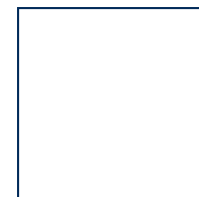


The Federal Reserve's Response to the Financial Crisis

CFA Virginia Society – John Walter

November 10, 2009

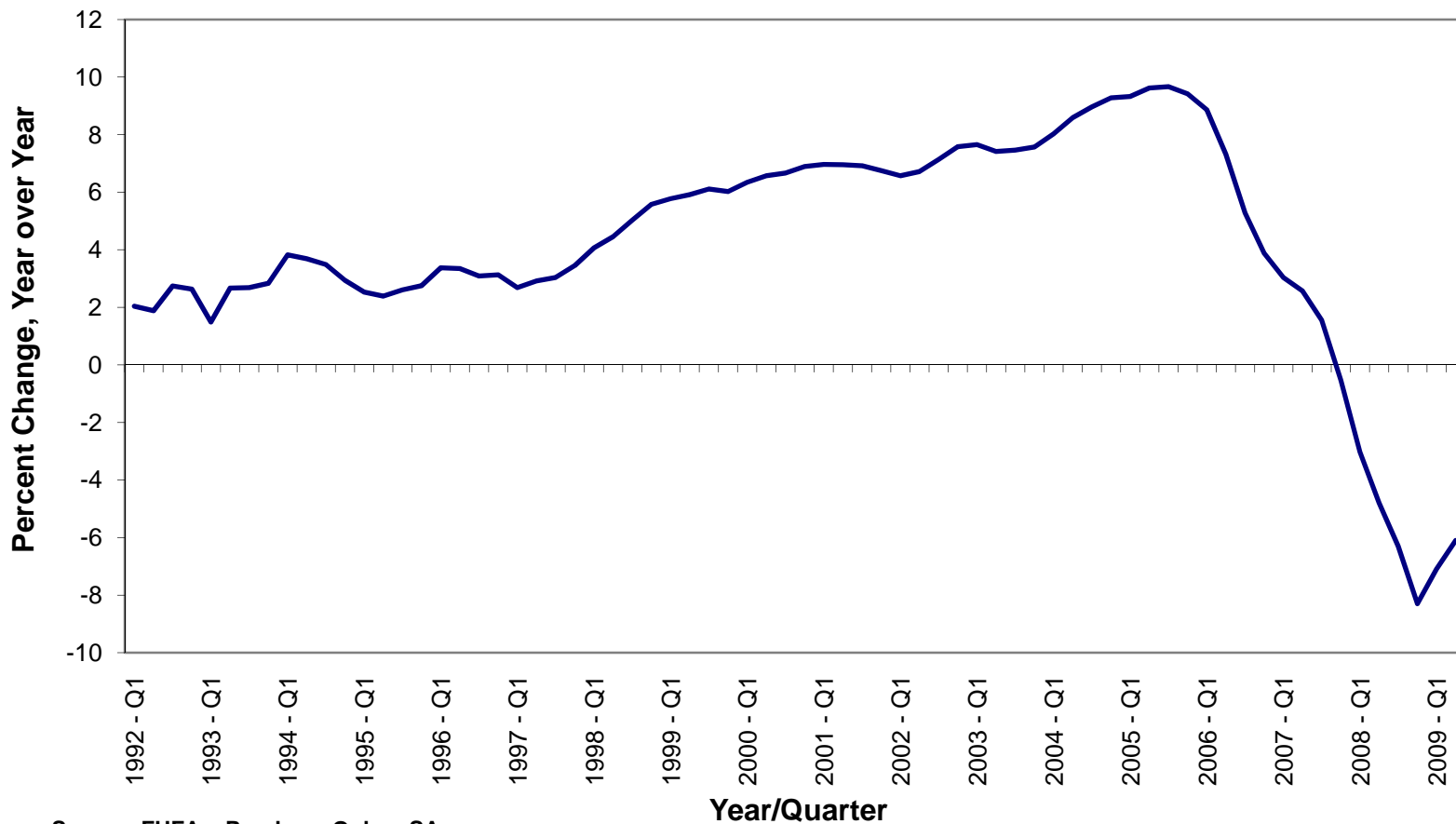


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Housing Price Index



Source: FHFA – Purchase Only -- SA





Evolution of the Financial Crisis

