

# Implementation of Open Market Operations

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# Agenda

- Federal Reserve's operating framework
- Execution of large-scale asset purchases
- Implications for the Fed's balance sheet
- Implications for income
- Implications for normalization

*The views expressed are the presenter's and not those of the Federal Reserve Bank of New York or the Federal Reserve System.*



# Federal Reserve's Operating Framework

# Monetary Policy Formulation and Implementation

- Policy formulation
  - Objectives established by Federal Reserve Act
  - “Dual mandate” of maximum employment and price stability
- Policy implementation through open market operations (OMOs)
  - FOMC votes on domestic policy directive
    - Directive establishes an operating objective for OMOs
  - Desk designs and conducts OMOs to achieve the objective
    - SOMA Manager accountable to the FOMC
    - Market monitoring supports policy formulation and execution
- Board of Governors regulates complementary policy tools
  - Discount window (administered by Reserve Banks)
  - Reserve requirements, interest on reserves, term deposits

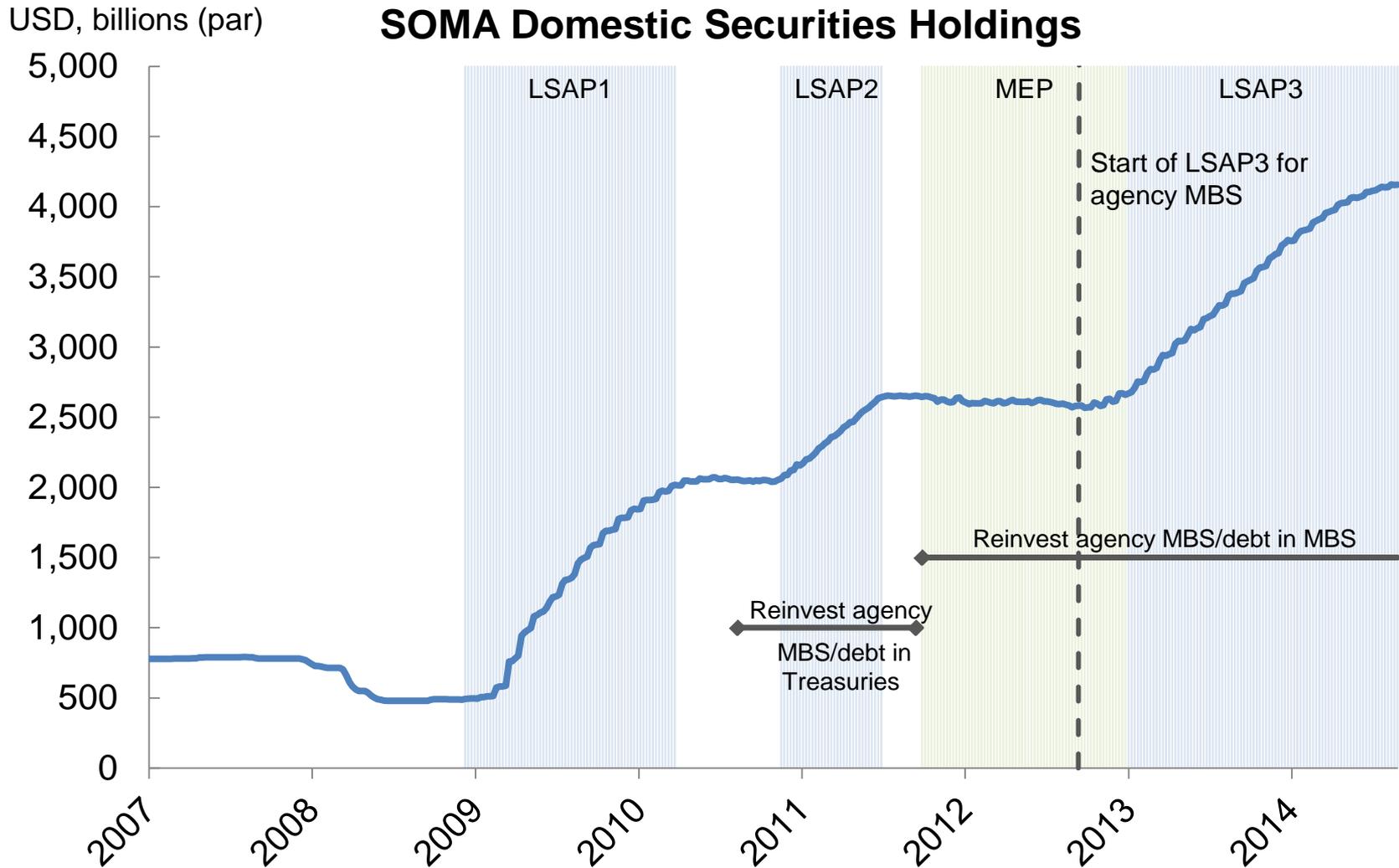


# Operating Framework for Policy Implementation

- Conventional operating objective for OMOs was target federal funds rate (FFR)
  - Desk adjusted supply of reserve balances to achieve target
    - Repos/reverse repos address transitory reserve needs
    - Treasury purchases offset currency growth
- With the FFR at the effective zero bound, operating objective has shifted to adjustments in balance sheet size/composition
  - Large-scale purchases of Treasuries, agency MBS and debt
  - Maturity Extension Program
  - Reinvestment policies
  - Interest on reserves keeps FFR in target range w/o OMOs
- FOMC has also used communications to influence policy



# Timeline of Asset Purchase Programs



Source: Board of Governors of the Federal Reserve System



# Large-scale Asset Purchases as a Policy Tool

- Purchases put downward pressure on longer-term interest rates, ease financial conditions and stimulate economic activity
- Purchases are understood to work through several channels
  - Portfolio balance effect
    - Reduce stock of securities held by private sector
    - Remove duration risk and prepayment risk from market
    - Drive risk premiums lower than they would otherwise be
  - Market functioning/liquidity effect (LSAP1)
    - Provide consistent and significant market presence
  - Signaling effect
    - May be perceived as signal of FOMC intentions for FFR path



# Execution of Large-scale Asset Purchases

# Implications for Open Market Operations

- LSAPs raised new operational challenges for the Desk
  - New, more complex instruments (agency MBS)
  - Increased frequency and size of operations
- However, the fundamental approach has remained the same
  - Carry out FOMC's directives with efficiency and competence
  - In doing so:
    - Seek competitive pricing and cost efficiency
    - Prudently manage risks
    - Be mindful of disruptions to financial markets
    - Be consistent, predictable and transparent
    - Innovate and adjust operations as needed
- Same attention will apply to tools used during normalization

