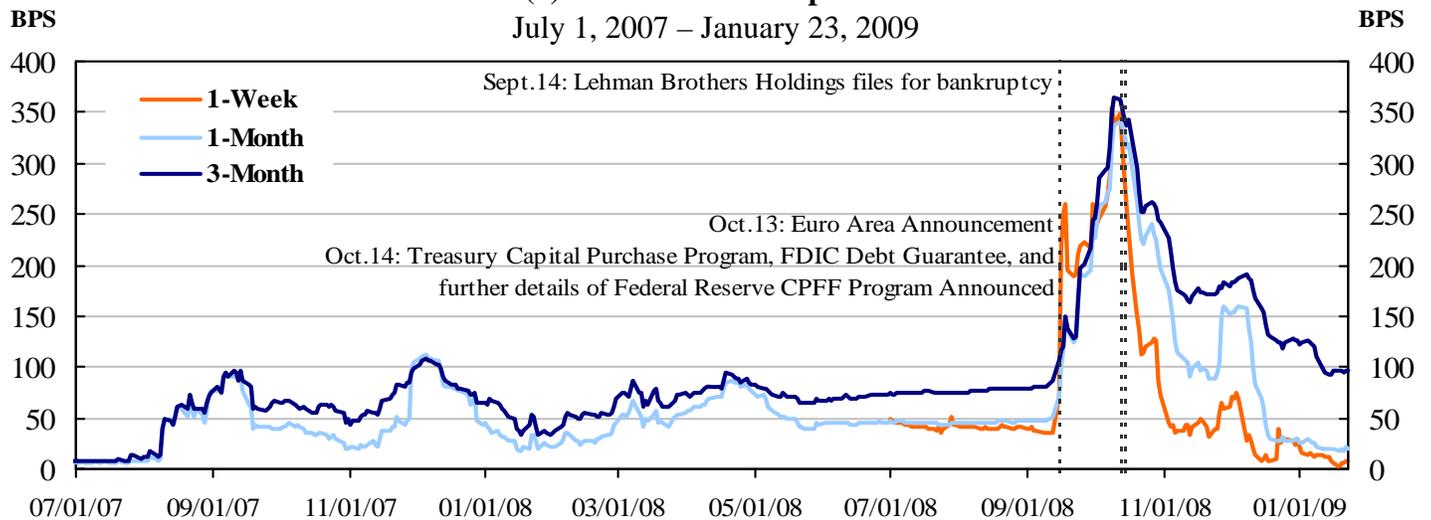


**Appendix 1: Materials used by Ms. Mosser and Mr. Hilton**

**(1) U.S. Libor–OIS Spreads**

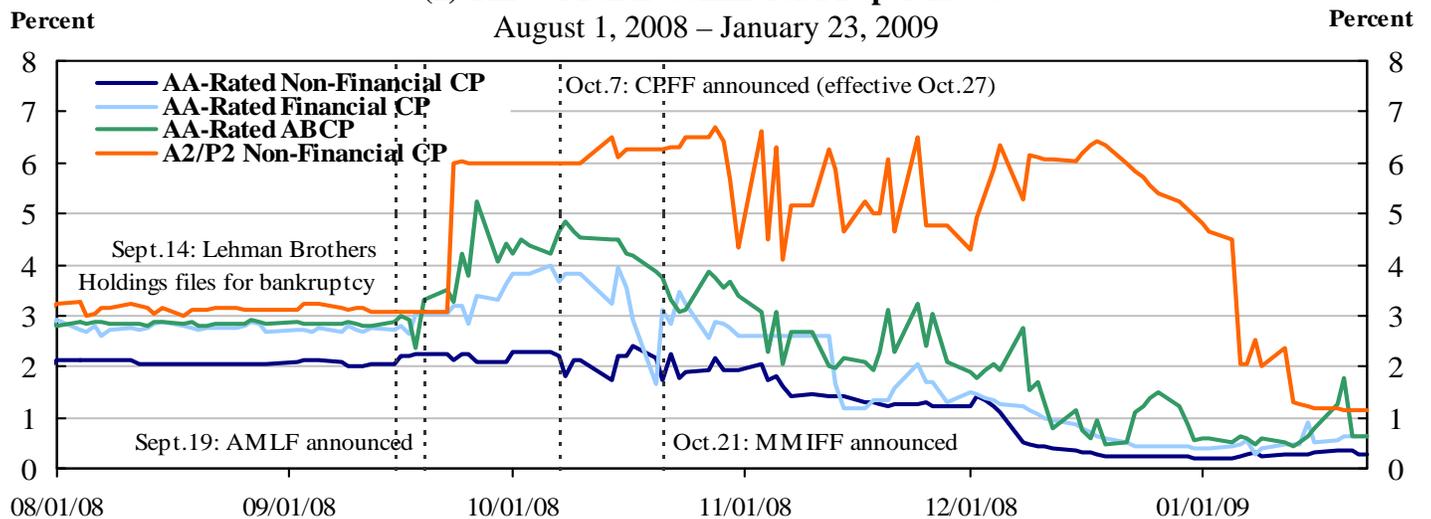
July 1, 2007 – January 23, 2009



Source: Bloomberg

**(2) Three-Month Commercial Paper Rates**

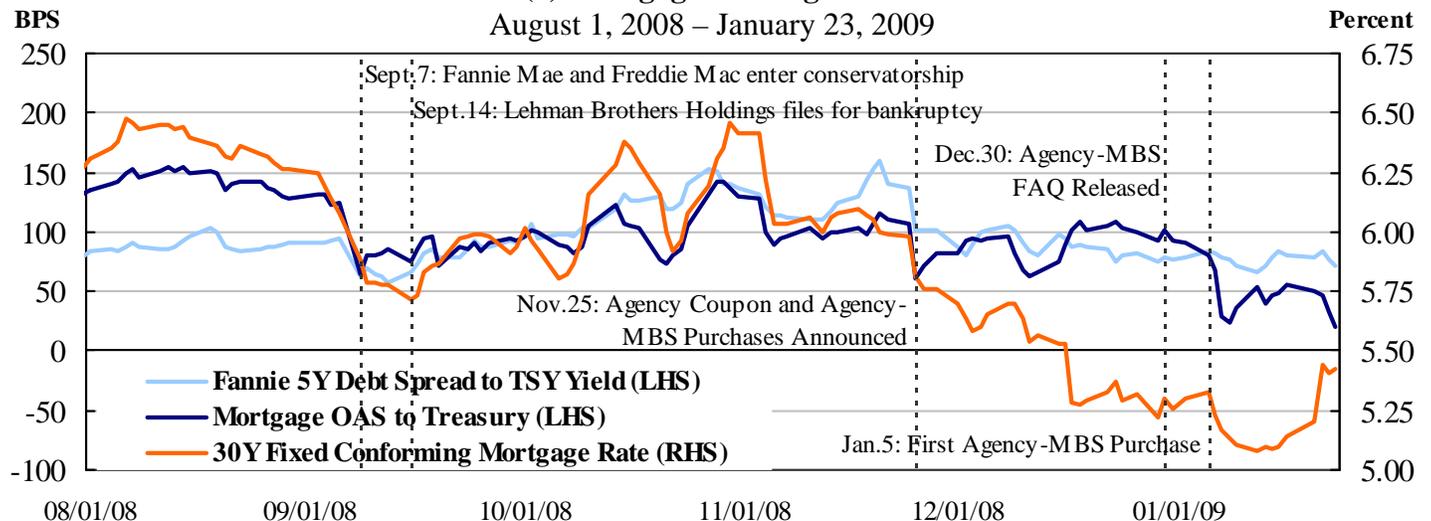
August 1, 2008 – January 23, 2009



Source: Federal Reserve Board

**(3) Mortgages and Agencies**

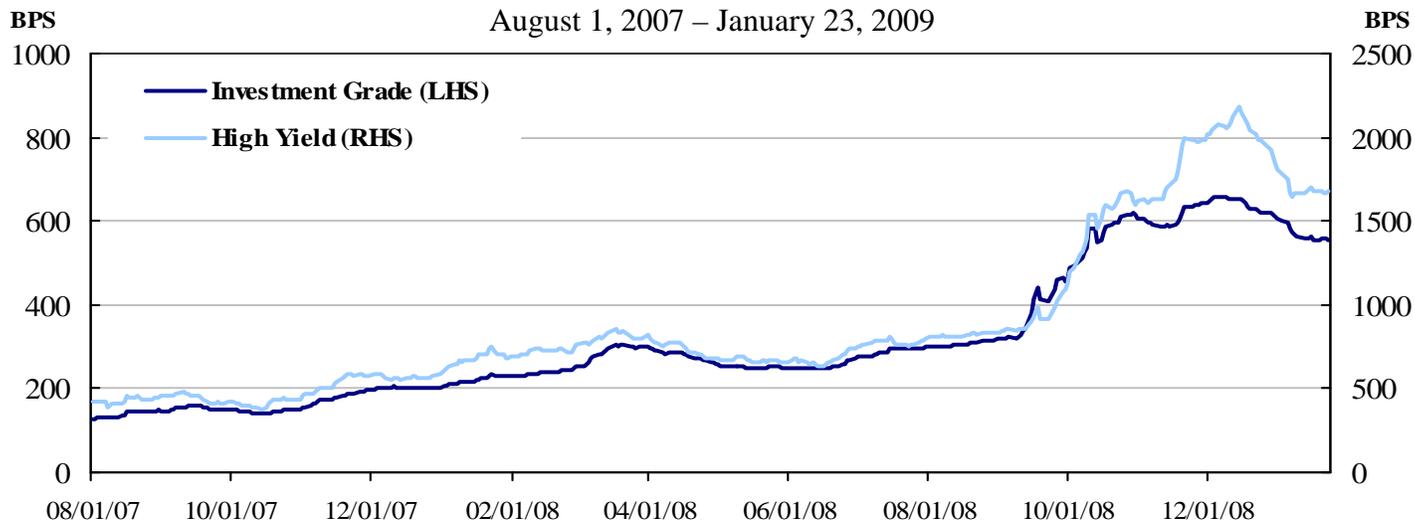
August 1, 2008 – January 23, 2009



Source: Bloomberg, Lehman Brothers/Barclays

**(4) Corporate Debt Cash Spreads Narrow Recently**

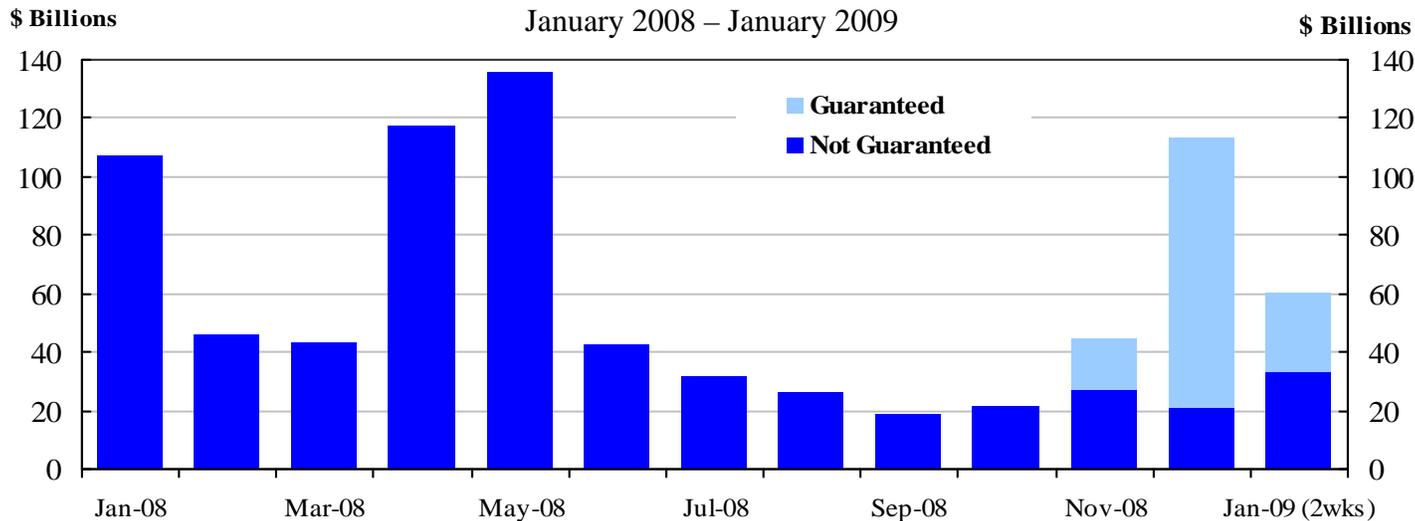
August 1, 2007 – January 23, 2009



Source: Merrill Lynch/Bank of America

**(5) Monthly Investment Grade Bond Issuance**

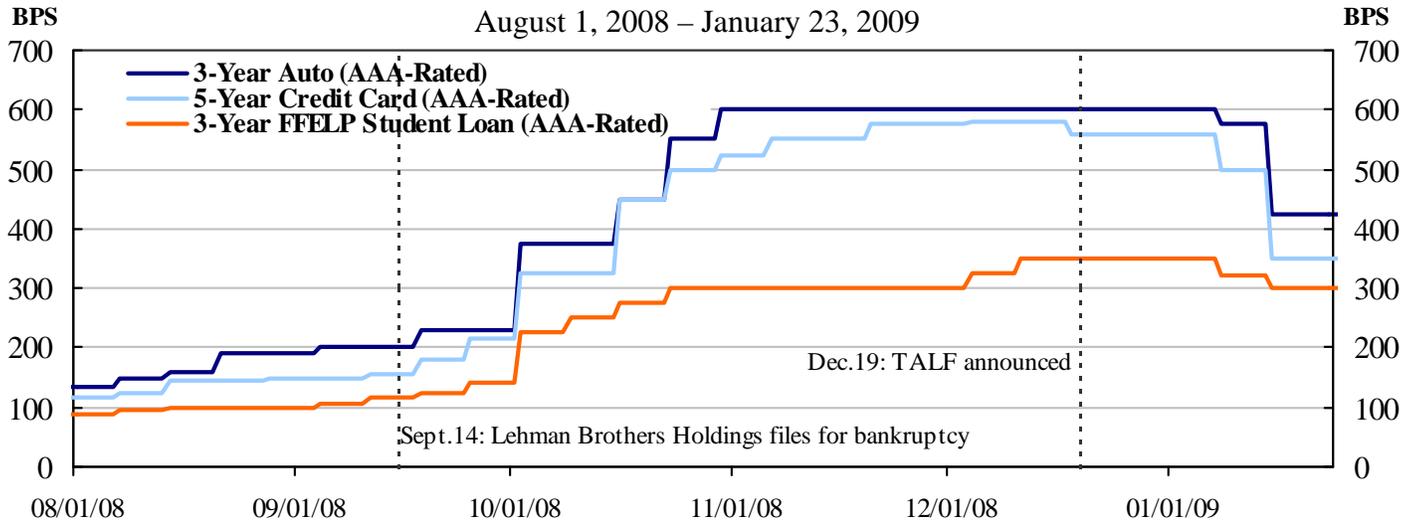
January 2008 – January 2009



Source: JPMorgan Chase

**(6) Asset-Backed Security Spreads Narrow After Year End**

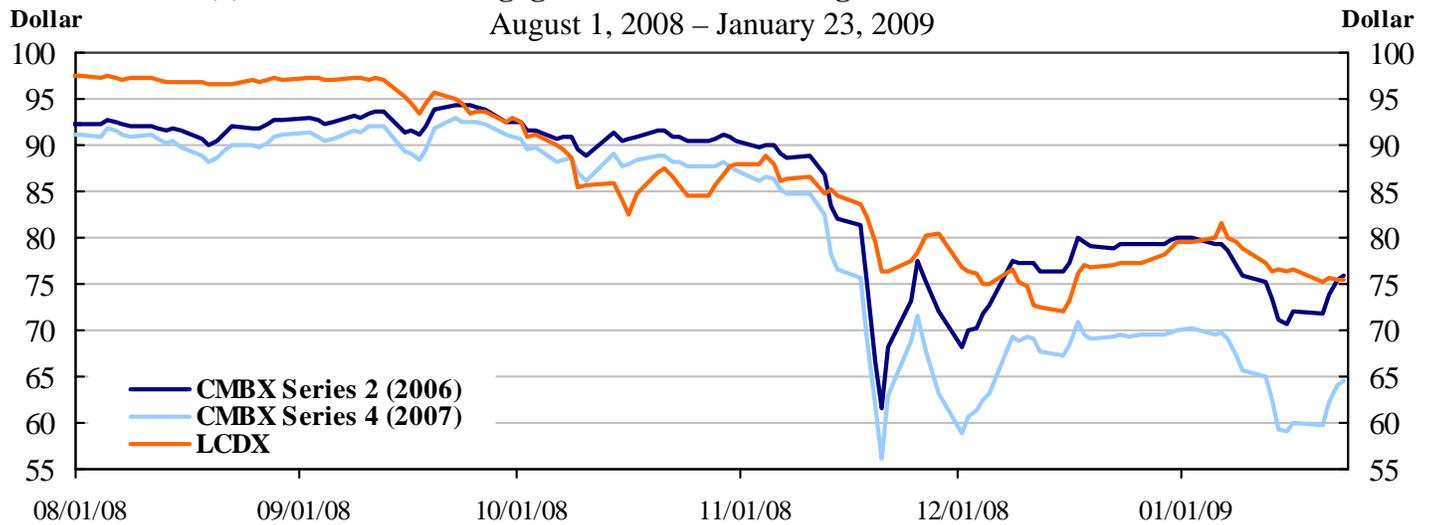
August 1, 2008 – January 23, 2009



Source: JPMorgan Chase

**(7) Commercial Mortgage-Backed and Leveraged Loan Prices Deteriorate**

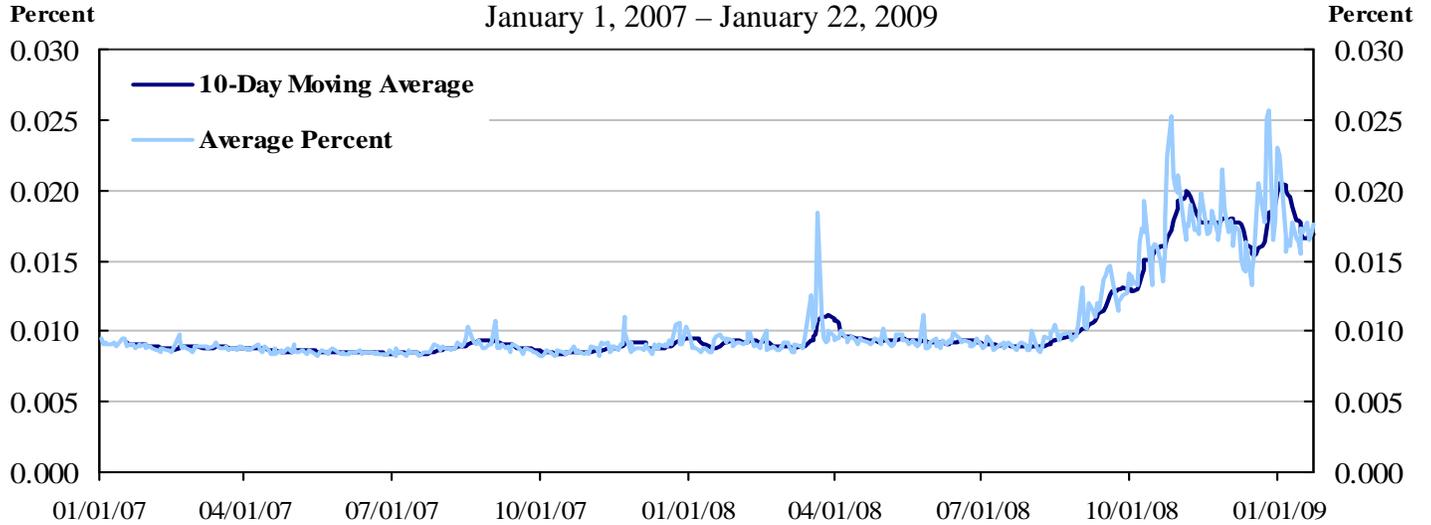
August 1, 2008 – January 23, 2009



Source: Lehman Brothers/Barclays, JPMorgan Chase

**(8) Average Daily Bid-Ask Spread: Euro-Dollar FX Rate**

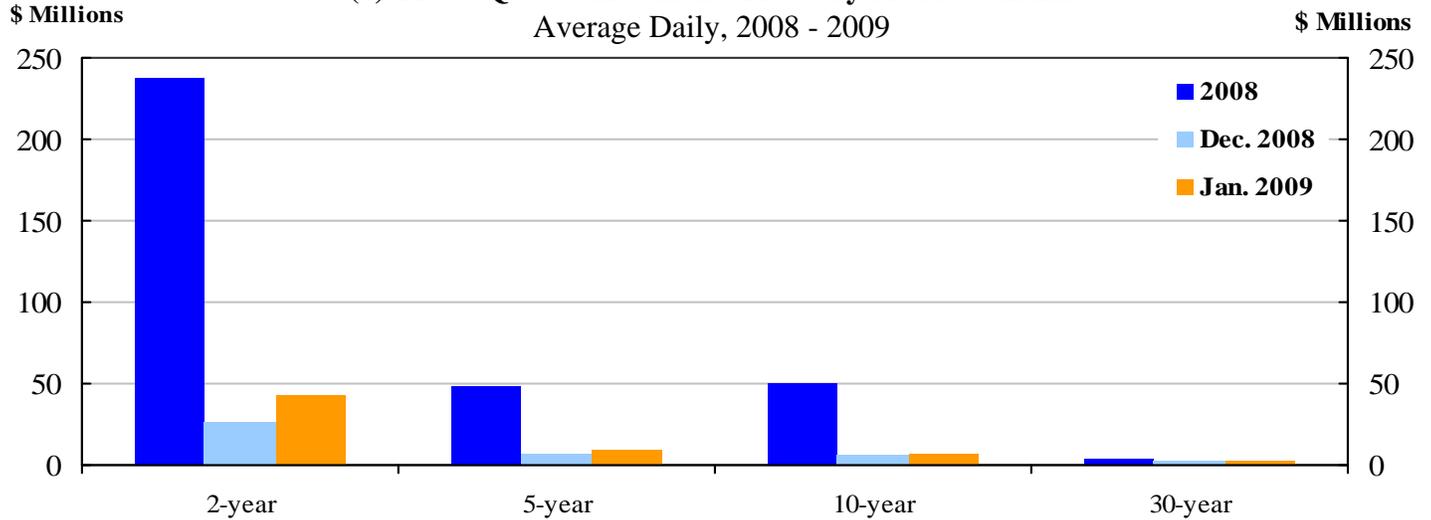
January 1, 2007 – January 22, 2009



Source: ICAP FX

**(9) Trade Quote Sizes in the Treasury Market Shrink**

Average Daily, 2008 - 2009



Source: Broker Tec

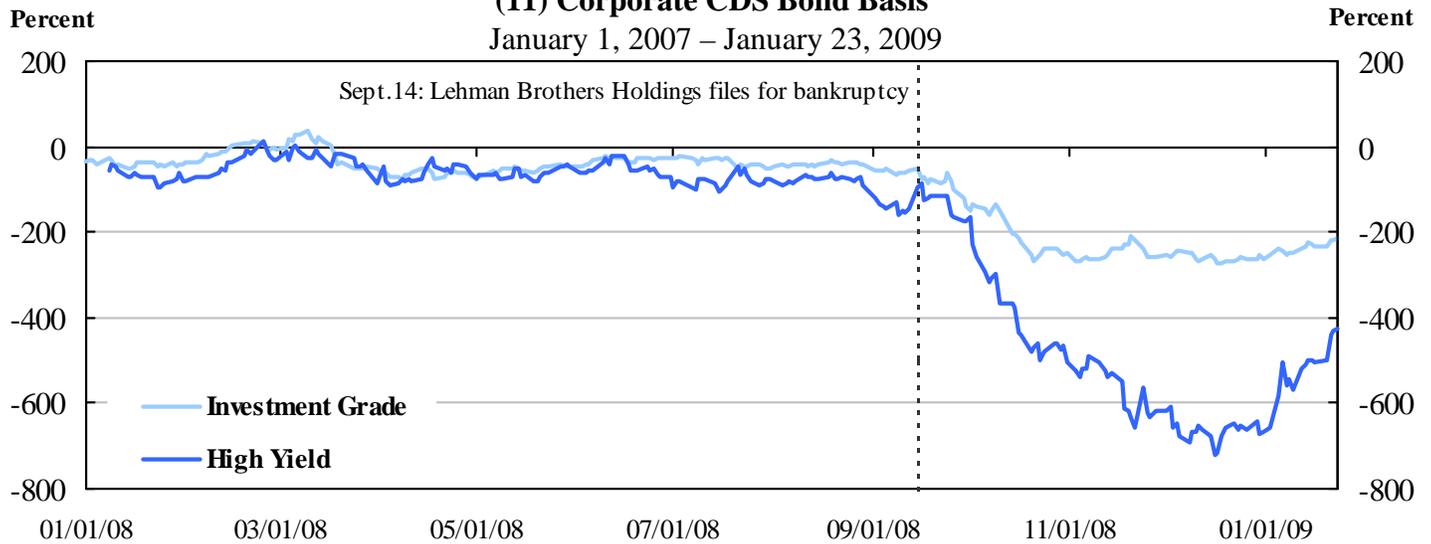
**(10) Average Absolute Price Error between Treasury Yields and FRB Model**



\*Calculated from securities with two to ten years until maturity, excluding on-the-run and first off-the-run securities.

