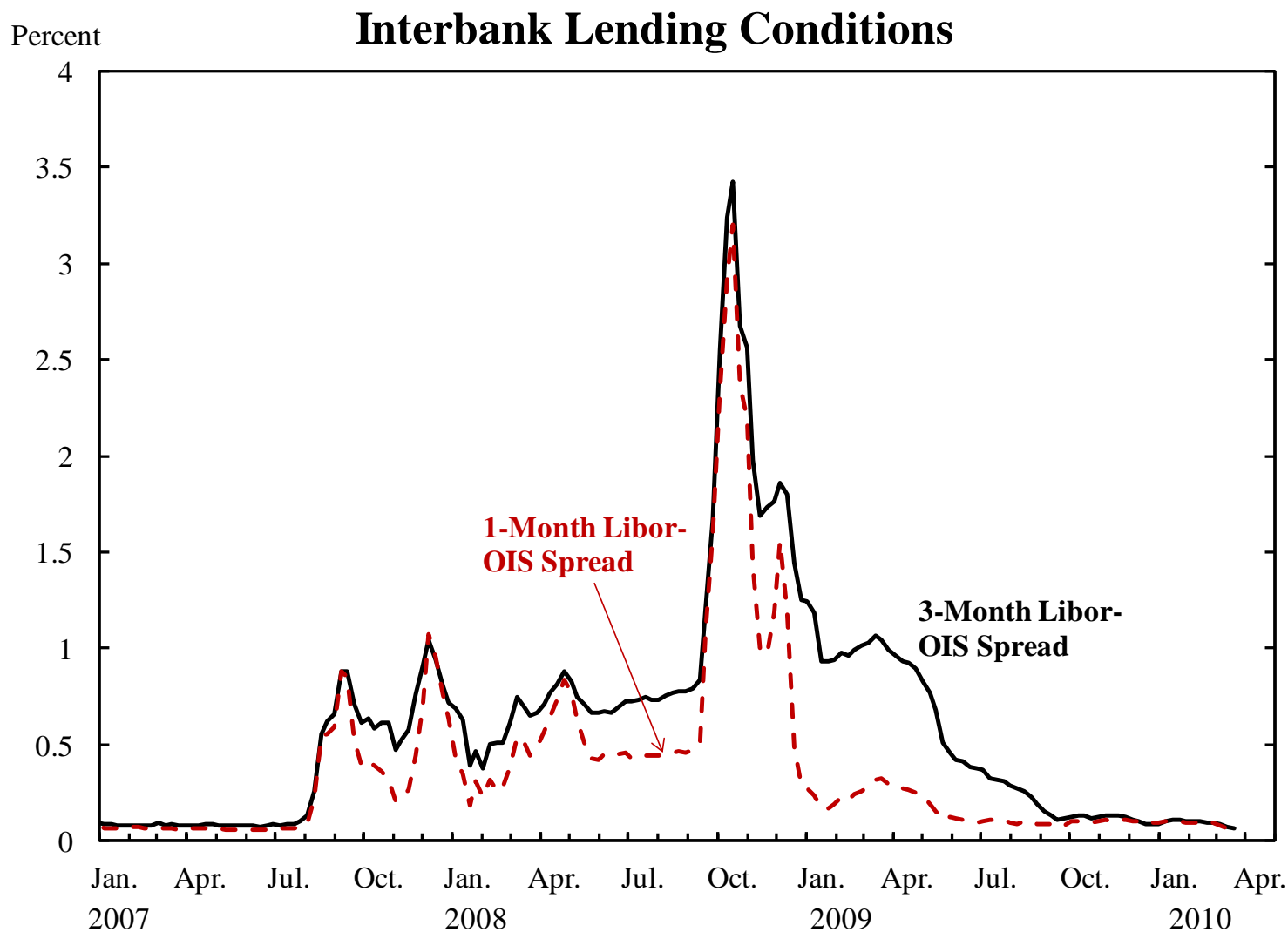# Discussion of
"Market Responses to Policy Initiatives During the Global Financial Crisis"