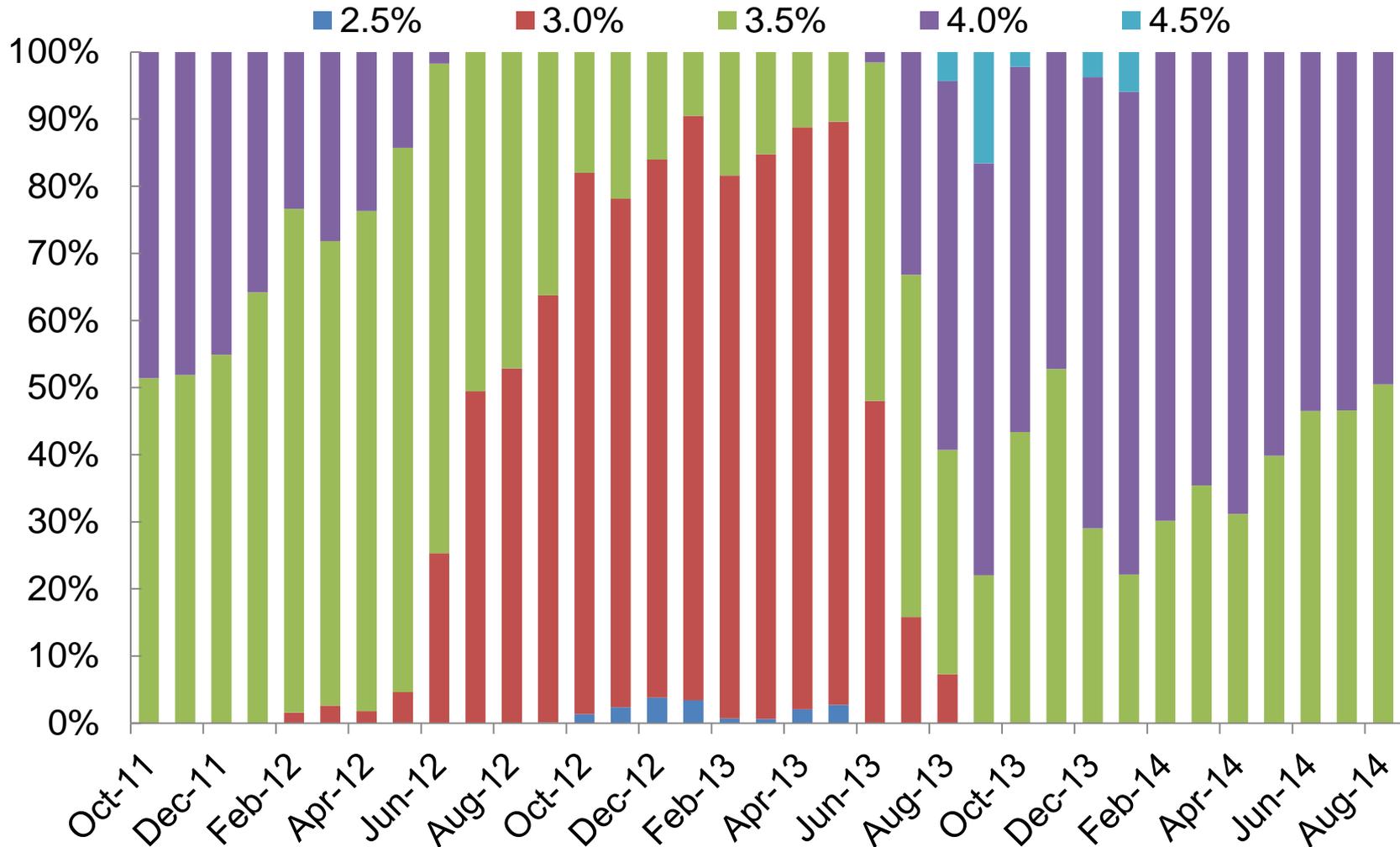


# Treasury and Agency MBS Purchase Operations

		Treasuries	Agency MBS
Design	Type of Securities	longer-term Treasuries	newly-issued agency MBS
	Market	secondary market	TBA market
	Purchase Distribution	planned by maturity sector	roughly proportional to anticipated gross issuance
Operations	Trading Platform	FedTrade	Tradeweb → FedTrade
	Scope of Operation	single maturity range	multiple coupons w/in single MBS settlement class
	Auction Style	multi-security, multi-price auction	simultaneous, single-security multi-price auctions
	Concentration Limit	70% of individual security	N/A
	Selection Criteria	relative value market prices	market prices
Counterparties	Standing Counterparties	primary dealers	primary dealers
	Small Firms	TOC pilot program completed	MOC pilot program accepting applicants
Other	Additional Considerations	none	dollar rolls margining regime CUSIP aggregation

# Coupon Distribution of SOMA Agency MBS Purchases

## Monthly SOMA Purchases of 30-Year Agency MBS



Source: FRBNY



# Agency MBS Operations in FedTrade

- Agency MBS operations moved to FedTrade in April 2014
  - Multi-year effort to expand proprietary system's capabilities
- Strategic objectives were quickly realized
  - Increase efficiency
  - Enhance transparency
  - Reduce operational and information security risk
- Dollar rolls still conducted over commercial trading platform

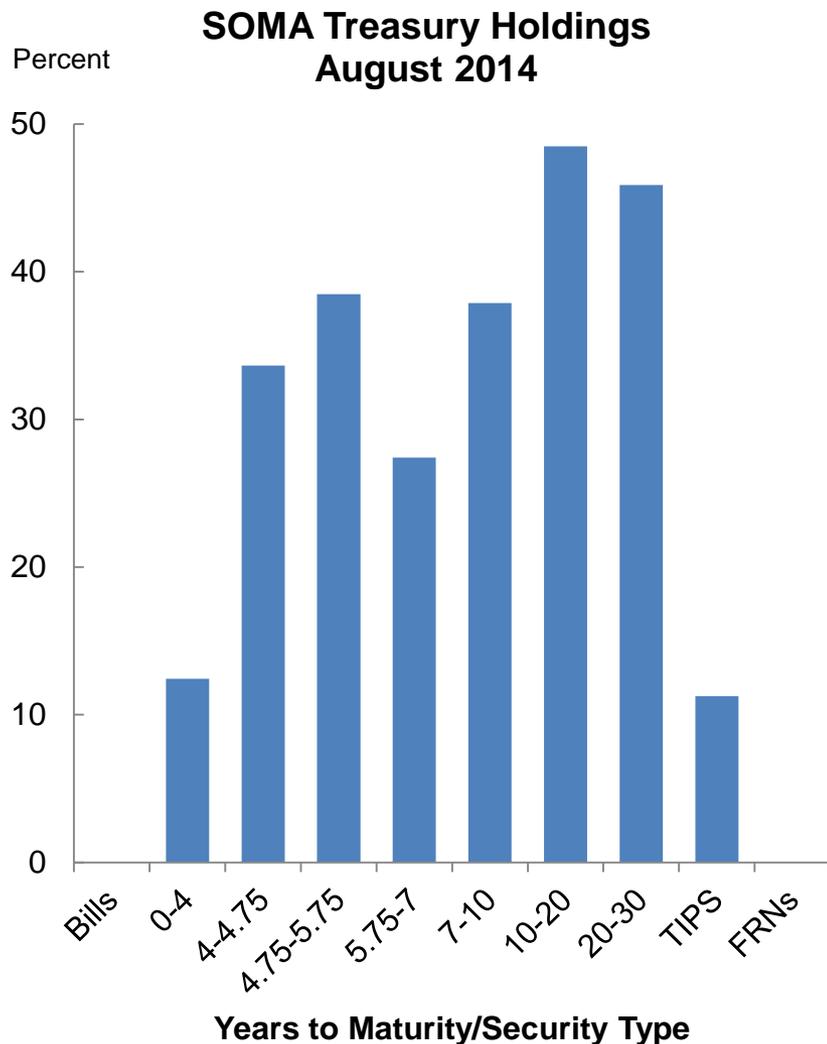


# Additional Operational Considerations

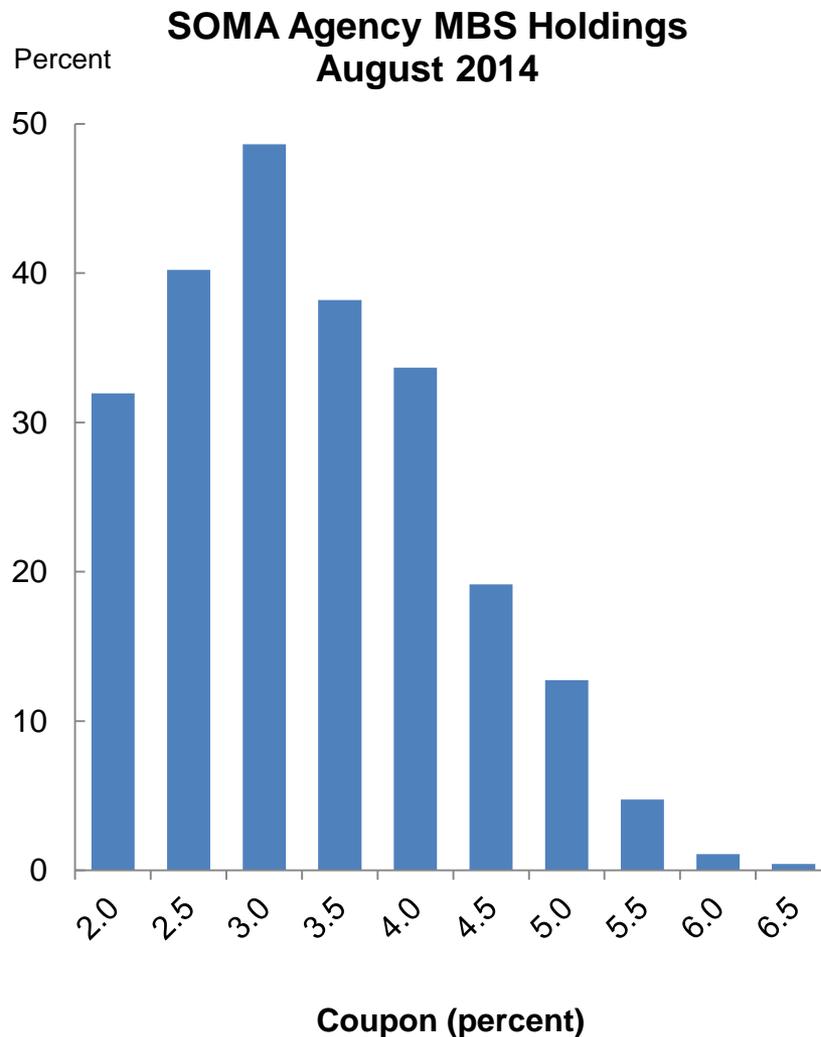
- Market functioning
  - Monitor effects of purchases on market conditions, results
  - Conduct securities lending and dollar rolls
- Transparency
  - Release planned operation schedules in advance
  - Release aggregate operational results and prices paid
  - Release summary of individual transaction details monthly
  - Release full transaction details with a 2-year lag
- Operational risk management and resiliency
  - Ensure robust controls
  - Provide end-to-end resiliency for mission-critical operations