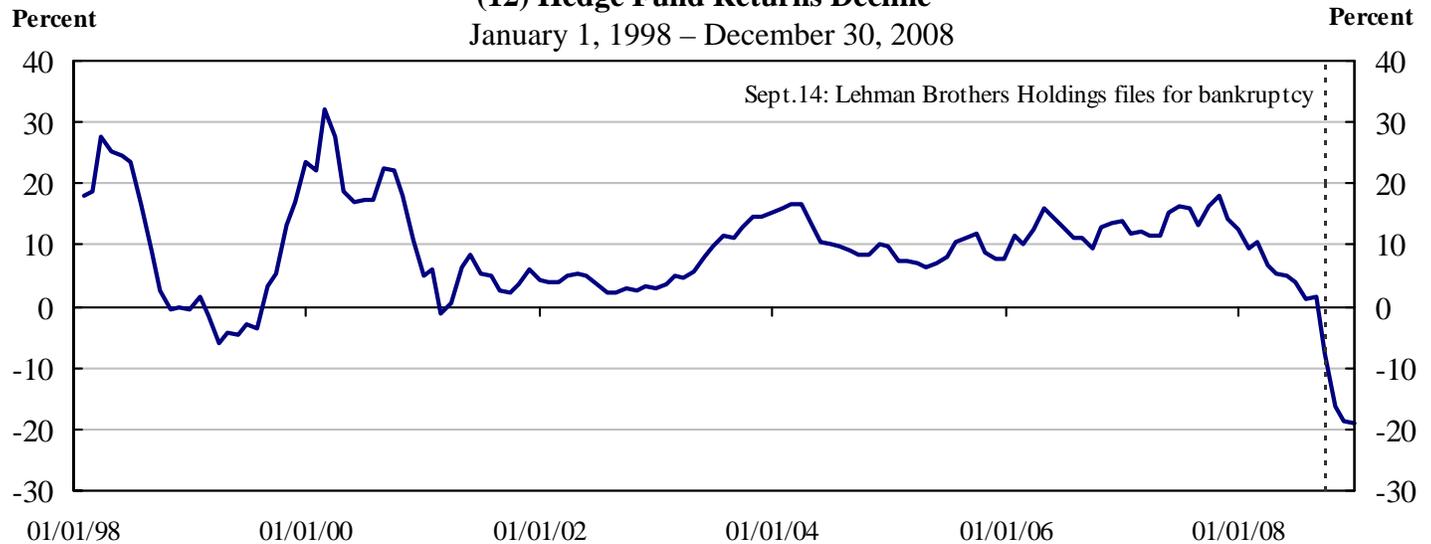
Source: Federal Reserve Board

**(11) Corporate CDS Bond Basis**



Source: JPMorgan Chase

**(12) Hedge Fund Returns Decline\***



Source: CS/Tremont, Bloomberg, Lehman Brothers/Barclays

\*12-Month rolling returns

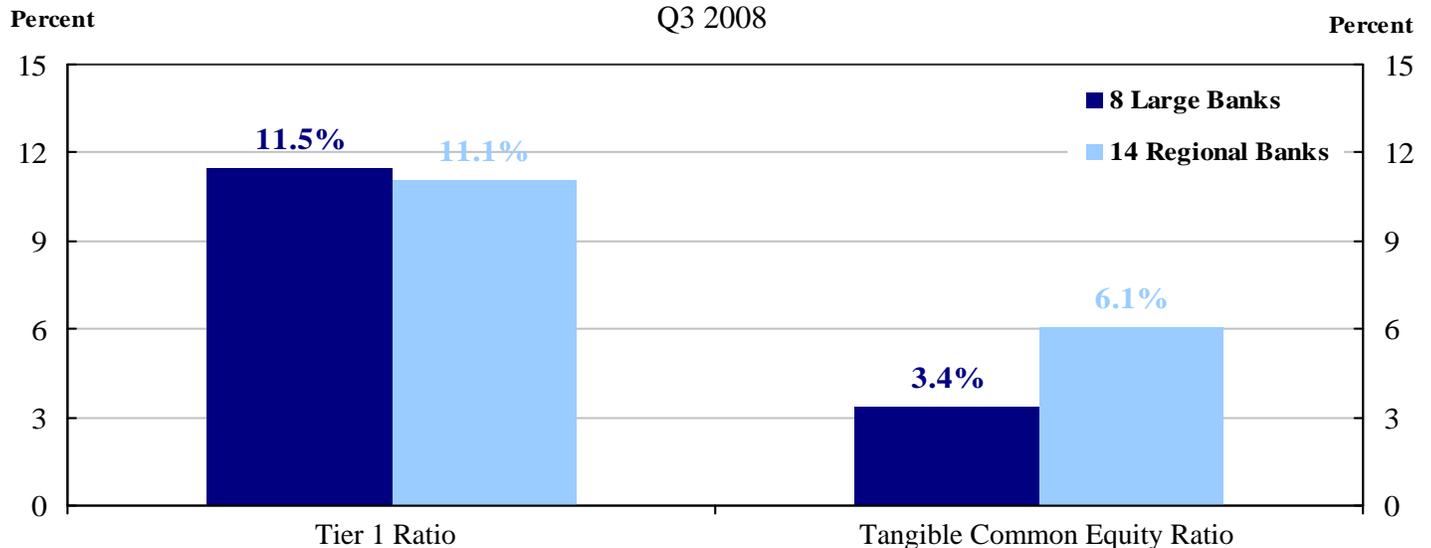
**(13) Bank Earnings Disappoint Expectations**  
Q3 2008 – Q4 2008

	Q4 Earnings		Q3 Capital Ratios	
	Earnings Estimate (\$bln)	Actual Earnings (\$bln)	Tangible Common Equity to Assets	Tier 1 Capital Ratio
<b>U.S. Bank Holding Companies</b>				
JPMorgan Chase	0.4	0.7	3.8	8.9
Citigroup	-5.0	-8.3	1.8	8.2
Bank of America	1.6	-1.8	2.6	7.6
Merrill Lynch	-1.9	-15.3		8.7
Wells Fargo**	1.6		5.4	8.6
State Street	0.0	0.1	2.4	16.0
Bank of New York-Mellon	0.7	0.1	2.1	9.3
Goldman Sachs	-1.7	-2.1		11.6
Morgan Stanley	0.5	-2.3		12.7
<b>Foreign Banks (in local currency)</b>				
UBS	-3.1		1.6	10.8
Credit Suisse	-3.0		2.0	10.4
Deutsche Bank	-4.4	-4.8	1.2	7.6
HSBC	4.2		3.4	8.2
Barclays*	1.1		1.0	7.9
RBS*	-4.2		2.7	
BNP Paribas	0.7		2.1	
Societe Generale	0.6		2.7	8.2

Source: Bloomberg

\*U.K. banks report semi-annually  
\*\*Expected to report Q4 earning on 1/28/09

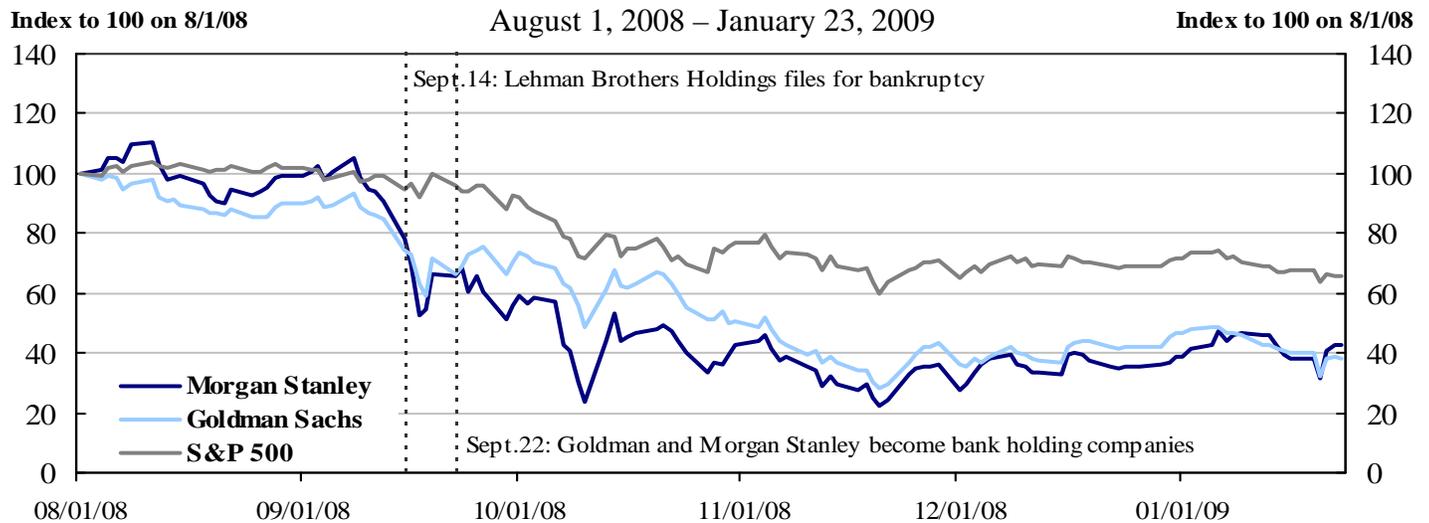
**(14) Bank Capital Ratios**  
Q3 2008



Source: Goldman Sachs

### (15) Former Investment Bank Equity Prices

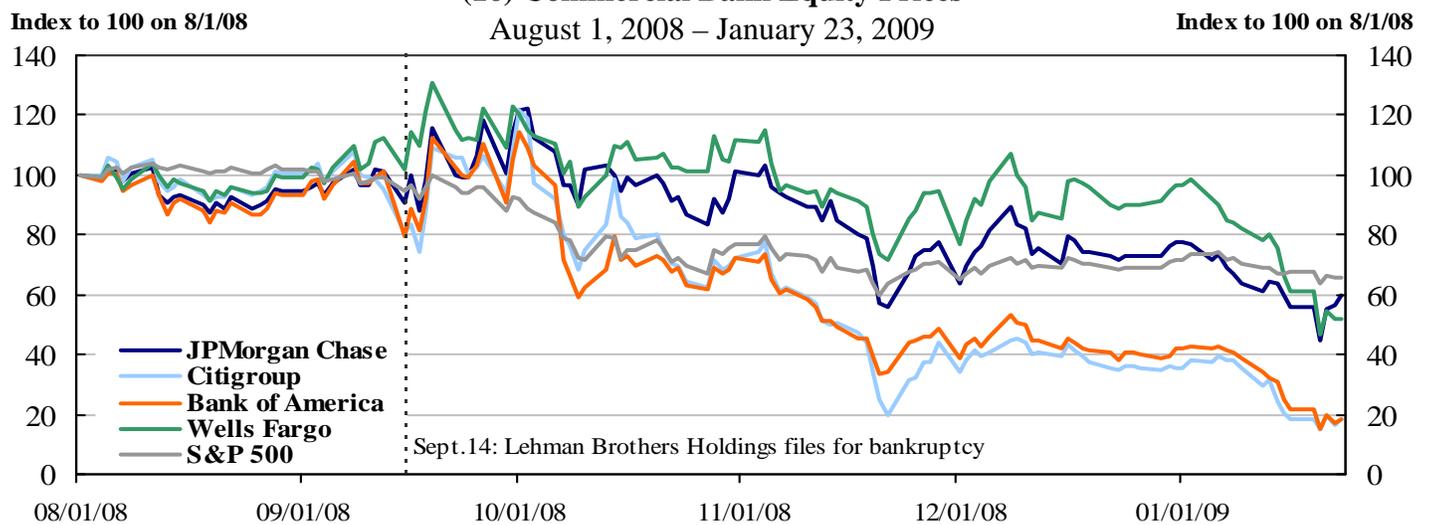
August 1, 2008 – January 23, 2009



Source: Bloomberg

### (16) Commercial Bank Equity Prices

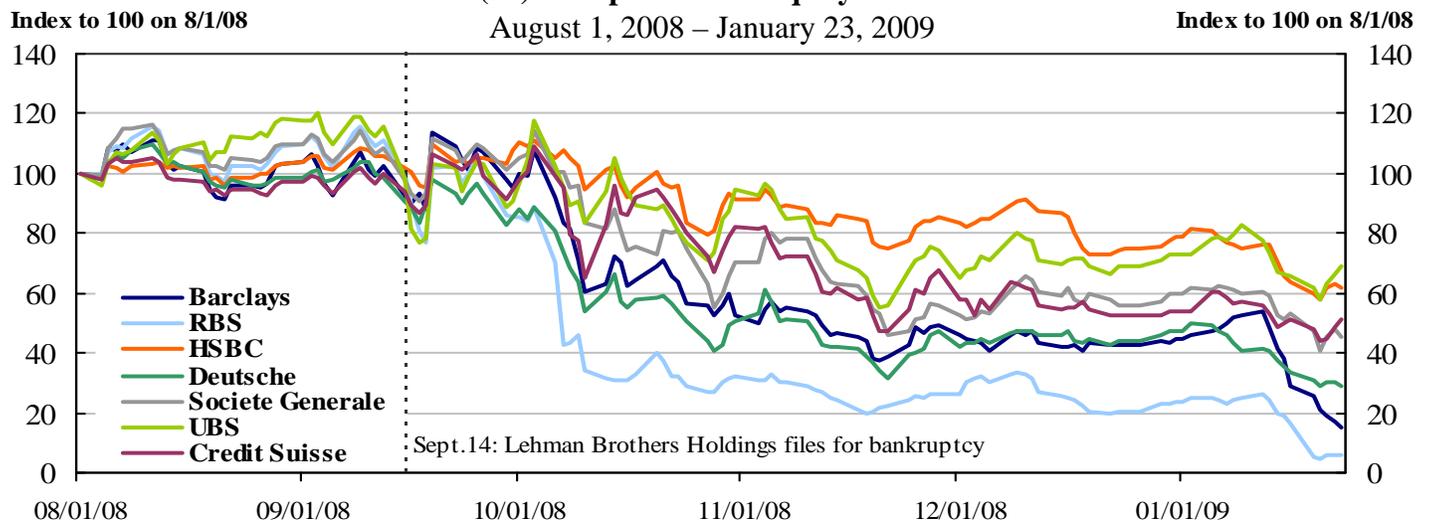
August 1, 2008 – January 23, 2009



Source: Bloomberg

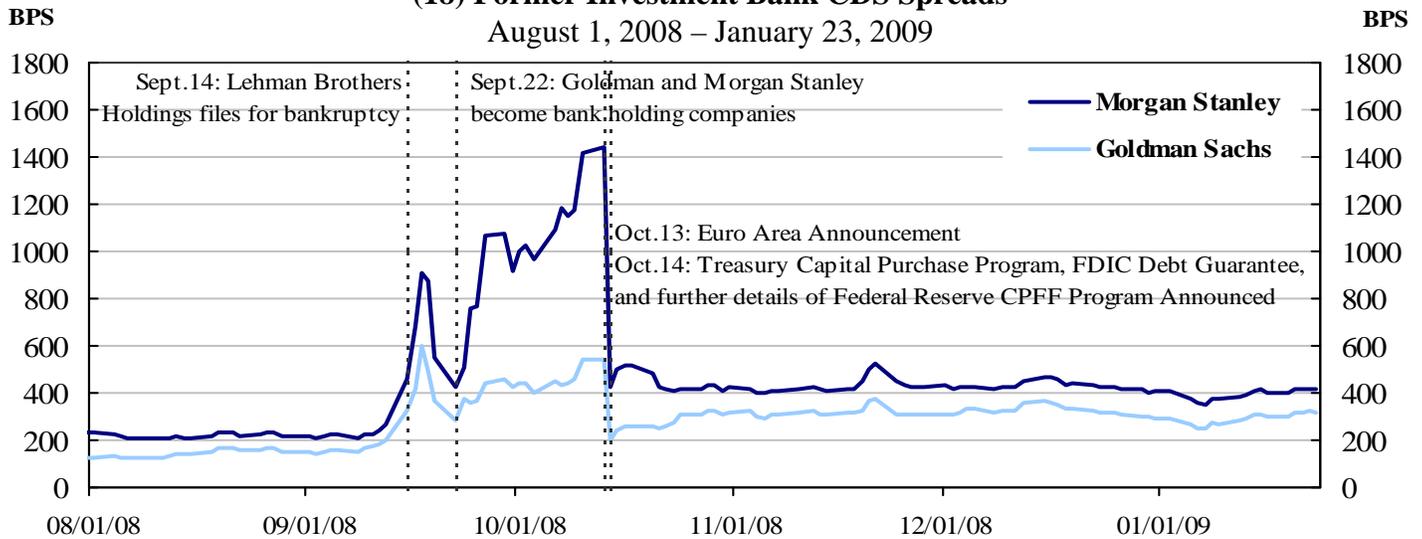
### (17) European Bank Equity Prices

August 1, 2008 – January 23, 2009



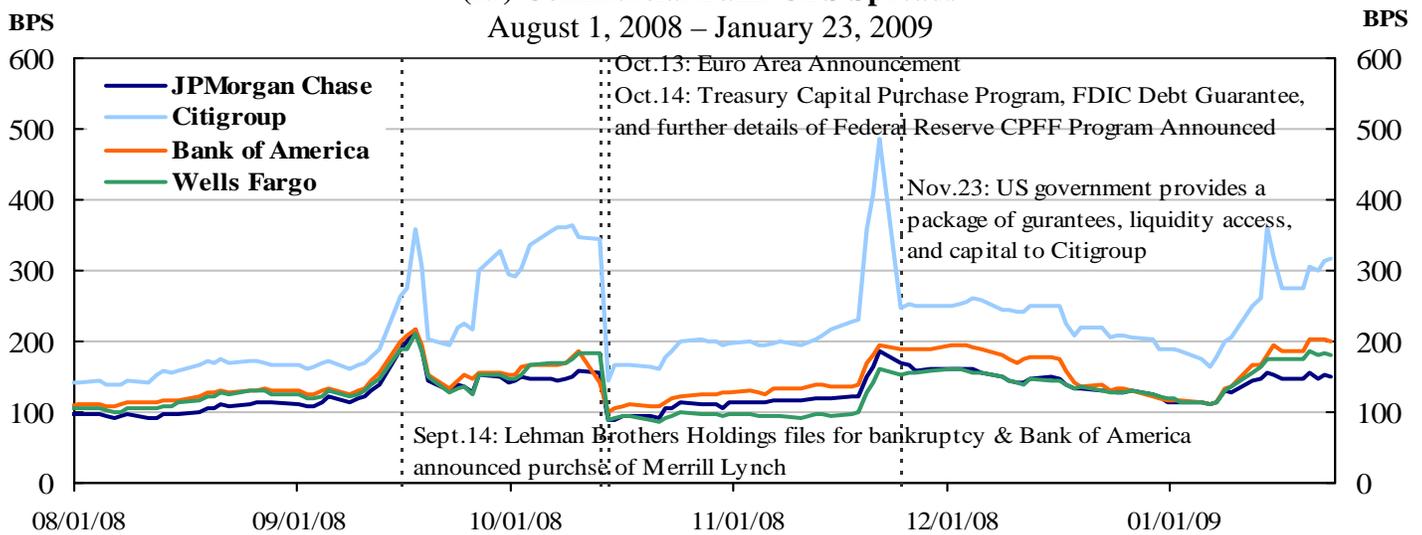
Source: Bloomberg

**(18) Former Investment Bank CDS Spreads**  
August 1, 2008 - January 23, 2009



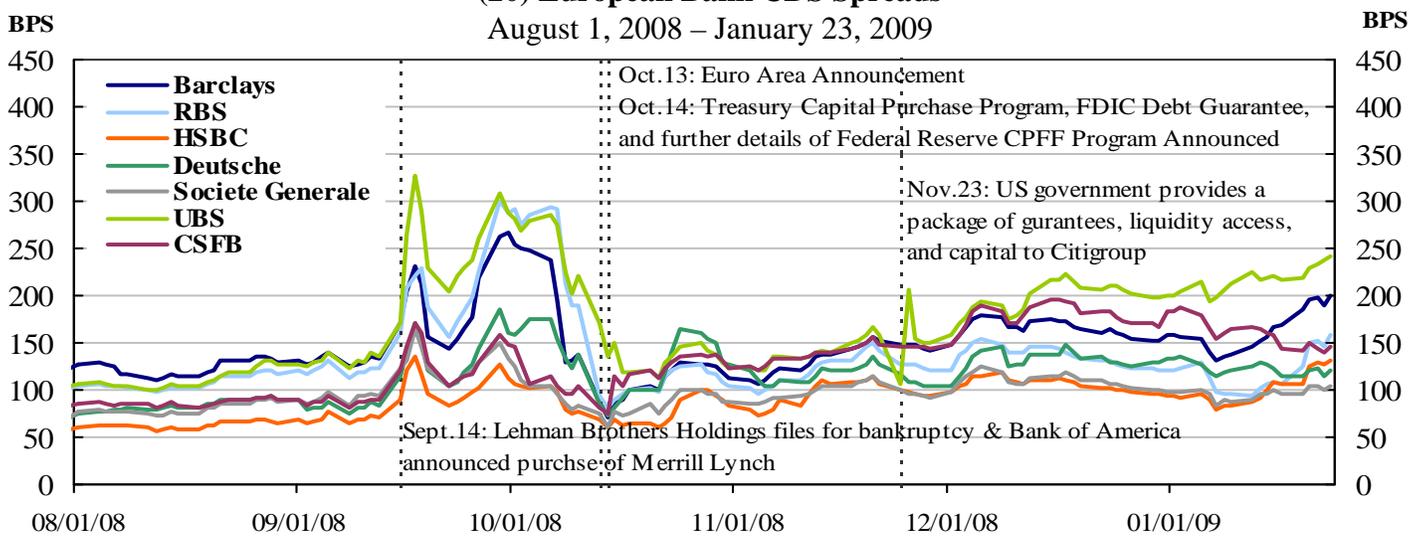
Source: Markit

**(19) Commercial Bank CDS Spreads**  
August 1, 2008 - January 23, 2009

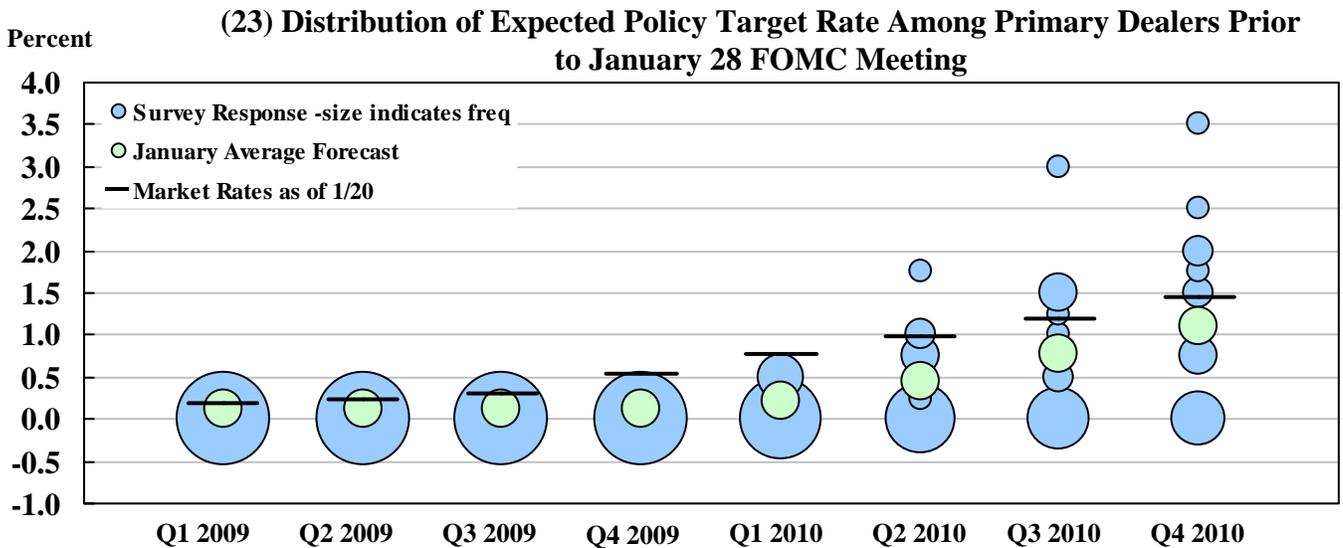
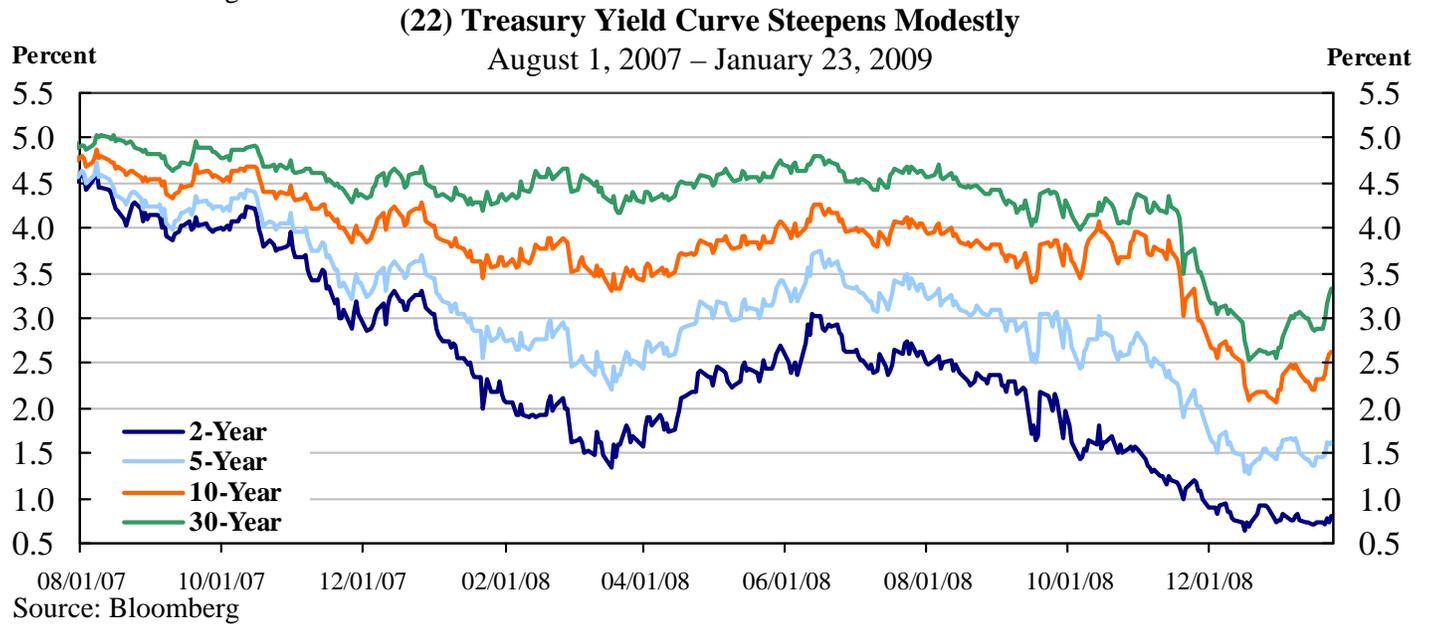
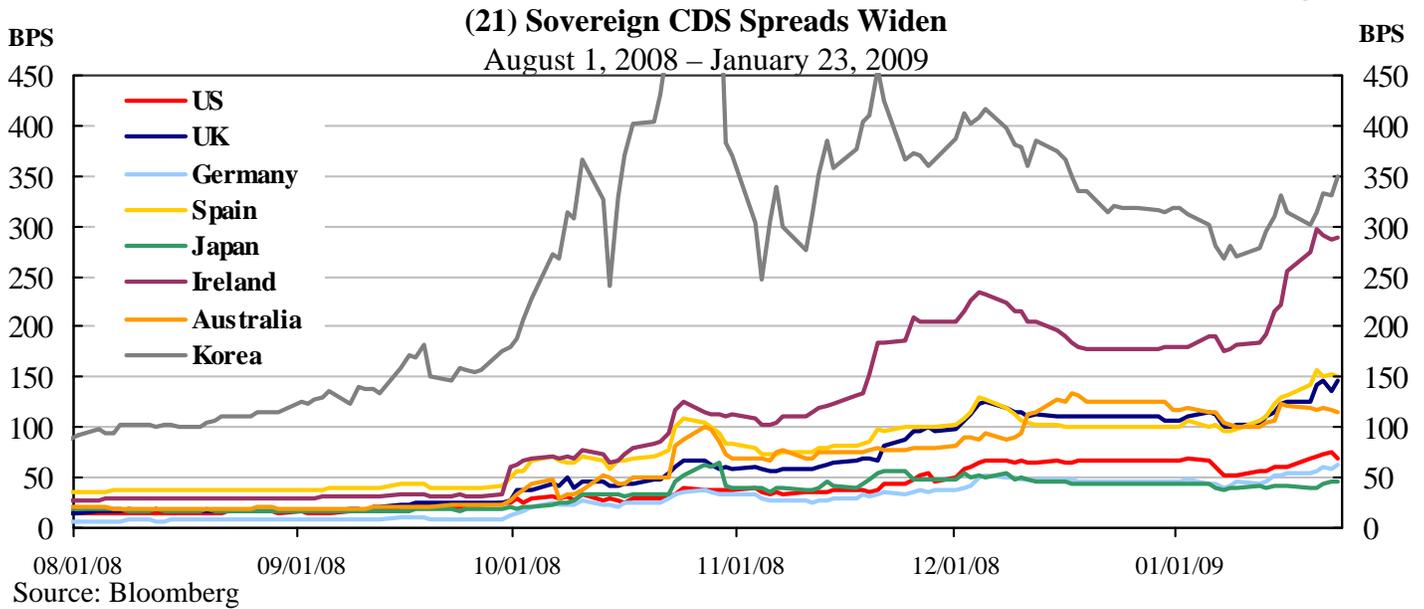


