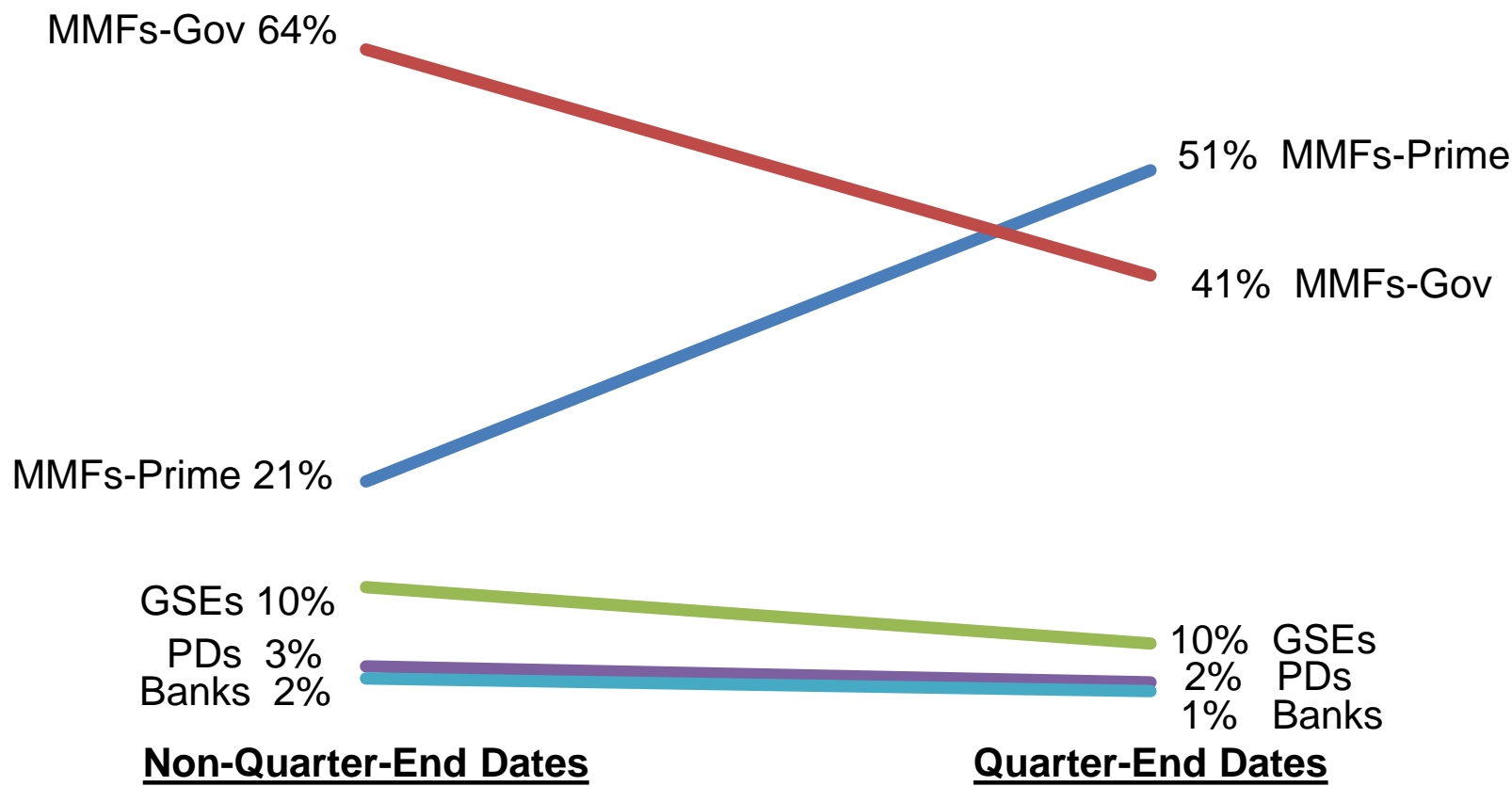


Source: FRBNY, data as of June 2015



ON RRP Exercise: Take-up by Counterparty Type

Share of Total Participation
in ON RRP Exercise Operations
Sep 2013 through Jun 2015