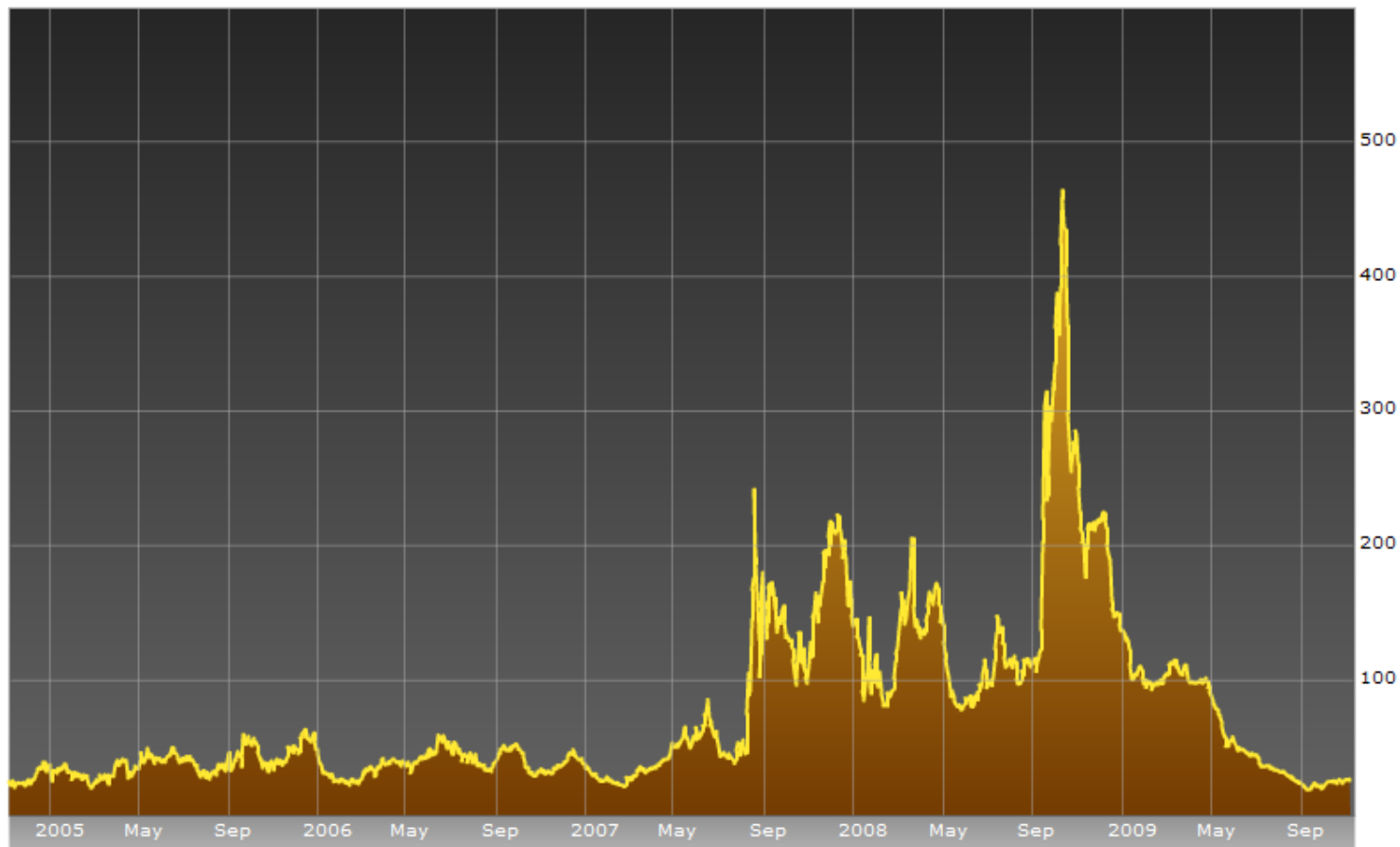
- Housing market problems shifted to financial markets in Summer 2007 – Losses at financial institutions across major countries
- Unclear which financial institutions held worst loans
 - Mortgages had been sliced and resold
- Uncertainty about how bad problems would become
- Financial institutions and investors became highly conservative