Source: Markit

**(20) European Bank CDS Spreads**  
August 1, 2008 - January 23, 2009

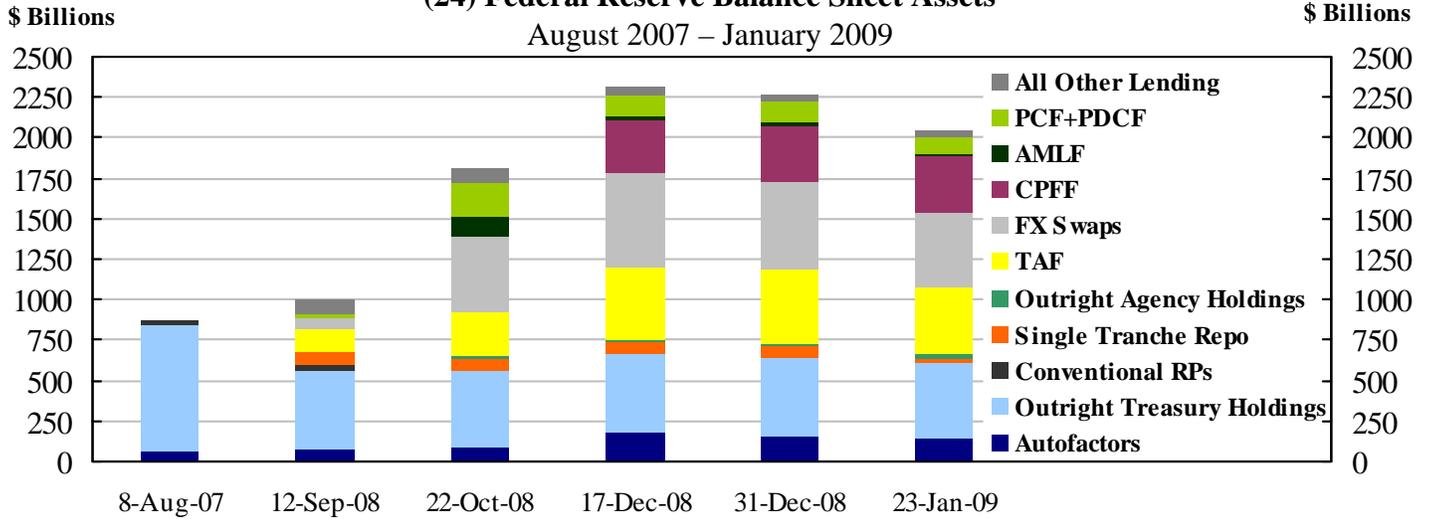


Source: Bloomberg



**(24) Federal Reserve Balance Sheet Assets**

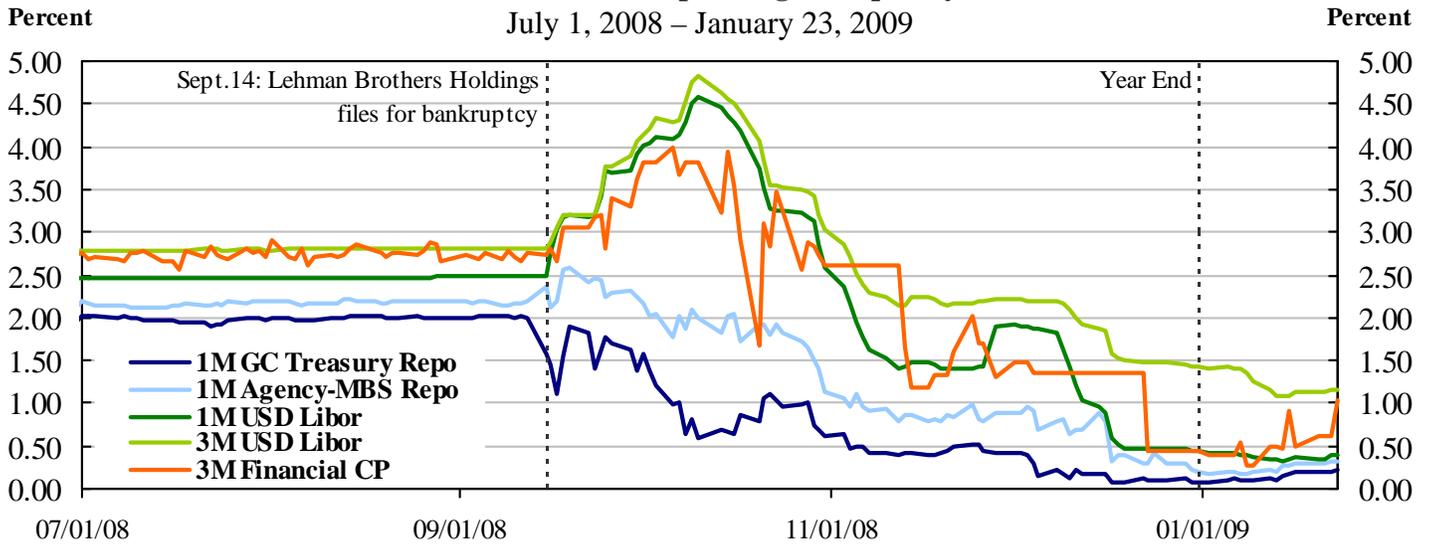
August 2007 – January 2009



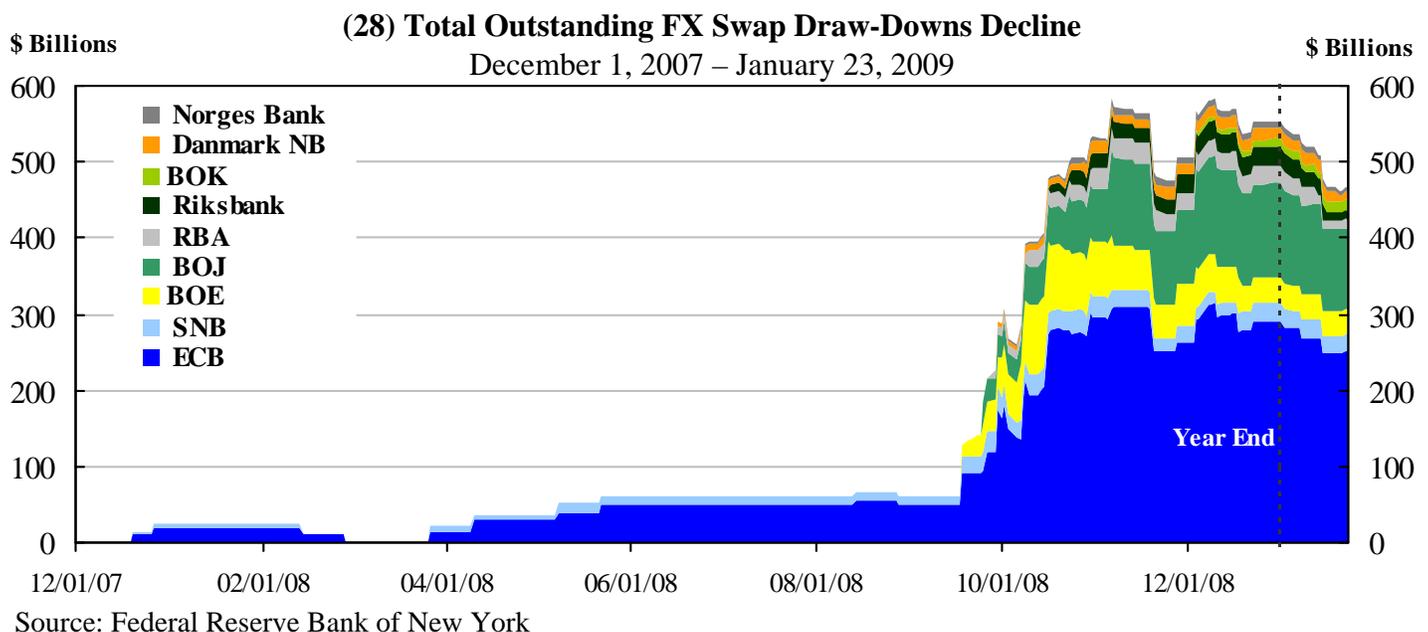
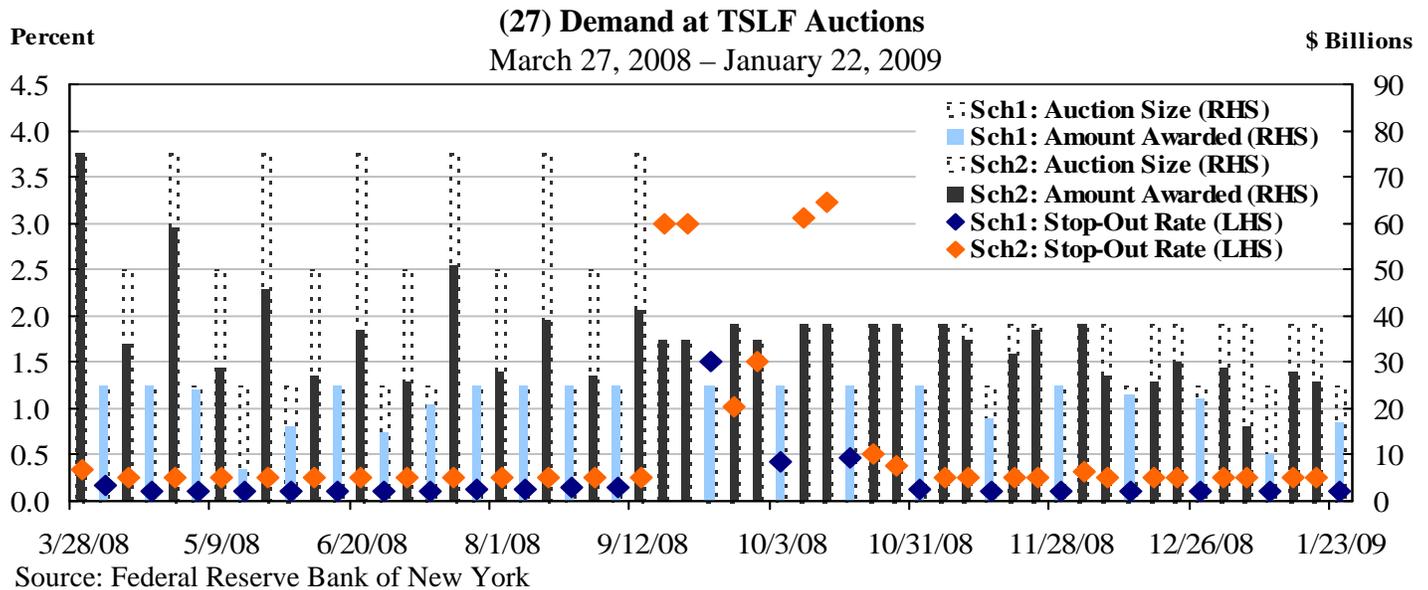
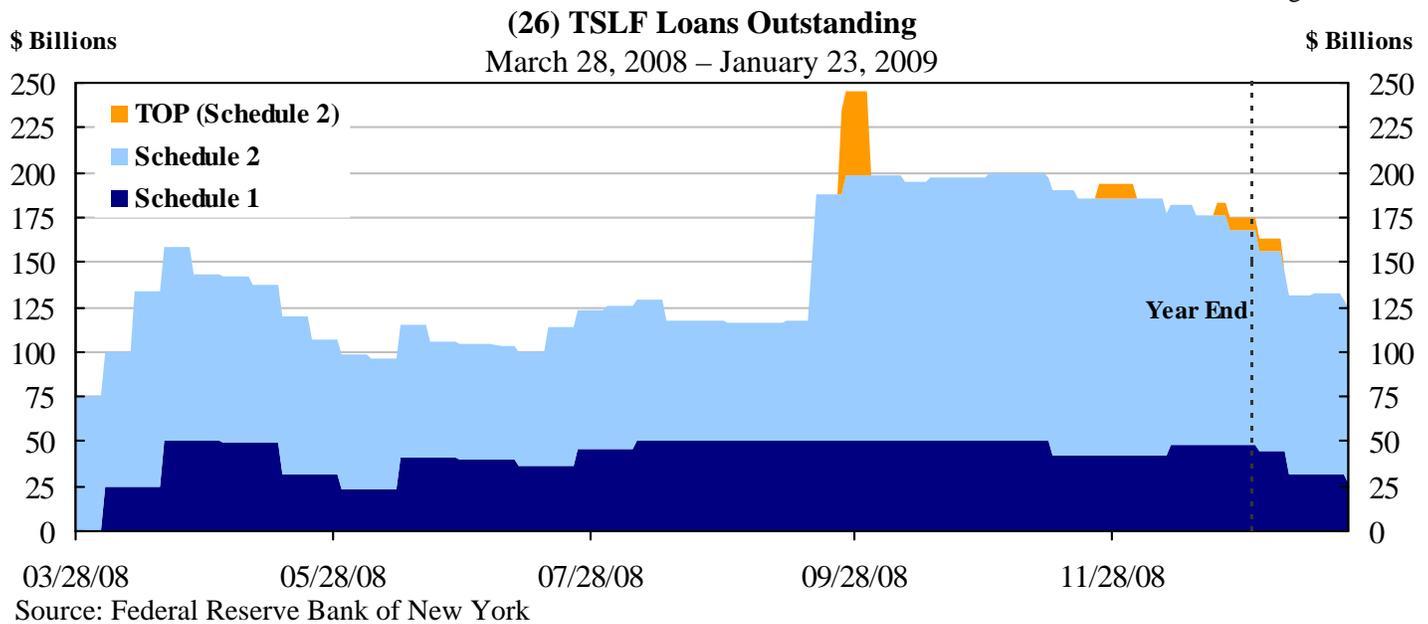
Source: Federal Reserve Bank of New York