Source: FRBNY



Term Repo Exercise Background

- During their October 2014 meeting, the FOMC instructed the Desk to begin conducting term RRP operations:
 - Term RRP allocations use a single-price auction based on a “stop-out” rate at which the amount offered was reached
 - If the amount offered at an auction was not allotted, then this amount was added to subsequent term RRP operations
 - Prior testing of term RRP allocations was focused on periodic, fixed quantity auctions intended to support large-scale draining operations
- The objectives of the exercises are two-fold:
 - To enhance operational readiness and increase its understanding of RRP allocations.
 - Reduce potential volatility in money market rates, particularly when there are significant and transitory shifts in money market activity such as on quarter- and year-end dates.



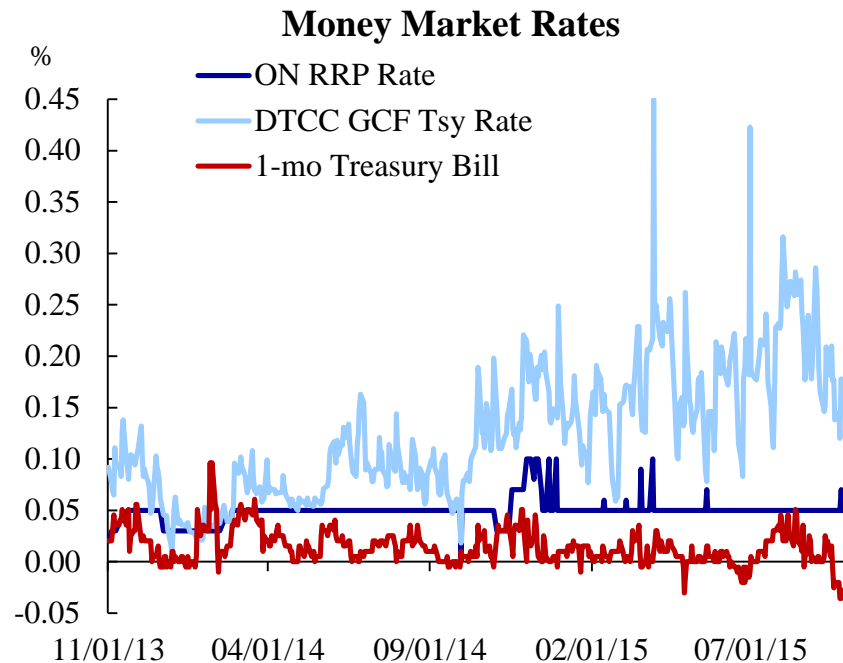
Evolution of Term RRP Exercise

- Parameters of term RRPs have been adjusted over time:
 - Tenors of these operations have declined
 - Maturity dates were staggered and positioned closer to the quarter-end date
 - Maximum offering rate has been lowered
 - In September, a term RRP was offered on the quarter-end date for the first time.

Quarter-End term RRP Operations							
Operation	Tenor (days)	Settlement Date	Maturity Date	Amount Offered (\$ bln.)	Amount submitted (\$ bln.)	Max Offering Rate (bps)	Award Rate (bps)
December, 2014	28	12/8/2014	1/5/2015	50	102	10	8
	21	12/15/2014	1/5/2015	50	75	10	7
	14	12/22/2014	1/5/2015	100	50	10	10
	7	12/29/2014	1/5/2015	100	76	10	10
March, 2015	14	3/19/2015	4/2/2015	75	81	10	9
	7	3/30/2015	4/6/2015	125	101	10	10
June, 2015	7	6/25/2015	7/2/2015	100	116	8	7
	2	6/29/2015	7/1/2015	100	104	8	7
September, 2015	7	9/24/2015	10/1/2015	100	112	8	7
	2	9/30/2015	10/2/2015	150	163	8	7

