Unconventional wisdom: How will unusual monetary policy affect market liquidity?

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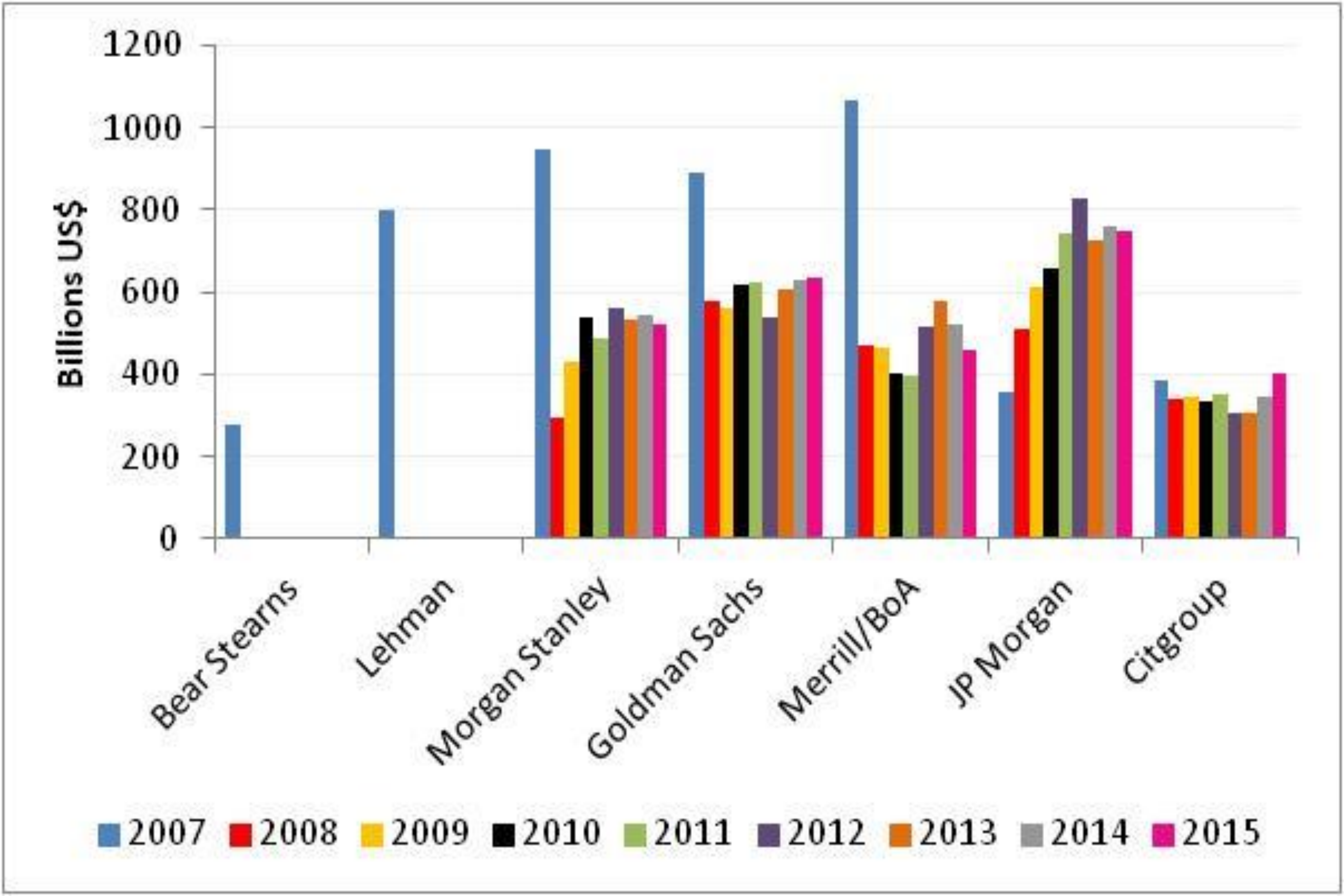
Manmohan Singh