**(25) Market Rates Corresponding to Liquidity Facilities**

July 1, 2008 – January 23, 2009

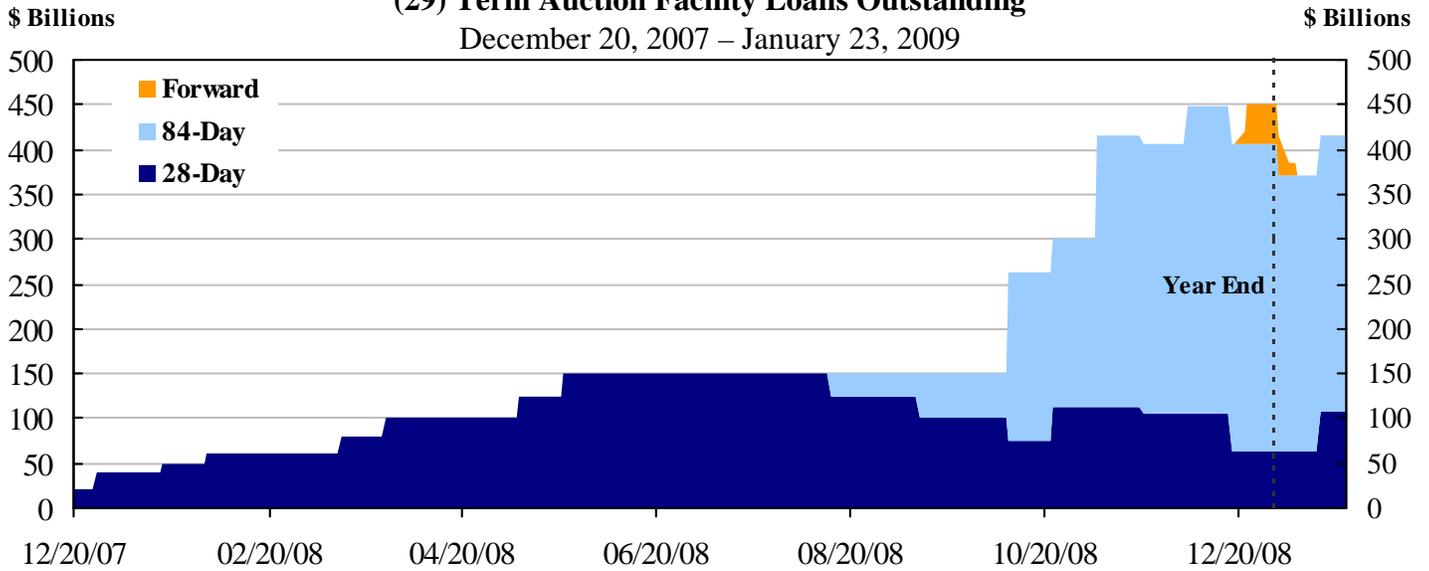


Source: Federal Reserve Bank of New York



**(29) Term Auction Facility Loans Outstanding**

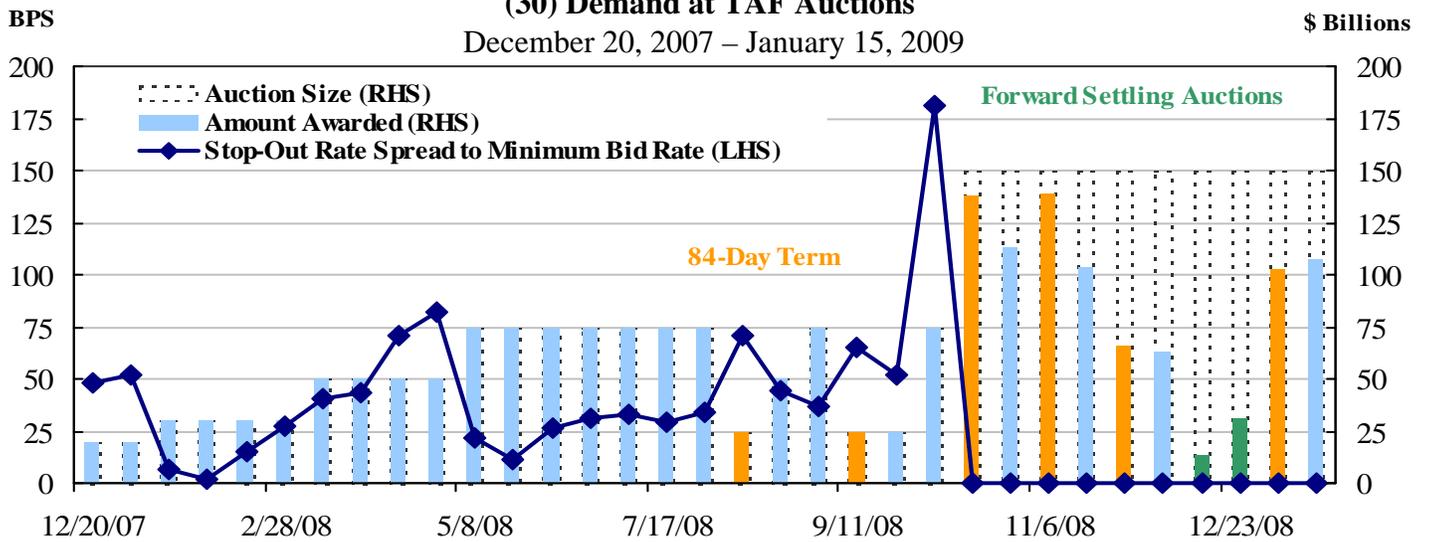
December 20, 2007 – January 23, 2009



Source: Federal Reserve Bank of New York

**(30) Demand at TAF Auctions**

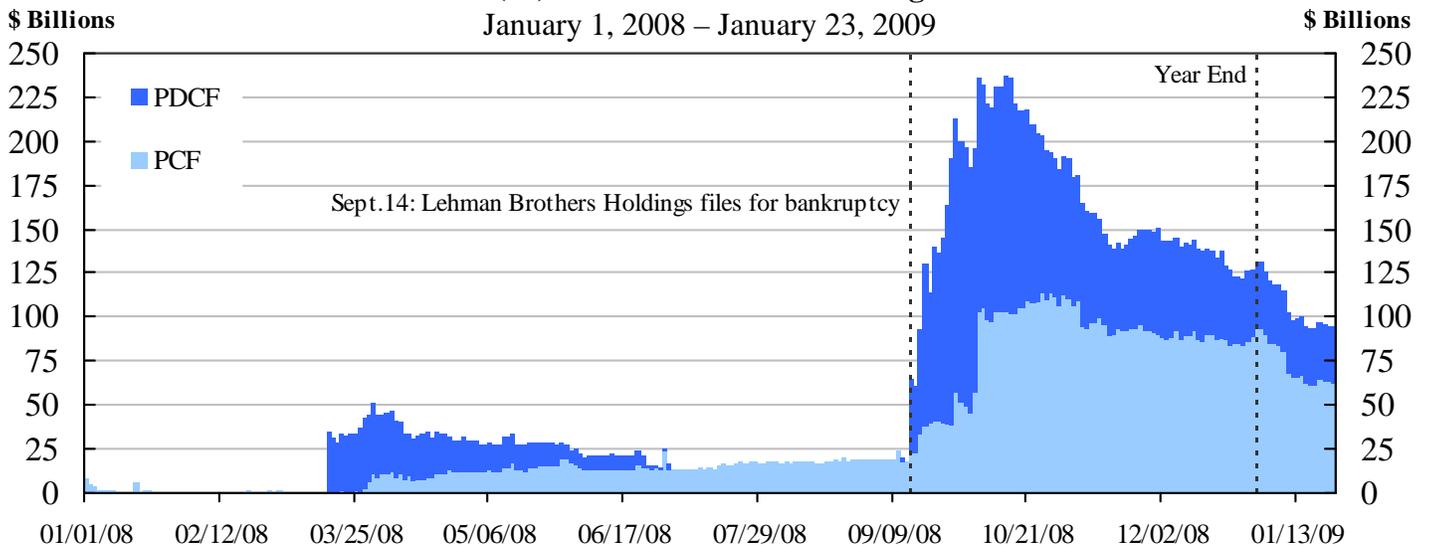
December 20, 2007 – January 15, 2009



Source: Federal Reserve Board

**(31) PCF and PDCF Borrowing**

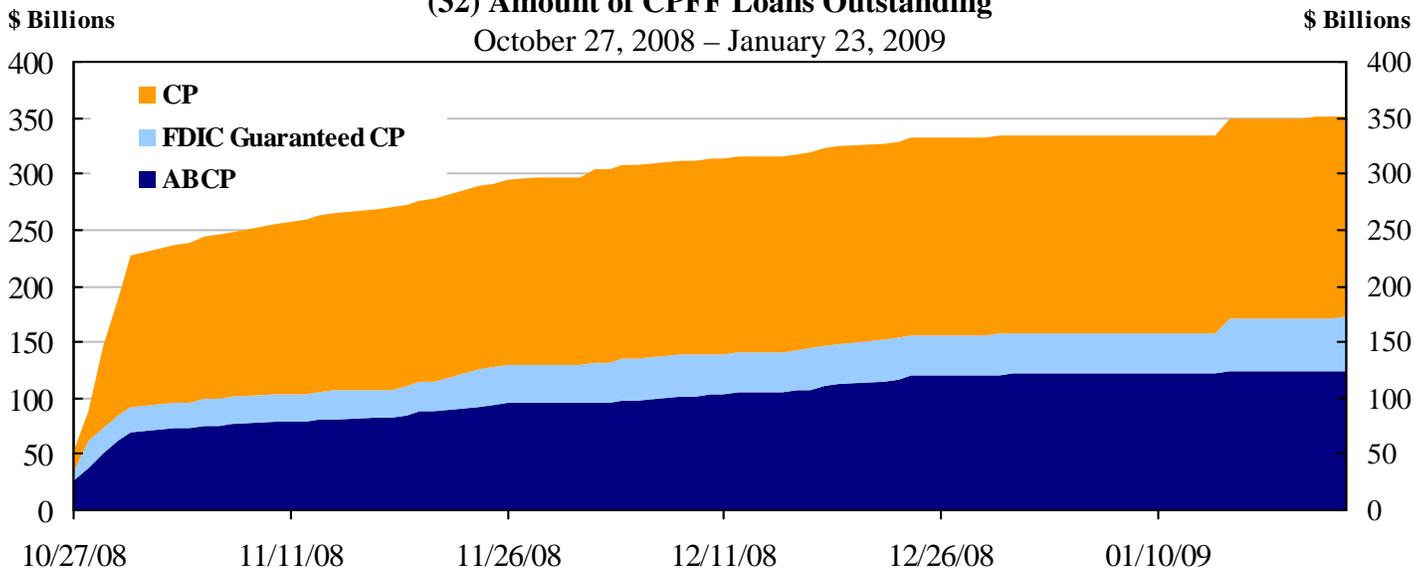
January 1, 2008 – January 23, 2009



Source: Federal Reserve Bank of New York

**(32) Amount of CPFF Loans Outstanding**

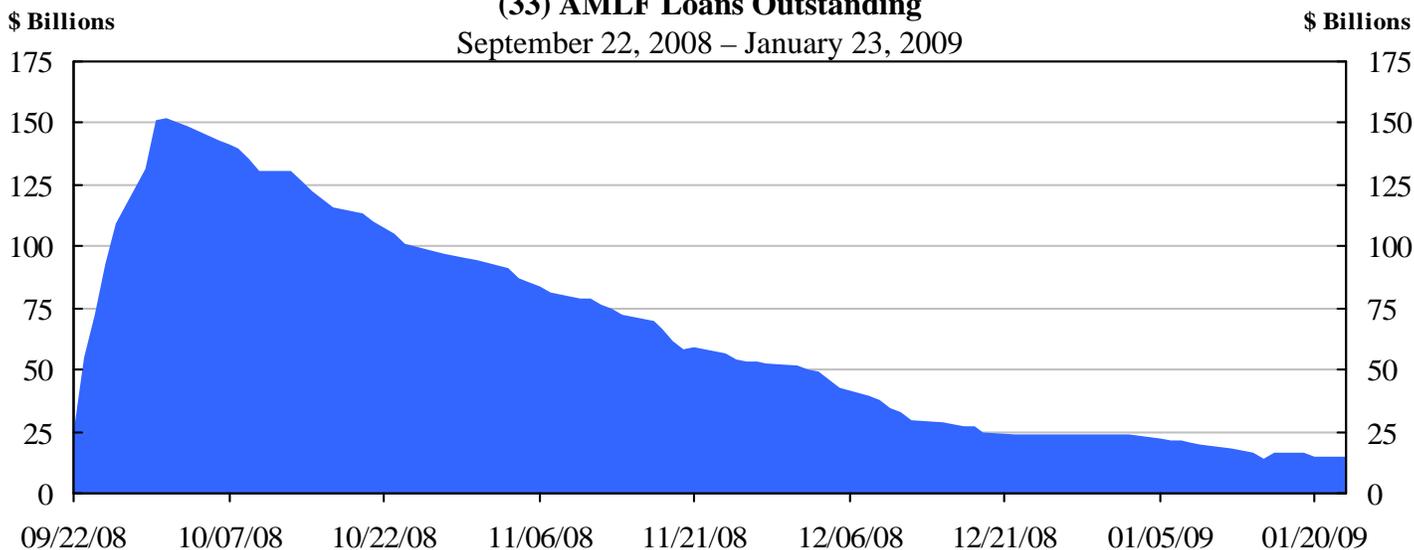
October 27, 2008 – January 23, 2009



Source: Federal Reserve Bank of New York

**(33) AMLF Loans Outstanding**

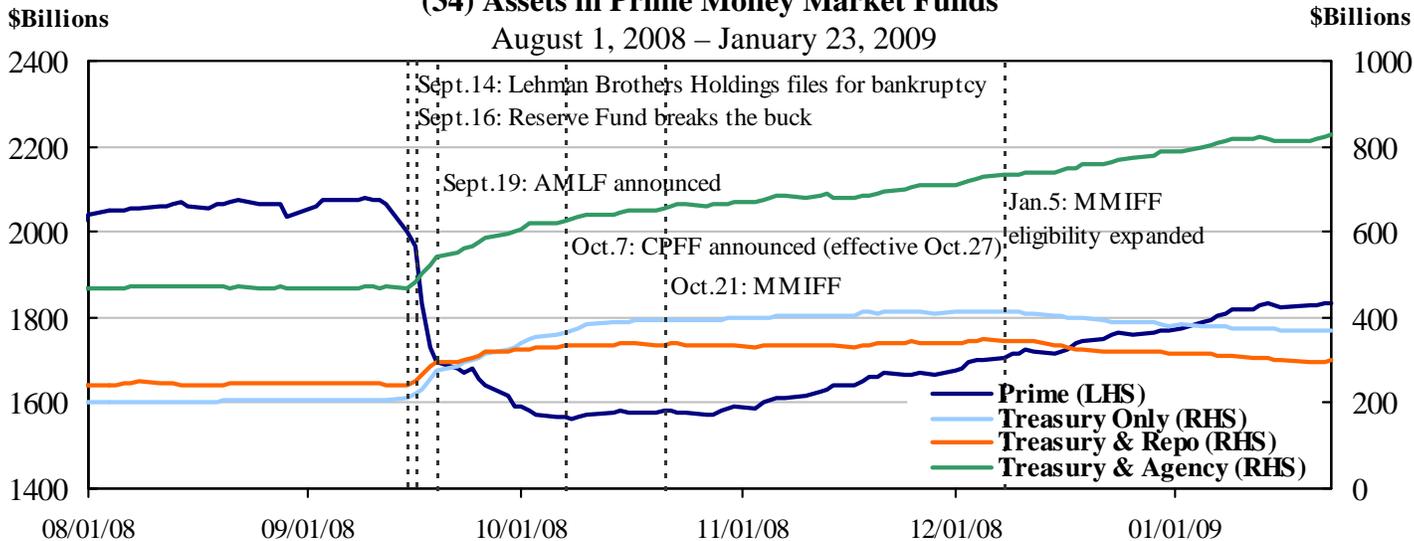
September 22, 2008 – January 23, 2009



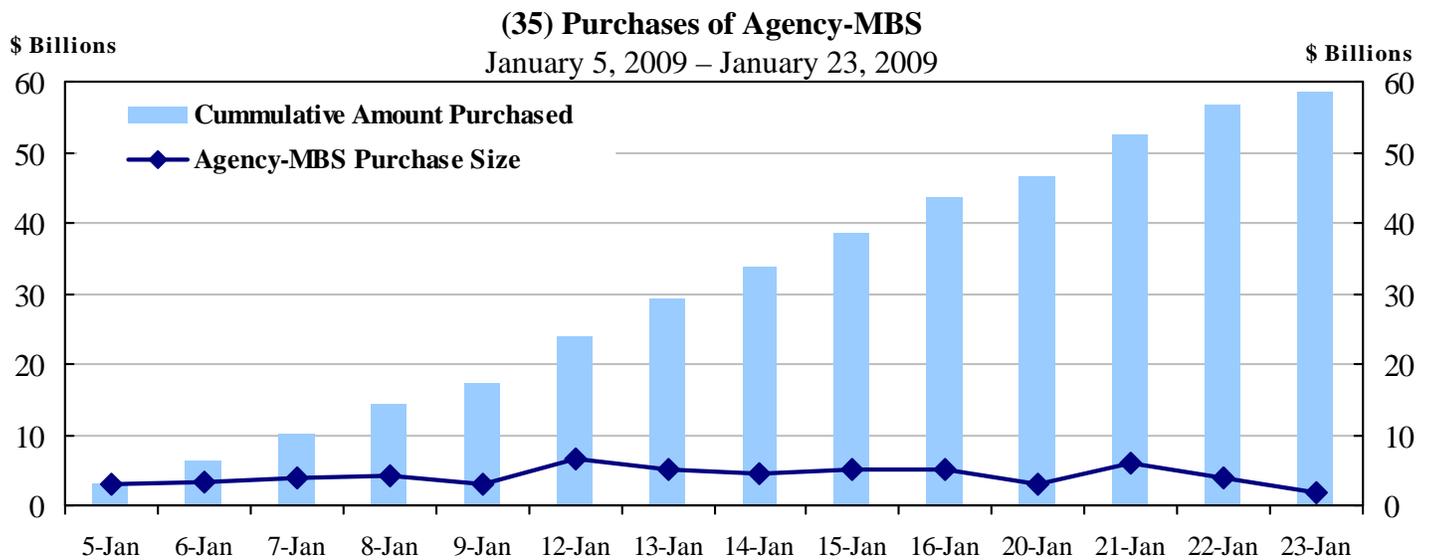
Source: Federal Reserve Bank of New York

**(34) Assets in Prime Money Market Funds**

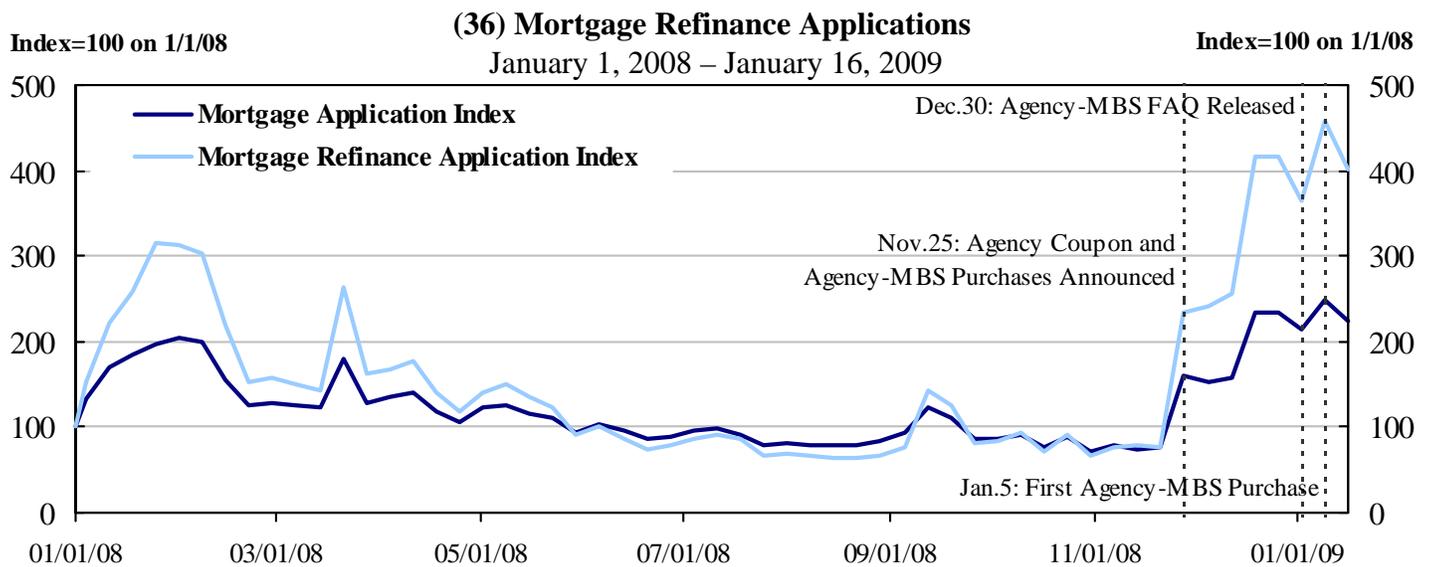
August 1, 2008 – January 23, 2009



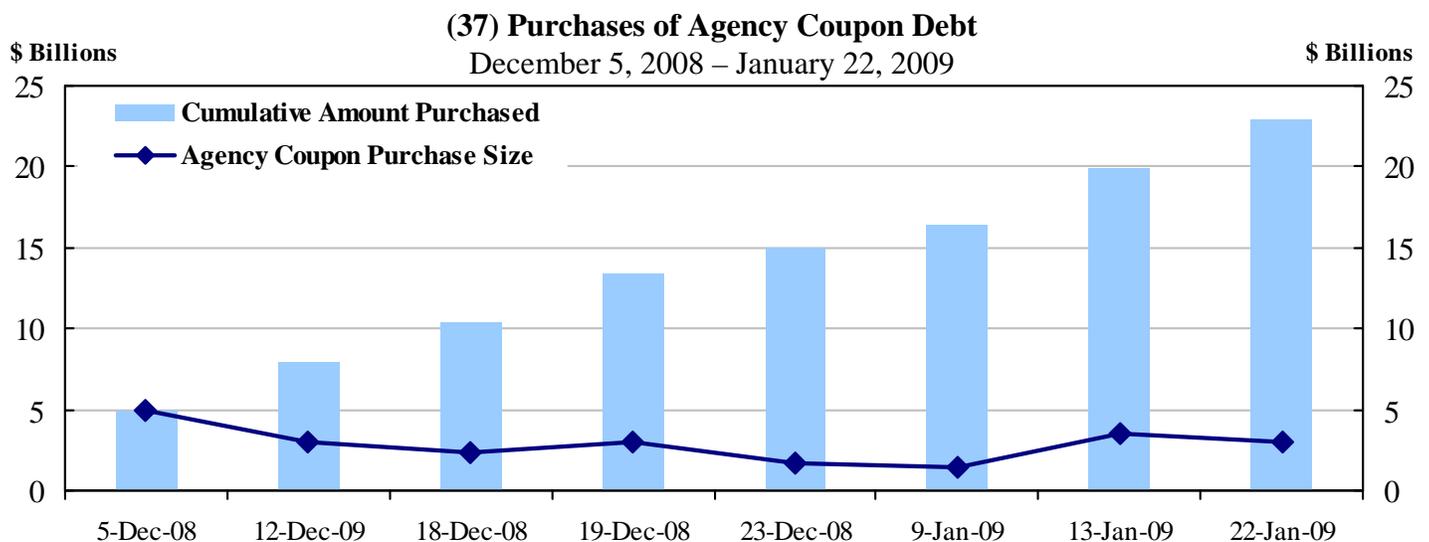
Source: iMoneyNet



Source: Federal Reserve Bank of New York



Source: Bloomberg

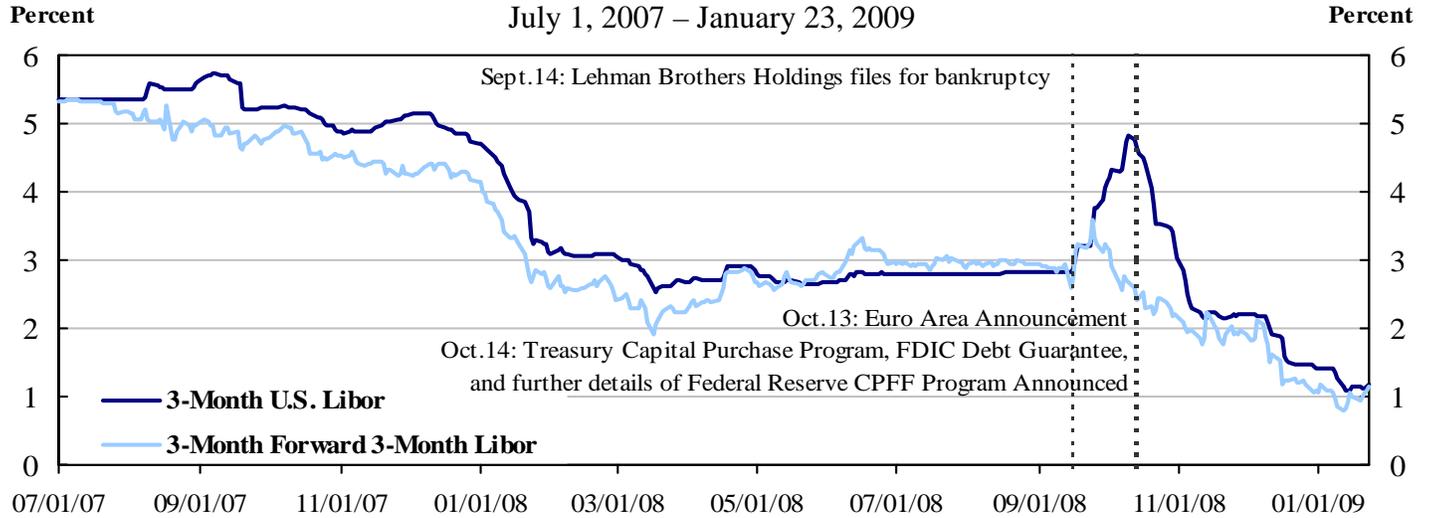


Source: Federal Reserve Bank of New York

**APPENDIX: Reference Exhibits**

**(38) Three-Month Libor and Expectations for Three-Month Libor Decline**

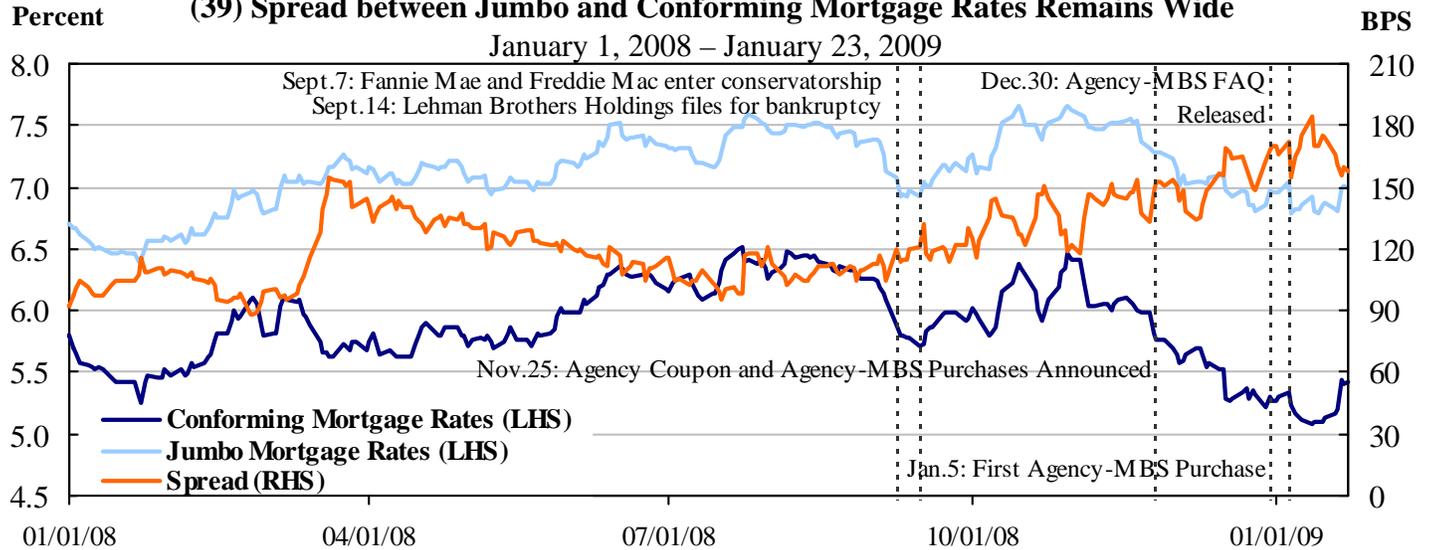
July 1, 2007 – January 23, 2009



Source: Bloomberg

**(39) Spread between Jumbo and Conforming Mortgage Rates Remains Wide**

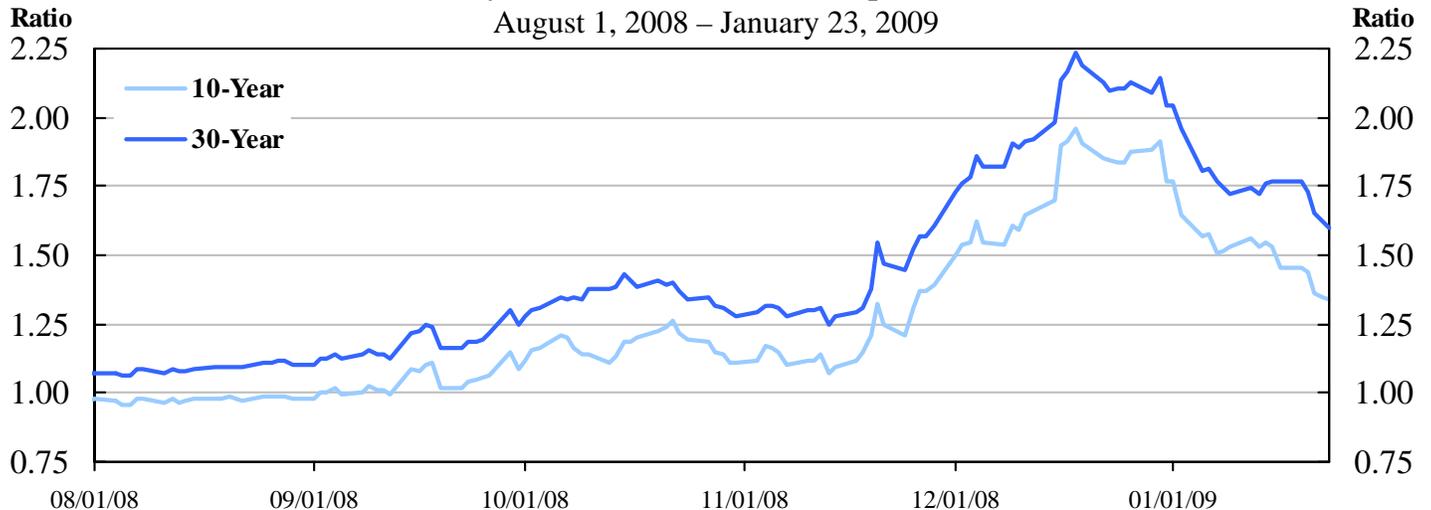
January 1, 2008 – January 23, 2009



Source: Bloomberg

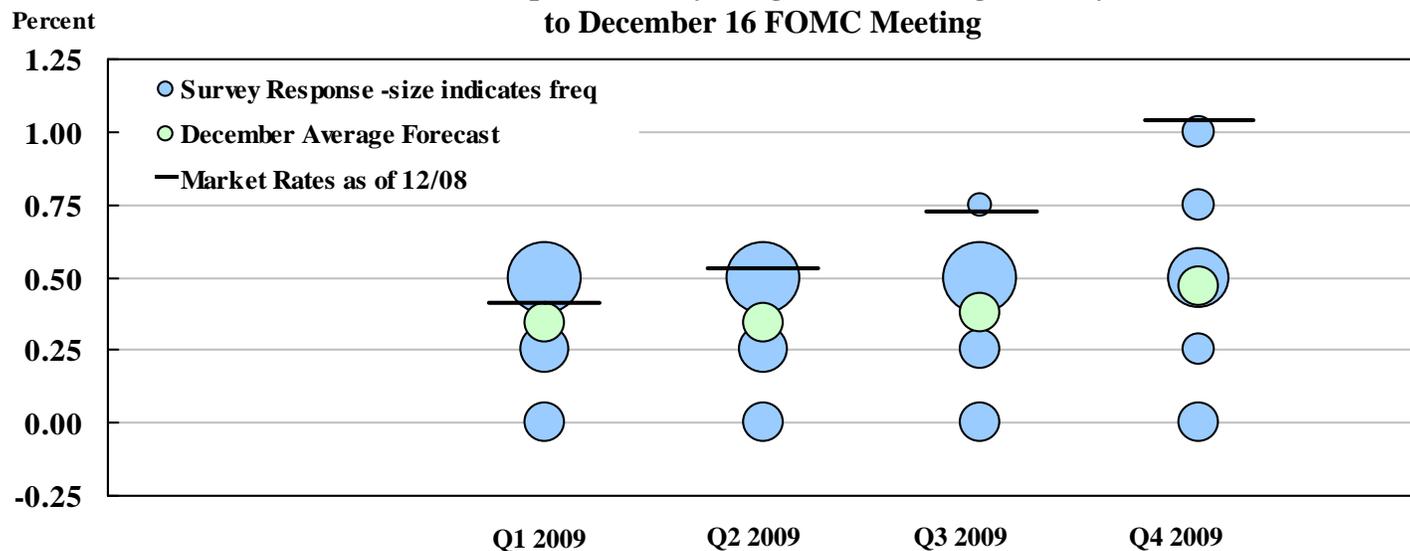
**(40) Ten- and Thirty- Year AAA-Rated Municipal Debt Yields Decline\***

August 1, 2008 – January 23, 2009



Source: Bloomberg

### (41) Distribution of Expected Policy Target Rate Among Primary Dealers Prior to December 16 FOMC Meeting



Source: Dealer Policy Survey

**Appendix 2: Materials used by Mr. Sichel, Ms. Dynan, and Mr. Reeve**

CLASS II FOMC - Restricted (FR)

*Material for*

*Staff Presentation on the  
Economic Outlook*

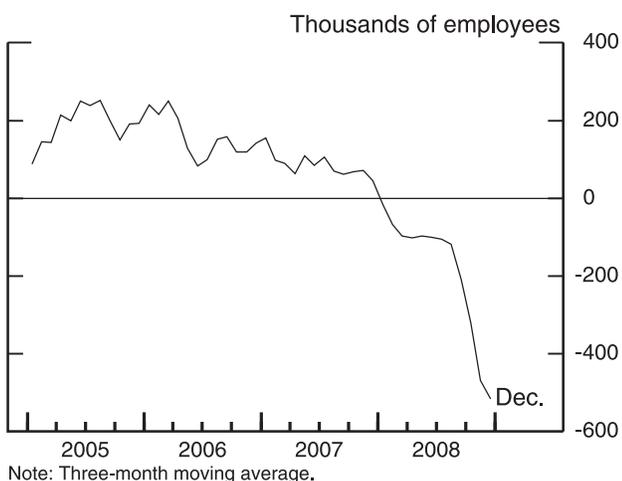
*January 27, 2009*

Class II FOMC - Restricted (FR)

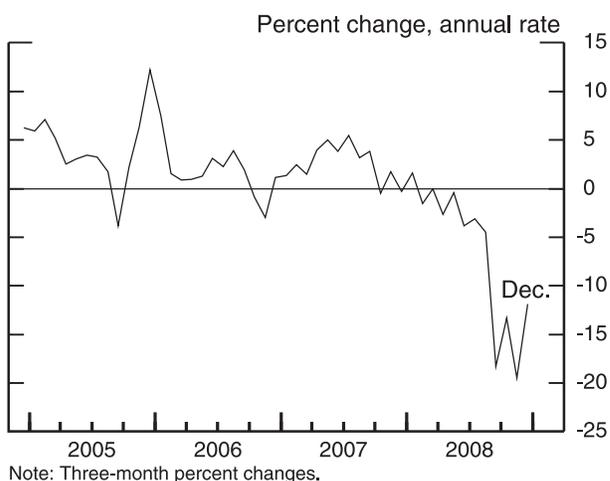
Exhibit 1

### Recent Indicators

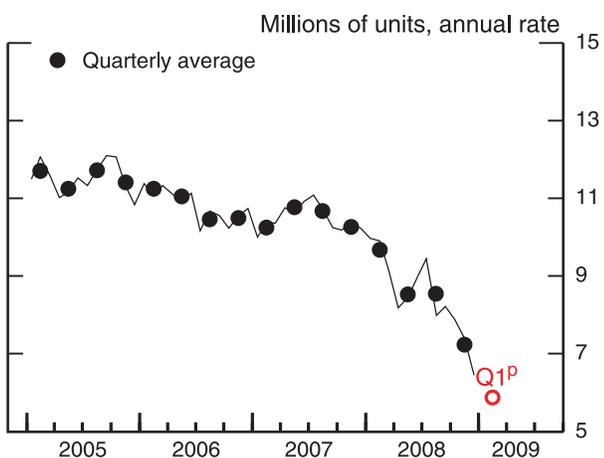
**Change in Private Payroll Employment**



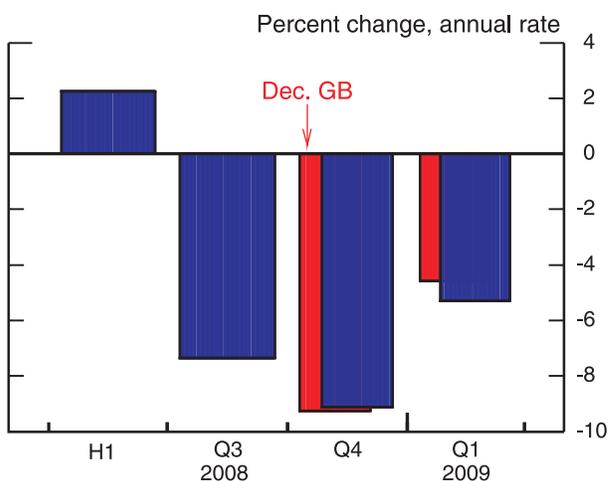
**Manufacturing IP Ex. Motor Vehicles**



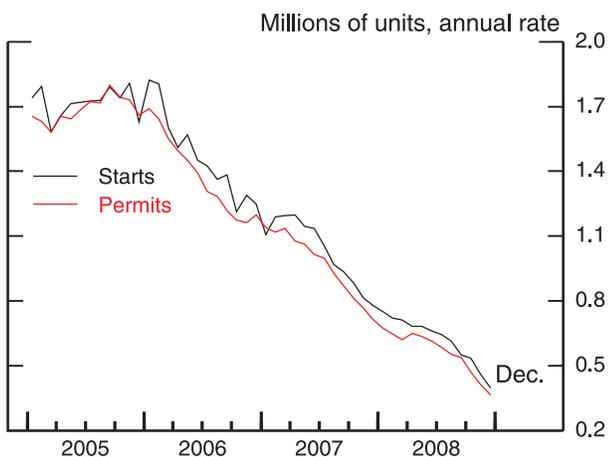
**Light Motor Vehicle Production**



**Real PCE Goods Ex. Motor Vehicles**



**Single-Family Housing Starts**



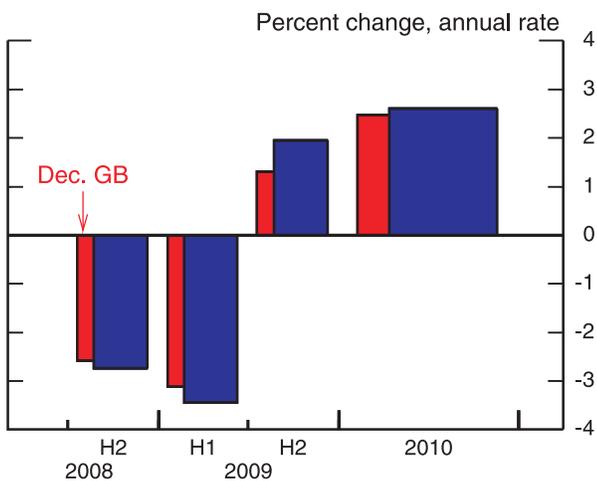
**Real GDP**

(Percent change, annual rate)

	Jan. GB	Dec. GB
2008:Q4	-4.9	-4.7
2009:Q1	-5.6	-5.0
2009:Q2	-1.3	-1.2

## Key Background Factors and Medium-Term Outlook

### Real GDP



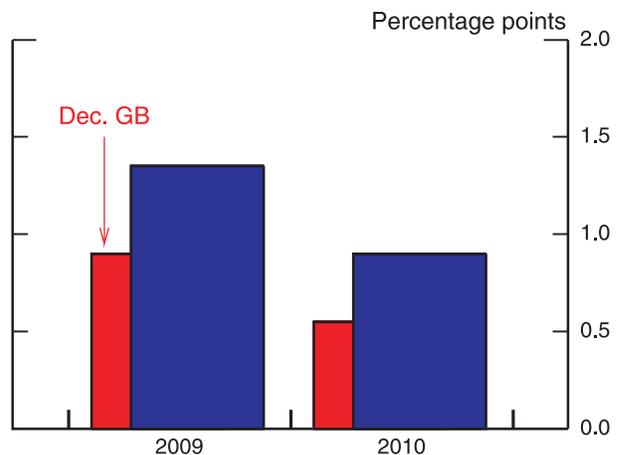
### Factors Contributing to Recovery

- Financial stress begins to recede
- Housing begins to stabilize
- Fiscal and monetary stimulus
- Inventory dynamics

### Response to 2009 Fiscal Stimulus Package

- Households begin spending tax cuts (\$180) and transfers (\$90) when received.
- Investment response to business tax cuts (\$120) is limited.
- Of total new funding for state and local governments (\$400), only 40 percent spent by the end of 2010.

