Discussion of "The Safety Trap"
by Ricardo J. Caballero and Emmanuel Farhi

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The views expressed in this presentation are those of the author and do not necessarily represent the views of the Federal Reserve Bank of New York or the Federal Reserve System.

Outline

1. Overview of the safety trap:
    1. Economic mechanism
    2. Comparison to the liquidity trap
    3. Policy implications

2. Confronting the model with stylized facts:
    1. Safety trap as amplification mechanism for crises
    2. Evidence from the recovery from crises

3. Implications for the monetary policy/financial stability nexus

Mechanics of the Safety Trap

- Fraction α of locally Knightian agents that only hold "safe" assets
  - "Safe" assets pay out even in the worst state of the world
  - Ex ante rate of return on "safe" asset r^K

- Securitization technology
  - Fraction of risky assets can be "transformed" into "safe" assets

- Three types of equilibria:
  1. Lots of "safe" assets, risk neutral agents are marginal, $r = r^K$
  2. Shortage of "safe" assets, Knightian agents are marginal, $r > r^K$
  3. Severe shortage of "safe" assets, safety trap at zero lower bound

- In equilibrium 3, recession is necessary to clear asset markets
  - That is, the "safety trap"

New Keynesian Mechanics of the Liquidity Trap

- Nominal rigidity leads to aggregate demand shortage following shock
  - If nominal interest rate can decline, loss of output from shock can be mitigated
  - “Classic” example of mitigation: FRBUS simulation for a large fall in house prices June 2005 FOMC meeting, Mishkin Speech 2007
    - In practice not much mitigation
- Liquidity trap occurs when nominal rates are at the zero lower bound and adjustment needs to take place through other prices or expectations of the future
- New Keynesian story until recently didn’t focus much on “animal spirits”
  - One version of animal spirits is to assume Knightian type agents

Economic Policies in the Safety and Liquidity Traps

- Policies for **safety trap**: supply risk free nominal assets
  1. Fiscal: issue Treasury bills
  2. QE: transform long-term gov't debt into reserves
  3. Liquidity facilities: transform risky assets into safe nominal assets
     - 2 and 3 can improve "safety" of private counterparties
- Forward guidance on rates is not useful for safety trap
  - Friction is the lack of supply of "safe" assets and counterparties, not aggregate demand shortage, forward guidance on balance sheet might work
- Policies for the **liquidity trap:**
  1. Forward guidance on rates (Eggertsson Woodford)
     - Shift in expectation about future growth → boost to wealth today → boost to consumption today
     - Might be difficult to achieve this shift if there are animal spirits
  2. LSAP: lower term premium, reduce prepayment premium