# SOMA Holdings as a Share of Outstanding Supply



Sources: FRBNY, U.S. Treasury Department

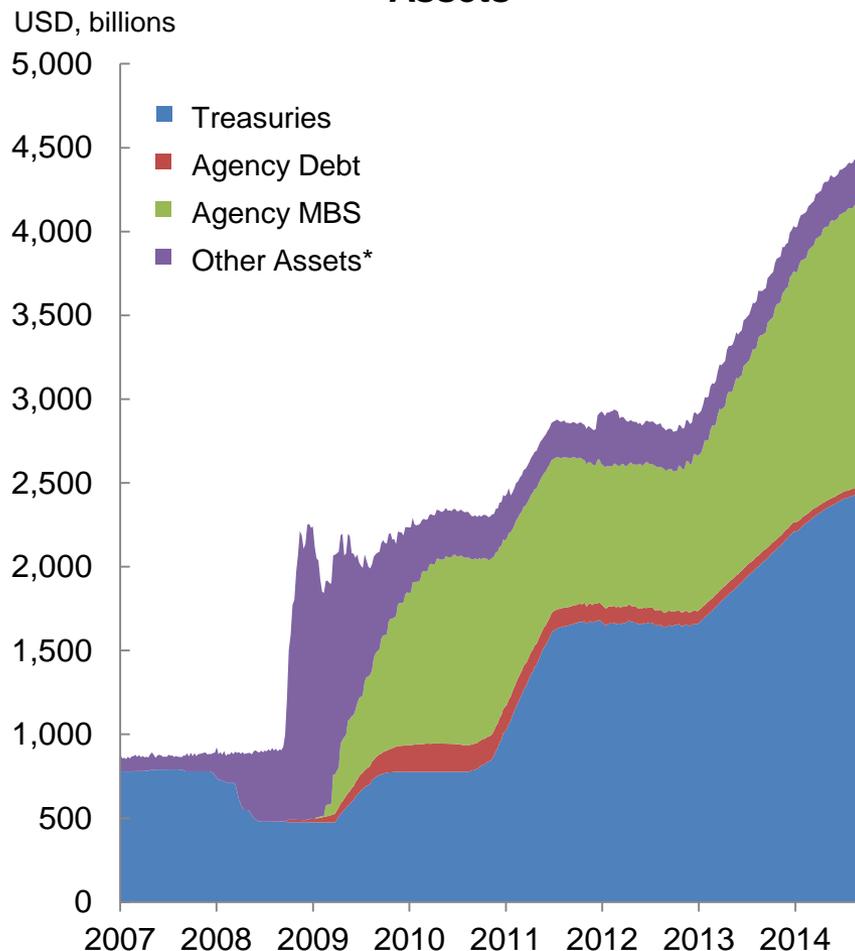


Sources: FRBNY, eMBS

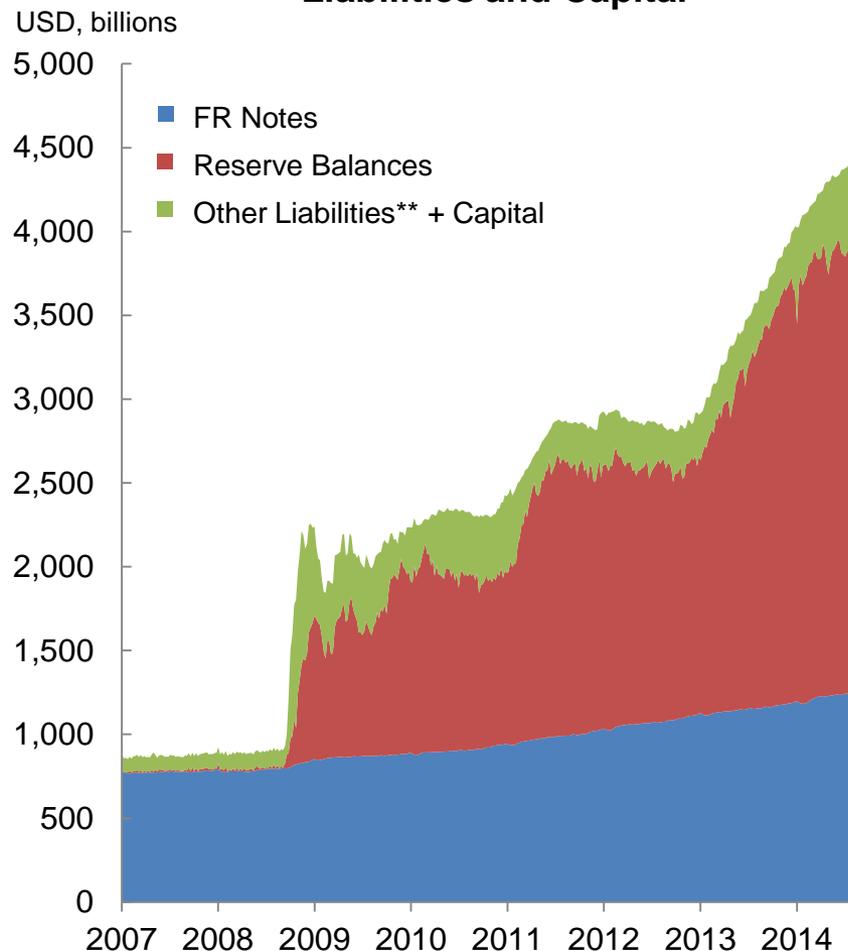
# Implications for the Fed's Balance Sheet

# Evolution of the Federal Reserve's Balance Sheet

## Assets



## Liabilities and Capital



\* Includes DW, crisis facilities, central bank liquidity swaps, foreign portfolio, and unamortized premiums and discounts.

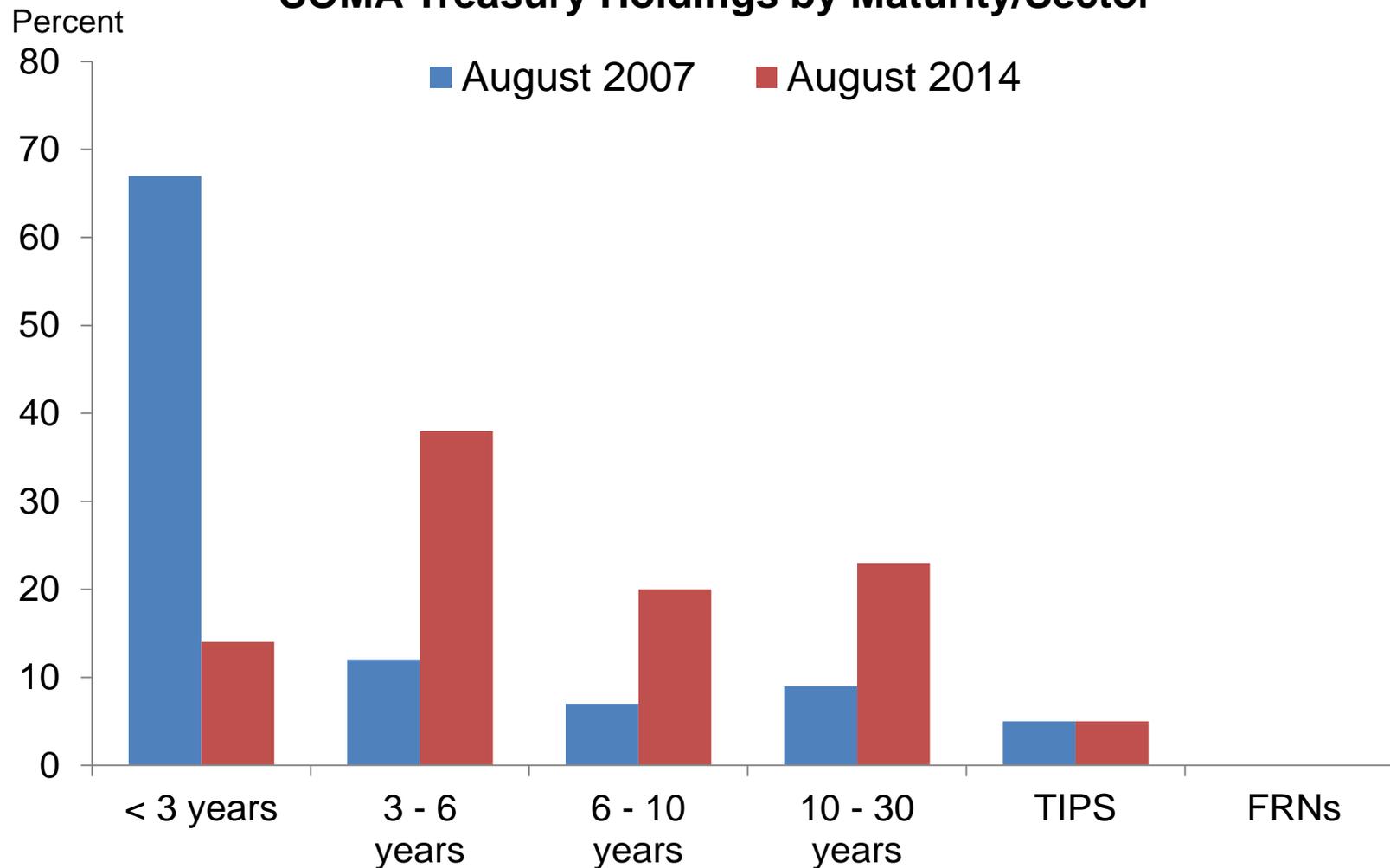
\*\* Includes Treasury accounts and reverse repos.