TED Spread

October 2004 – October 2009





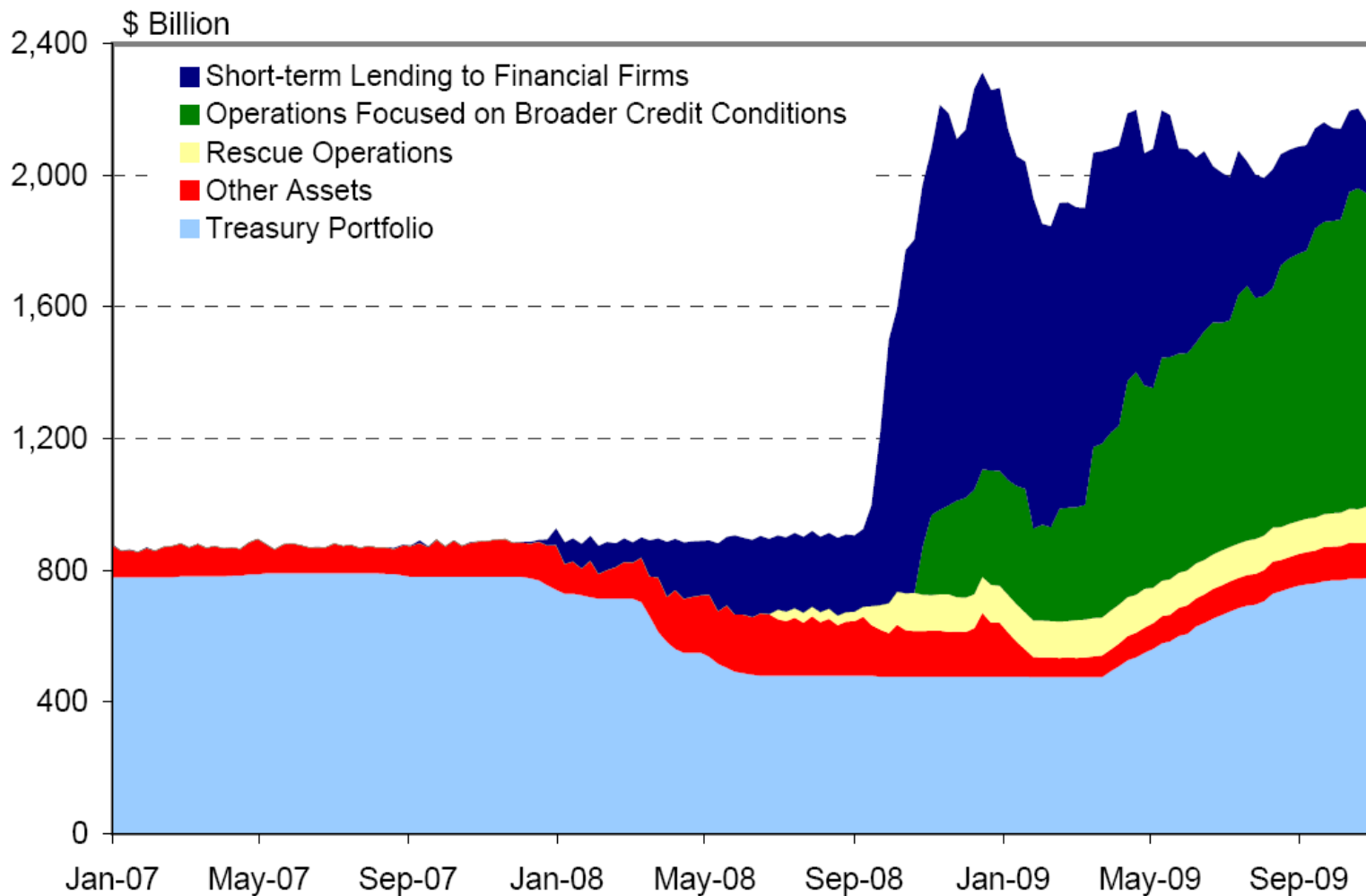
Relief Programs

- Relief programs began in fall of 2007
- Goal of programs
 - Provide a transfusion
 - Provide funding to lenders – so that they would be willing to lend to consumers and businesses
- The Federal Reserve introduced a total of 14 programs
 - FDIC has introduced several of its own as has the Treasury