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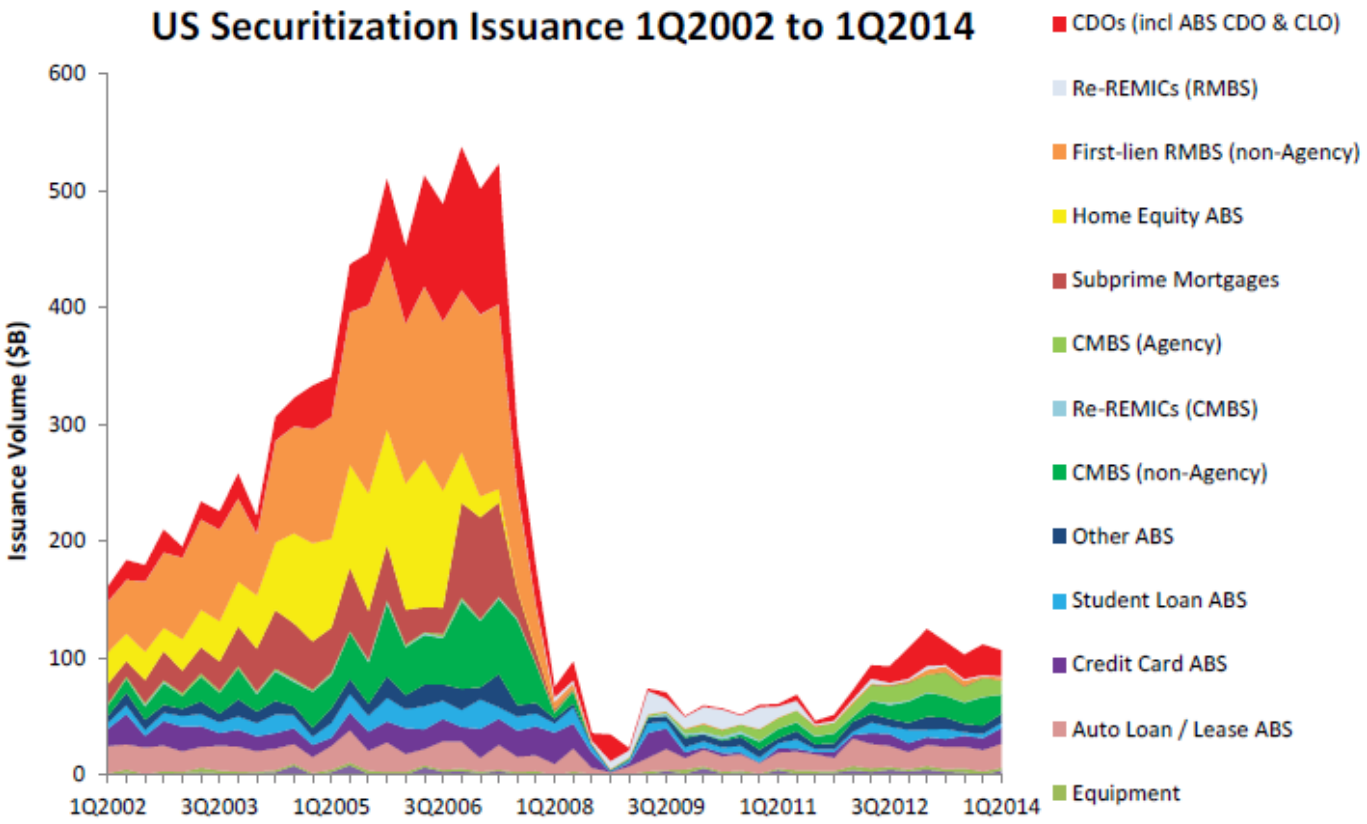
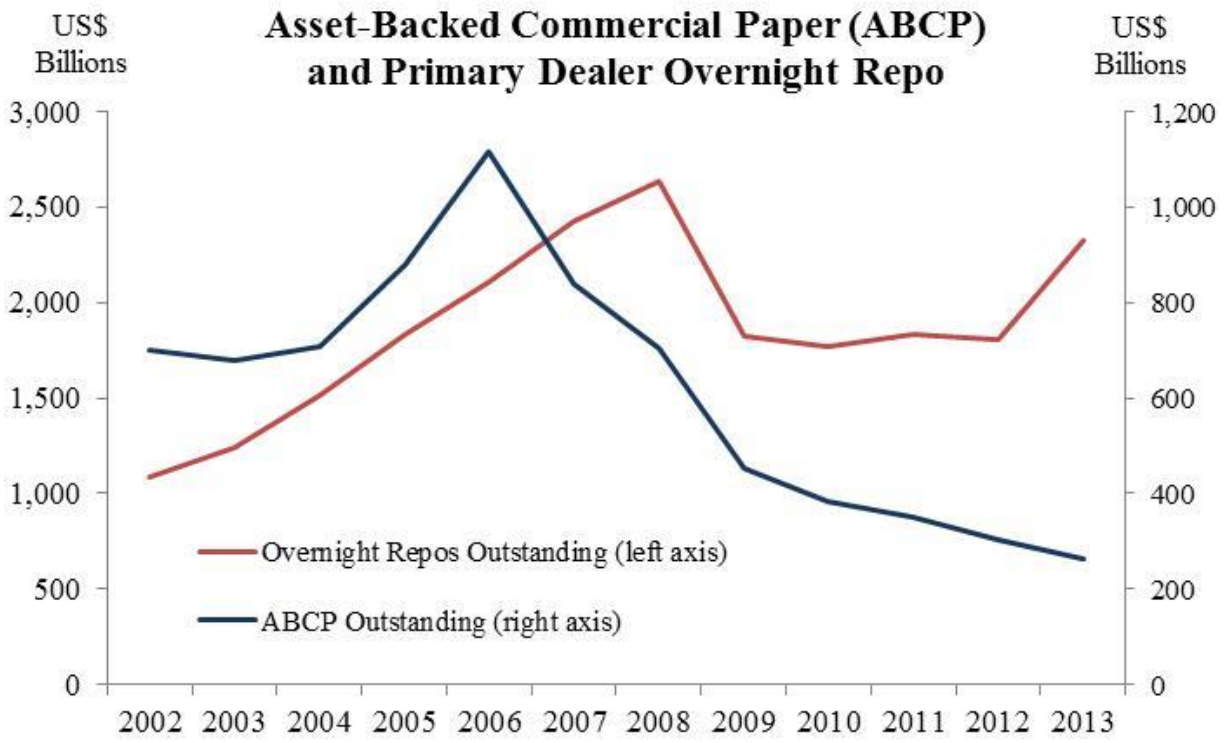
AAA Collateral Boom and Bust



Source: Asset-Backed Alert, Commercial Mortgage Alert

- Securitization produced massive amounts of AAA collateral
- Reassessment of subprime was big shock to stock of AAA supply
- Consistent with both uncertainty shock, and demand shock

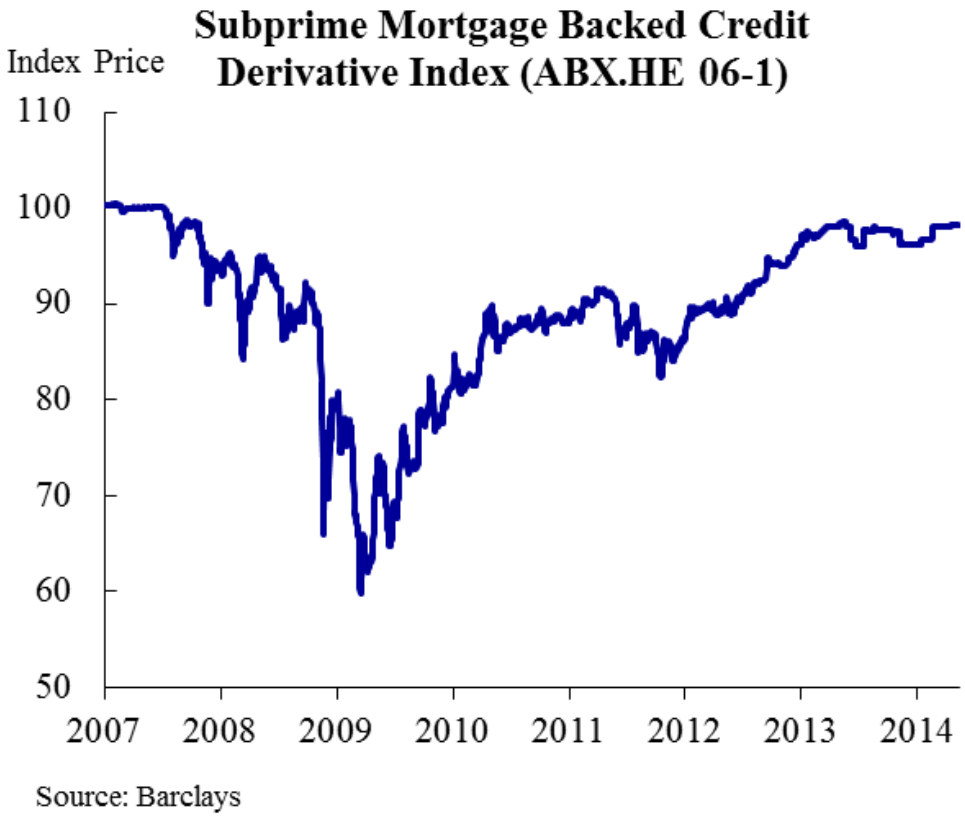
Asset-Backed Commercial Paper and O/N Repos