Source: Board of Governors of the Federal Reserve System



# Distribution of SOMA Treasury Holdings

## SOMA Treasury Holdings by Maturity/Sector

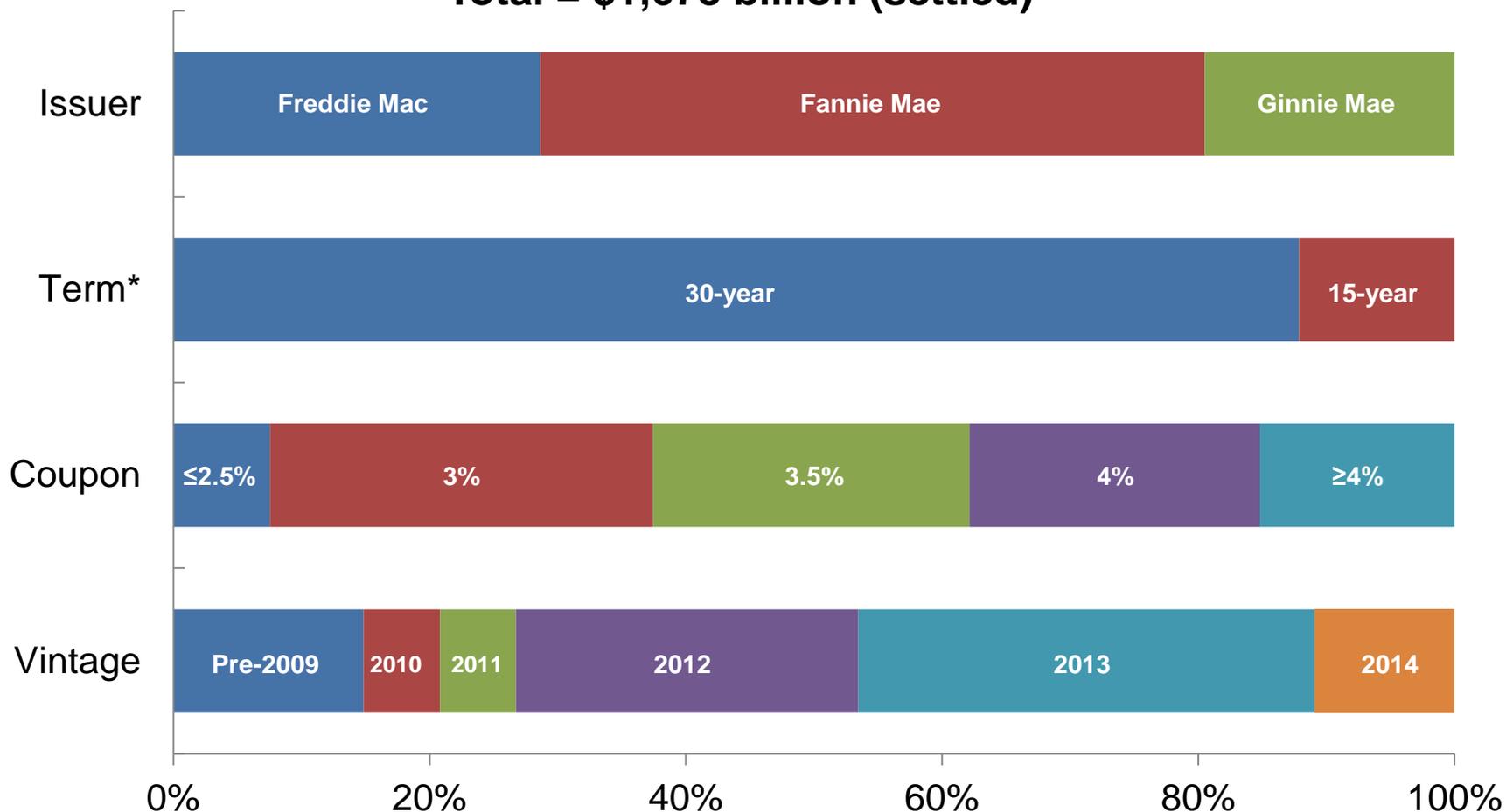


Source: FRBNY



# Distribution of SOMA Agency MBS Holdings

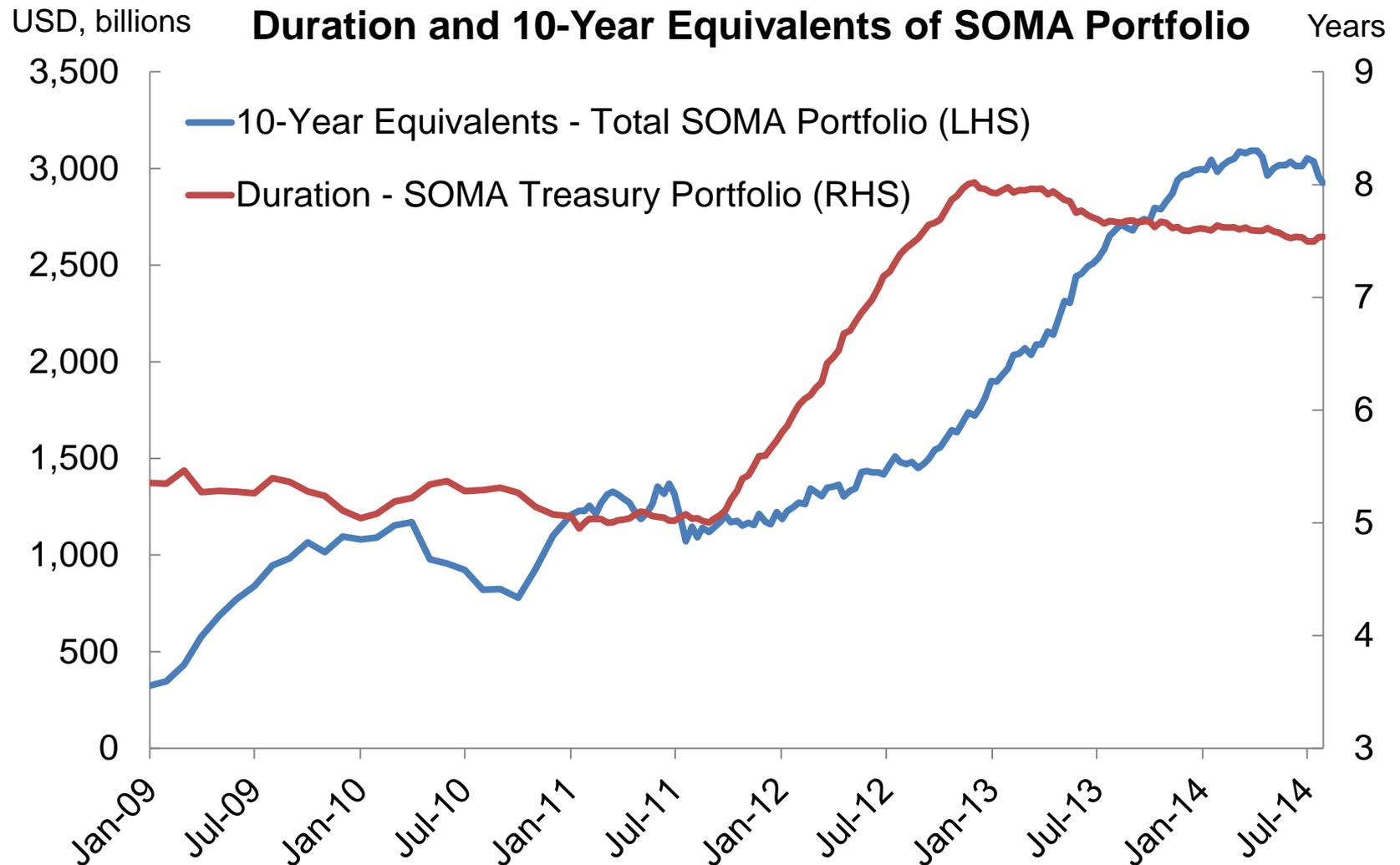
August 27, 2014  
 Total = \$1,678 billion (settled)



\*Includes <1% in 10-year and 20-year agency MBS, which may be delivered into 15- and 30-year TBA contracts, respectively.