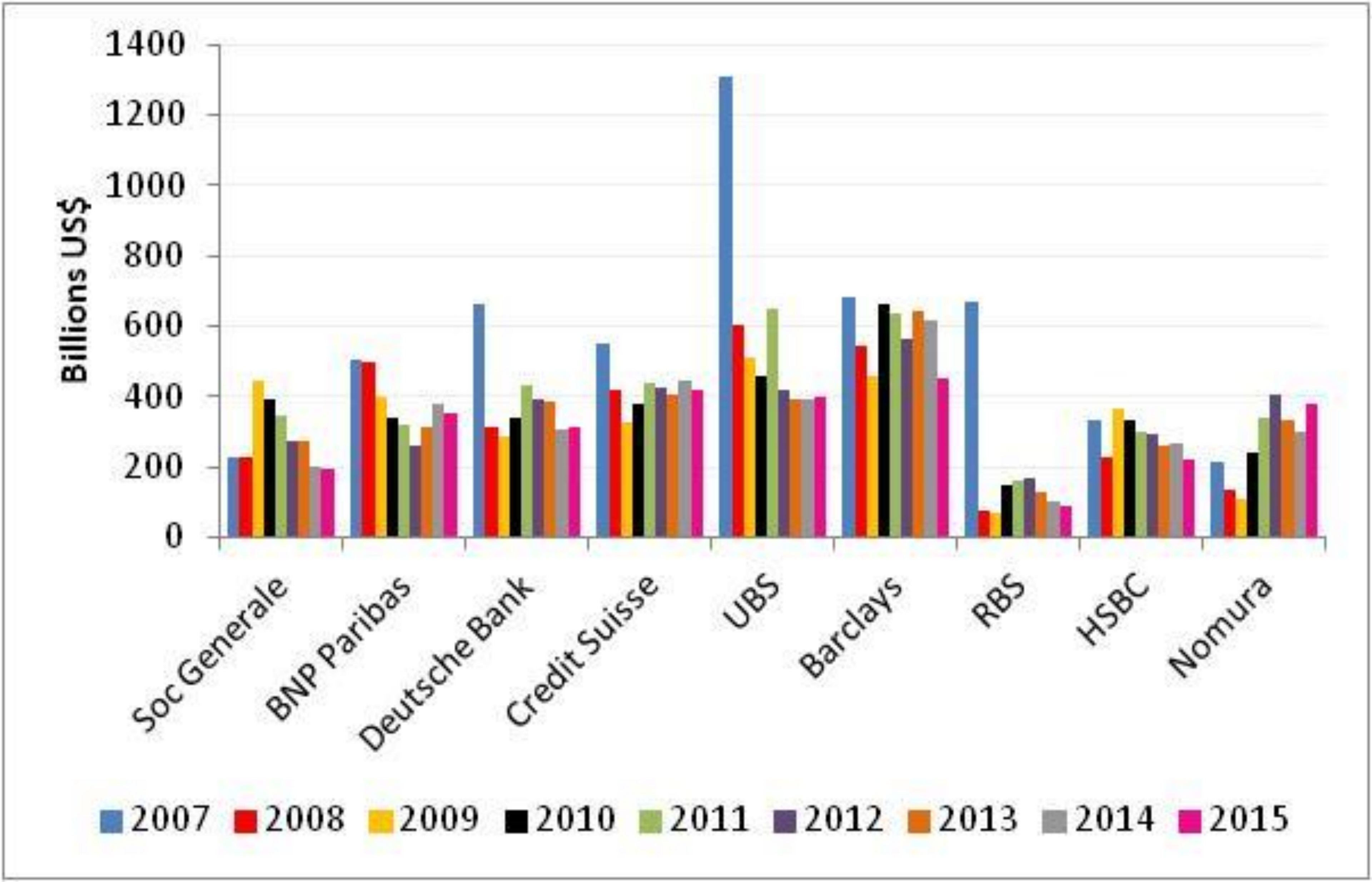
Senior Economist, International Monetary Fund

Views are of the author only and not of the IMF

Pledged collateral received by U.S. banks



Pledged collateral received by European banks (and Nomura)



Collateral from Hedge Funds –

(single biggest source of pledged collateral to market)

- Hedge funds pledge collateral for reuse to their prime broker (PB) in lieu of **financing from the PB** (or, rehypothecation)

note: **cross-border issue**: In the U.S., SEC's Rule 15c3 and Regulation T generally limits PB's use of rehypothecated collateral from a client. Non-US jurisdictions such as UK (English Law) or EU <u>do not</u> have any limits.