Source: Federal Reserve, FR 2004

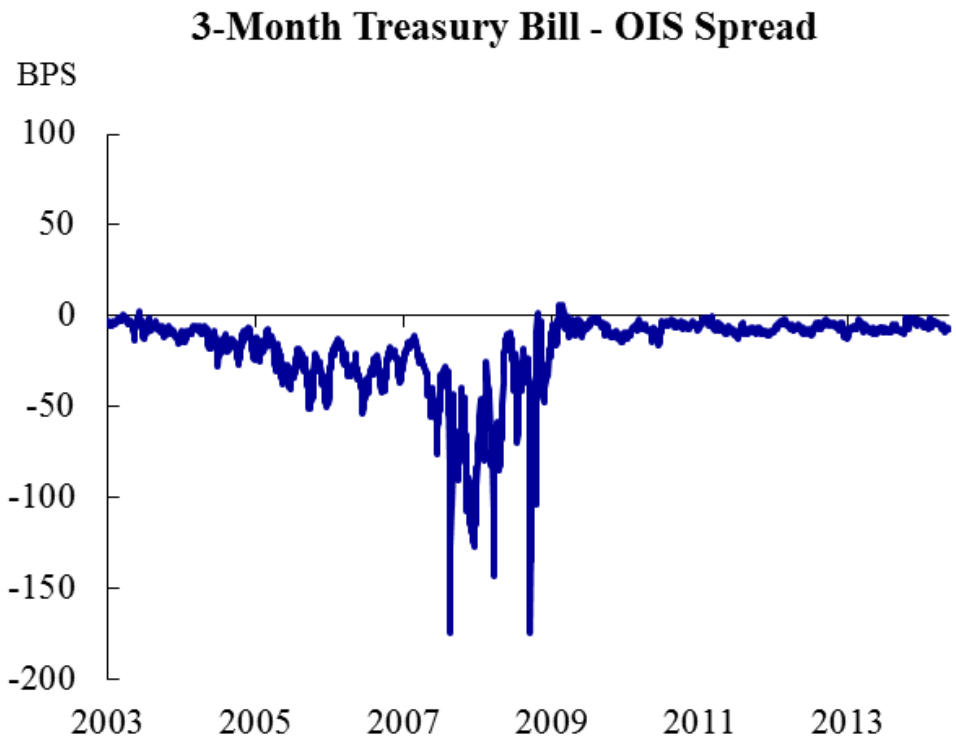
- Similar reassessment of ABCP and pullback from repo
- “Shadow banking” production of “safe” assets collapsed

Flight from Manufactured Collateral



- Price of AAA subprime tranche collapsed
- Such a fire sale is fully consistent with Caballero-Farhi
  - (100 – ABX) can be viewed as a proxy for $r - r^K$ (in prices not yields)

Flight to Safe Assets



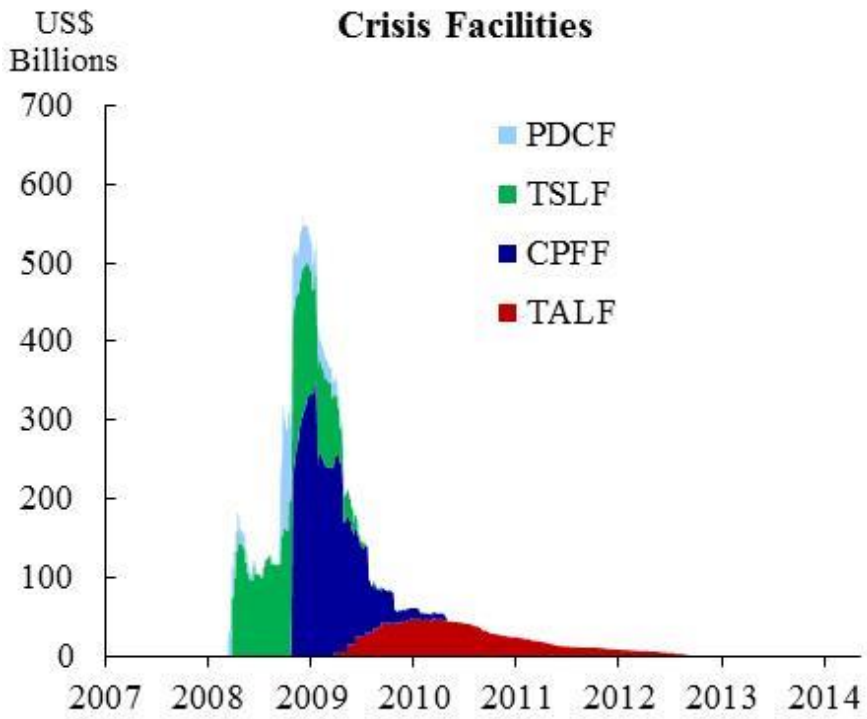
Source: Bloomberg

- A proxy for $r - r^K$ that has little counterparty risk

Did Safety Trap Play a Role to Trigger the Crisis?