Source: FRBNY

# SOMA Portfolio Risk Measures

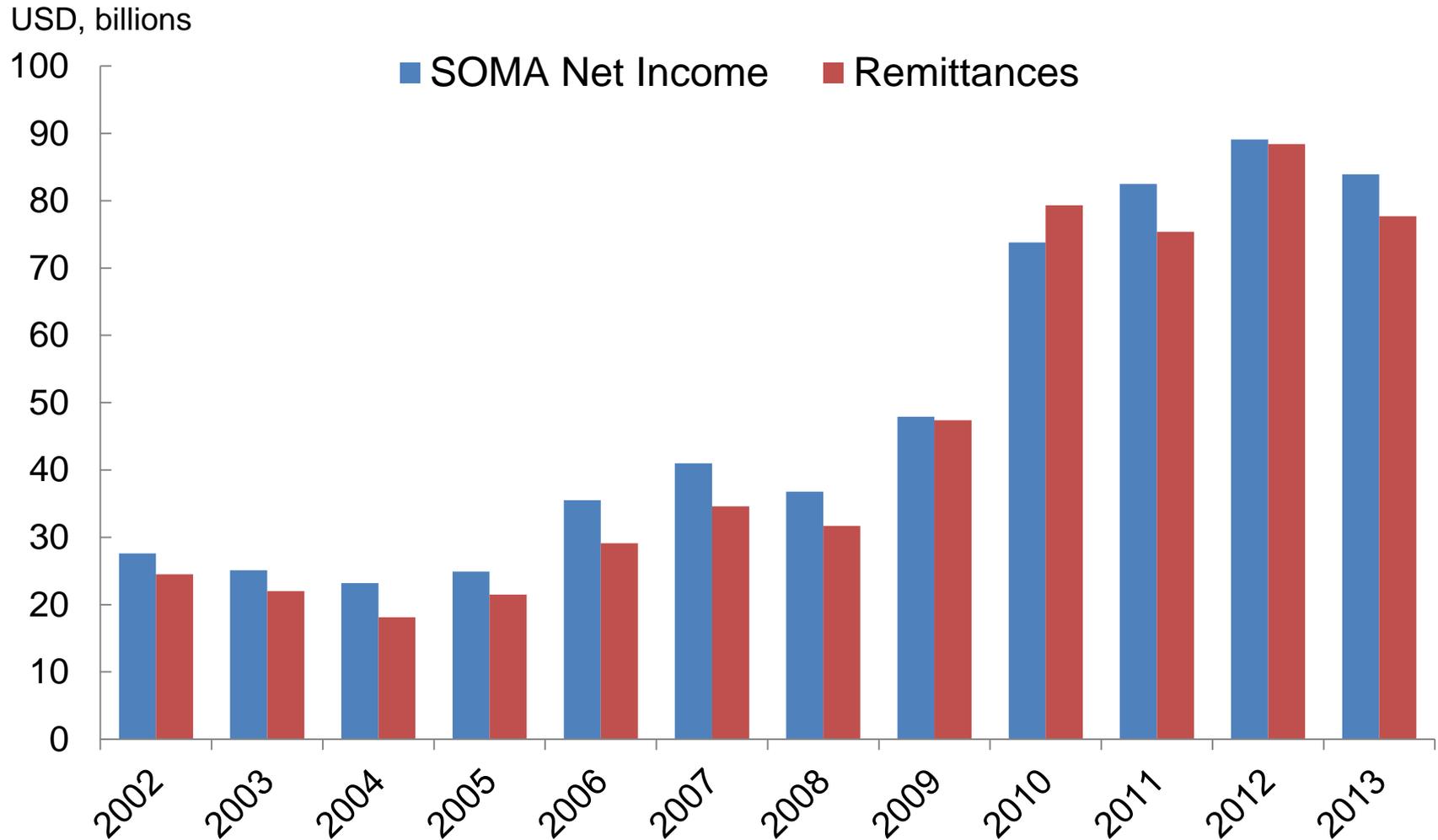


Source: FRBNY



# Implications for Income

# SOMA Net Income and Fed Remittances to Treasury



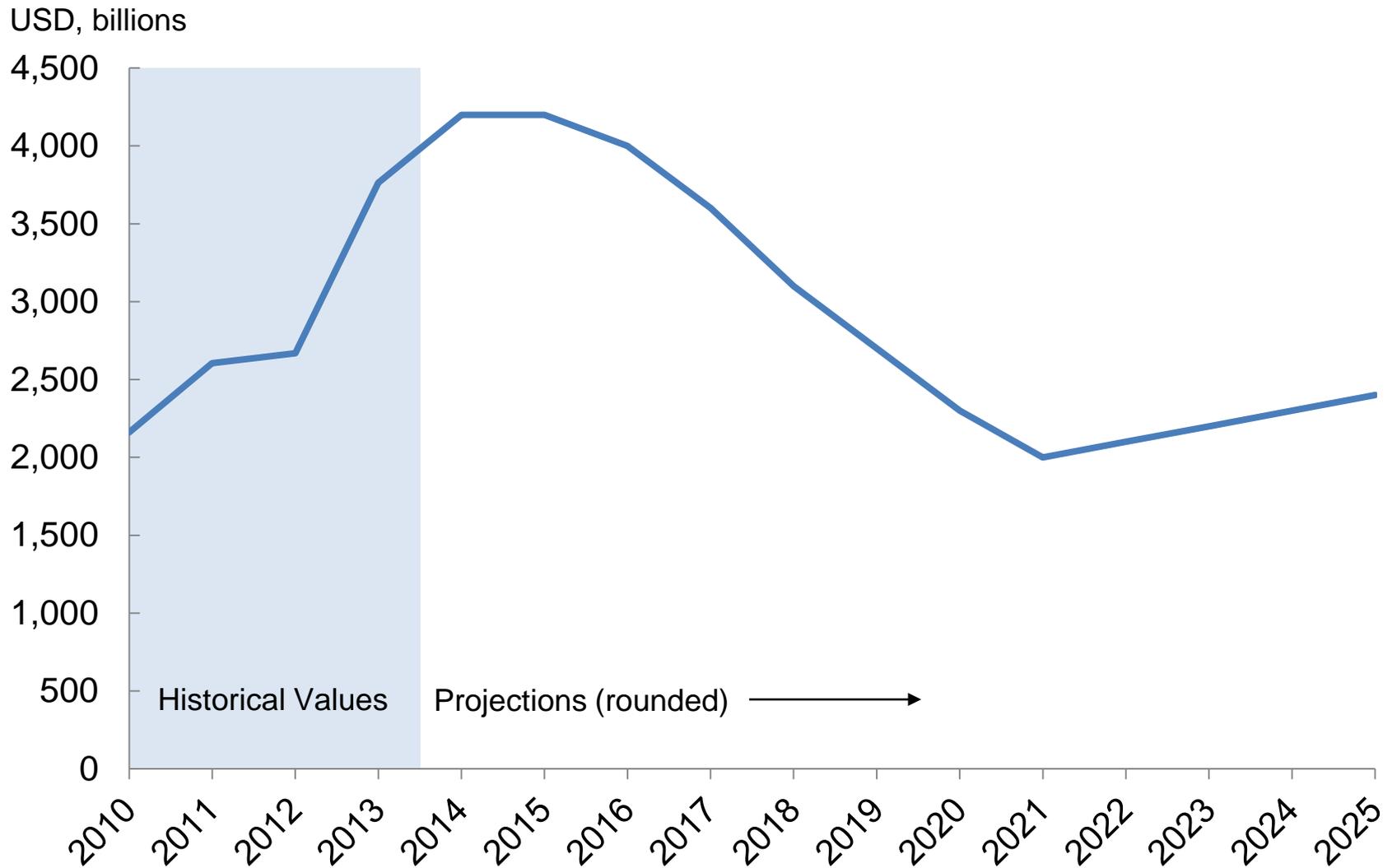
Source: FRBNY

# Portfolio Projection Exercise: Baseline Assumptions

- July 2014 *Survey of Primary Dealers* (FRBNY) median results
  - Asset purchases continue to taper, end in October 2014
  - FFR target lifts off in Q3-2015
  - Normalization framework\*
    - IOER and ON RRPs
      - \$350 billion in ON RRPs immediately after liftoff
      - Spread of 20 bps between IOER and ON RRP rates
    - Reinvestments end after FFR liftoff (Q1-2016)
    - No MBS sales
- June 2014 *Blue Chip Financial Forecasts Survey* consensus
  - FFR target lifts off in Q3-2015, rises to 3.8% over long run
  - 10-year Treasury yield rises gradually to ~5% by early 2019
- Currency and capital assumptions from Fed staff research\*\*

\* July SPD preceded the July 29-30, 2014, FOMC meeting; minutes to this meeting reportedly led market participants to expect a wider IOER-ON RRP spread. \*\* Carpenter et al, "The Federal Reserve's Balance Sheet: A Primer and Projections," Board of Governors of the Federal Reserve System FEDS no. 2013-01, January 2013.