- Hedge funds also fund their positions via **repo(s)** with dealers

- HF collateral "to the street" from PB and repo was about $1.7 trill (2007); down to about $1.35 trill after crisis. Recently with AUM growing sizably, leverage rebounding, collateral from HF to street about $ 1.9 trillion (2014); similar trend in 2015 with higher AUM.

The "non-hedge fund" source of collateral—

Securities Lending, 2007-2015

Collateral Received from Pension Funds, Insurers, Official Accounts etc (US dollar, billions)									
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Securities Lending vs. Cash Collateral	1209	935	875	818	687	620	669	701	644
Securities Lending vs. Non-Cash Collateral	486	251	270	301	370	378	338	425	454
Total Securities Lending	**1,695**	**1,187**	**1,146**	**1,119**	**1,058**	**998**	**1,008**	**1,137**	**1,098**

source: RMA

Why is securities lending business not "bouncing back"—see article

- Legally akin to repos (except securities lent out can be "called" at any time)
- **Official sector** (central banks, sovereign wealth funds) are key players in this market along with **pension funds** and **insurers.** They usually liaise with the collateral desks of large banks via custodians
- However, sec-lending business has not bounced back to the pre-Lehman days: Why?
  - Balance sheet "space" at the large collateral banks
  - Opportunity to invest "cash" from sec-lending in a zero-rate environment
  - Near future, sale of AAA securities by EM, Japan, Mid-east…

Collateral Re-use—

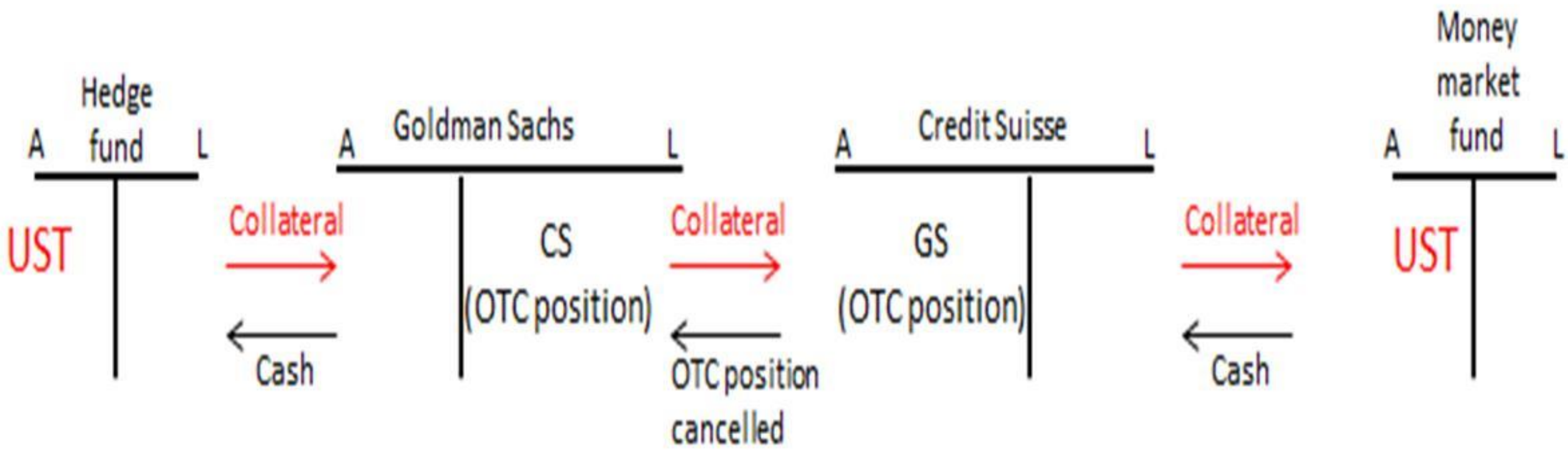
see last column

Table2.3. Sources of Pledged Collateral, Volume of Market, and Velocity (2007, 2010-2014)

(In trillions of U.S. dollars; velocity in units)

Year	Sources			Volume of secured operations	Velocity
	Hedge funds	Others	Total		
2007	1.7	1.7	3.4	10.0	3.0
2010	1.3	1.1	2.4	5.8	2.4
2011	1.3	1.05	2.35	6.1	2.5
2012	1.8	1.0	2.8	6.0	2.2
2013	1.85	1.0	2.85	5.8	2.0
2014	1.9	1.1	3.0	5.8	1.9

An example of repeated use/reuse of collateral (that leads to collateral chains)



Demand = Supply * re-use rate

Is there a fiduciary duty to issue safe assets by public sector? Why?