- Evidence suggests yes:
  - Collapse of securitized AAA tranches
  - Repricing of those tranches
  - Massive flight to quality
    - Assets
    - Counterparties
- This is consistent with two shocks in Caballero-Farhi:
  - Fractions of Knightian agents increased (animal spirits)
  - Risk assessment changed (opacity unraveled: Dong-Holmström-Gorton)
- Next question:
  - Is recovery from the crisis consistent with the safety trap?

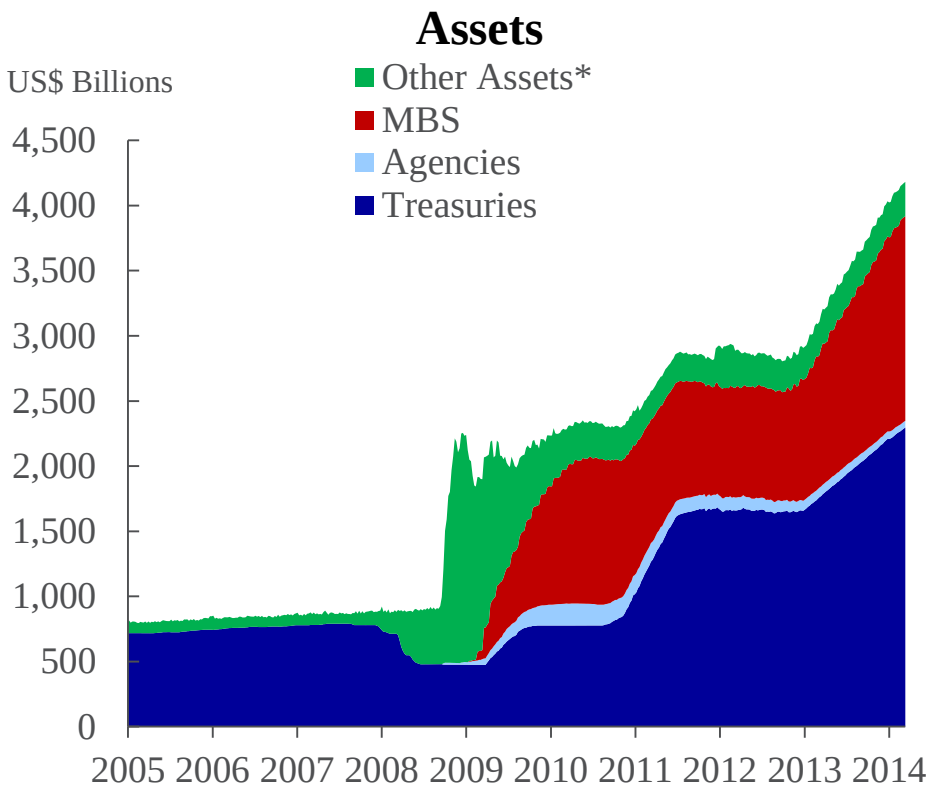
Fed's Safe Asset Manufacturing: Emergency Facilities



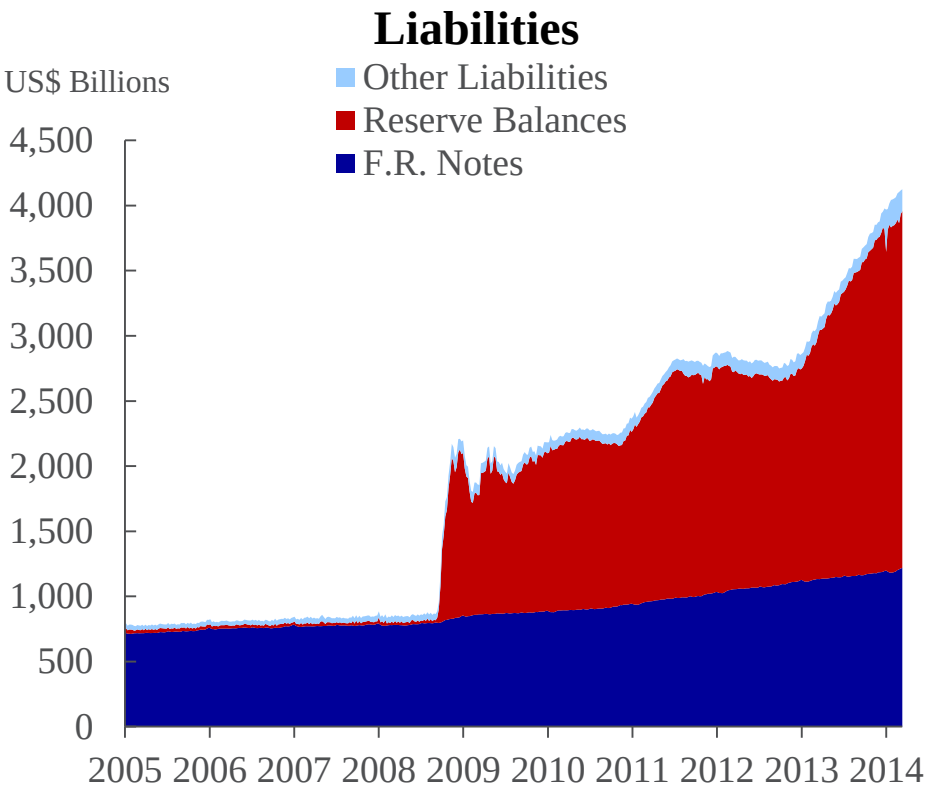
Source: Federal Reserve Bank of New York

- Fed manufactured safe assets through its crisis facilities
  - PDCF: substitute funding of dealers for repo market collapse
  - TSLF: switch MBS against Treasury collateral
  - CPFF: funding of high quality CP
  - TALF: provide funding of securitized assets with a put