John C. Williams
Federal Reserve Bank Of San Francisco
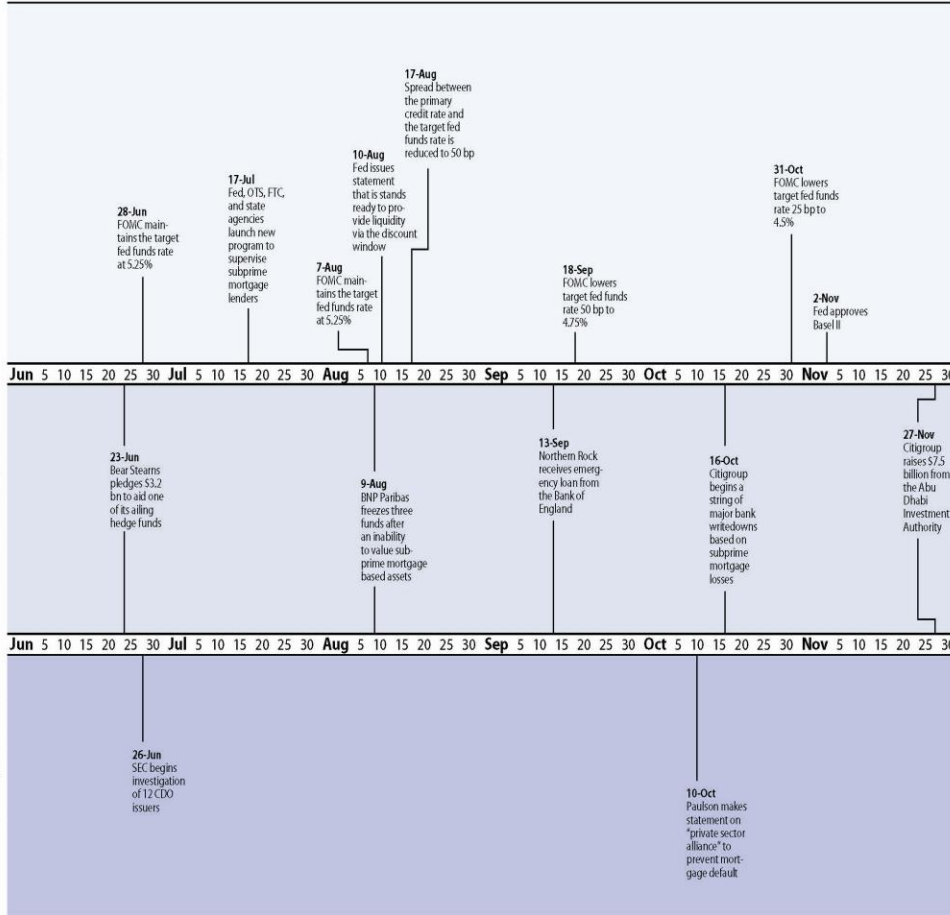
Question: Which policy interventions affected Libor-OIS spreads?

Interbank Lending Conditions

Methodology: Event study

Financial Turmoil Timeline (June 2007 - November 2007)

Fed Policy Actions

28-Jun FOMC maintains the target fed funds rate at 5.25%

17-Jul Fed, OTS, FTC, and state agencies launch new program to supervise subprime mortgage lenders

7-Aug FOMC maintains the target fed funds rate at 5.25%

10-Aug Fed issues statement that is stands ready to provide liquidity via the discount window

17-Aug Spread between the primary credit rate and the target fed funds rate is reduced to 50 bp

18-Sep FOMC lowers target fed funds rate 50 bp to 4.75%

31-Oct FOMC lowers target fed funds rate 25 bp to 4.5%

2-Nov Fed approves Basel II

Market Events

23-Jun Bear Stearns pledges $3.2 bn to aid one of its ailing hedge funds

9-Aug BNP Paribas freezes three funds after an inability to value subprime mortgage based assets

13-Sep Northern Rock receives emergency loan from the Bank of England

16-Oct Citigroup begins a string of major bank writedowns based on subprime mortgage losses