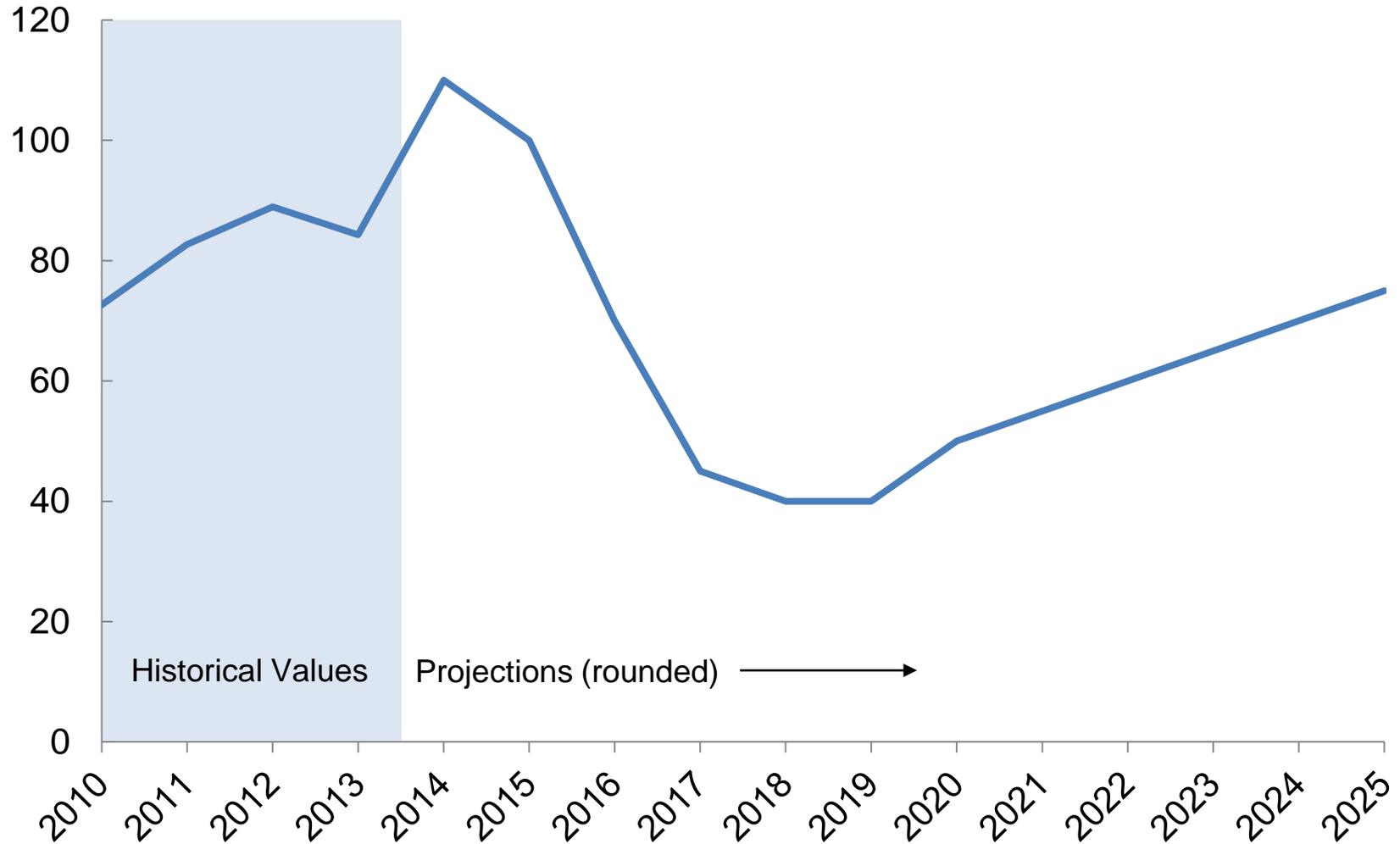
# Projected Path of SOMA Domestic Securities Portfolio



Source: FRBNY staff projection (August 2014)

# Projected SOMA Net Income

USD, billions



Source: FRBNY staff projection (August 2014)

# Implications for Normalization

# Normalization Tools

- The Fed has developed and tested tools to “normalize” policy
  - Interest on excess reserves (IOER)
  - Overnight reverse repos (ON RRP)
  - Term Deposit Facility (TDF)
  - Term reverse repos (term RRP)
  - Asset sales
- Tools may be used towards different ends
  - Control short-term rates with an elevated level of reserves
  - Drain reserve balances



# FOMC Communications on Normalization

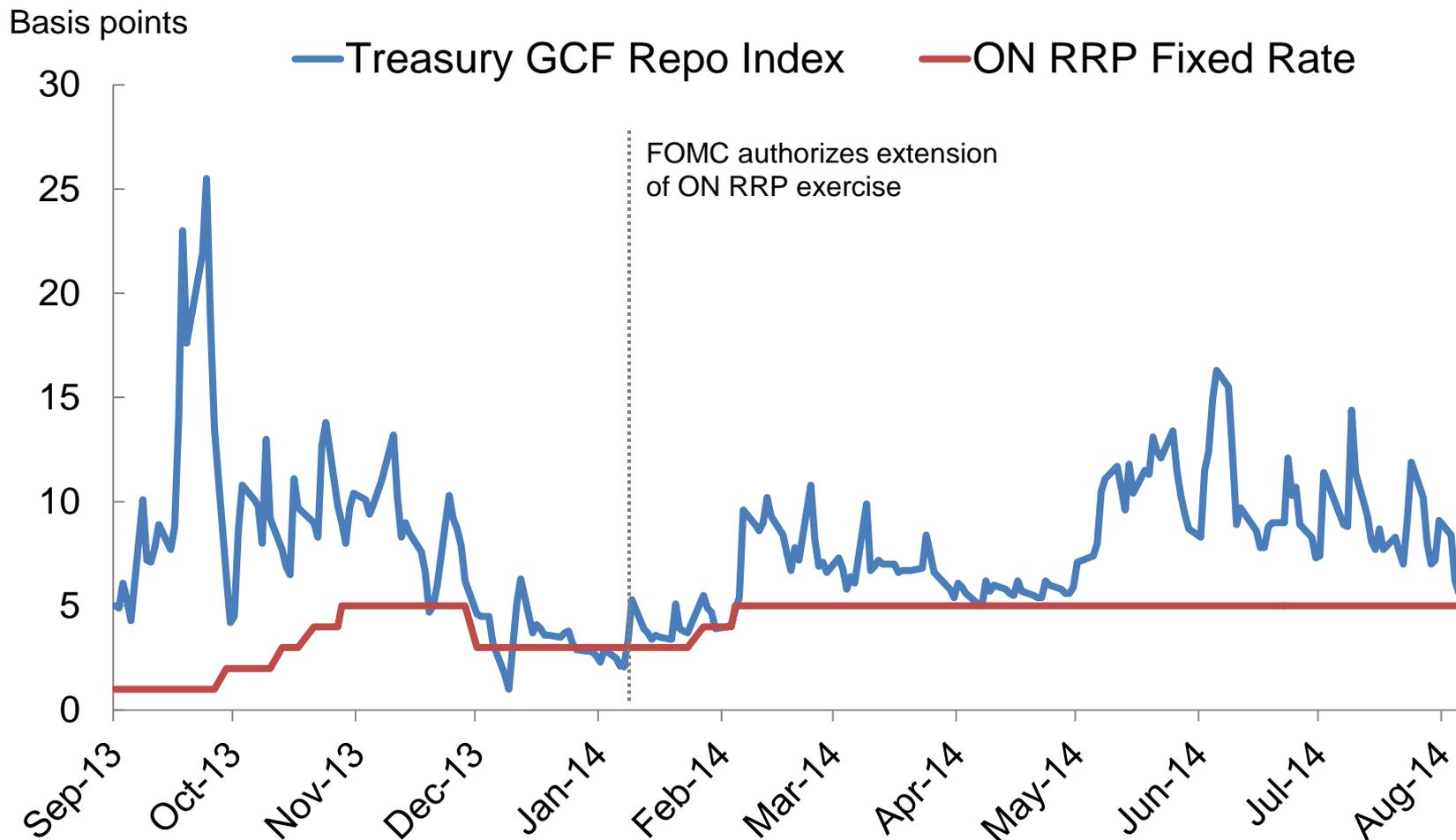
- Considerable agreement on framework described in July 2014 FOMC minutes
  - FOMC says it intends to provide more information later this year
- Normalizing the stance and conduct of policy
  - FFR remains key policy rate
    - Target range of 25 bps at liftoff and for some time thereafter
  - IOER adjustments as primary tool to move FFR and influence other rates
  - ON RRP facility helps firm floor under rates during normalization
    - Facility described as temporary and limited in scale
  - Initially, IOER rate at top of FFR range and ON RRP rate at bottom
- Normalizing the size and composition of the balance sheet
  - In long run, reduce balance sheet to smallest level needed for efficiency
    - Portfolio should consist primarily of Treasuries
  - Reduce or end reinvestments sometime after liftoff
  - Anticipate no MBS sales, except perhaps to eliminate residual holdings