Fed's Safe Asset Manufacturing: Asset Purchases



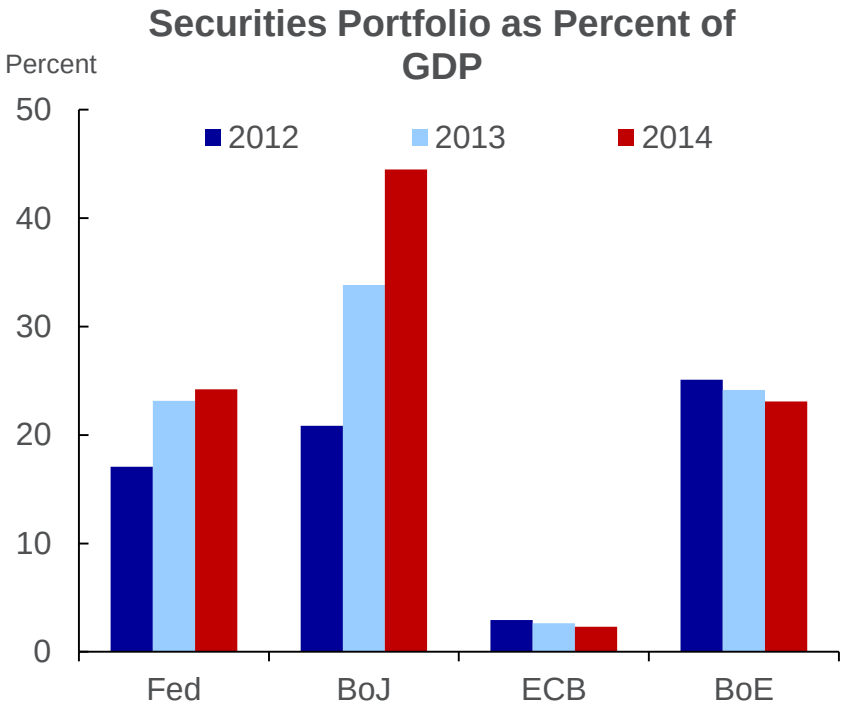
*Includes crisis facilities.
Source: Federal Reserve Bank of New York

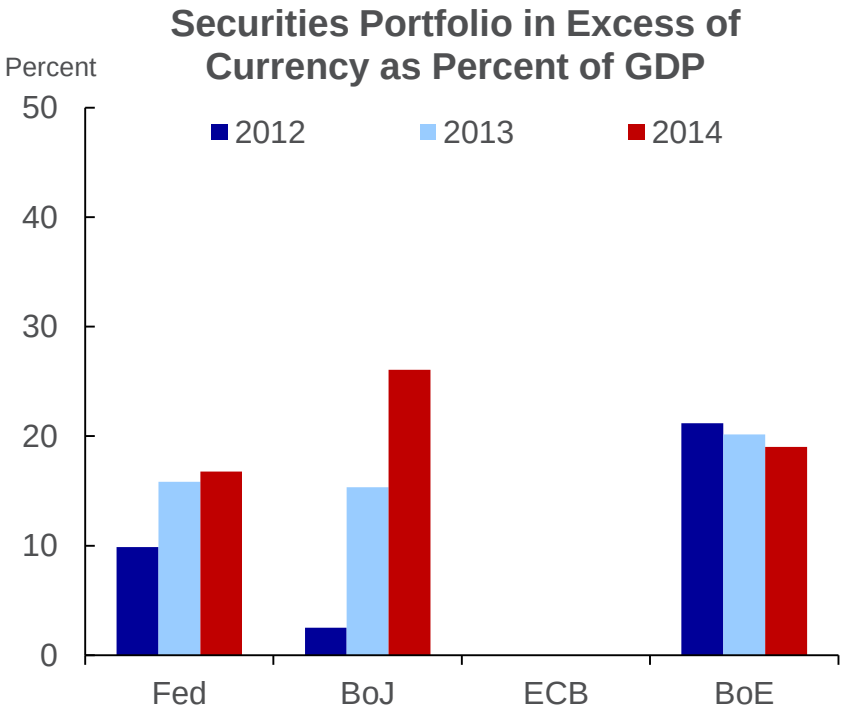


Source: Federal Reserve Bank of New York

- Fed increased supply of "safe" assets by transforming MBS and longer term Treasury securities into reserves
  - Note that "safe" means no interest rate risk, prepayment or credit risk
  - Also direct rate effect