27-Nov Citigroup raises $7.5 billion from the Abu Dhabi Investment Authority

Other Policy Actions

26-Jun SEC begins investigation of 12 CDO issuers

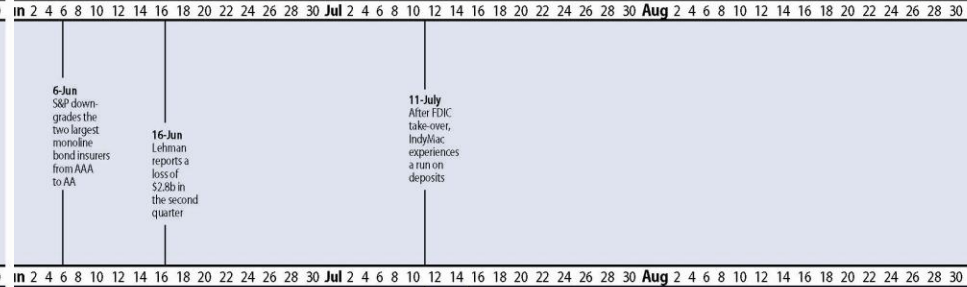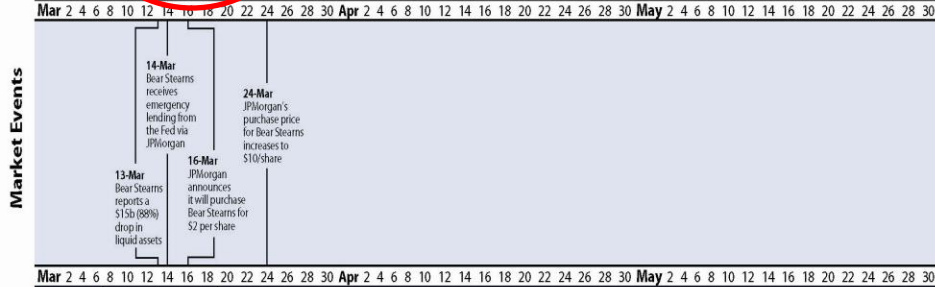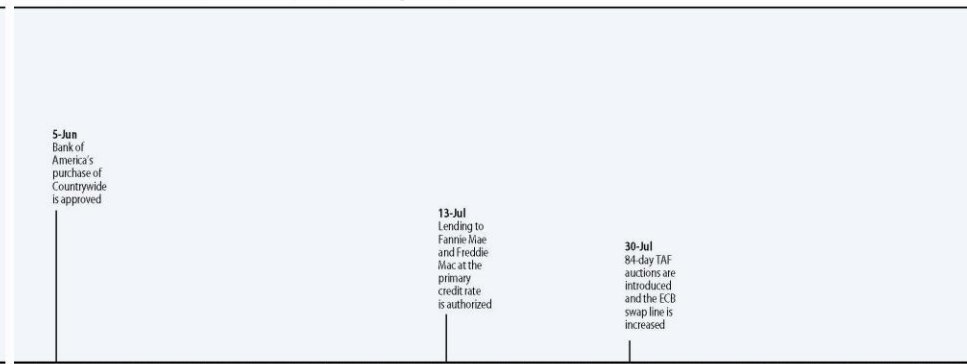**10-Oct** Paulson makes statement on "private sector alliance" to prevent mortgage default

Click on any event for further information. This timeline is updated on the first of every month. If you encounter broken links or have other feedback, please email lauri.feldman@ny.frb.org.