### Contribution of Fiscal Package to GDP Growth\*



\* Includes housing-related programs financed by the TARP.

### Contributions of Inventories to Real GDP Growth

(Percentage points, annual rate)

	Current Episode*	Postwar Average
1. Year before peak	-0.5	0.4
2. Peak to trough	-0.3	-1.6
3. Year after trough	1.0	1.3

\*GDP peak in 2008:Q2 and trough in 2009:Q2.

### Inventory Dynamics

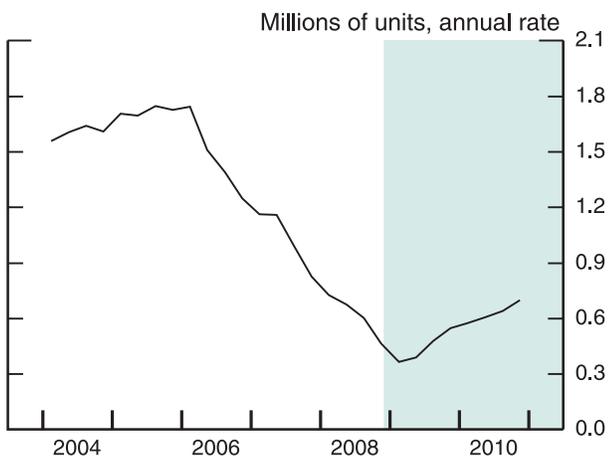
- In the year before the peak, inventories held down real GDP growth.
- Peak-to-trough, inventories hold down real GDP only a little.
- In the year after the trough, the cessation of inventory decumulation contributes importantly to real GDP growth.

Class II FOMC - Restricted (FR)

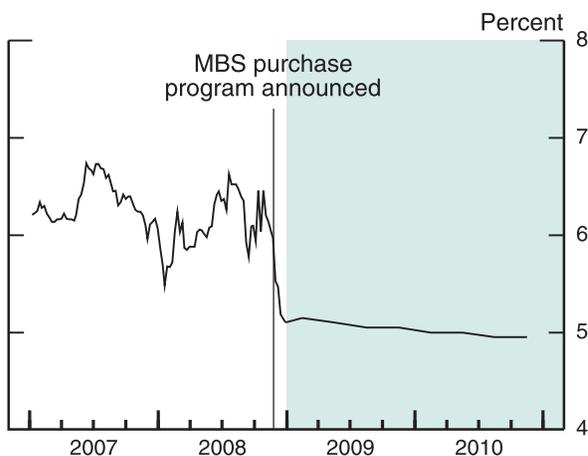
Exhibit 3

### Single-Family Housing

**Single-Family Starts**



**Rate on 30-year Fixed-Rate Conforming Mortgages**



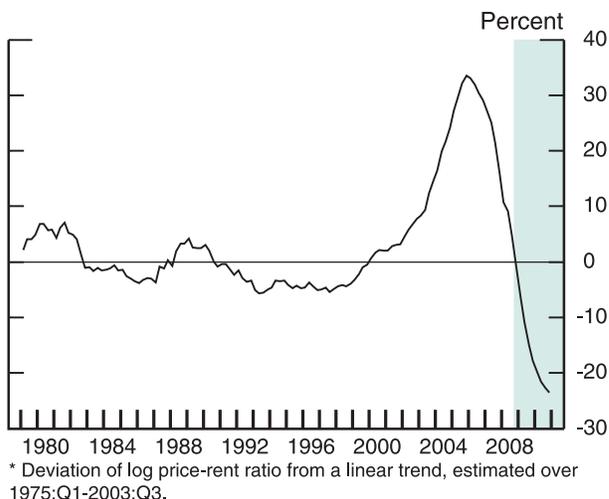
**Tighter Supply of Mortgage Credit**

Much more difficult to obtain mortgages for households:

- Lacking solid credit histories
- Unable to make significant downpayments
- In need of low introductory rates

Lending is more restrictive than in the past to those seeking to finance an amount above the conforming limit.

**Overvaluation of Single-Family Homes\***

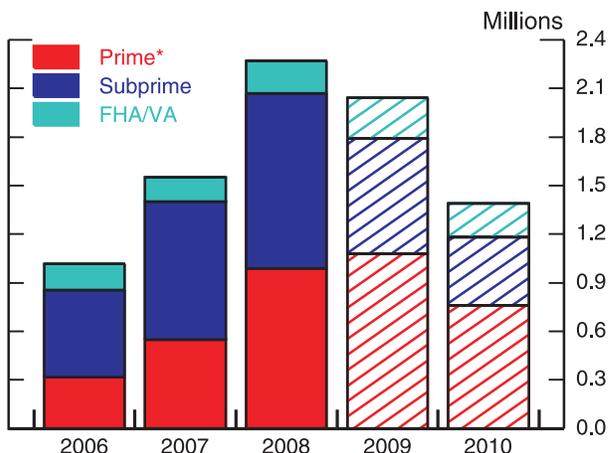


**Housing Equity**

	Sept. 2007	Sept. 2008
<b>Current equity &lt; 20%</b>		
1. Subprime	52	61
2. Prime*	17	31
<b>Current equity &lt; 0</b>		
3. Subprime	11	28
4. Prime*	1	9

\* Includes near-prime mortgages; first liens only.

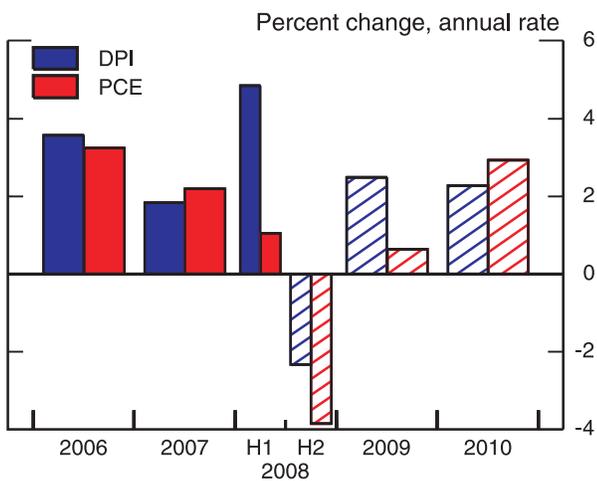
**Foreclosure Starts**



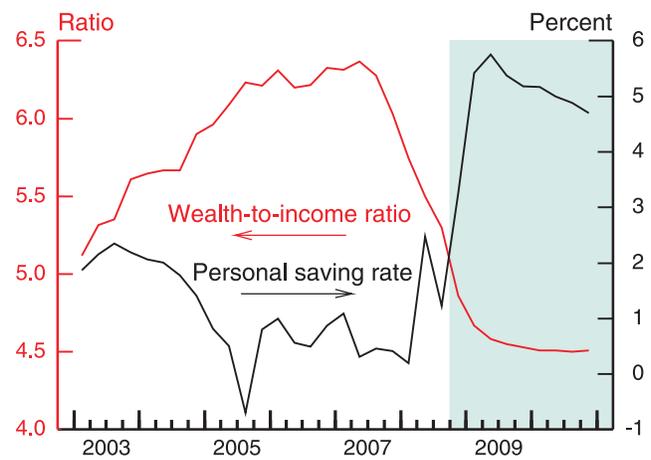
\* Includes near-prime mortgages.  
Note: 2008 figure based on data through 2008:Q3 and a projection for 2008:Q4.

### Consumer Spending

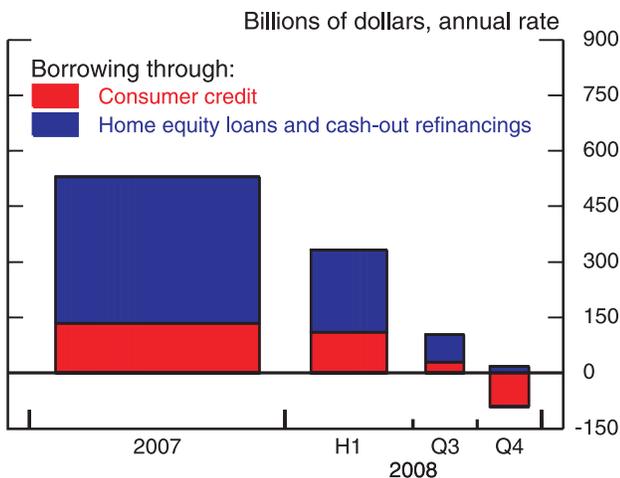
**Real PCE and DPI**



**Saving Rate and Wealth-to-Income Ratio**

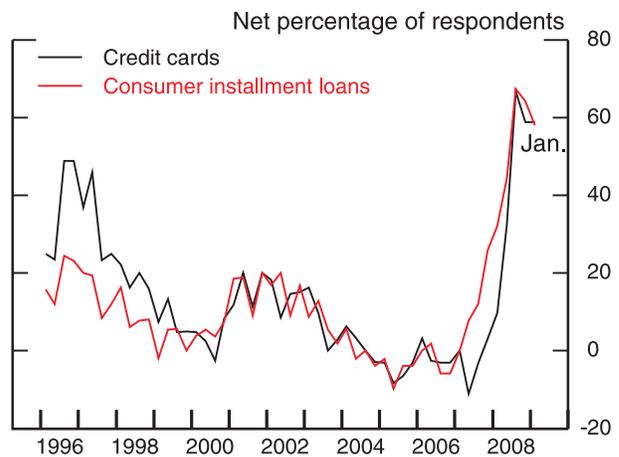


**Sources of Financing for Consumer Spending**



Note: 2008:Q4 estimated based on partial data.

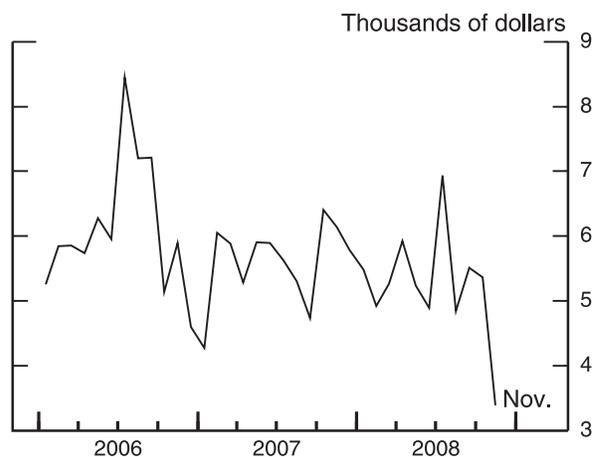
**Commercial Banks Tightening Standards on Consumer Loans**



**Developments in Consumer ABS Markets**

- Very little issuance since October.
- The commercial banks that make most credit card loans have alternative sources of funding.
- But, the finance companies affiliated with the auto manufacturers have not (for the most part) had access to these sources.

**Auto Loans Originated by the Detroit Three Finance Companies per Unit Sold**

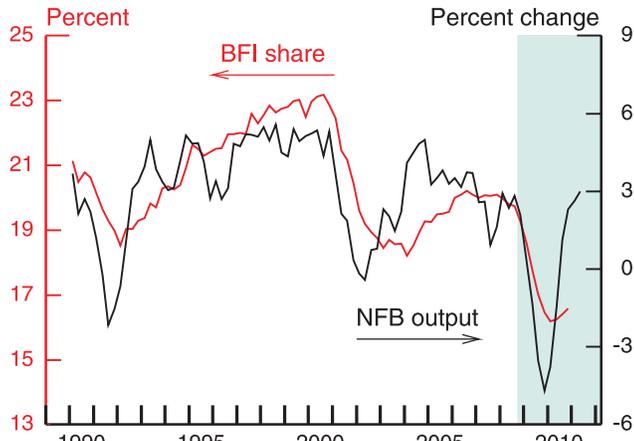


Class II FOMC - Restricted (FR)

Exhibit 5

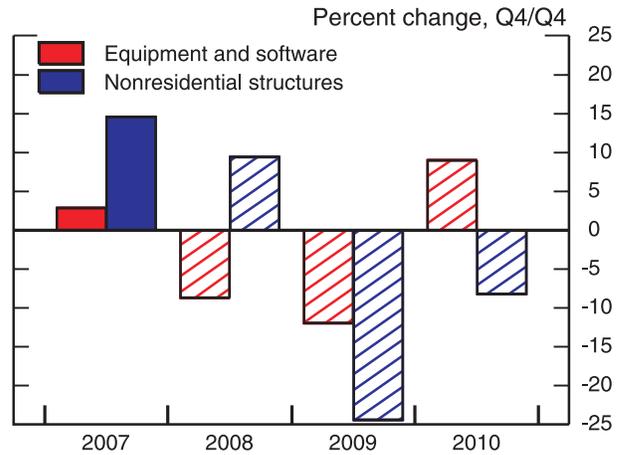
### Business Investment and Finance

**The Accelerator**

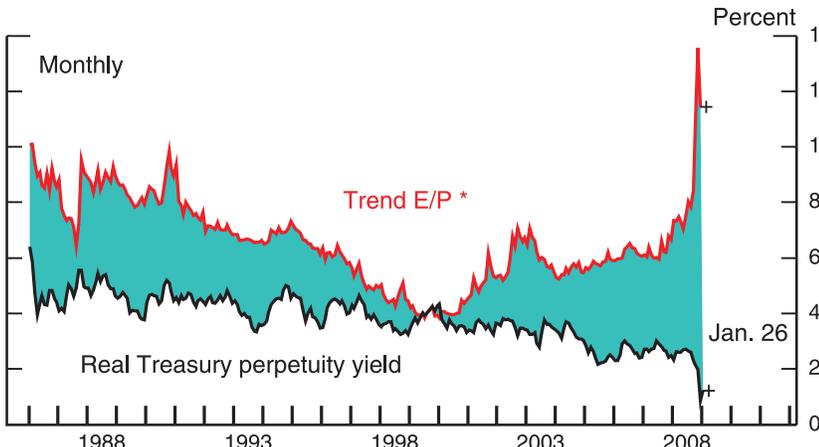


Note: BFI share equals nominal BFI divided by nominal nonfarm business (NFB) output. NFB output growth is measured as the percent change from four quarters earlier, lagged two quarters.

**Components of BFI**

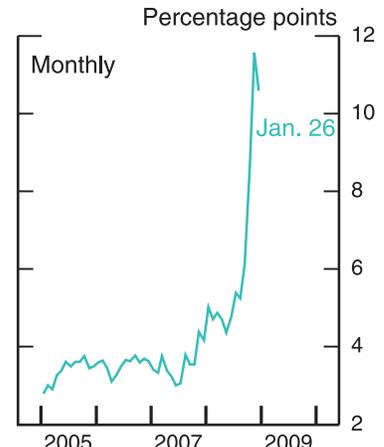


**Equity Valuation for S&P 500**



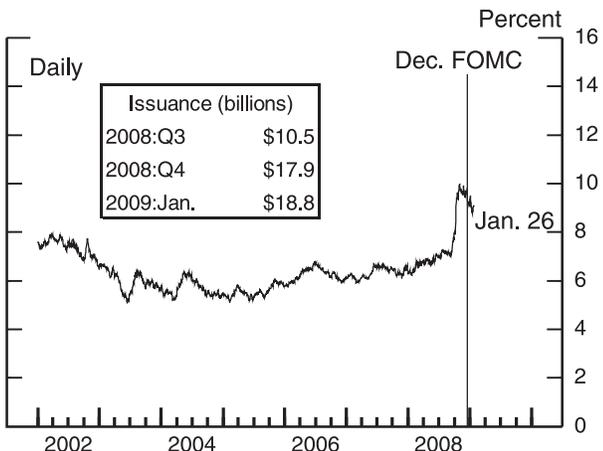
+ Denotes latest observation using daily interest rates and stock prices and latest earnings data from I/B/E/S.  
 \* Estimated using analyst year-ahead earnings from I/B/E/S.

**Estimated Equity Premium\***



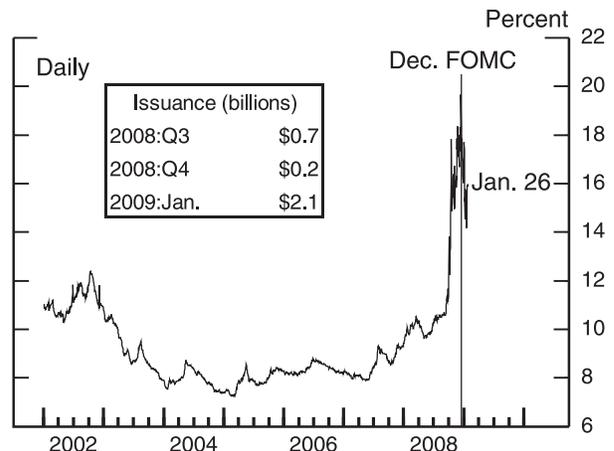
\* Trend E/P ratio less real Treasury perpetuity yield.

**Investment-Grade Corporate Bond Yield**



Note: Yield for 10-year BBB bonds. Issuance shown at a monthly rate; January is month-to-date.

**High-Yield Corporate Bond Yield**



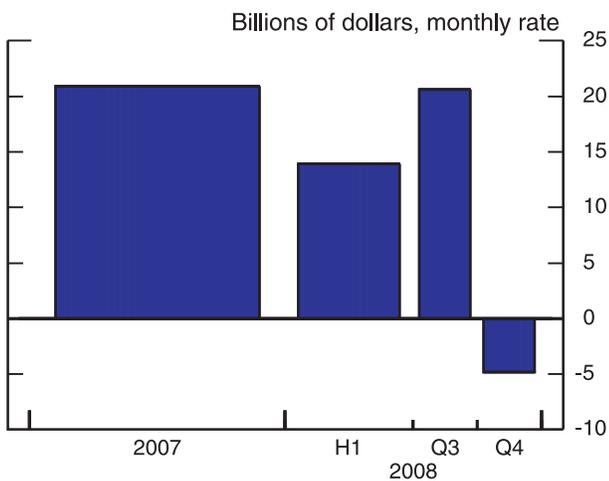
Note: Yield for 10-year bonds. Issuance shown at a monthly rate; January is month-to-date.

Class II FOMC - Restricted (FR)

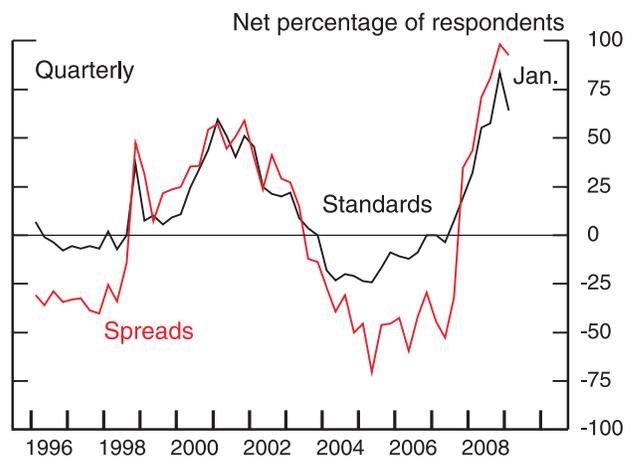
Exhibit 6

### Business Investment and Finance (continued)

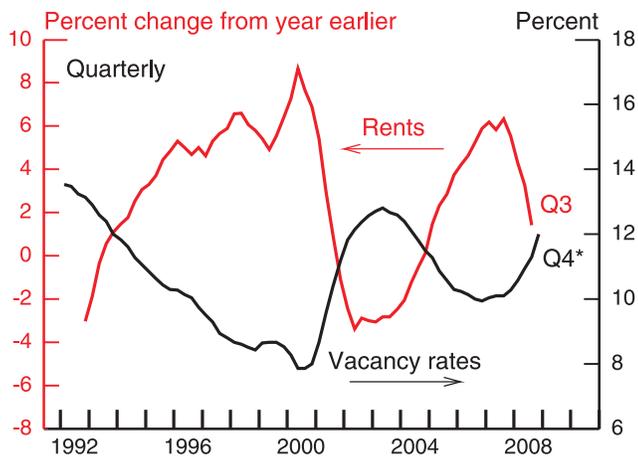
**Change in C&I Loans**



**Commercial Banks Tightening Standards and Spreads on C&I Loans**

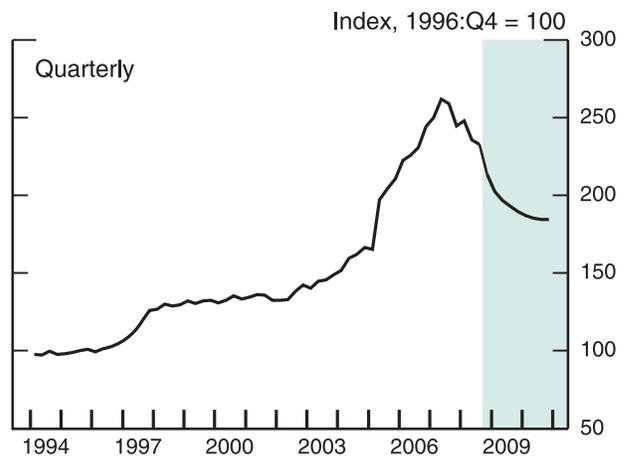


**Vacancy Rates and Rents on Commercial Properties**



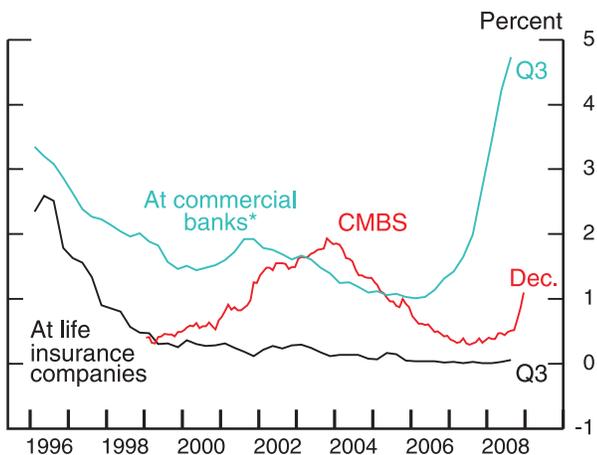
\* Preliminary  
 Note: Average of series for office, industrial, and retail properties.  
 Source: Torto Wheaton.

**Prices of Commercial Properties**



Note: Index based on sales of properties in NCREIF portfolio.

**Delinquency Rates on Commercial Mortgages**



\*Excluding farmland.  
 Source: Citigroup; Call Report; ACLI.

**Implications of Shutdown in the CMBS Market**

Should add to the pressure on banks' balance sheets and thereby indirectly damp structures spending:

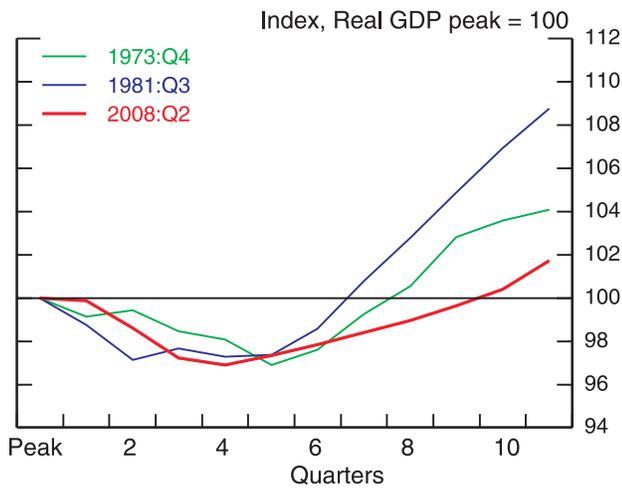
- Market will not be able to help refinance construction loans coming due.
- Loans currently within CMBS coming due will need financing from alternative sources.

Class II FOMC - Restricted (FR)

Exhibit 7

### Business Cycle Dynamics

Real GDP: Cyclical Comparison



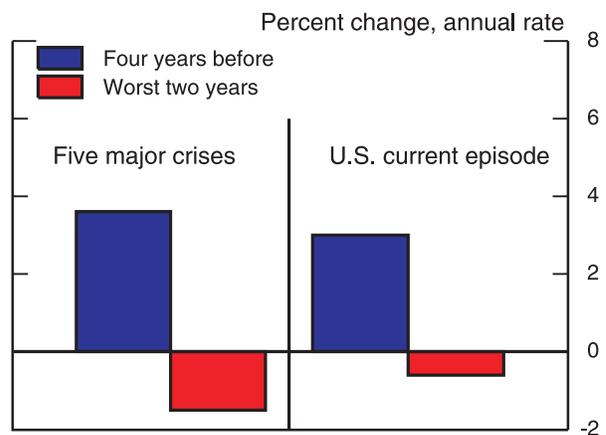
Recession and Recovery

- Contraction in real GDP is in line with big postwar recessions.
- Projected recovery is more sluggish.

Financial Crises and Economic Downturns

- Downturns linked to major financial crises tend to be severe.
- Average stepdown in real GDP growth after five major postwar financial crises was about 5 percentage points.
- For U.S., our forecast implies a stepdown of 3½ percentage points.

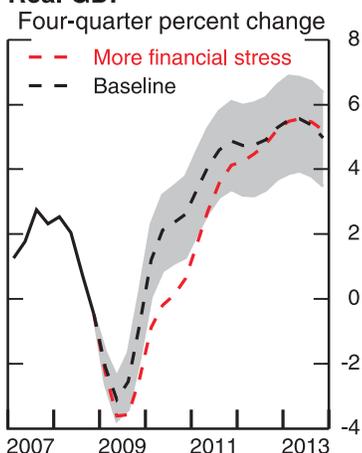
Economic Growth Before and After Onset\*



\*As identified by Reinhart and Rogoff; includes Spain (1977), Norway (1987), Finland (1991), Sweden (1991), and Japan (1992). Onset of U.S. crisis dated to 2007.