Central Bank Securities Portfolios

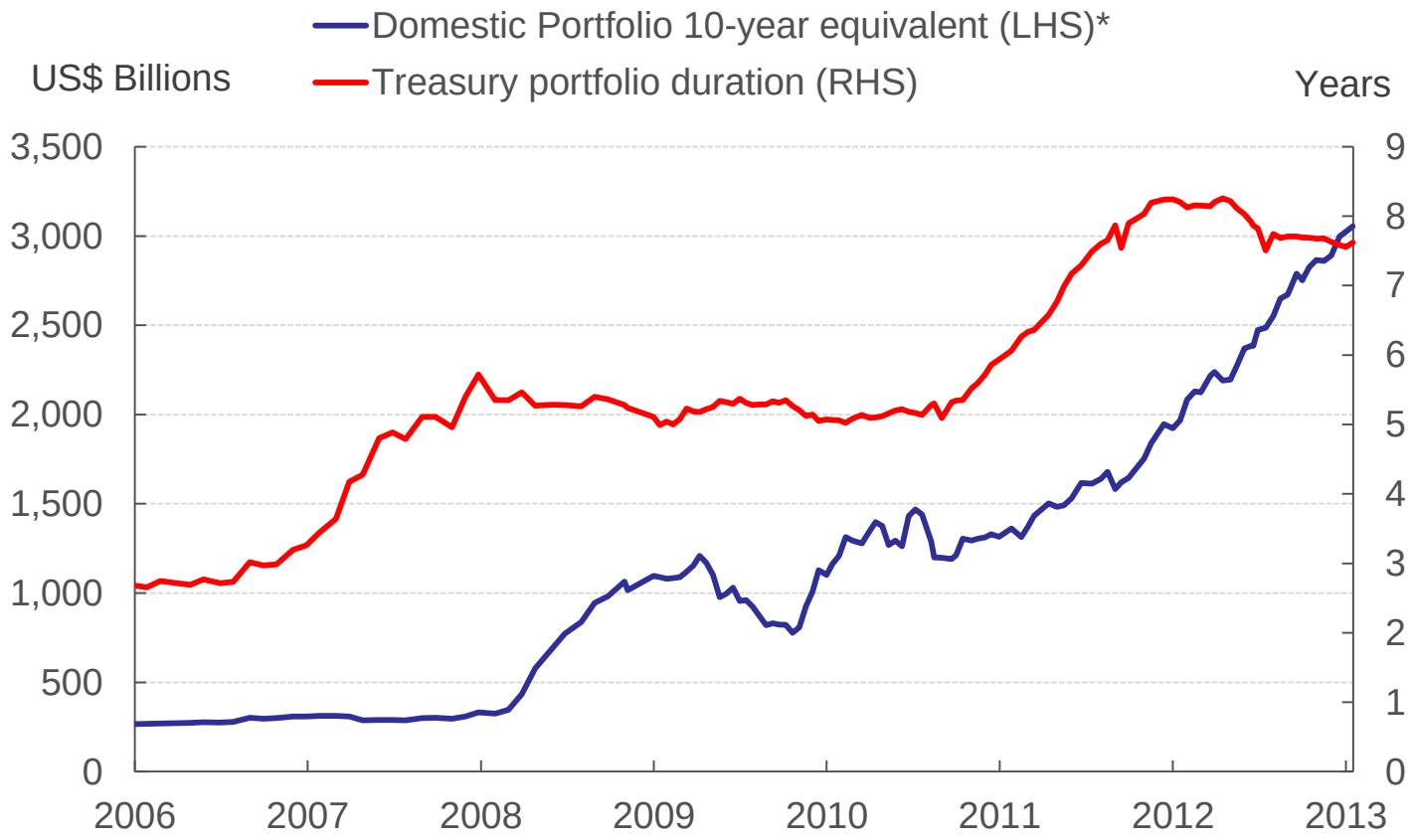




Sources: Federal Reserve Bank of New York, BoJ, ECB, BoE, IMF

- Broad central bank accommodation increases safe asset supply, with potential heterogeneous impacts given differences in central bank polices and distribution of collateral asset holdings

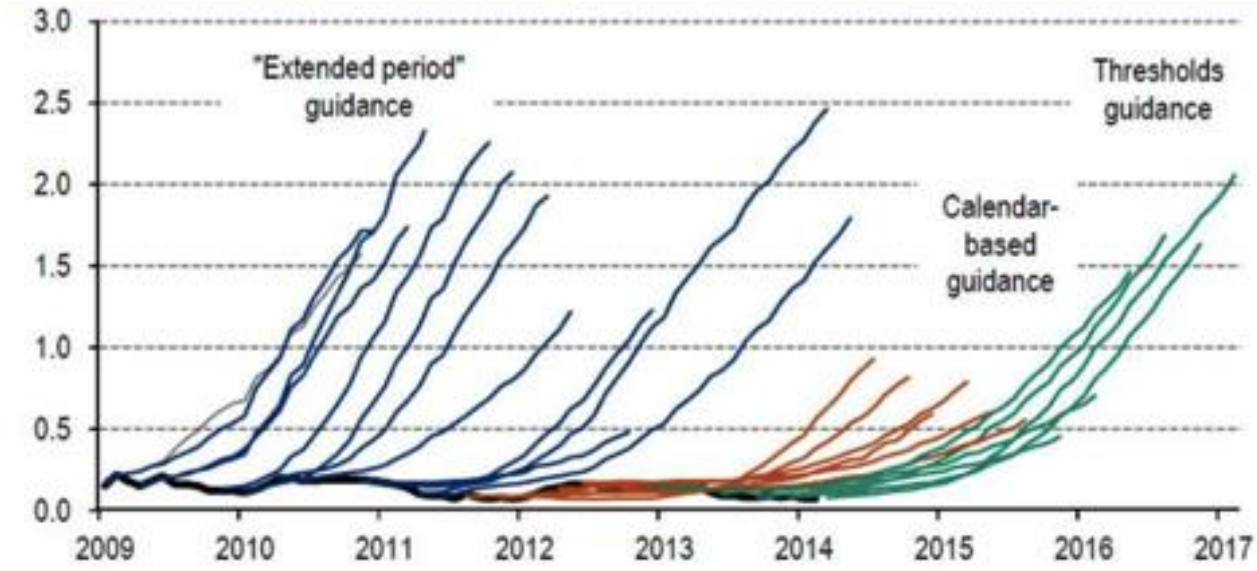
MEP and LSAP Removal of Duration



*Calculated by FRBNY using BlackRock Solutions estimates of agency MBS duration.