Financial Turmoil Timeline (December 2007 - February 2008)
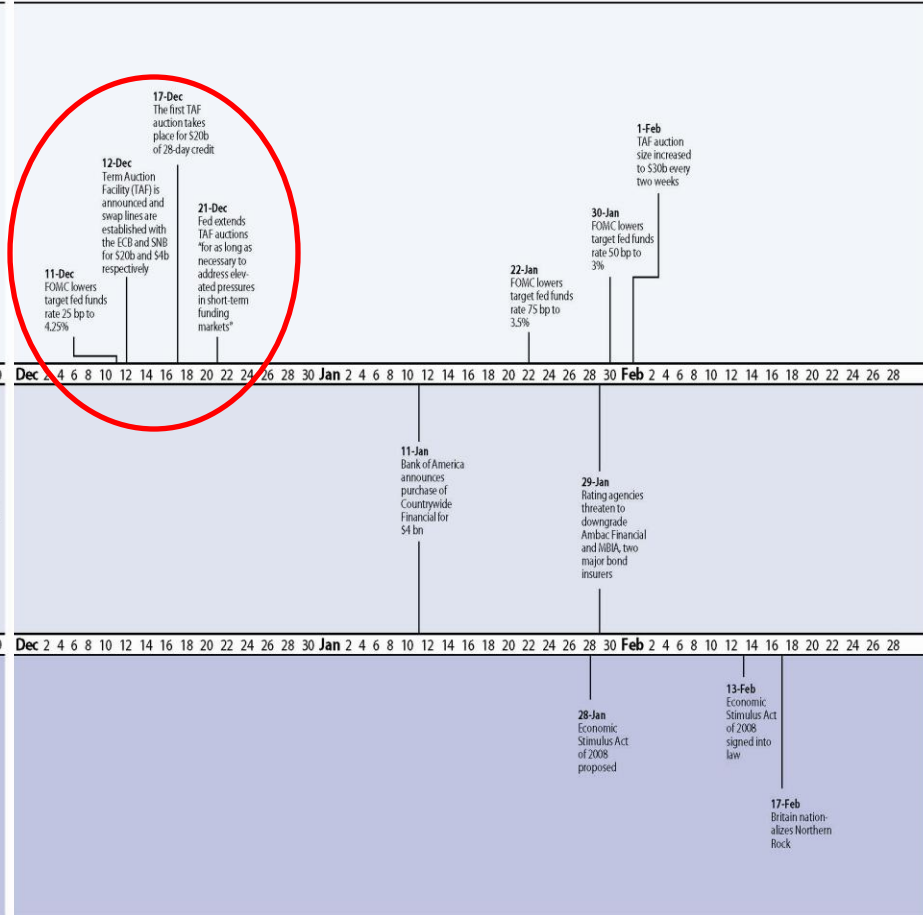
11-Dec FOMC lowers target fed funds rate 25 bp to 4.25%

12-Dec Term Auction Facility (TAF) is announced and swap lines are established with the ECB and SNB for $20b and $4b respectively

17-Dec The first TAF auction takes place for $20b of 28-day credit

21-Dec Fed extends TAF auctions "for as long as necessary to address elevated pressures in short-term funding markets"

22-Jan FOMC lowers target fed funds rate 75 bp to 3.5%

30-Jan FOMC lowers target fed funds rate 50 bp to 3%

1-Feb TAF auction size increased to $30b every two weeks

11-Jan Bank of America announces purchase of Countrywide Financial for $4 bn

29-Jan Rating agencies threaten to downgrade Ambac Financial and MBIA, two major bond insurers

28-Jan Economic Stimulus Act of 2008 proposed

13-Feb Economic Stimulus Act of 2008 signed into law
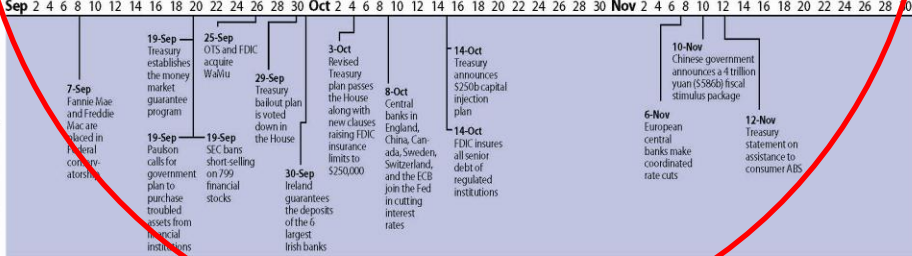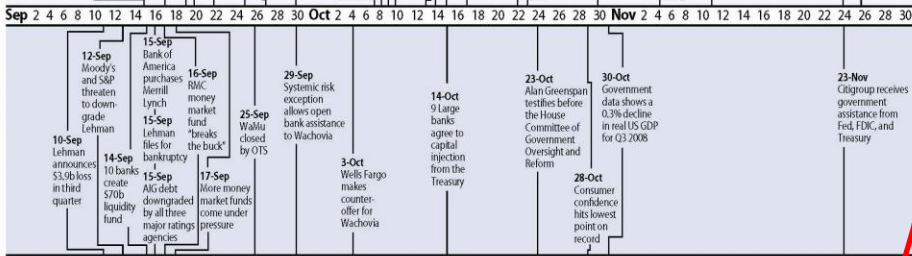
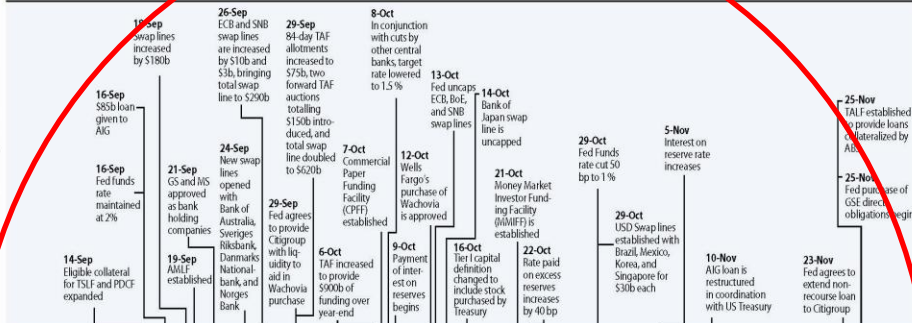**17-Feb** Britain nationalizes Northern Rock