(e.g., US Treasury's debt issuance mandate: regular/predictable/least cost)

The current global Monetary Policy

- Central banks via QE are trying to rejuvenate the credit creation engine. So far they are not having great success.

- Monetary policy is ultra loose.

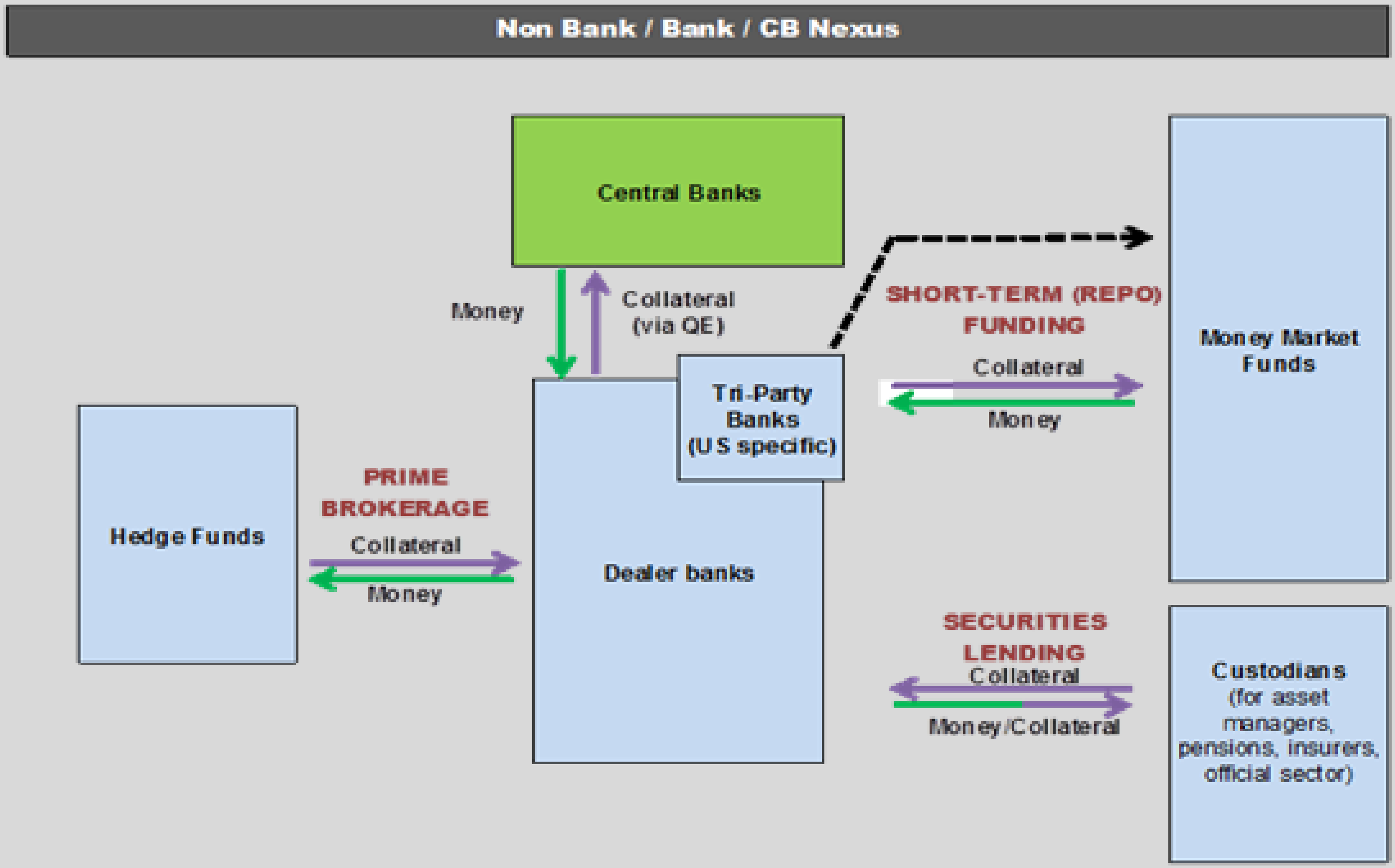
- Restricting collateral re-use is a tight money policy that seems to be **at odds** with the current policies of key monetary authorities. (cite regulatory examples/proposals)

QE resulted in Fed printing-- where is this money?