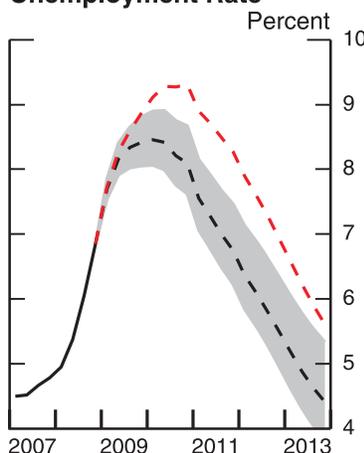
### Alternative Simulation: More Financial Stress

Real GDP

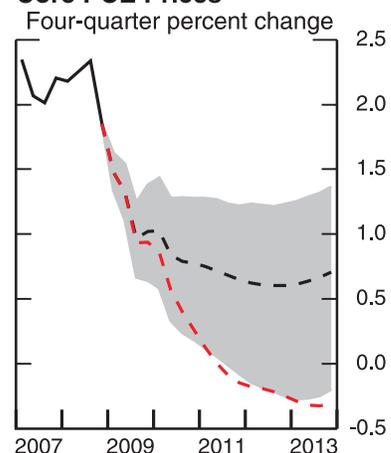


Note: Shading denotes 70% confidence interval.

Unemployment Rate

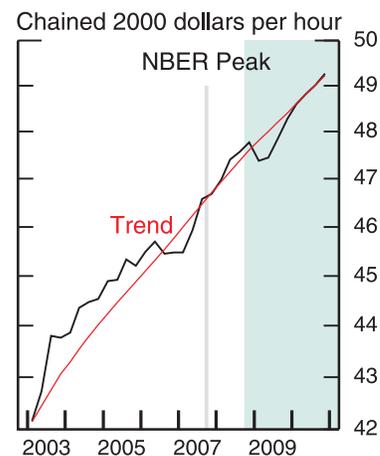
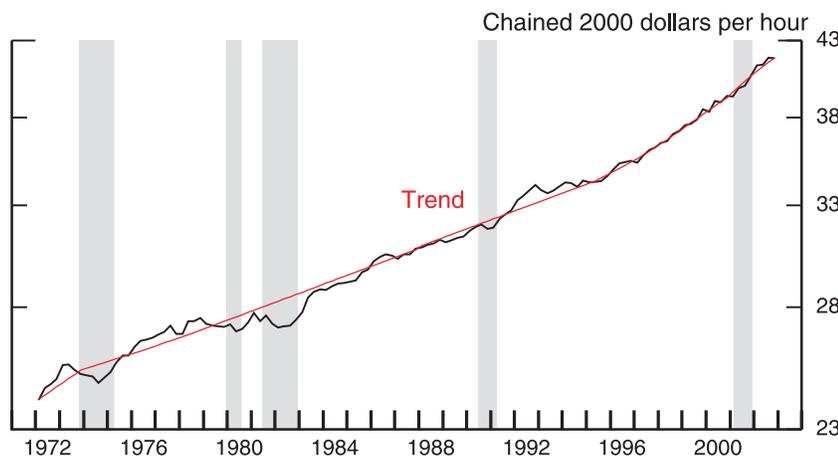


Core PCE Prices



### Labor Productivity and Inflation

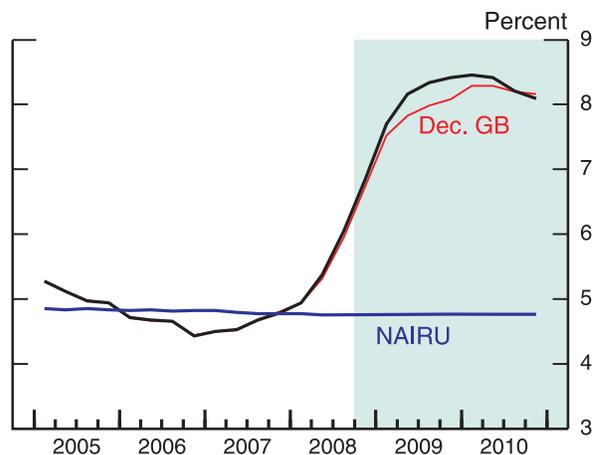
#### Labor Productivity



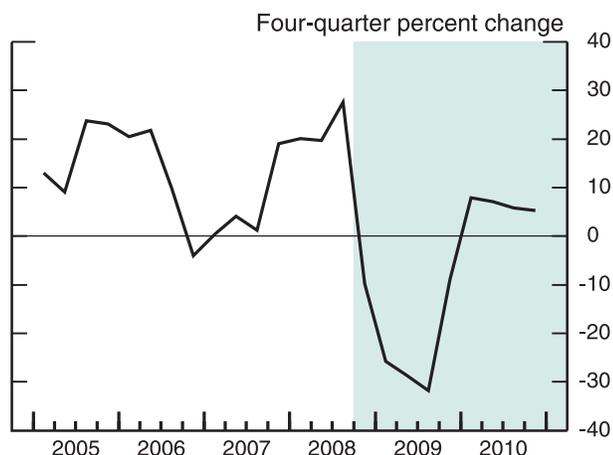
#### Productivity Dynamics

- In some earlier recessions labor productivity was procyclical.
- Procyclicality not observed during the 2001 recession.
- In the current episode, labor productivity expected to exhibit some procyclicality, as the deep recession leads to some labor hoarding.

#### Unemployment Rate



#### PCE Energy Prices



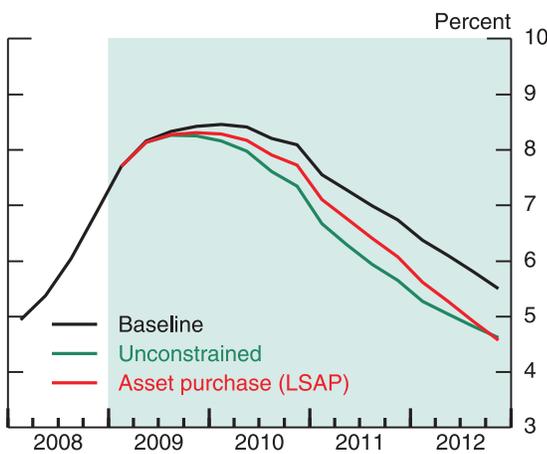
#### PCE Price Projections

(Percent change, Q4/Q4)

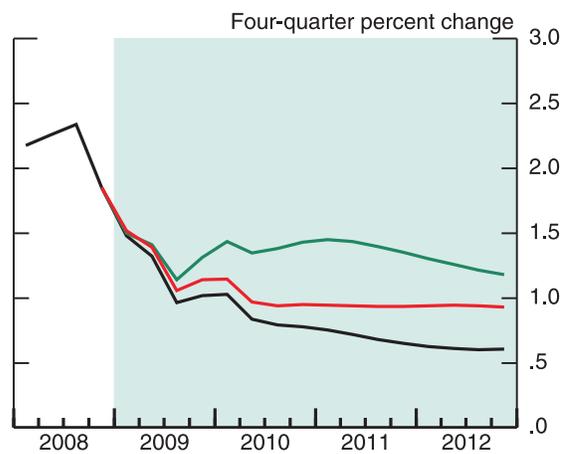
	2008	2009	2010
1. PCE price index	1.7	0.6	1.1
2. Dec. GB	(1.9)	(0.7)	(1.0)
3. Core PCE	1.9	1.0	0.8
4. Dec. GB	(2.0)	(1.1)	(0.8)

## An Unconventional Policy: Large-Scale Asset Purchases

**Unemployment Rate**



**Core PCE Prices**



### Assumptions Behind a Successful LSAP Program

- Imperfect substitutability of long- and short-term debt.
- Sufficient substitutability among long-term fixed-income securities.
- Usual linkages to equity and foreign exchange markets.

### Simulation Assumptions

**The Program:**

- \$500 billion in MBS debt plus \$500 billion in Treasury securities.
- On top of existing programs.
- Announced immediately, carried out over next year and a half.

**Financial Effects:**

- Reduces mortgage rates: 125 b.p.
- Reduces Treasury rates: 80 b.p.
- Reduces Baa rate: 75 b.p.

### Caveats, Financial and Macroeconomic

**Financial:**

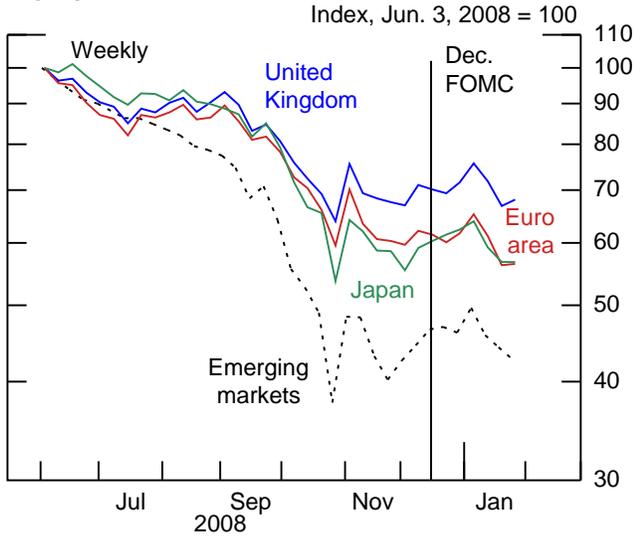
- Direct effects on interest rates are uncertain
- Current dysfunction in some financial markets could limit indirect effects
- Could be economies--or diseconomies--of scale in the size of the program
- LSAPS introduce tricky "exit issues" on how to unwind the program

**Macroeconomic:**

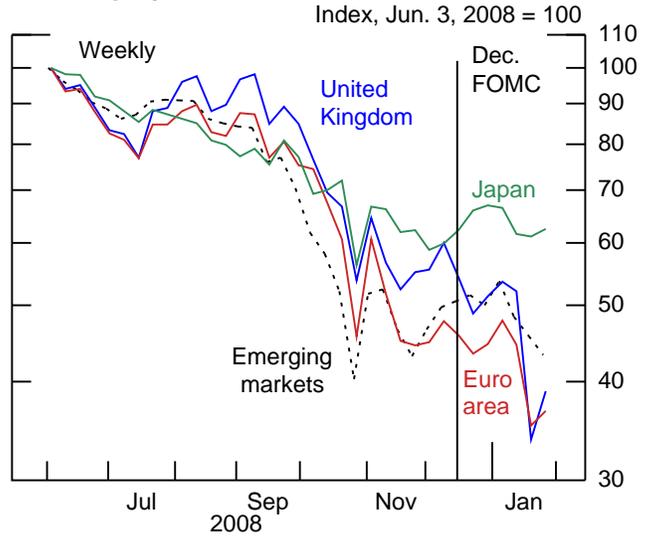
- The model may understate--or overstate--the macroeconomic outcomes
- Heavy reliance on mortgage rates and housing to drive economic recovery

### Global Financial Markets

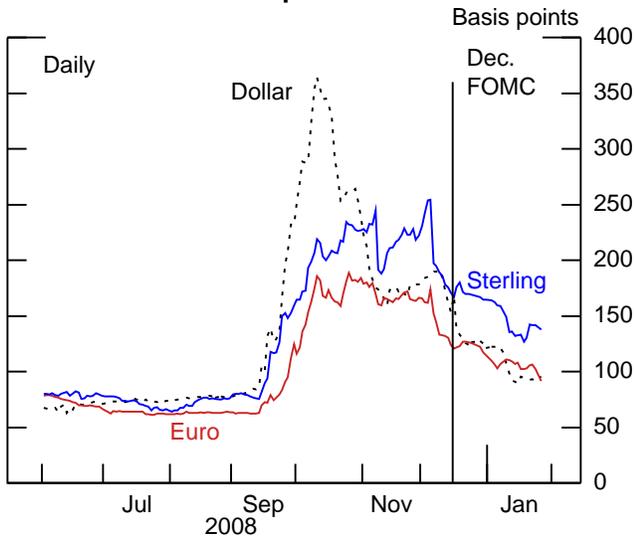
**Equity Prices**



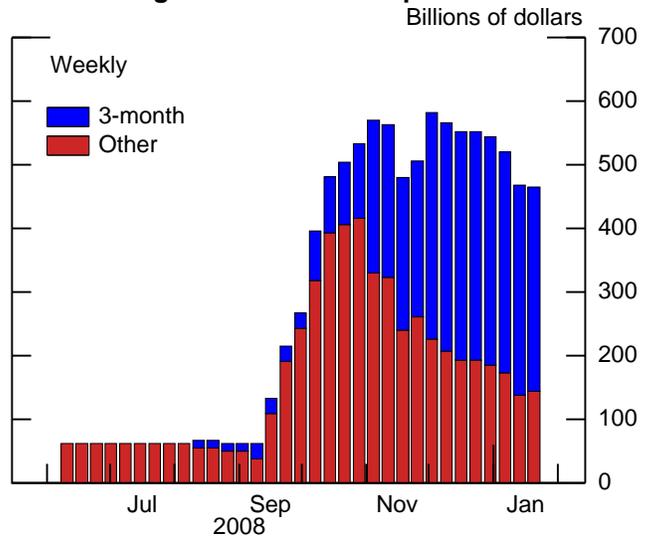
**Bank Equity Prices**



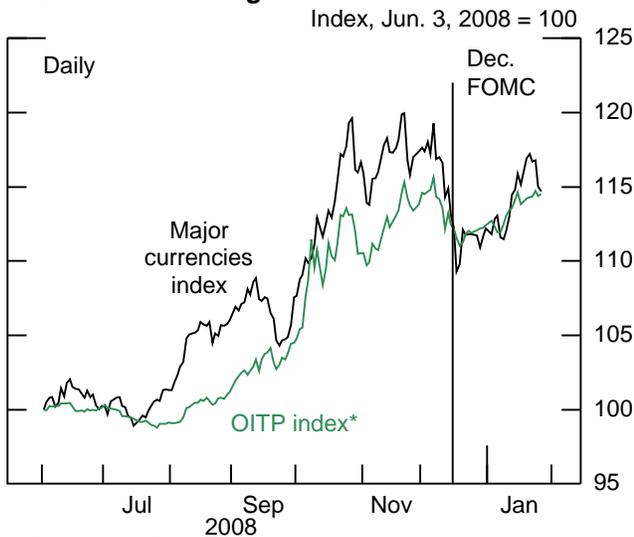
**3-Month LIBOR-OIS Spreads**



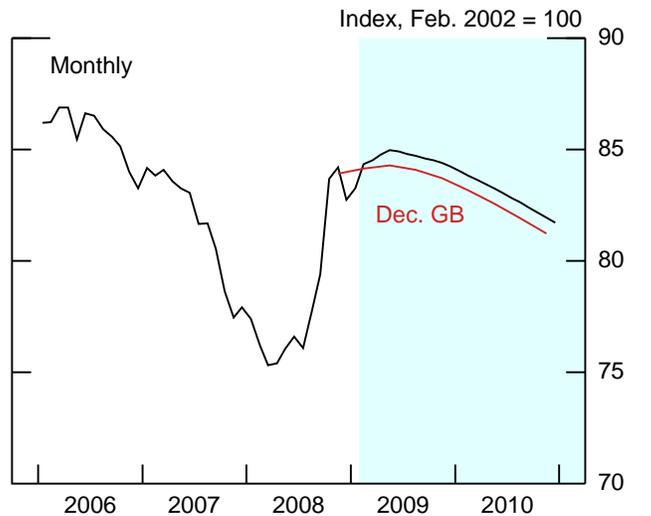
**Outstanding Central Bank Swap Draws**



**U.S. Dollar Exchange Rates**



**Broad Real Dollar**



\*Other important trading partners.

### Foreign Growth Outlook

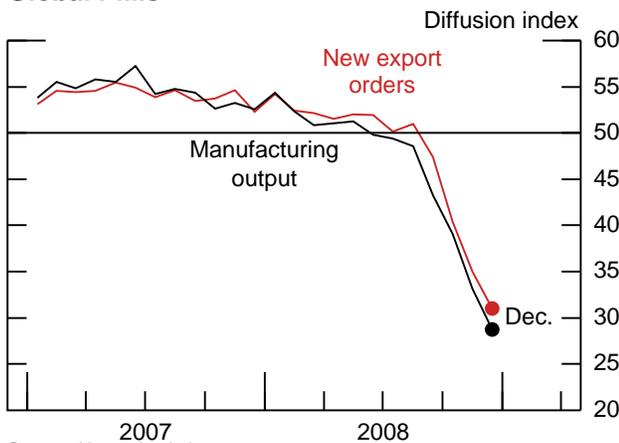
	Real GDP*			Percent change, annual rate**			
	2007	2008		2009 <sup>p</sup>	2010 <sup>p</sup>		
		Q1-Q3	Q4 <sup>e</sup>	Q1	Q2	H2	
<b>1. Total</b>	<b>4.2</b>	<b>1.4</b>	<b>-3.8</b>	<b>-2.8</b>	<b>-0.8</b>	<b>1.5</b>	<b>2.8</b>
2. <i>December Greenbook</i>	4.2	1.4	-1.6	-1.2	0.1	1.5	2.8
<b>3. Advanced Foreign Economies</b>	<b>2.6</b>	<b>0.2</b>	<b>-2.8</b>	<b>-3.4</b>	<b>-1.9</b>	<b>0.6</b>	<b>1.9</b>
4. Japan	2.0	-1.1	-5.2	-3.7	-1.5	0.0	1.1
5. Euro area	2.1	0.4	-2.0	-2.0	-1.0	0.7	1.9
6. United Kingdom***	3.0	-0.4	-5.9	-4.0	-2.2	0.3	1.7
7. Canada	2.8	0.4	-2.4	-4.4	-2.8	0.7	2.1
<b>8. Emerging Market Economies</b>	<b>6.4</b>	<b>3.0</b>	<b>-5.0</b>	<b>-1.9</b>	<b>0.8</b>	<b>2.6</b>	<b>4.1</b>
9. Emerging Asia	7.8	4.0	-6.5	-0.8	1.8	4.3	5.7
10. China	11.4	9.1	0.3	4.0	6.5	7.5	8.8
11. Latin America	4.8	1.8	-4.1	-3.5	-0.4	0.9	2.5
12. Mexico	4.2	0.9	-5.0	-4.0	-1.0	0.4	2.2

\*GDP aggregates weighted by shares of U.S. merchandise exports.

\*\*Change from final quarter of preceding period to final quarter of period indicated.

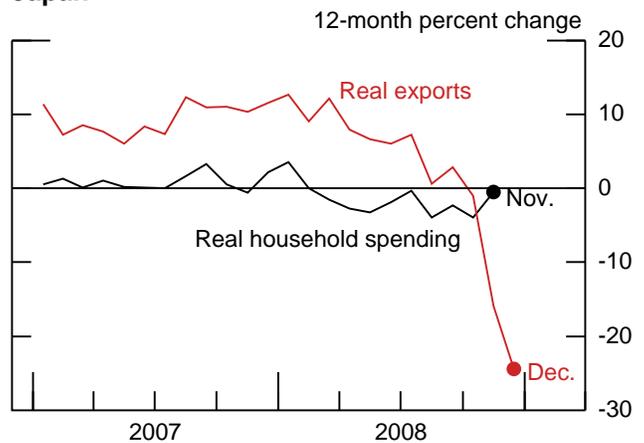
\*\*\*Updated since January Greenbook.

#### Global PMIs

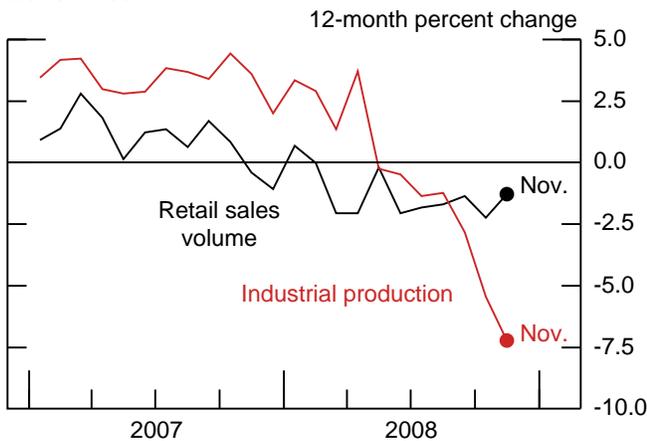


Source: Haver Analytics.

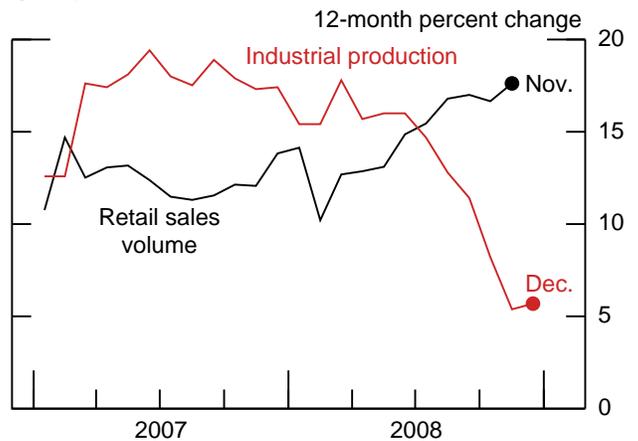
#### Japan



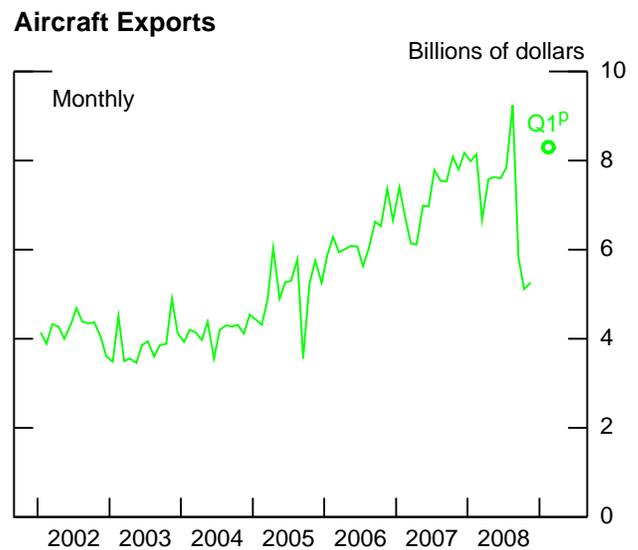
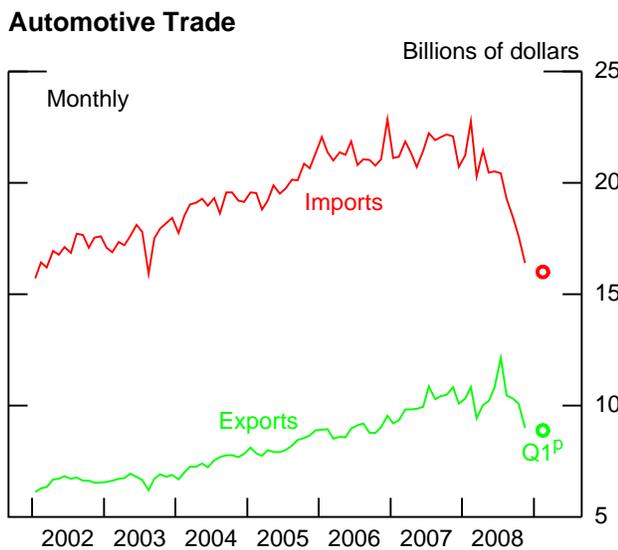
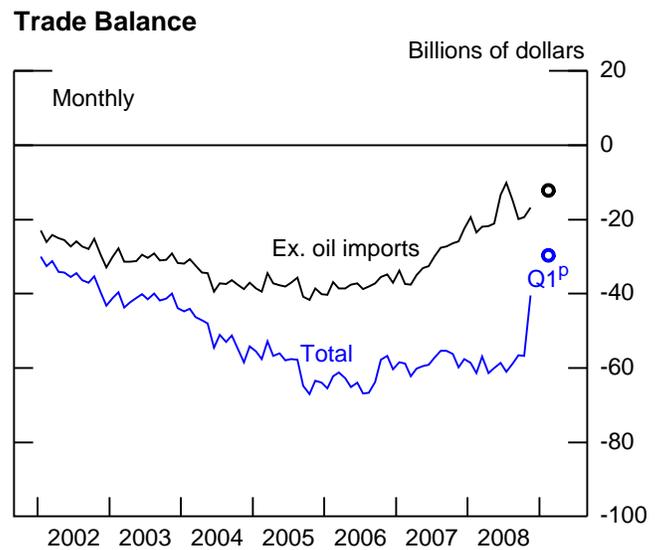
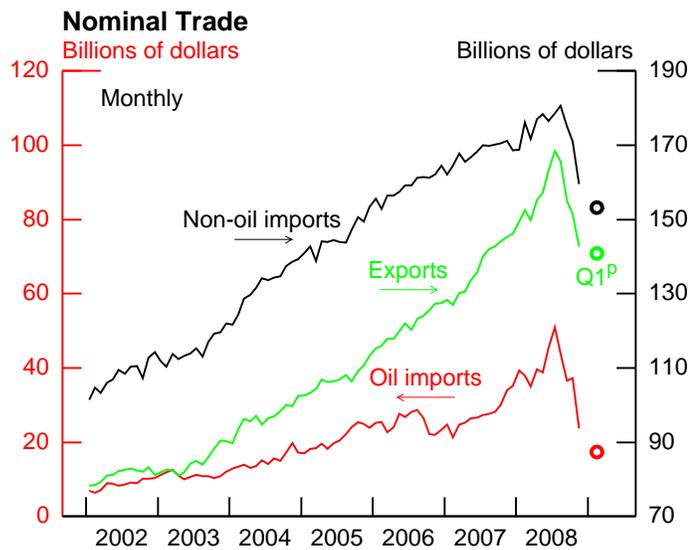
#### Euro Area



#### China



### U.S. Trade



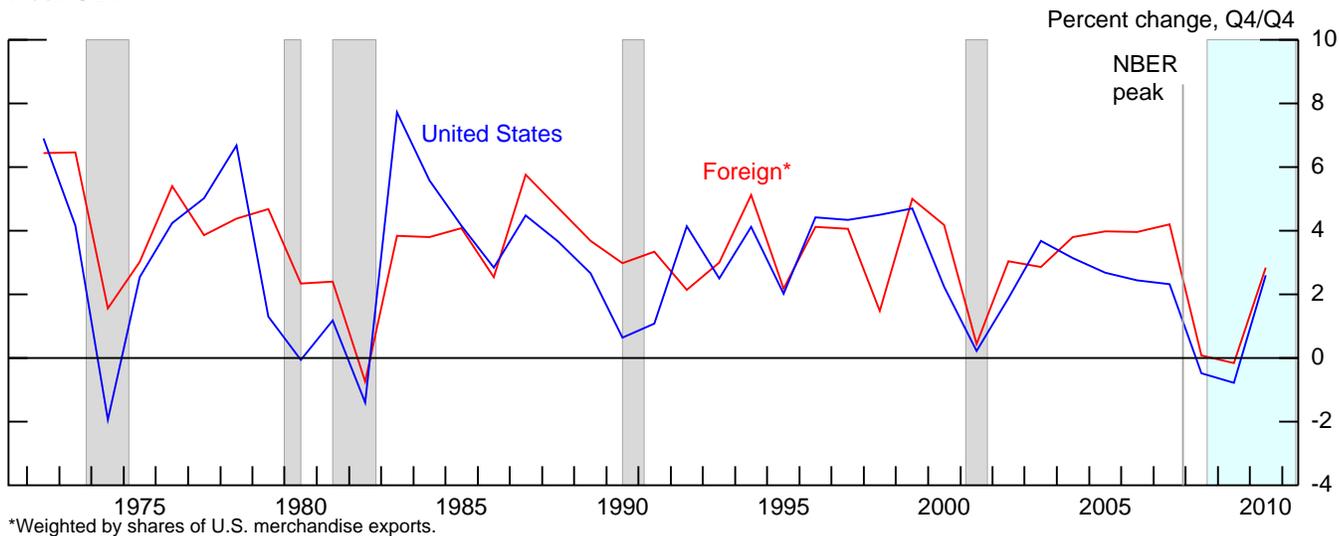
### Trade in Real Goods and Services

	2007	2008		2009 <sup>P</sup>			2010 <sup>P</sup>
		Q1-Q3	Q4 <sup>e</sup>	Q1	Q2	H2	
<b>Growth Rates (percent, annual rate*)</b>							
1. Exports	8.9	6.7	-19.9	-5.1	-2.7	-0.1	2.4
2. Imports	1.1	-3.9	-15.4	-11.7	-1.9	5.8	5.4
<b>Contribution to Real GDP Growth (percentage points, annual rate*)</b>							
3. Net Exports	0.8	1.6	-0.1	1.2	-0.1	-0.8	-0.5
4. <i>December Greenbook</i>	0.8	1.6	0.4	0.9	0.1	-0.5	-0.4

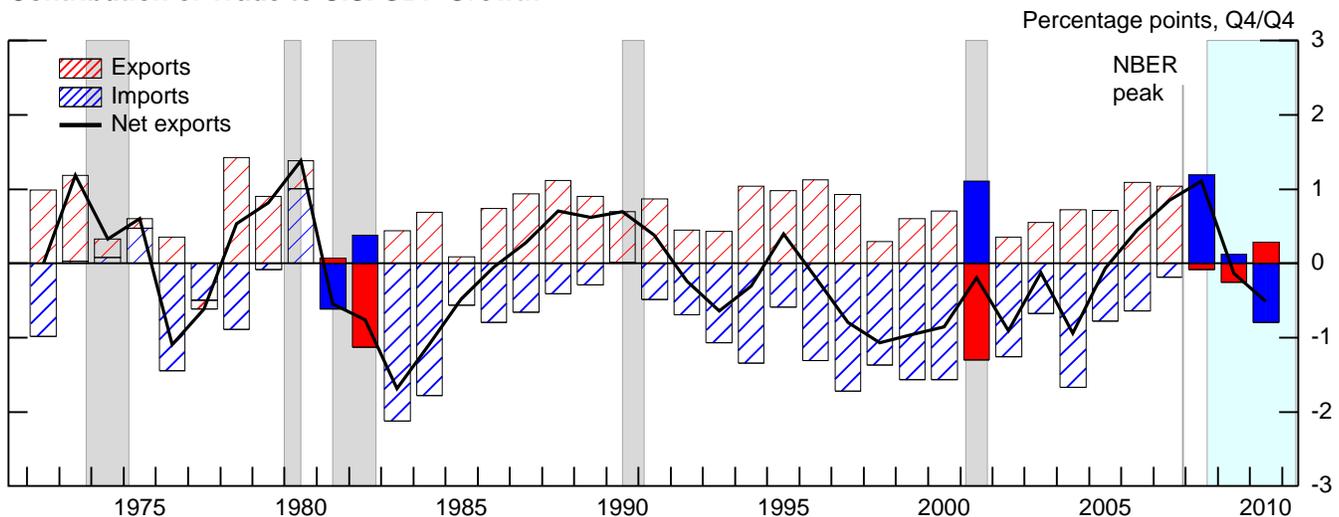
\*Change from final quarter of preceding period to final quarter of period indicated.