- MEP and LSAPs has brought substantial duration onto the Fed's balance sheet

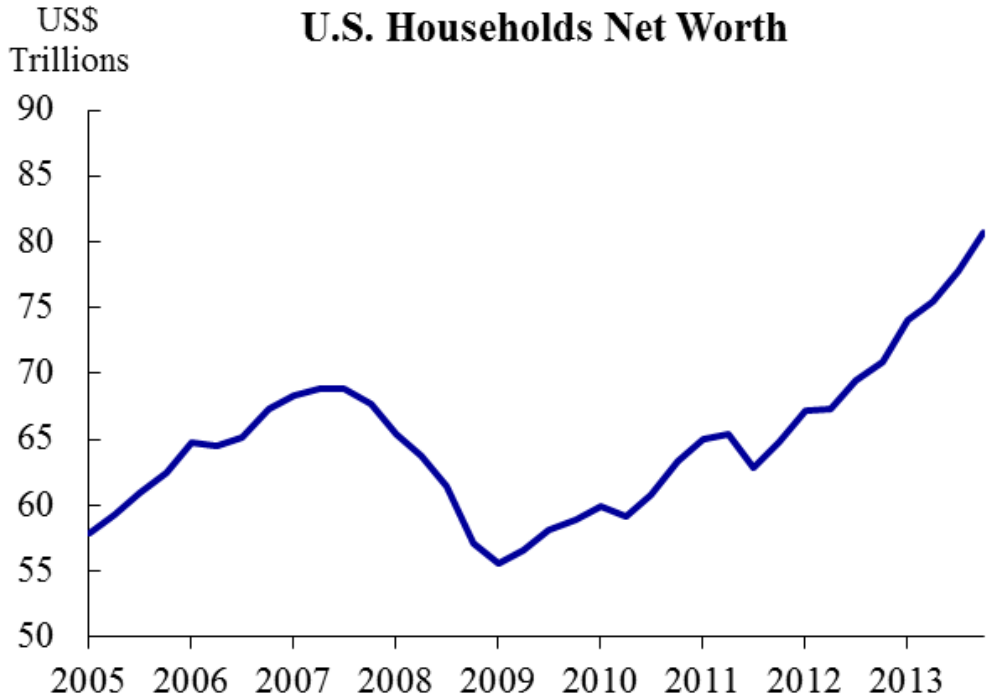
Forward Guidance as Interpreted by the "Market"



Source: BofA Merrill Lynch Global Research, Bloomberg, Federal Reserve Board

- Fed has also used forward guidance to impact shape of the yield curve

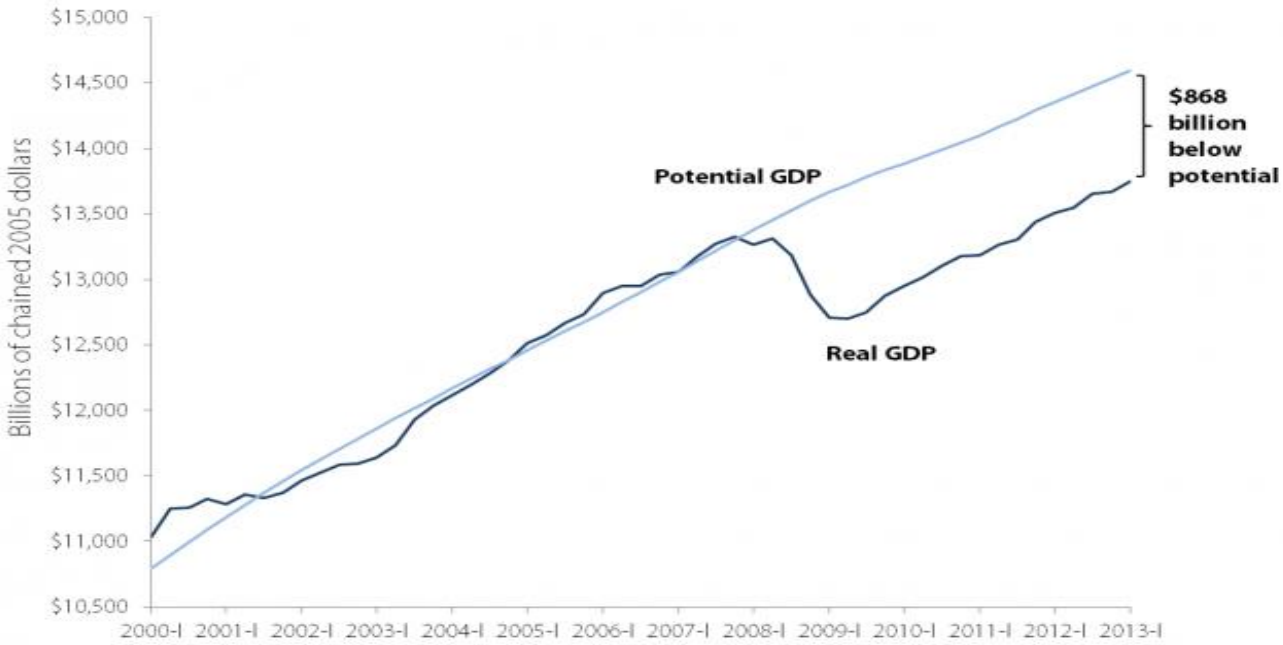
Nominal Household Wealth has Recovered



Source: Federal Reserve
Includes nonprofit organizations, not seasonally adjusted

- This is consistent with forward guidance and LSAP channels working
- Indirect evidence for liquidity trap

CBO Measure of Output Gap Still Wide



Source: Bureau of Economic Analysis National Income and Product Accounts and Congressional Budget Office

- General agreement output gap still has not closed
  - Remaining effects of liquidity trap or safety trap (Turner Paper)
- BUT we saw earlier that spreads quickly reverted to normal levels → Safety trap likely no longer active

Safety or Liquidity Trap?