- The bank deposit market is sizable—in fact the top 4 bank holding companies (Bank of America, Wells Fargo, Citibank and JPMorgan) hold about $3.9 trillion in deposits as per FDIC's June 2015 data, relative to $1.9 trillion as of June 2008.
- The top 50 bank holding companies hold $7.5 trillion as of June 2015, relative to $4 trillion as of June 2008.
- QE had not happened then deposits would have grown roughly in line with economy's growth and/or household wealth (these are low single digit rates)

The “old plumbing” …..in blue area

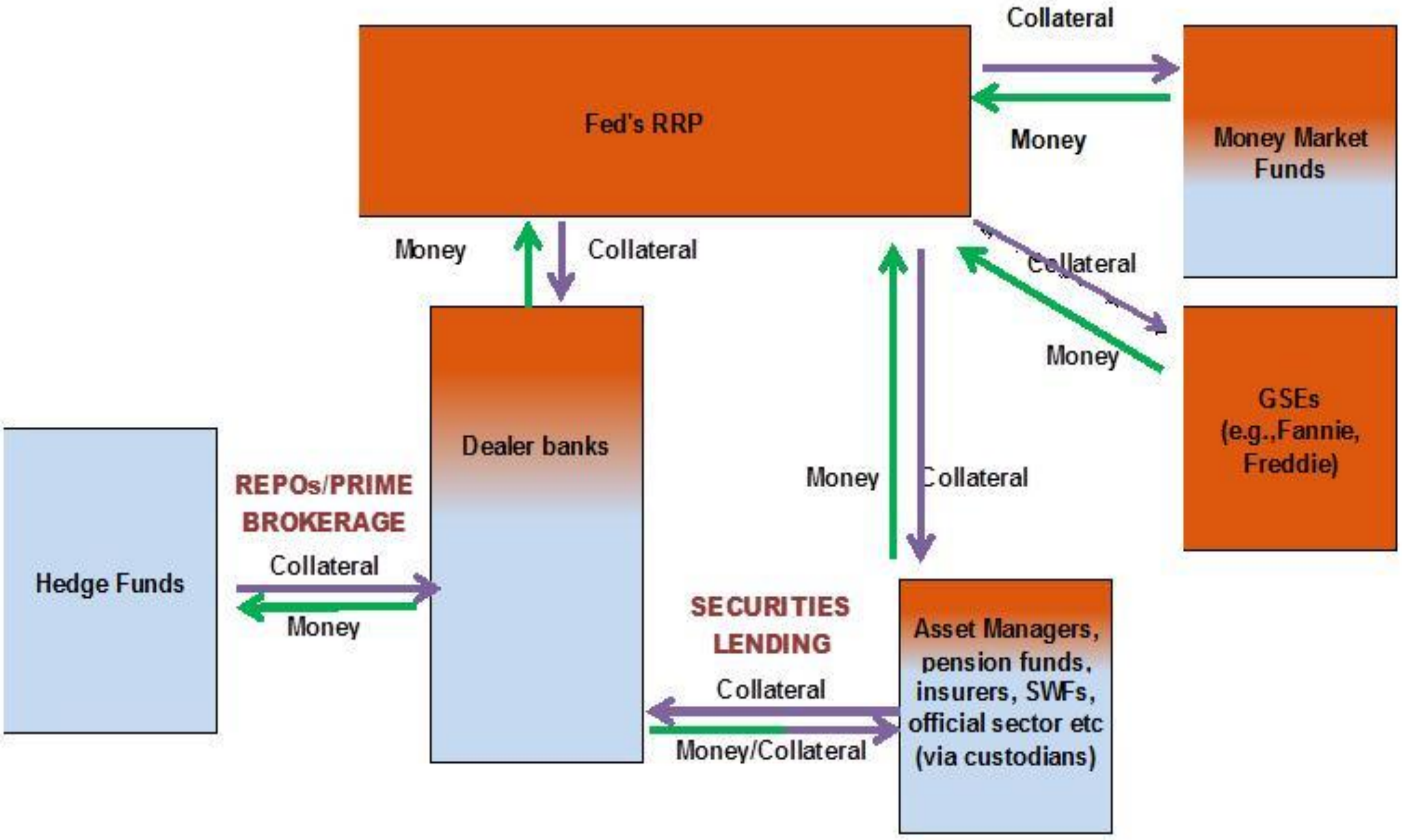
Figure 1: Collateral and Financial Plumbing