### Cyclical Comparisons

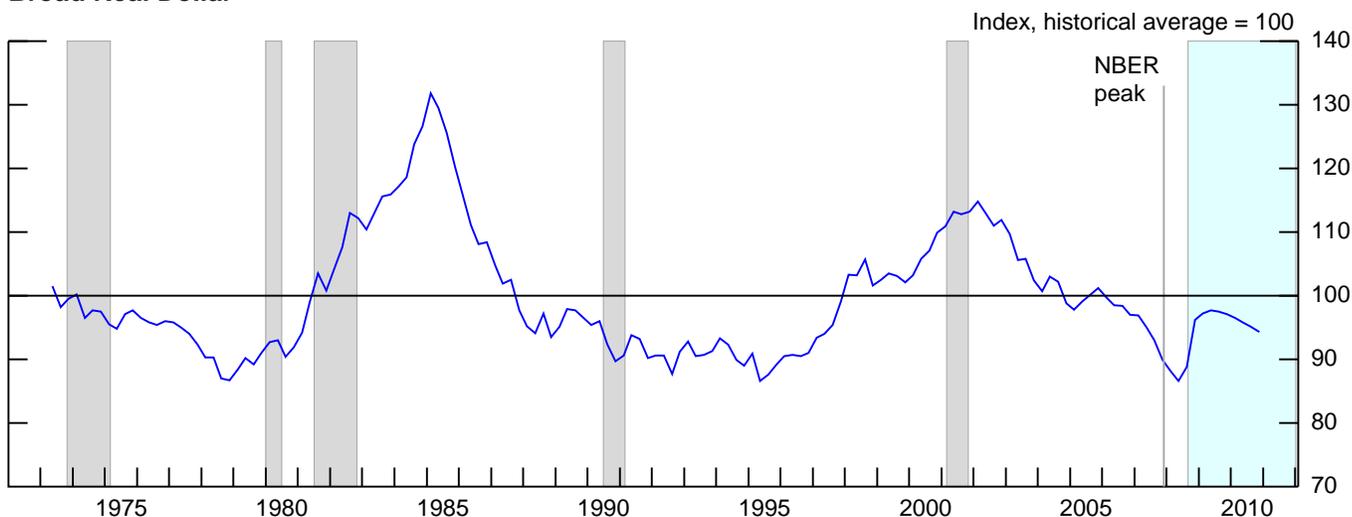
#### Real GDP



#### Contribution of Trade to U.S. GDP Growth

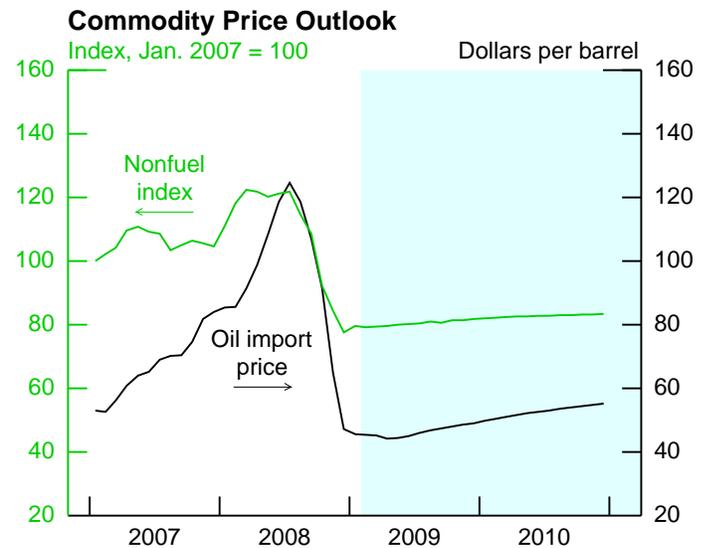
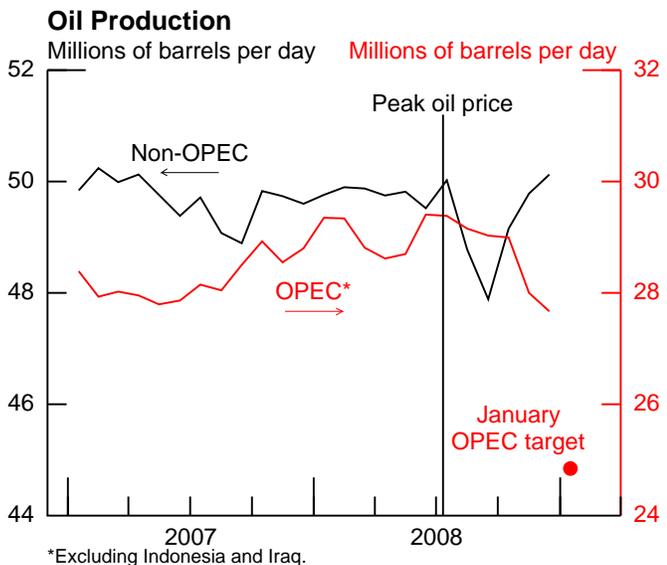
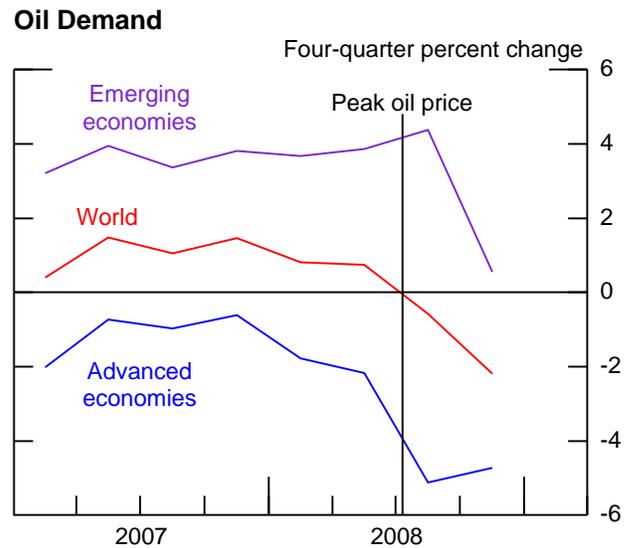
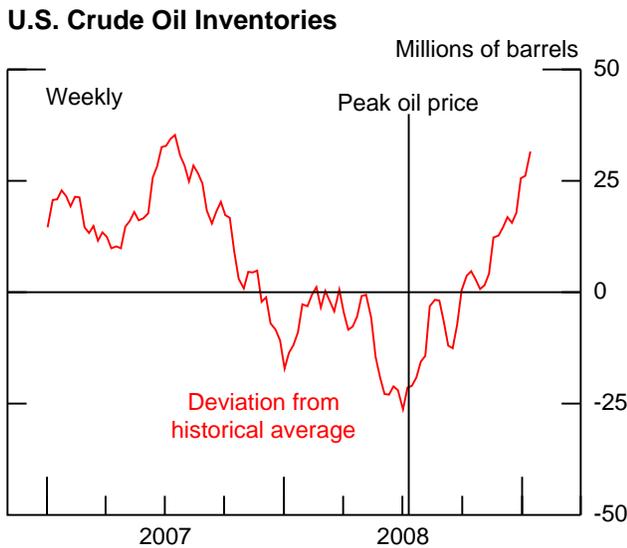
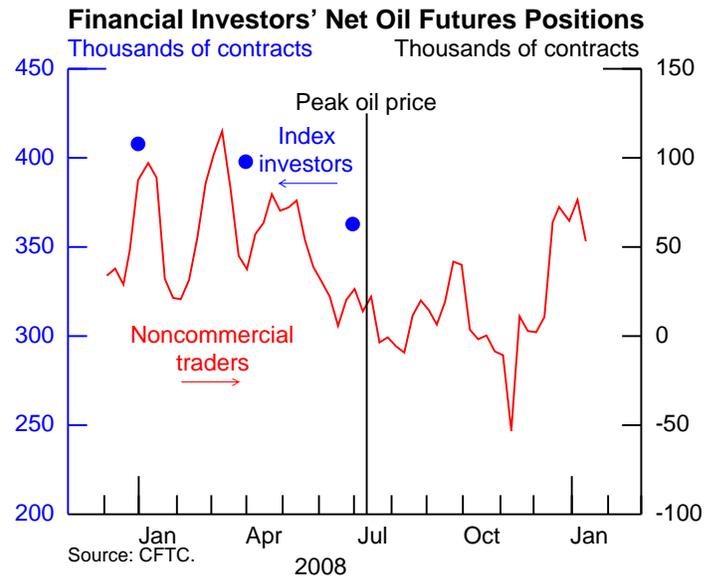
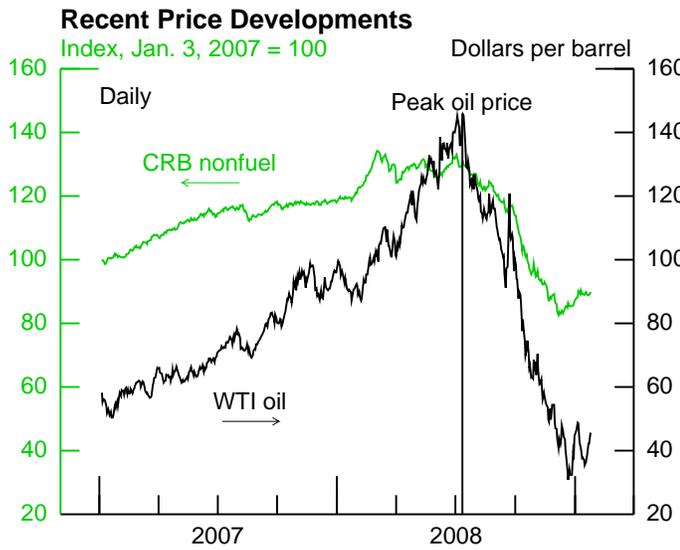


#### Broad Real Dollar



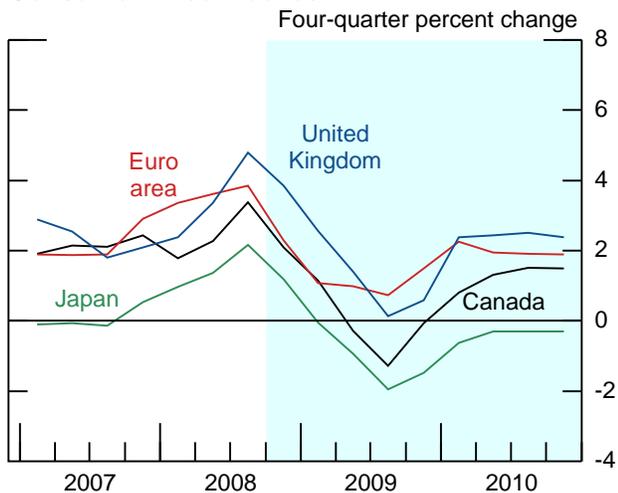
Note: Gray shading represents U.S. recessions as dated by the NBER. Blue shading represents the forecast period.

### Commodity Prices

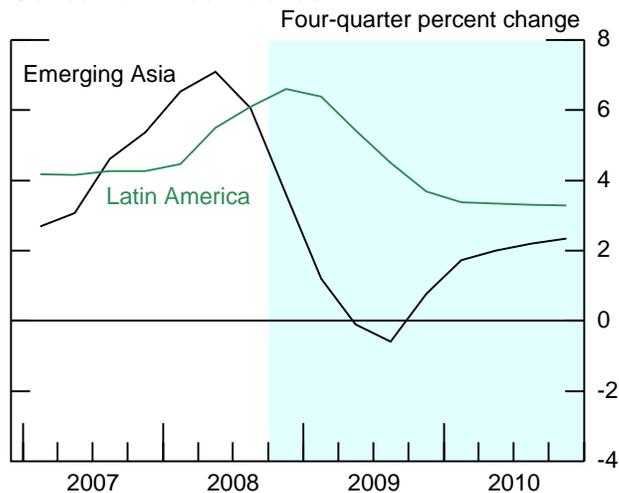


### Prices

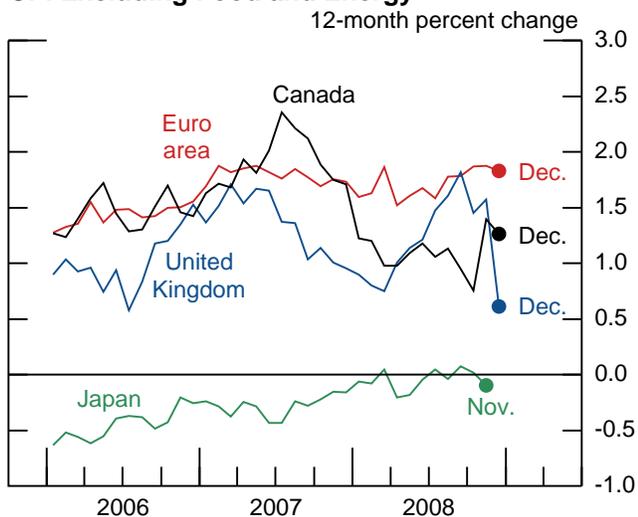
#### Consumer Price Indexes



#### Consumer Price Indexes

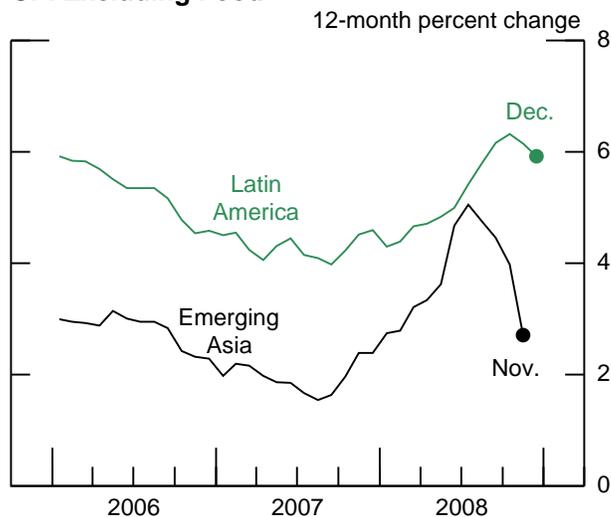


#### CPI Excluding Food and Energy\*



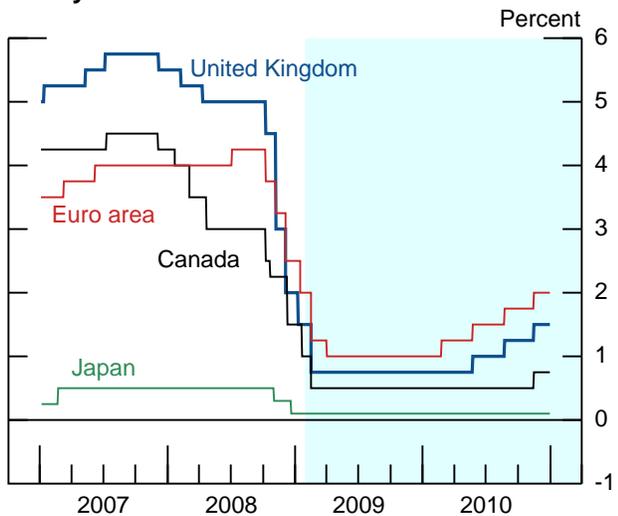
\*Staff estimates.

#### CPI Excluding Food\*

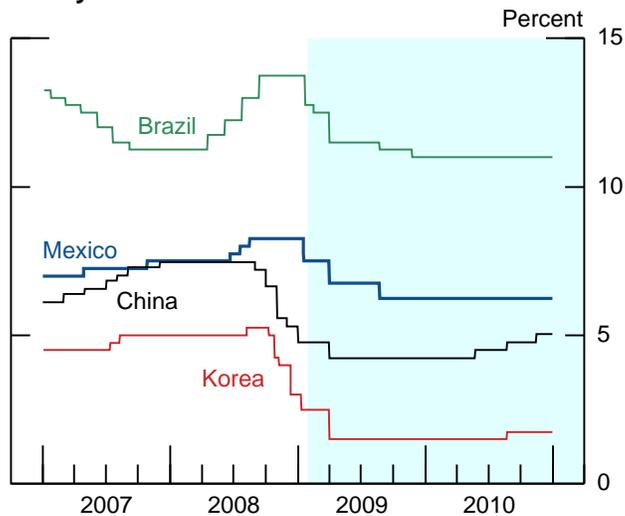


\*Staff estimates.

#### Policy Rates



#### Policy Rates



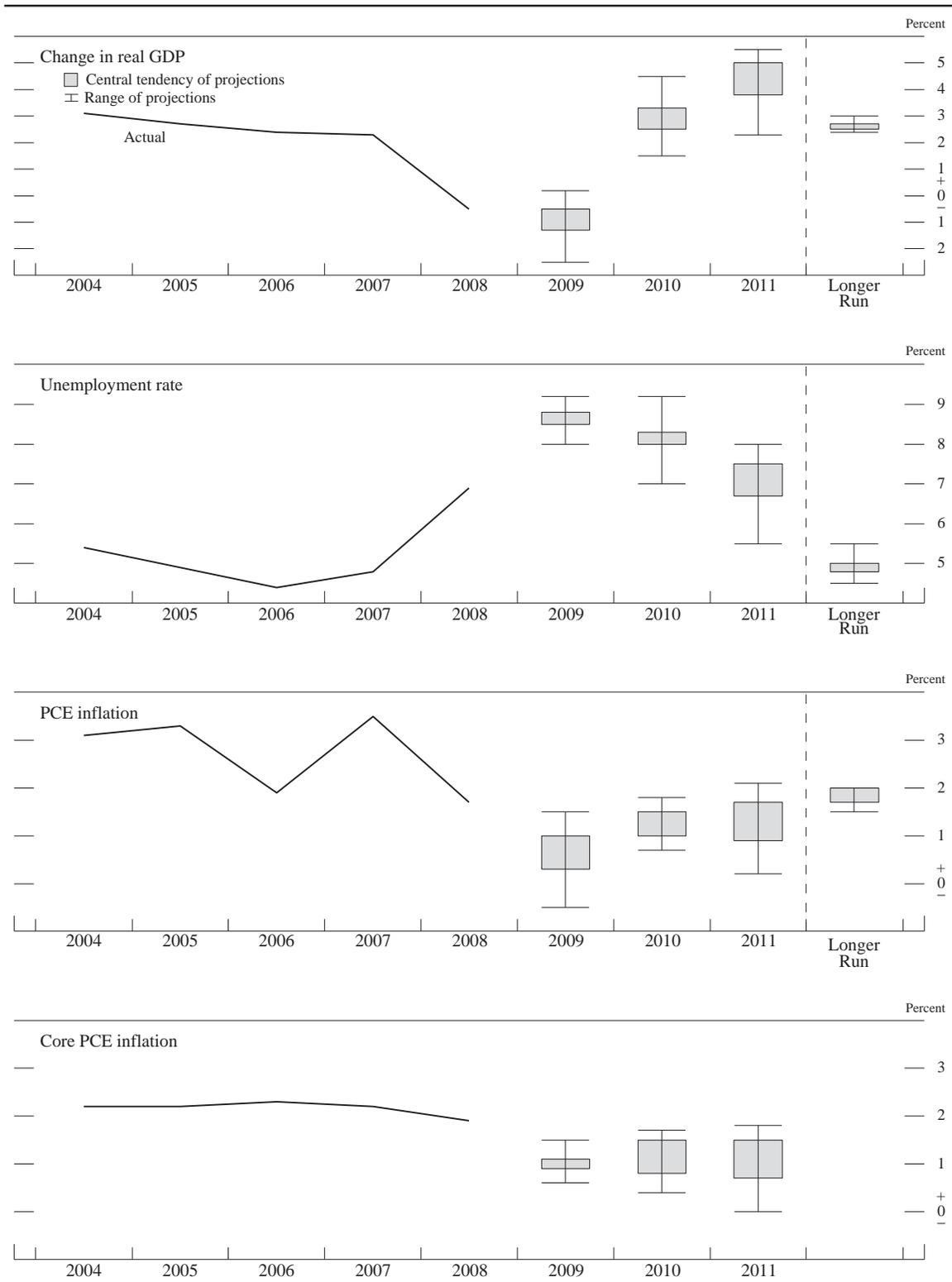
**Appendix 3: Materials used by Mr. Madigan**

**Class I FOMC – Restricted Controlled (FR)**

**Material for Briefing on  
FOMC Participants' Economic Projections**

Brian Madigan  
January 27, 2009

## Exhibit 1: Economic Projections of FOMC Participants for 2009 to 2011 and over the Longer Run



## Exhibit 2: Economic Projections of FOMC Participants for 2009 to 2011 and over the Longer Run

### Real GDP Growth

	2009	2010	2011	Longer-Run
<b>Central Tendency</b>	-1.3 to -0.5	2.5 to 3.3	3.8 to 5.0	2.5 to 2.7
<i>October projections</i>	-0.2 to 1.1	2.3 to 3.2	2.8 to 3.6	2.5 to 2.7
<b>Range</b>	-2.5 to 0.2	1.5 to 4.5	2.3 to 5.5	2.4 to 3.0
<i>October projections</i>	-1.0 to 1.8	1.0 to 4.5	2.0 to 5.0	2.0 to 2.9
<b>Memo: Greenbook</b>	-0.8	2.6	4.9	2.7
<i>October Greenbook</i>	-0.1	2.3	4.5	2.7

### Unemployment Rate

	2009	2010	2011	Longer-Run
<b>Central Tendency</b>	8.5 to 8.8	8.0 to 8.3	6.7 to 7.5	4.8 to 5.0
<i>October projections</i>	7.1 to 7.6	6.5 to 7.3	5.5 to 6.6	4.8 to 5.0
<b>Range</b>	8.0 to 9.2	7.0 to 9.2	5.5 to 8.0	4.5 to 5.5
<i>October projections</i>	6.6 to 8.0	5.5 to 8.0	4.9 to 7.3	4.5 to 5.8
<b>Memo: Greenbook</b>	8.4	8.1	6.7	4.8
<i>October Greenbook</i>	7.2	7.2	6.4	4.8

### PCE Inflation

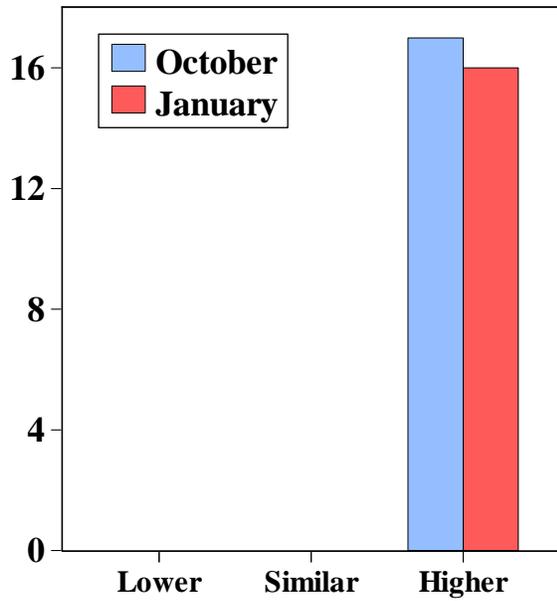
	2009	2010	2011	Longer-Run
<b>Central Tendency</b>	0.3 to 1.0	1.0 to 1.5	0.9 to 1.7	1.7 to 2.0
<i>October projections</i>	1.3 to 2.0	1.4 to 1.8	1.4 to 1.7	1.7 to 1.8
<b>Range</b>	-0.5 to 1.5	0.7 to 1.8	0.2 to 2.1	1.5 to 2.0
<i>October projections</i>	1.0 to 2.2	1.1 to 1.9	0.8 to 1.8	1.5 to 2.0
<b>Memo: Greenbook</b>	0.6	1.1	0.8	-----
<i>October Greenbook</i>	1.4	1.4	1.1	-----