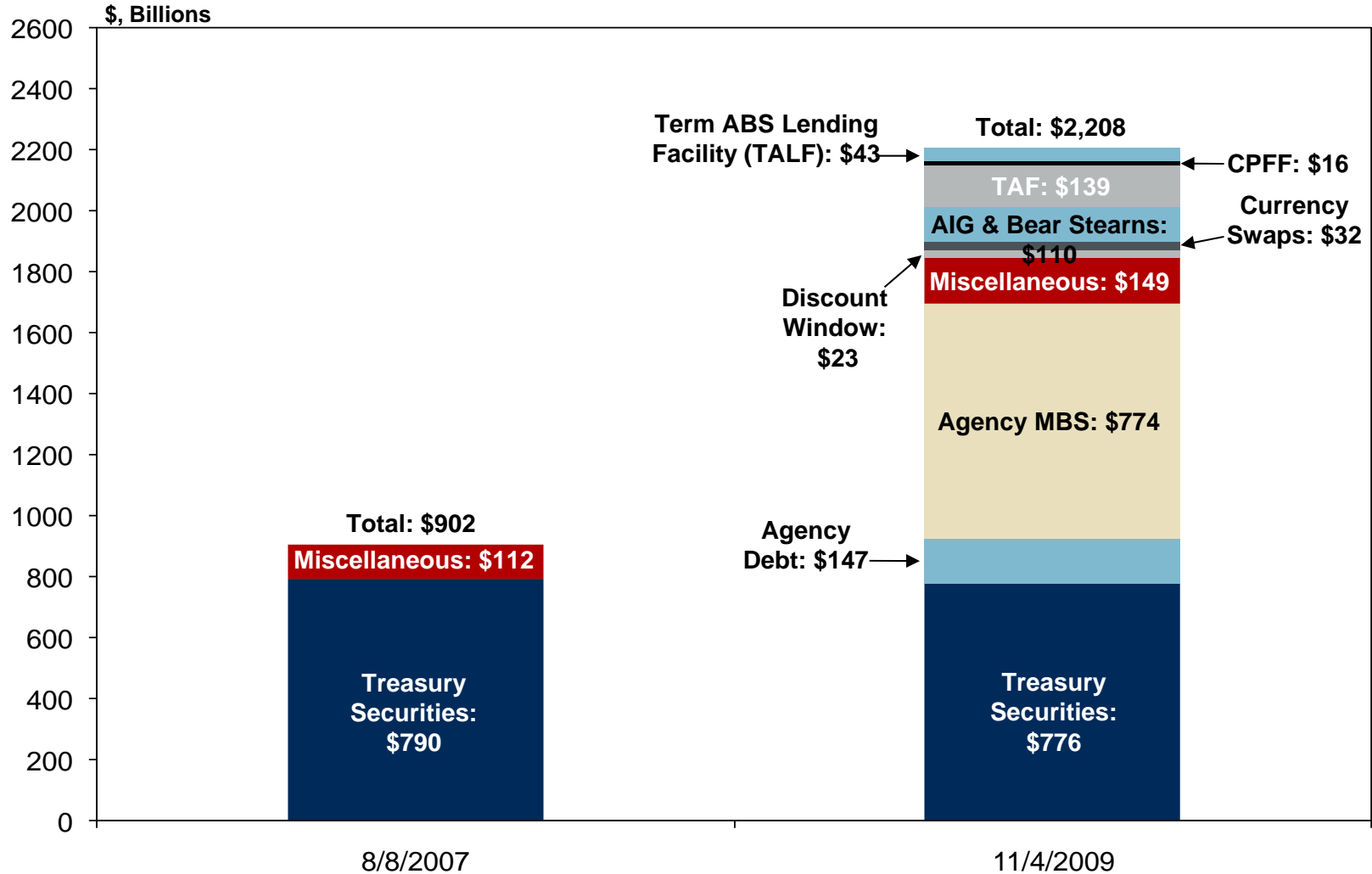




Federal Reserve System Assets



Federal Reserve System Assets



Notes: CPFF is the Commercial Paper Funding Facility. Money Market Facility (AMLF) holdings were less than \$1 billion on 11/4.