Impact on Money Market Rates

- Market participants have viewed the ON RRP exercise as providing effective floor under most money market rates
- Term RRPs provide additional capacity around quarter-end dates when demand is particularly high



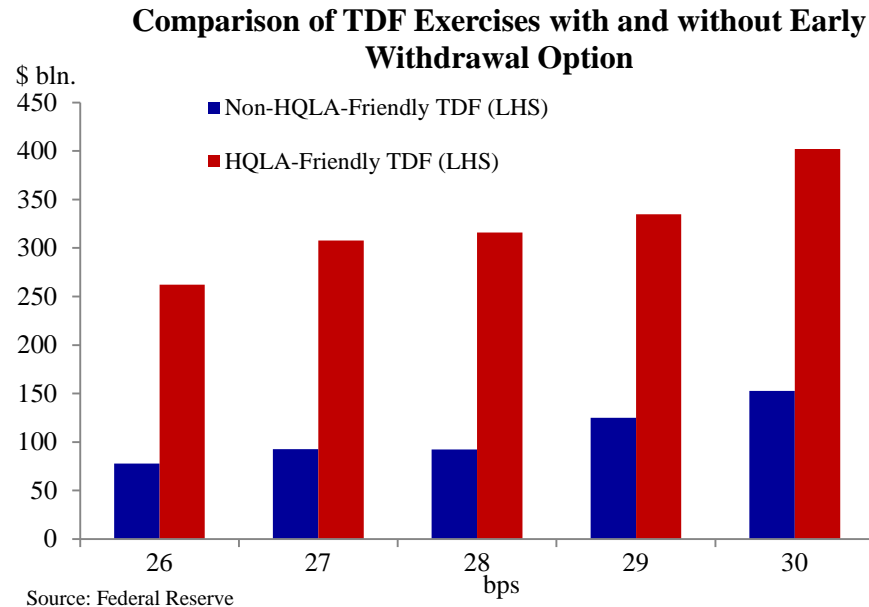
Source: FRBNY, DTCC, Bloomberg. Data as of 9/28/2015

Term Deposit Facility

Term Deposit Facility (TDF) Background

- Since 2010, the Federal Reserve has been conducting TDF tests to ensure operational readiness and provide eligible institutions an opportunity to gain familiarity with TDF procedures.
 - TDFs are intended to help manage the aggregate level of reserve balances held by depository institutions.
 - Available to depository institutions who are eligible to earn IOER.
- Market participants report that TDF operations have not materially impacted money market rates, despite fairly large take-up in recent operations
- Market participants expect that the FOMC could use TDF – particularly a large TDF— as a supplementary tool to help control short-term interest rates.

2014 TDF with / without an Early Withdrawal Option



- Early withdrawal option was added to TDF in 2014
- Qualifies TDF assets as High Quality Liquid Assets (HQLA) for Liquidity Coverage Ratio (LCR) reporting purposes

Appendix

Useful References

- The Federal Reserve's Balance Sheet and Earnings: A Primer and Projections
<http://www.federalreserve.gov/pubs/feds/2013/201301/201301pap.pdf>
- FOMC Policy Normalization Principles and Plans
<http://www.federalreserve.gov/newsevents/press/monetary/20140917c.htm>
- SOMA holdings
http://www.newyorkfed.org/markets/soma/sysopen_accholdings.html
- Federal Reserve Bank of New York Annual Report
<http://www.newyorkfed.org/aboutthefed/annualreports.html>
- FAQs: ON RRP Operational Exercise
http://www.newyorkfed.org/markets/rrp_faq.html
- Statement to Revise Terms of ON RRP Operational Exercise
http://newyorkfed.org/markets/opolicy/operating_policy_140917.html
- Announcement of Term Deposit Facility
<http://www.federalreserve.gov/newsevents/press/monetary/20140904a.htm>
- Factors Affecting Reserve Balances (H.4.1 release)
<http://www.federalreserve.gov/releases/h41/>