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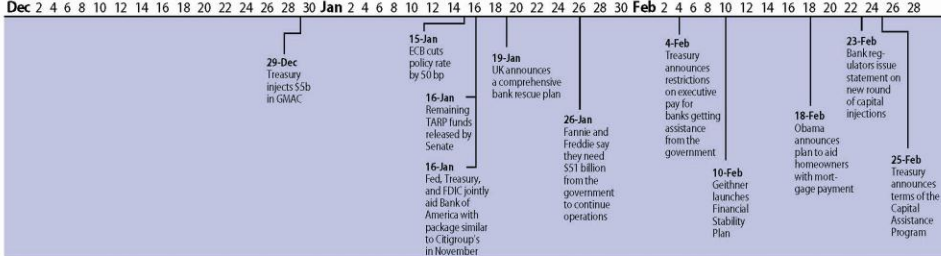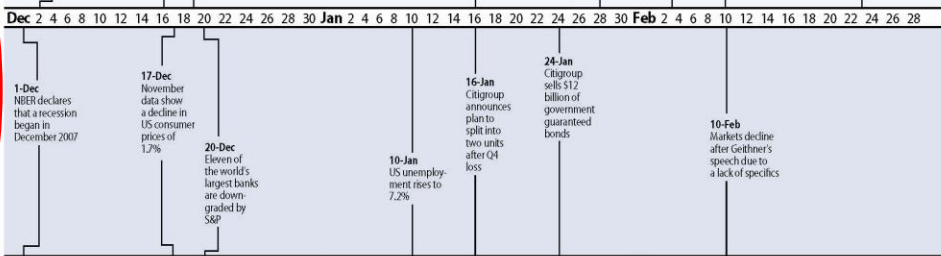
Event Study: Key Events

Event Study: Key Events

Event Study: Key Events

Financial Turmoil Timeline (March 2009 - May 2009)

Fed Policy Actions

2-Mar — Fed and Treasury announce joint restructuring plan for AIG

3-Mar — TALF launch

15-Mar — In his 60 Minutes interview, Bernanke makes first public use of the term "green shoots" by a Fed official during the crisis

18-Mar — Announcement of program to buy $300b worth of Treasuries and to increase the purchase of agency debt

18-Mar — Fed funds rate maintained at 0-25bp

19-Mar — TALF eligible securities expanded

23-Mar — Fed and Treasury release joint statement clarifying the roles of the two organizations

6-Apr — Fed creates foreign currency swap agreements with the ECB, BoJ, BoE, and SNB

1-May — TALF eligible collateral expanded

7-May — Stress test results released

29-Apr — FOMC keeps target rate at 0-25 bp

19-May — TALF announces acceptance of legacy CMBS

Market Events

2-Mar — AIG announces $61.7b fourth quarter loss, the largest in US corporate history

2-Apr — Financial Accounting Standards Board (FASB) relaxes mark-to-market accounting rules

9-Apr — Wells Fargo reports record profit in Q1 2009

13-Apr — Goldman Sachs moves to raise $5 billion to pay back TARP funding

5-May — Evidence of easing term funding conditions comes as Libor falls below 1%

11-May — Following stress test results, bank raise $7.5 billion in new capital

12-May — Bank of America sells its stake in China Construction Bank for $7.3 billion