Loan Programs

- **Term Auction Facility (TAF)**
 - Term loans (up to 84 days) to banks while funding markets are under stress
- **Primary Dealer Credit Facility (PDCF)**
 - Discount window loans to Primary Dealers
- **ABCP Money Market Fund Liquidity Facility (AMLF)**
 - Non-recourse loans to banks to fund purchases of asset-backed commercial paper from money market mutual funds
- **Money Market Funding Facility (MMFF)**
 - Funding for private-sector SPV purchases of CDs, bank notes and commercial paper from money market funds





Loan Programs, continued

- **Term Asset-Backed Securities Loan Facility (TALF)**
 - Non-recourse loans to purchasers of recently issued consumer or small business asset-backed securities
- **Term Securities Lending Facility (TSLF)**
 - Treasury securities lent to Primary Dealers which provide less liquid securities as collateral
- **Central Bank Swap Lines**
 - Reciprocal currency arrangements with a number of other central banks – U.S. dollars lent in exchange for foreign currencies





Asset Purchase Programs

- **Commercial Paper Funding Facility (CPFF)** – Fed purchases (through an Special Purpose Vehicle) commercial paper directly from issuers
- **Purchase of agency debt**
- **Purchases of agency mortgage-backed securities**
- **Treasury Securities Purchase Program**





Institution-Specific Assistance

- **Bear Stearns** – Acquired a block of Bear Stearns troubled assets to facilitate JP Morgan Chase’s purchase of Bear Stearns
- **AIG** – Loans, assets purchases, and liability acquisitions to prevent AIG’s failure
- **Citigroup and Bank America** – Guaranteed specified blocks of assets





Loan Program –Term Auction Facility

- Begun in December 2007 – currently \$139 billion
- Term loans (up to 84 days) vs. typical Fed lending – overnight
- Avoids stigma associated with typical Fed lending