### Core PCE Inflation

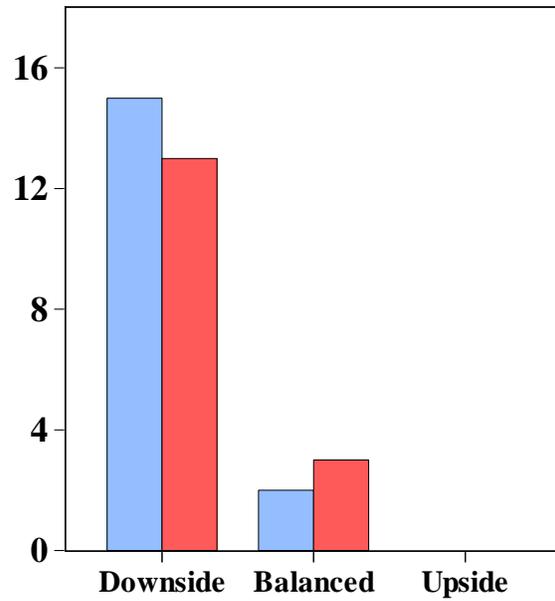
	2009	2010	2011
<b>Central Tendency</b>	0.9 to 1.1	0.8 to 1.5	0.7 to 1.5
<i>October projections</i>	1.5 to 2.0	1.3 to 1.8	1.3 to 1.7
<b>Range</b>	0.6 to 1.5	0.4 to 1.7	0.0 to 1.8
<i>October projections</i>	1.3 to 2.1	1.1 to 1.9	0.8 to 1.8
<b>Memo: Greenbook</b>	1.0	0.8	0.6
<i>October Greenbook</i>	1.5	1.3	1.1

### Exhibit 3: Risks and Uncertainty in Economic Projections

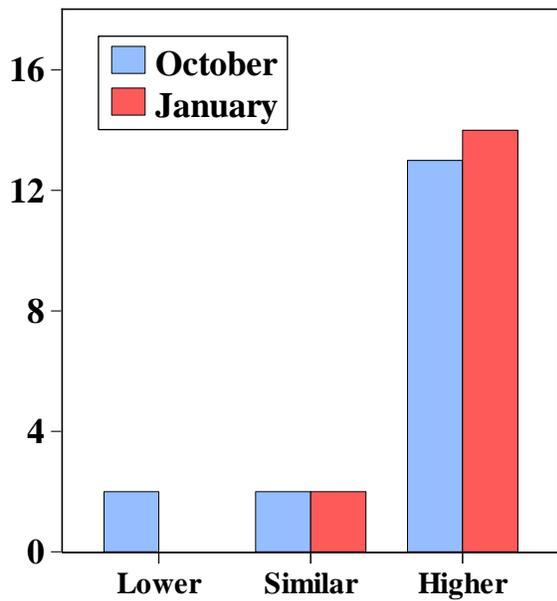
#### Uncertainty about GDP Growth



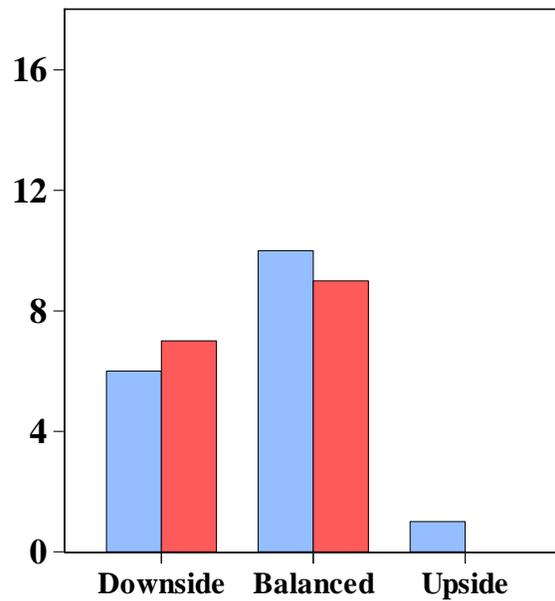
#### Risks to GDP Growth



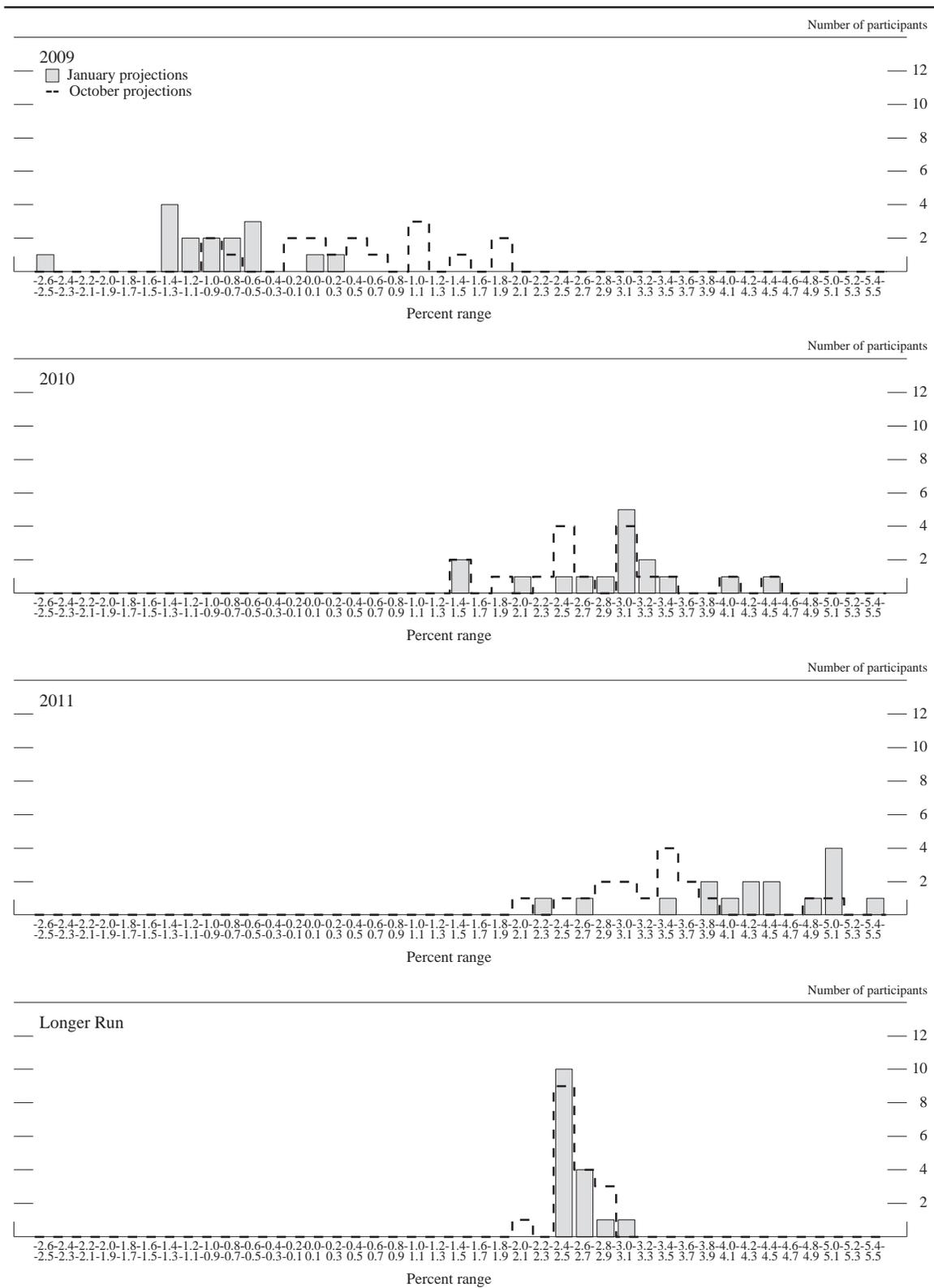
#### Uncertainty about PCE Inflation



#### Risks to PCE Inflation

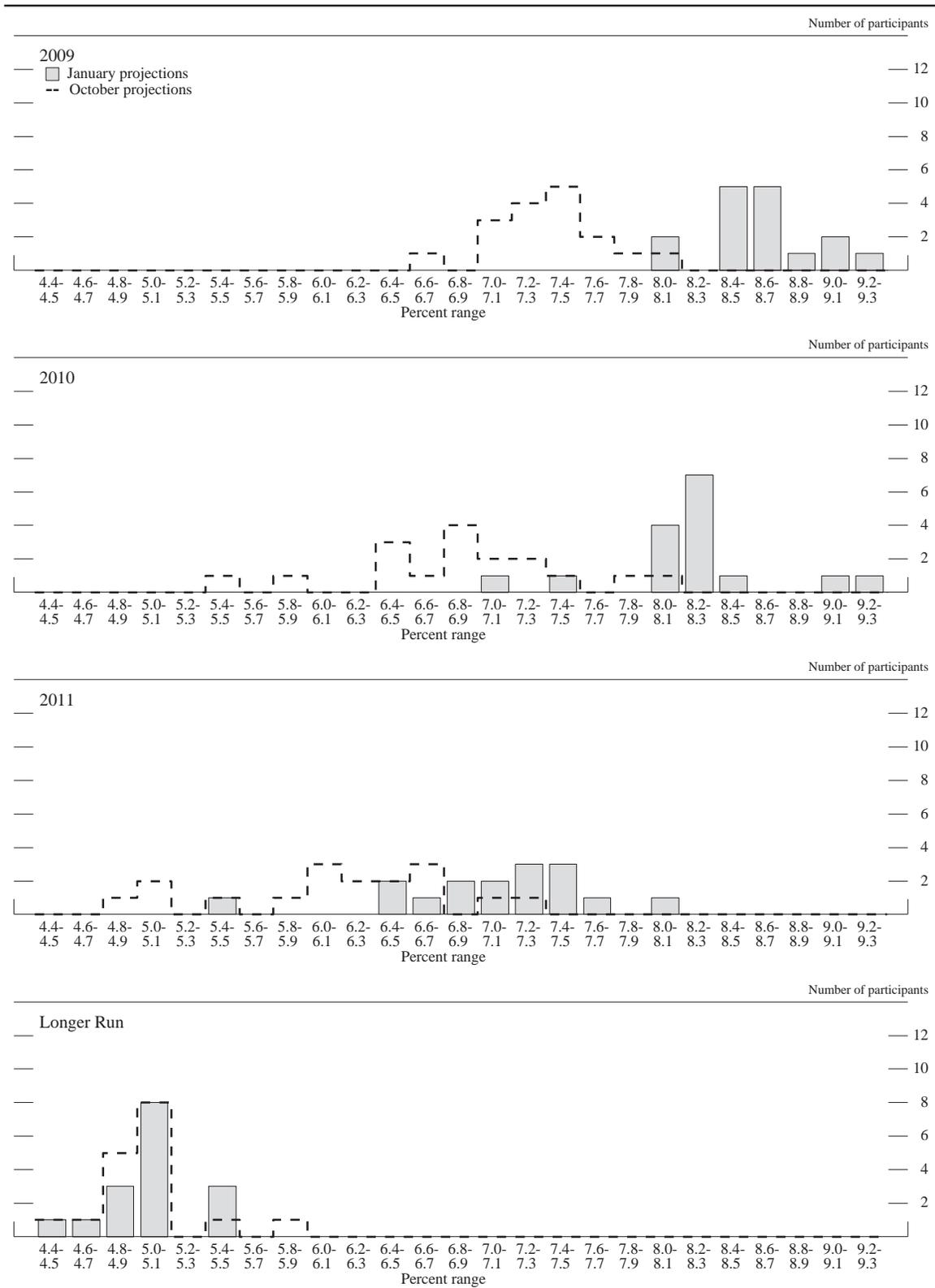


## Exhibit 4: GDP Growth Projections of FOMC Participants for 2009 to 2011 and over the Longer Run



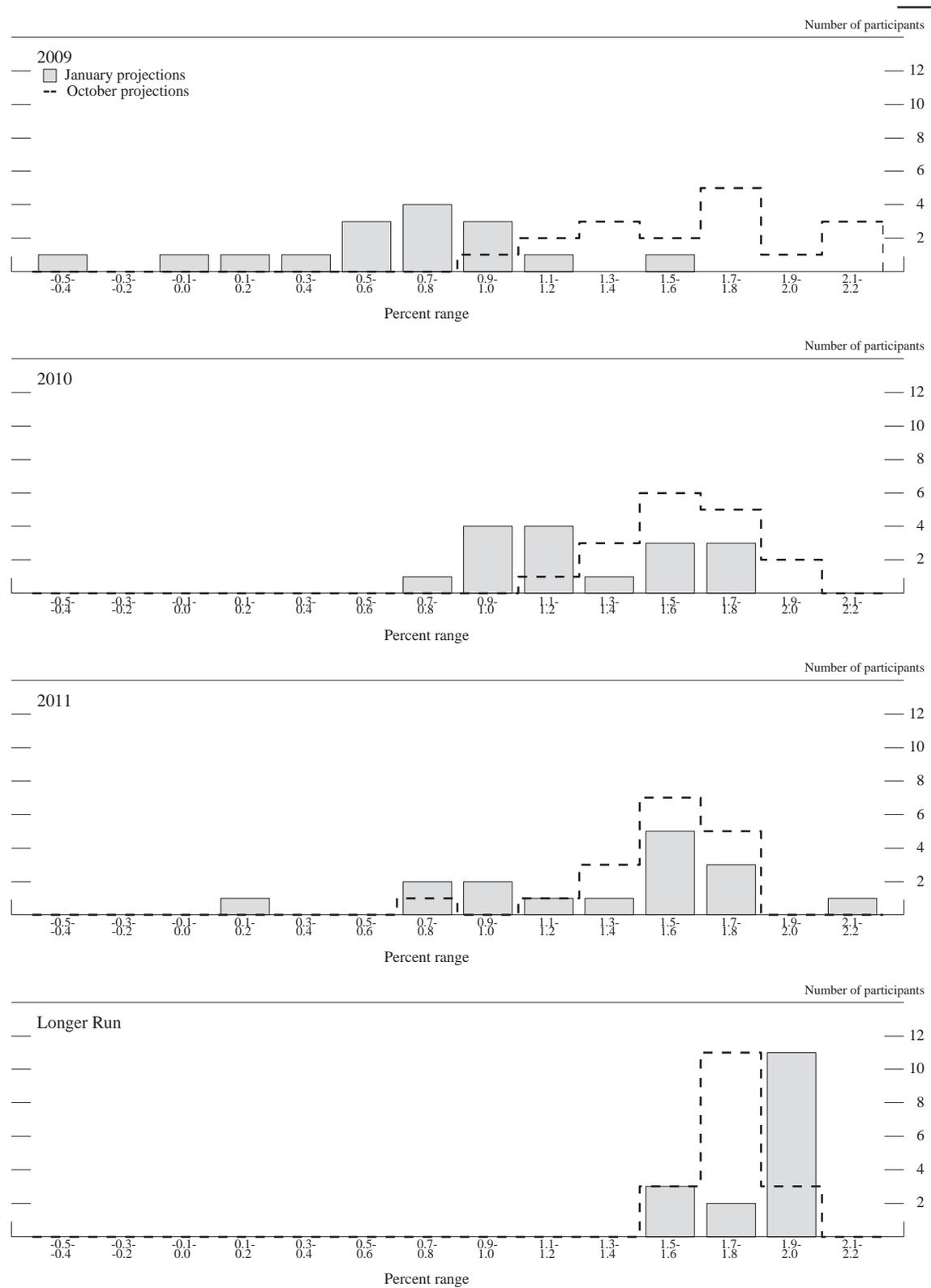
NOTE: Definitions of variables are in the general note to table 1.

# Exhibit 5: Unemployment Projections of FOMC Participants for 2009 to 2011 and over the Longer Run



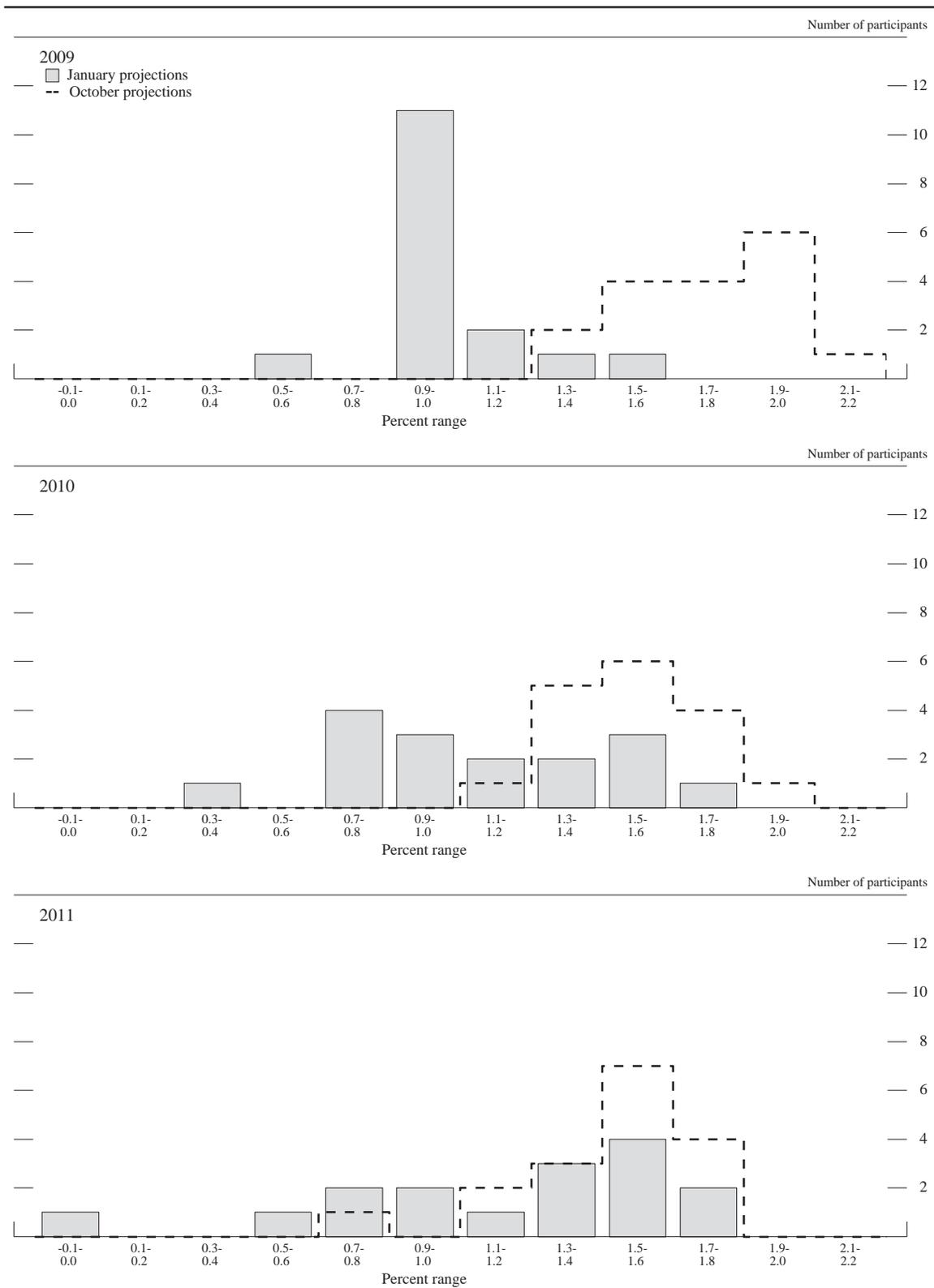
NOTE: Definitions of variables are in the general note to table 1.

## Exhibit 6: PCE Inflation Projections of FOMC Participants for 2009 to 2011 and over the Longer Run



NOTE: Definitions of variables are in the general note to table 1.

## Exhibit 7: Core PCE Inflation Projections of FOMC Participants for 2009 to 2011



NOTE: Definitions of variables are in the general note to table 1.

**Appendix 4: Materials used by Mr. Madigan**

**Class I FOMC – Restricted Controlled (FR)**

**Material for  
FOMC Briefing on Monetary Policy Alternatives**

Brian Madigan  
January 27-28, 2009

## **Exhibit 1**

### **Unconventional Policy Tools**

1. Policy communications
  - About the federal funds rate
    - Quantitative expectations
    - Qualitative expectations
    - Conditional expectations
  - About other policy tools
    - Amounts and time frame
  - About inflation outlook and objectives
    - Explicit numerical inflation objective
    - Longer-term projections
    - Express concern about undesirably low inflation
2. Credit policies
  - Supporting or substituting for dysfunctional markets
3. Transactions under open market authority
  - Swap arrangements
  - MBS purchases
  - Treasury purchases

## Alternative A

1. The Federal Open Market Committee decided today to keep its target range for the federal funds rate at 0 to 1/4 percent. The Committee continues to anticipate that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for some time.
2. Information received since the Committee met in December suggests that the economy has weakened somewhat more than anticipated. Industrial production, housing starts, and employment have declined steeply, as consumers and businesses have cut back spending. Furthermore, global demand appears to be slowing significantly. Conditions in some financial markets have improved, in part reflecting government efforts to provide liquidity and strengthen financial institutions; nevertheless, credit conditions for households and firms remain extremely tight. The Committee anticipates that a gradual recovery in economic activity will begin later this year, but the downside risks to that outlook are ~~sizeable~~ significant.
3. In light of the declines in the prices of energy and other commodities in recent months and the prospects for an extended period of economic slack, the Committee expects that inflation pressures will remain subdued. Moreover, the Committee sees some risk that inflation could persist for a time below rates that best foster economic growth and price stability in the longer term.
4. The Federal Reserve will employ all available tools to promote the resumption of sustainable economic growth and to preserve price stability. The focus of the Committee's policy is to support the functioning of financial markets and stimulate the economy through open market operations and other measures that are likely to keep the size of the Federal Reserve's balance sheet at a high level.

[Alt. 1: To provide further support to activity in housing markets, the Committee decided to expand its purchases of agency mortgage-backed securities to \$750 billion this year from its previously announced total of \$500 billion. The Committee anticipates completing these purchases by the end of the third quarter. The Committee also is prepared to purchase longer-term Treasury securities as needed to improve overall financial conditions.]

[Alt. 2: To help improve overall financial conditions, the Committee decided to purchase up to \$250 billion of longer-term Treasury securities this year. The Federal Reserve continues to purchase large quantities of agency debt and mortgage-backed securities to provide support to the mortgage and housing markets, and it stands ready to expand such purchases as conditions warrant.]

Next month, the Federal Reserve will implement the Term Asset-Backed Securities Loan Facility to facilitate the extension of credit to households and small businesses. The Committee will continue to monitor carefully the size and composition of the Federal Reserve's balance sheet in light of evolving financial market developments and to assess whether expansions of or modifications to lending facilities would serve to further support credit markets and economic activity and help to preserve price stability.

## Alternative B

1. The Federal Open Market Committee decided today to keep its target range for the federal funds rate at 0 to 1/4 percent. The Committee continues to anticipate that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for some time.
2. Information received since the Committee met in December suggests that the outlook for the economy remains weak. Industrial production, housing starts, and employment have continued to decline steeply, as consumers and businesses have cut back spending. Furthermore, global demand appears to be slowing significantly. Conditions in some financial markets have improved, in part reflecting government efforts to provide liquidity and strengthen financial institutions; nevertheless, credit conditions for households and firms remain extremely tight. The Committee anticipates that a gradual recovery in economic activity will begin later this year, but the downside risks to that outlook are significant.
3. In light of the declines in the prices of energy and other commodities in recent months and the prospects for considerable economic slack, the Committee expects that inflation pressures will remain subdued in coming quarters.
4. The Federal Reserve will employ all available tools to promote the resumption of sustainable economic growth and to preserve price stability. The focus of the Committee's policy is to support the functioning of financial markets and stimulate the economy through open market operations and other measures that are likely to keep the size of the Federal Reserve's balance sheet at a high level. The Federal Reserve continues to purchase large quantities of agency debt and mortgage-backed securities to provide support to the mortgage and housing markets, and it stands ready to expand the quantity of such purchases and the duration of the purchase program as conditions warrant. The Committee also is prepared to purchase longer-term Treasury securities ~~as needed to improve~~ if evolving circumstances indicate that such transactions would be particularly effective in improving conditions in private credit markets. Next month, the Federal Reserve will implement the Term Asset-Backed Securities Loan Facility to facilitate the extension of credit to households and small businesses. The Committee will continue to monitor carefully the size and composition of the Federal Reserve's balance sheet in light of evolving financial market developments and to assess whether expansions of or modifications to lending facilities would serve to further support credit markets and economic activity and help to preserve price stability.

### **Alternative C**

1. The Federal Open Market Committee decided today to keep its target range for the federal funds rate at 0 to 1/4 percent. The Committee continues to anticipate that economic conditions are likely to warrant exceptionally low levels of the federal funds rate for some time.
2. Information received since the Committee met in December suggests that the outlook for the economy remains weak. Industrial production, housing starts, and employment have continued to decline steeply, as consumers and businesses have cut back spending. Conditions in some financial markets have improved, in part reflecting government efforts to provide liquidity and strengthen financial institutions; nevertheless, credit conditions for households and firms remain tight. The Committee anticipates that a recovery in economic activity will begin later this year, supported in part by additional fiscal measures and the monetary and liquidity policies already in place.
3. The declines in the prices of energy and other commodities in recent months have significantly reduced overall price inflation. With economic slack likely to persist, the Committee expects that both overall and core consumer price inflation will remain low.
4. The Federal Reserve will employ all available tools to promote the resumption of sustainable economic growth and to preserve price stability. The focus of the Committee's policy is to support the functioning of financial markets and stimulate the economy through open market operations and other measures that are likely to keep the size of the Federal Reserve's balance sheet at a high level. The Federal Reserve continues to purchase large quantities of agency debt and mortgage-backed securities to provide support to the mortgage and housing markets. Next month, the Federal Reserve will implement the Term Asset-Backed Securities Loan Facility to facilitate the extension of credit to households and small businesses. The Committee will continue to monitor carefully the size and composition of the Federal Reserve's balance sheet in light of evolving financial market developments.

## December FOMC Statement

The Federal Open Market Committee decided today to establish a target range for the federal funds rate of 0 to 1/4 percent.

Since the Committee's last meeting, labor market conditions have deteriorated, and the available data indicate that consumer spending, business investment, and industrial production have declined. Financial markets remain quite strained and credit conditions tight. Overall, the outlook for economic activity has weakened further.

Meanwhile, inflationary pressures have diminished appreciably. In light of the declines in the prices of energy and other commodities and the weaker prospects for economic activity, the Committee expects inflation to moderate further in coming quarters.

The Federal Reserve will employ all available tools to promote the resumption of sustainable economic growth and to preserve price stability. In particular, the Committee anticipates that weak economic conditions are likely to warrant exceptionally low levels of the federal funds rate for some time.

The focus of the Committee's policy going forward will be to support the functioning of financial markets and stimulate the economy through open market operations and other measures that sustain the size of the Federal Reserve's balance sheet at a high level. As previously announced, over the next few quarters the Federal Reserve will purchase large quantities of agency debt and mortgage backed securities to provide support to the mortgage and housing markets, and it stands ready to expand its purchases of agency debt and mortgage-backed securities as conditions warrant. The Committee is also evaluating the potential benefits of purchasing longer-term Treasury securities. Early next year, the Federal Reserve will also implement the Term Asset-Backed Securities Loan Facility to facilitate the extension of credit to households and small businesses. The Federal Reserve will continue to consider ways of using its balance sheet to further support credit markets and economic activity.