- These facts suggest that:
  - Recovery of wealth points to forward guidance/LSAP channels
  - Output gap not closing suggests that either
    - Safe assets remain scarce or
    - Liquidity trap remains active
  - Given the massive amount of safe assets production by central banks, and the recovery of “safety spreads” (OIS-Treasury, ABX), it seems unlikely that there is still a shortage of “safe” assets

- Evidence suggests that safety trap was an important amplification mechanism going into the crisis

- But in more recent years evidence suggests liquidity trap mechanism was driving force

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Implications for Monetary Policy & Financial Stability

- Central Banks have a number of tools:
  - Level of rates
  - Size and composition of balance sheets
  - Guidance about use of tools in certain states of the world (e.g., ECB Outright Monetary Transactions)

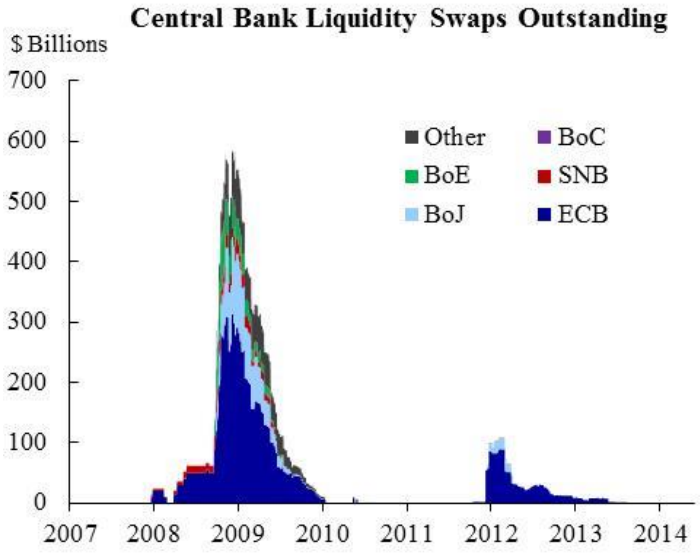
- Economics of the safety trap and recent experience suggest that the size and composition of the balance sheet can be an important complement to rate policy
  - Safety trap channel can be a big amplifier of standard Keynesian channels

What is a "Safe" Asset?

- Central Banks offer a nominal safe asset and in some circumstances direct access to a safe counterparty
- But economic agents care about real not nominal values
- Some economic agents based on (MV=PY) might be wary of safe asset production by central banks

Central banks need to keep long forward inflation expectations well-anchored

- Largest and quickest increase in "safe" asset production in autumn 2008 was from the U.S. dollar liquidity swaps
  - Partly a funding issue but U.S. dollar seems a special type of "safe" asset
- "Animal Spirits" can include lack of credibility in government production of safe assets



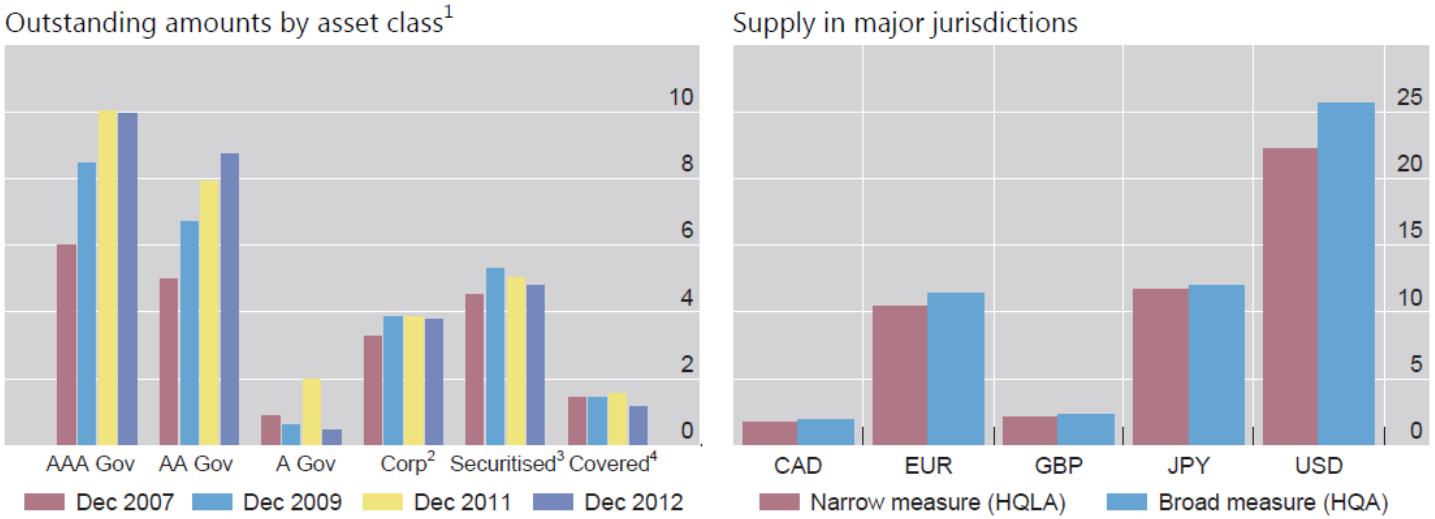
Source: Federal Reserve Bank of New York

Reference

Safety or Liquidity Trap?

High-quality debt securities

In trillions of US dollars — Graph 4



[1] Outstanding amounts with maturity greater than one year. [2] Global corporate bonds rated single-A or higher. [3] US securitised bonds. [4] Global covered bonds.

- BIS CGFS Working Group study on collateral assets
  - Evidence of increasing bank reliance on collateralized market funding and asset encumbrance, driven by higher perceived counterparty risk and regulatory reform
  - At same time, supply of collateral assets outstrips estimates of collateral demand, with differences across jurisdictions