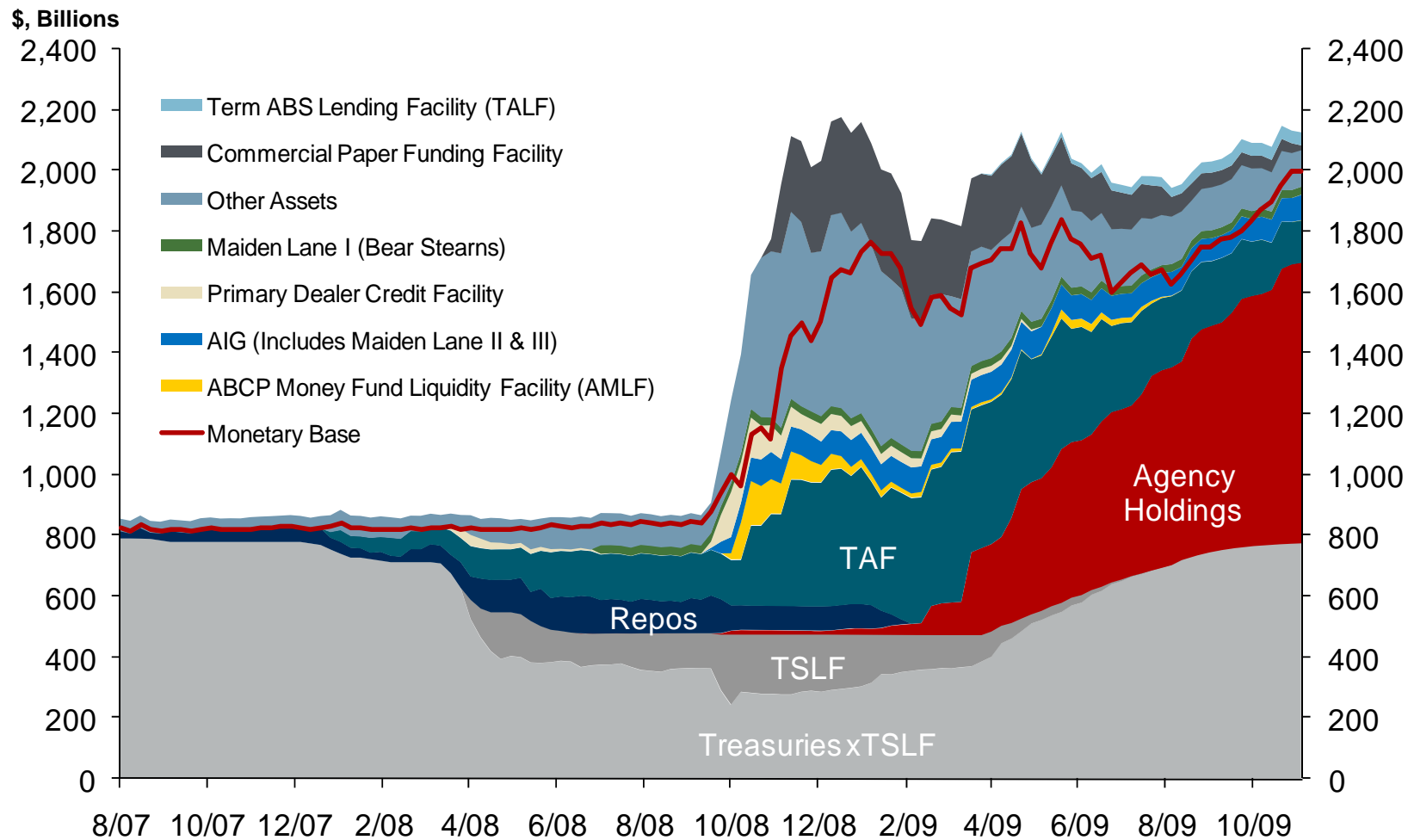
Asset Purchases – Agency MBS

- Fed is purchasing mortgage-backed securities guaranteed by agencies: Fannie Mae, Freddie Mac, and Ginnie Mae
- Currently the Fed holds \$774 billion
- Goal – to lower interest rates on home mortgages, thereby propping up house prices and improving conditions in financial markets





Federal Reserve System Assets





Expanded Fed Assets Inflationary?

- The asset purchases by the Fed have injected \$1.1 trillion in reserves into banks.
- Right now banks are happy to hold \$1.1 trillion of excess reserves at the Fed.
- At some point they will want to start lending them out.
- When they do, money supply will start rising rapidly, inflation will result unless the Fed offsets.
- Observers wonder what the Fed's exit strategy is: how the Fed plans to avoid inflationary impacts from our huge balance sheet.
- Bernanke has explained the Fed's exit strategy





Exit Strategy

- Borrowing will tend to decrease as the economy heals – already taking place – which will tend to lower reserves
- Raise the rate we pay on reserves
 - Since our rate on reserves sets a floor for market rates – raising this rate will raise market rates – preventing inflation
- Lower reserves – Bernanke’s suggestions (7/21/09 *WSJ*)
 - Reverses
 - Increased Treasury balances – leads to decreased reserves
 - Term bank deposits at the Fed
 - Sell some of Fed’s holdings

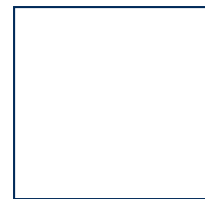
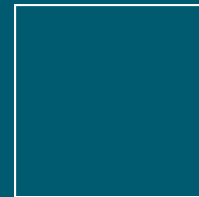
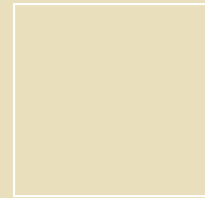




Conclusions

- Broad declines in home prices led to defaults on loans.
- Many financial firms were heavily exposed to home loans so they began to suffer financial problems.
- Financial markets tightened up significantly.
- Fed stepped in with a number of interventions meant to prop up.
- Financial markets seem to be on the mend – use of several Fed programs has fallen.
- At some point the Fed will begin to remove reserves – we have not reached that point yet





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