# FOMC Resolutions Authorizing ON RRP Exercise

- Through temporary resolutions, the FOMC has authorized the New York Fed to conduct a series of fixed-rate ON RRPs according to the following terms

Approval Date	Terms
Sep 17, 2013	<ul style="list-style-type: none"><li>Fixed rate may vary from 0 to 5 basis points</li><li>Maximum allotment of \$1 billion/day per counterparty</li><li>SOMA Manager will inform FOMC in advance of changes</li><li>Operations authorized through Jan 29, 2014</li></ul>
Dec 17, 2013	<ul style="list-style-type: none"><li>Maximum allotment cap raised to \$3 billion/day per counterparty</li></ul>
Jan 28, 2014	<ul style="list-style-type: none"><li>Fixed rate may vary from 0 to 5 basis points</li><li>No stated allotment cap per counterparty</li><li>Changes in offered rate or per-counterparty bid limit requires approval of the FOMC Chair</li><li>SOMA Manager will notify FOMC in advance of changes</li><li>Operations authorized through Jan 30, 2015</li></ul>

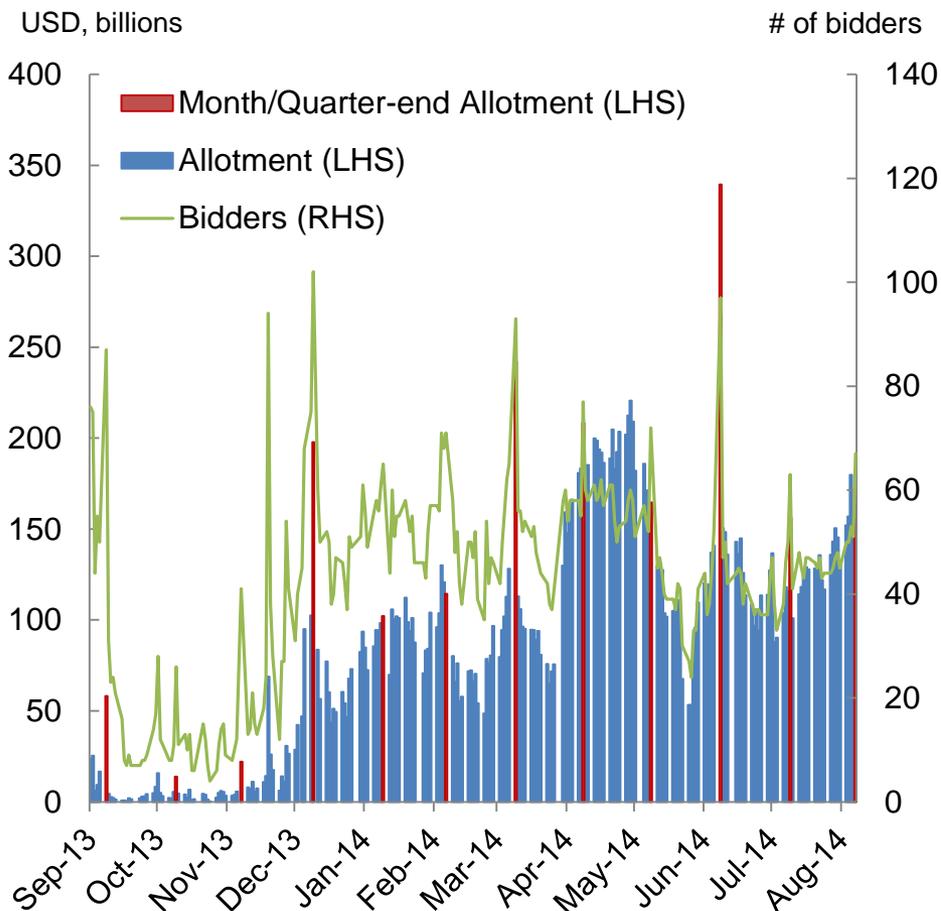
# Secured Overnight Interest Rates



Sources: FRBNY, DTCC

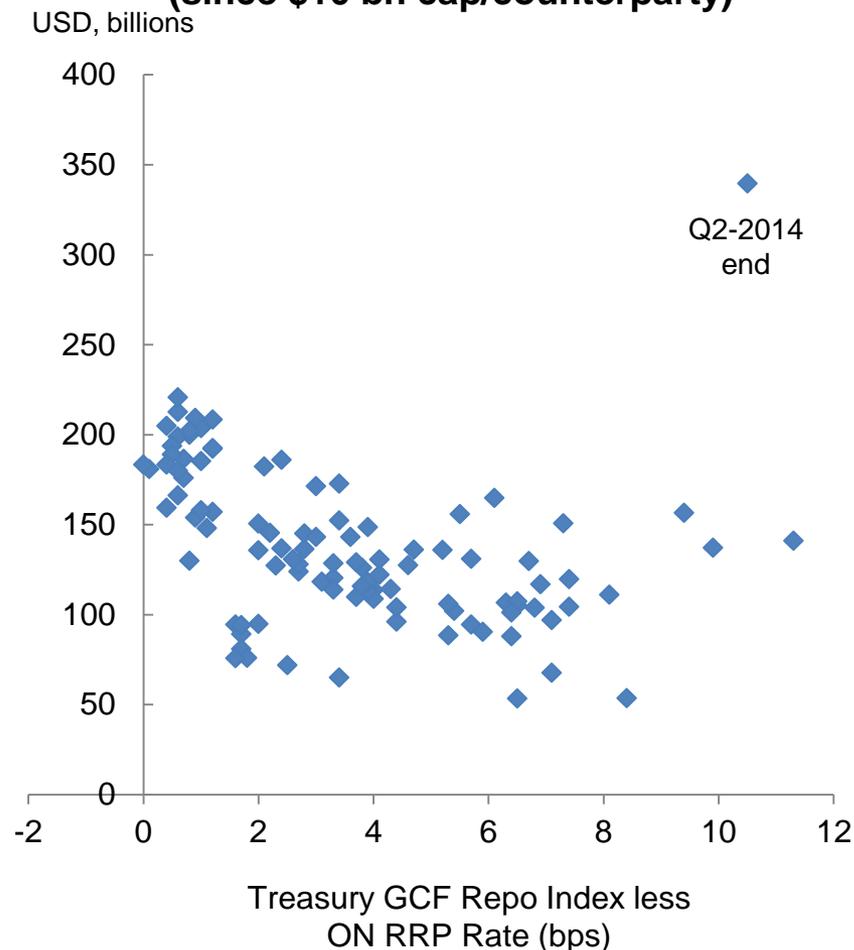
# ON RRP Exercise: Operation Results

## ON RRP Participation



Source: FRBNY

## ON RRP Allotment vs. Rate Spread (since \$10 bn cap/counterparty)



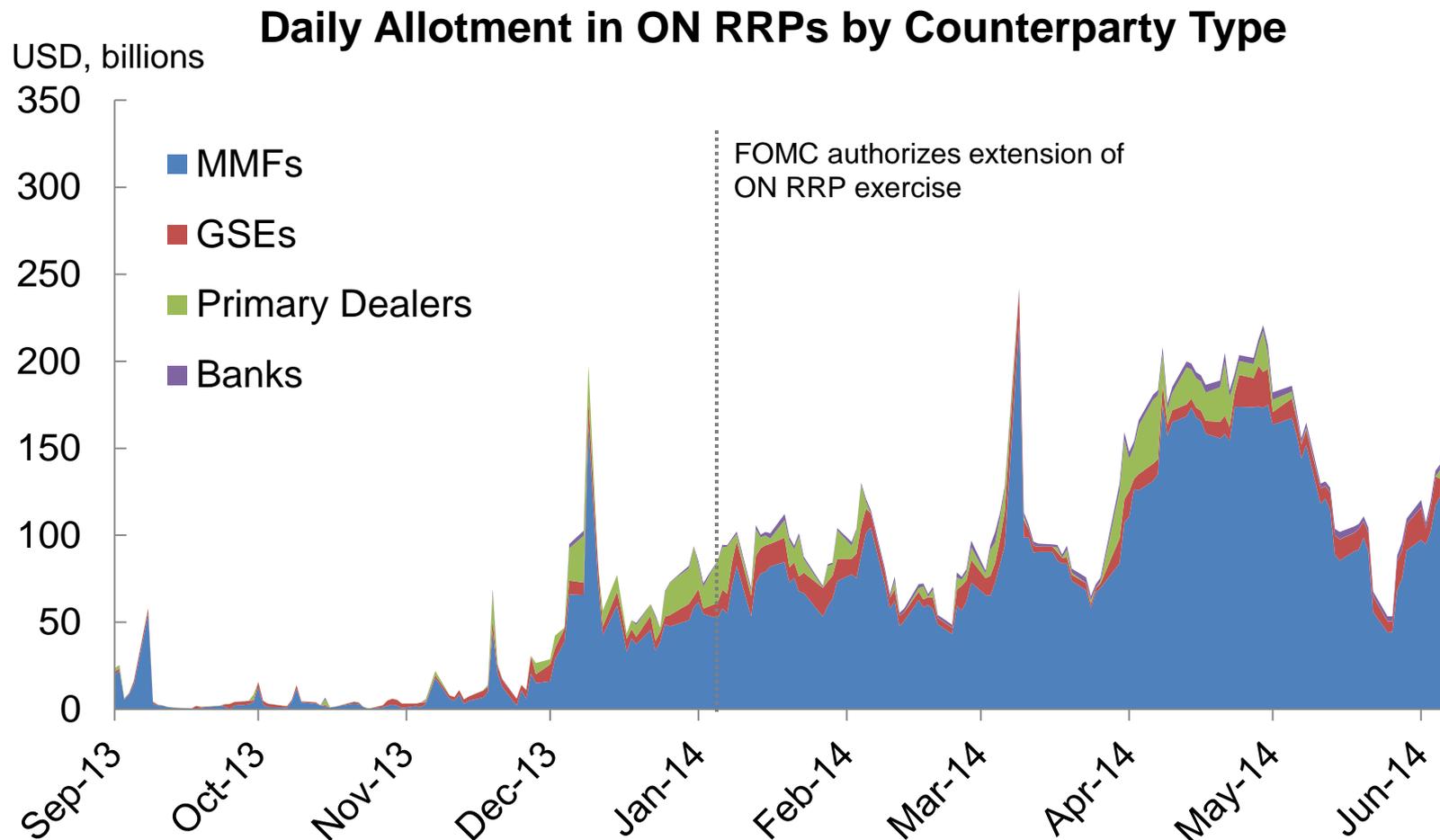
Sources: FRBNY, DTCC

# ON RRP Counterparties

- Broad set of RRP counterparties participates in exercise
  - 140 counterparties currently eligible
    - 22 primary dealers
    - 118 expanded RRP counterparties
      - 94 2a-7 money market funds (MMFs) (32 government; 62 prime)
      - 18 depository institutions
      - 6 government-sponsored enterprises
- Counterparty observations
  - All types of counterparties participate
  - Largest take-up from money market funds (MMFs)