Collateral intermediation

Plumbing…… and central banks

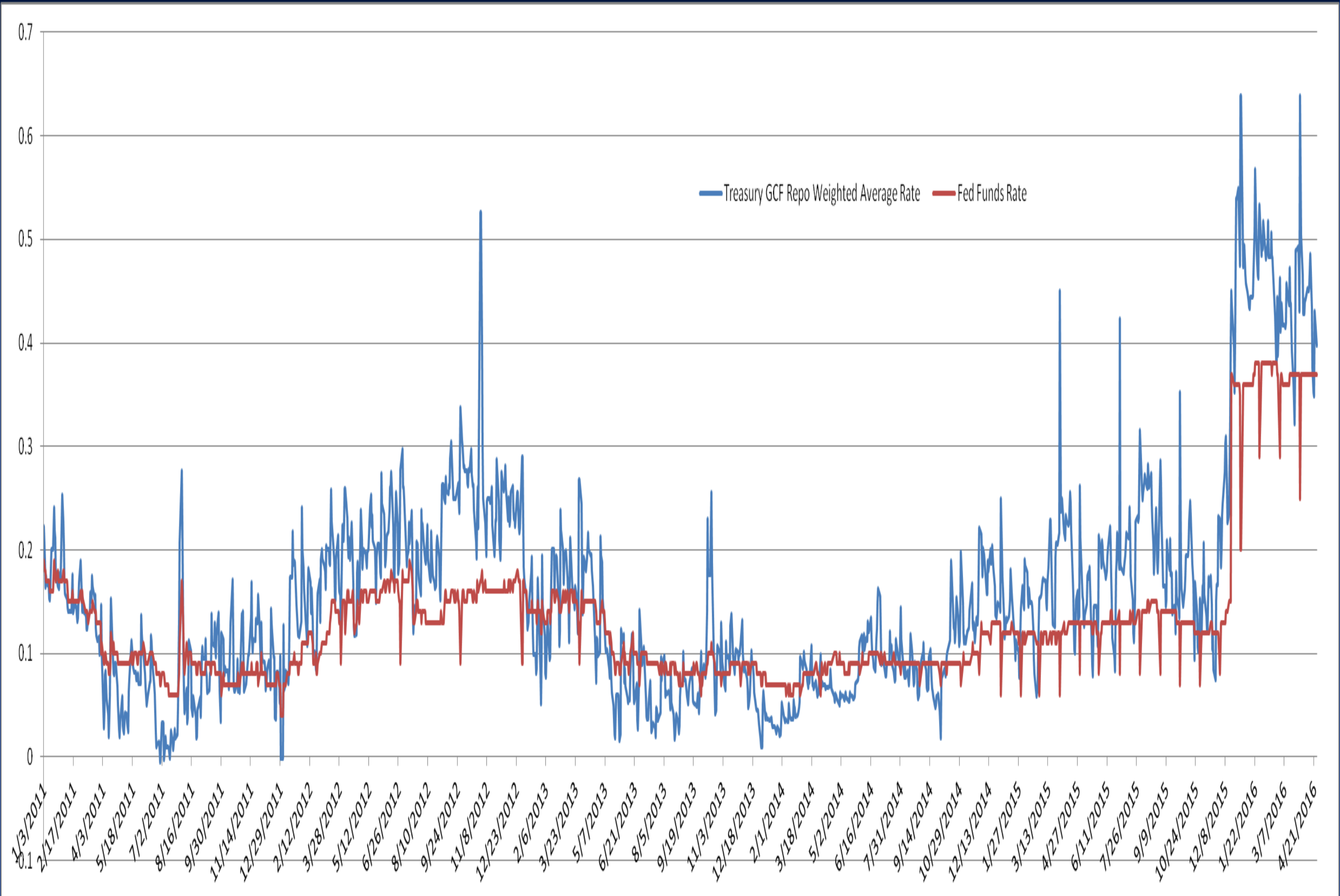
— an example from Fed's reverse repo program (RRP)