  - Some bids awarded at maximum limit
    - 64 instances since increase to \$10 billion cap on April 7, 2014



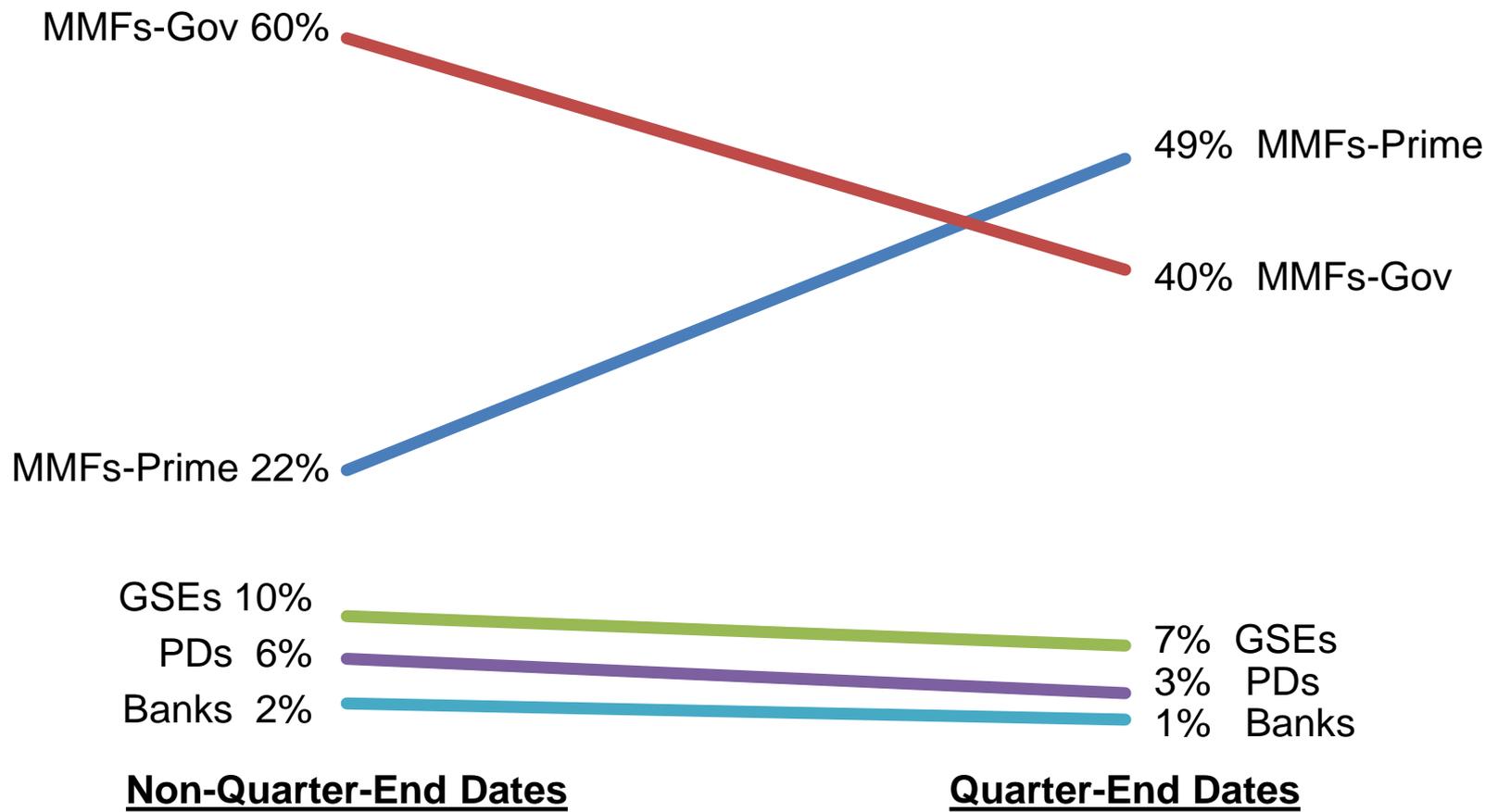
# ON RRP Exercise: Take-up by Counterparty Type



Source: FRBNY

# ON RRP Exercise: Take-up by Counterparty Type

## Share of Total Participation in ON RRP Exercise Operations to Date



Source: FRBNY



# Term Deposit Facility: Exercise Results

Date	Term (days)	Max Award Amount (billions)	Rate	Size (billions)	# of participants
Jan 13, 2014	<b>28</b>	\$1.25	0.26%	\$12.8	31
Mar 3, 2014	7	\$1.25	0.26%	\$13.5	26
Mar 10, 2014	7	\$1.25	0.26%	\$15.2	29
Mar 17, 2014	7	\$1.25	0.26%	\$15.4	27
Mar 24, 2014	7	\$1.25	0.26%	\$14.3	27
May 19, 2014	7	<b>\$3.00</b>	0.26%	\$27.6	35
May 27, 2014	7	<b>\$5.00</b>	0.26%	\$42.9	33
Jun 2, 2014	7	<b>\$7.00</b>	0.26%	\$59.1	35
Jun 9, 2014	7	<b>\$10.00</b>	0.26%	\$77.8	40
Jun 16, 2014	7	\$10.00	<b>0.27%</b>	\$92.7	45
Jun 23, 2014	7	\$10.00	<b>0.28%</b>	\$92.4	46
Jun 30, 2014	7	\$10.00	<b>0.29%</b>	\$124.9	58
Jul 7 2014	7	\$10.00	<b>0.30%</b>	\$152.8	75

# Money Market Data Collection

- New data collection requirement effective April 1, 2014
  - Report of Selected Money Market Rates (FR 2420)
- Collects transaction-level data on unsecured borrowing

Transaction Type	Reporting Entities*	Submission Frequency
Federal Funds	U.S. banks and thrifts, FBO branches	Daily, previous day's transactions by 7:00 am
Eurodollars	U.S banks and thrifts	Daily, previous day's transactions by 7:00 am
Certificates of Deposits	U.S. banks and thrifts, FBO branches	Daily, activity from two days prior by 2:00 pm

\* U.S. banks with > \$26 billion in assets report the activity of their U.S. operations and foreign branches with > \$2 billion in assets. FBO branches with > \$900 million in third-party assets each report separately.

# Questions