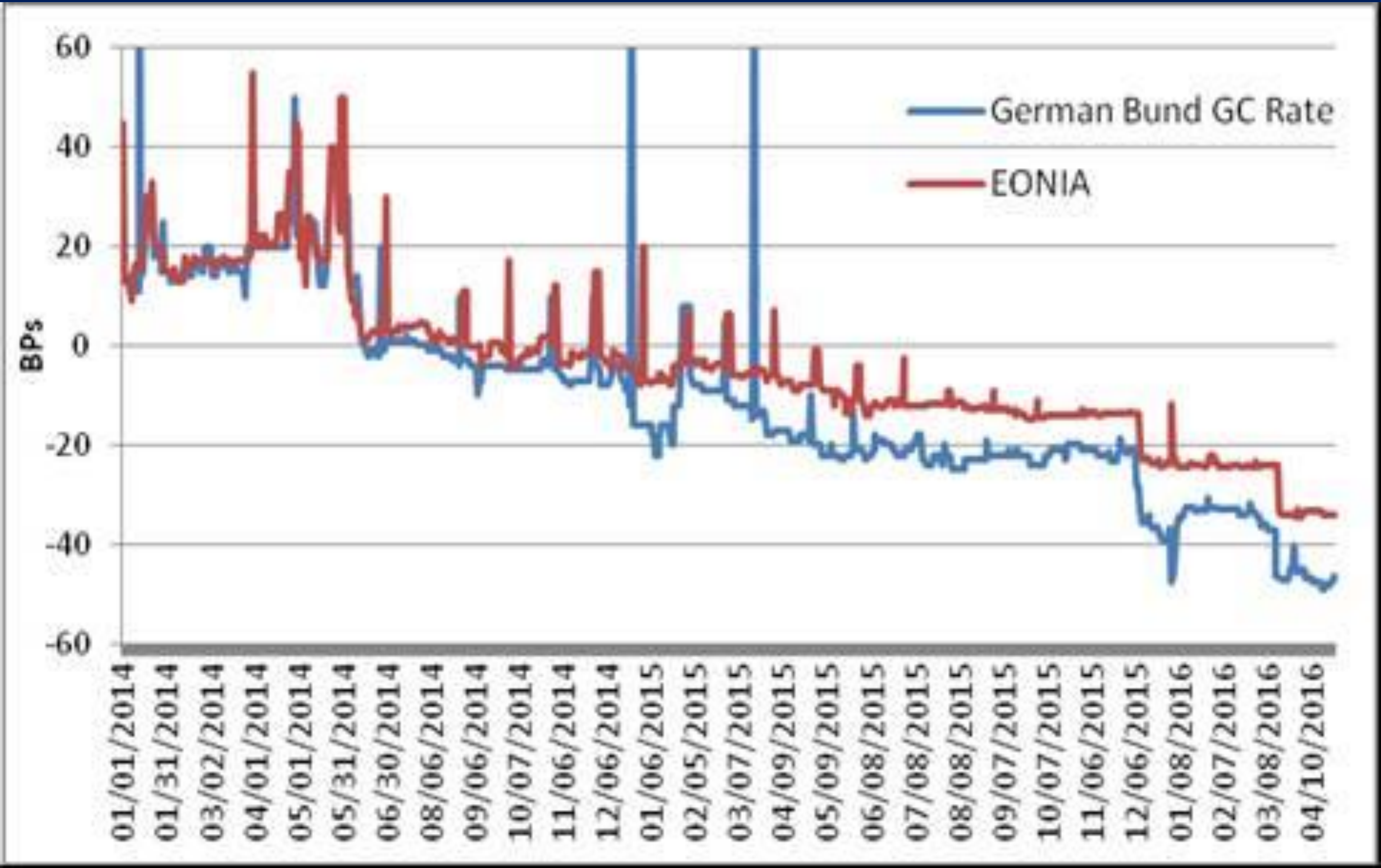
Change in Fed Balance Sheet since end-2007—a snapshot (and ECB is going this route)

Assets	Liabilities
Asset Purchases, change since 2007	Excess Reserves (i.e. deposits of banks at Fed)
↑ $ 3.4 trillion approx	↑ $ 2.9 trillion approx

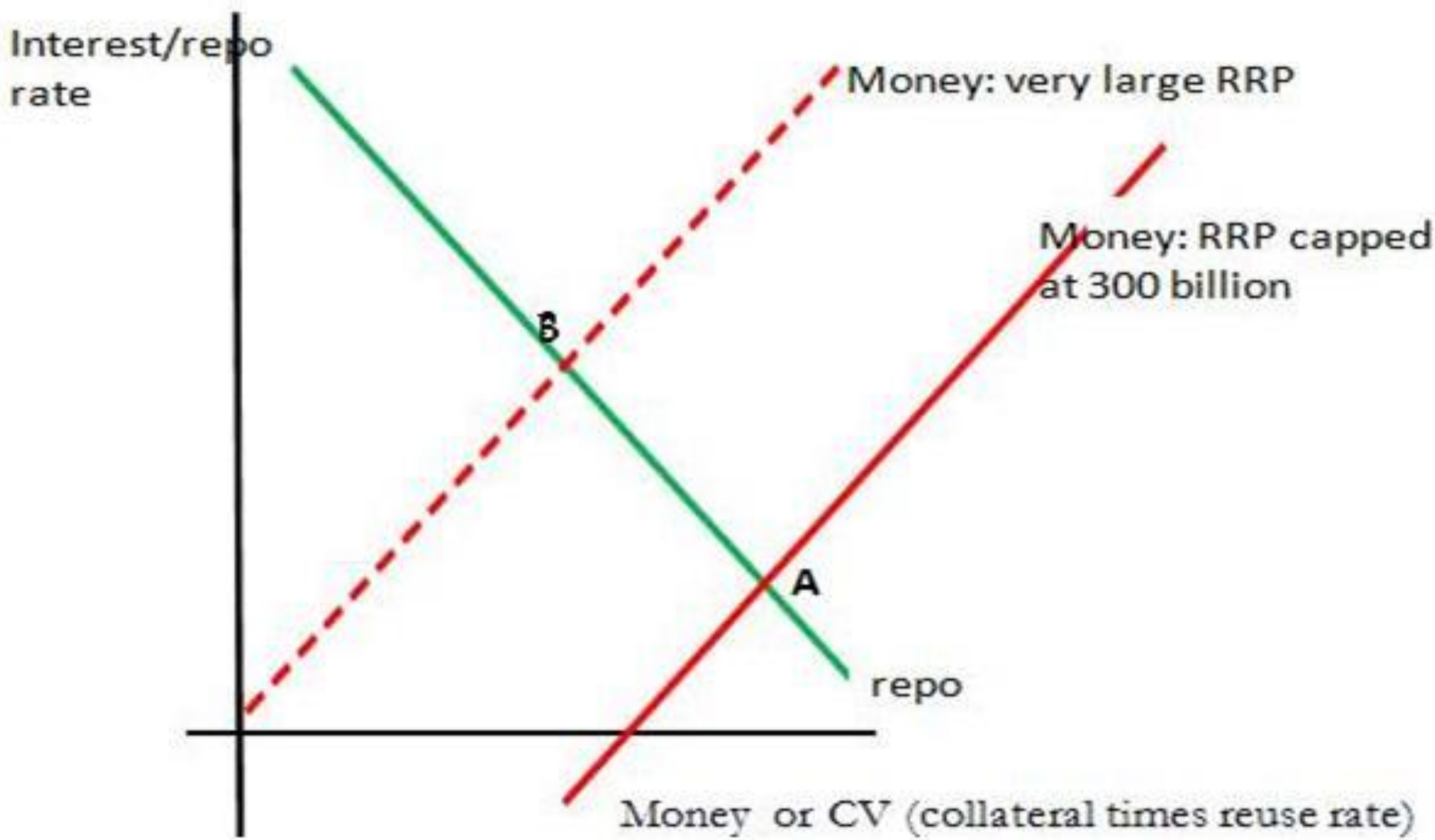
Policy rate (Fed Funds) and repo rates (GCF)



Life below zero in Eurozone—policy rate and repo rate move in sync



Fed Dec 16 liftoff- sizable…can change the relative prices of money and collateral. Goal: GC will likely equal FF (at B)



Asset Sales: US Treasury is sold to market—GC near B (not exactly B) but will be a market signal [Unlike large RRP, previous slide, that controls collateral]