29-May — Government statistics show an annualized drop in GDP of 5.7% for Q1 2009

Other Policy Actions

1-Mar — AIG receives $30b in capital in exchange for government control of two divisions of the company

2-Mar — Fed and Treasury announce joint restructuring plan for AIG

3-Mar — Treasury releases TALF details

23-Mar — Treasury releases details of the Public-Private Investment Program

2-Apr — G20 meets in London

2-Apr — ECB cuts policy rate to 1.25%

29-Apr — $3.4 trillion budget is approved by Congress

7-May — ECB cuts policy rate by 25bp to 1%

7-May — Joint statement released ahead of Capital Assessment Program results

8-May — Fannie Mae requests $19 billion from the Treasury after $23.2 billion quarterly loss

13-May — US Treasury releases proposal to regulate OTC derivatives

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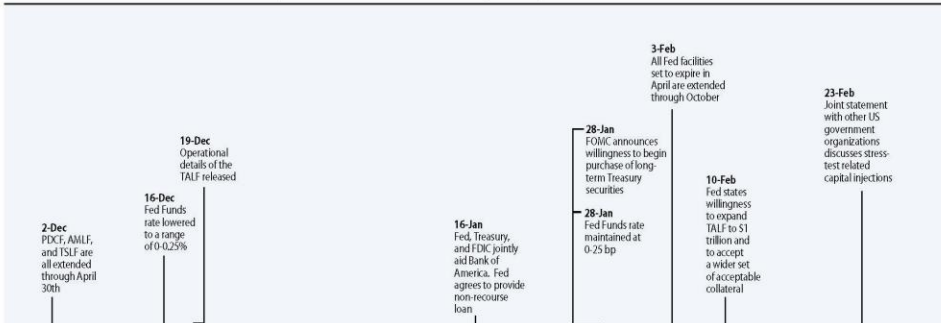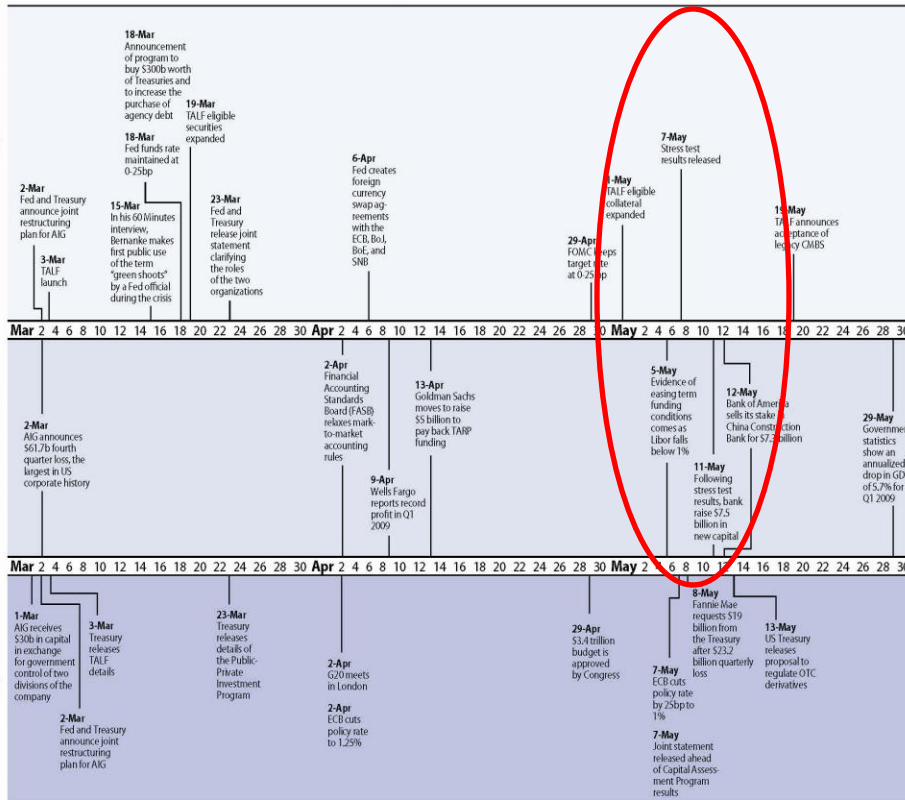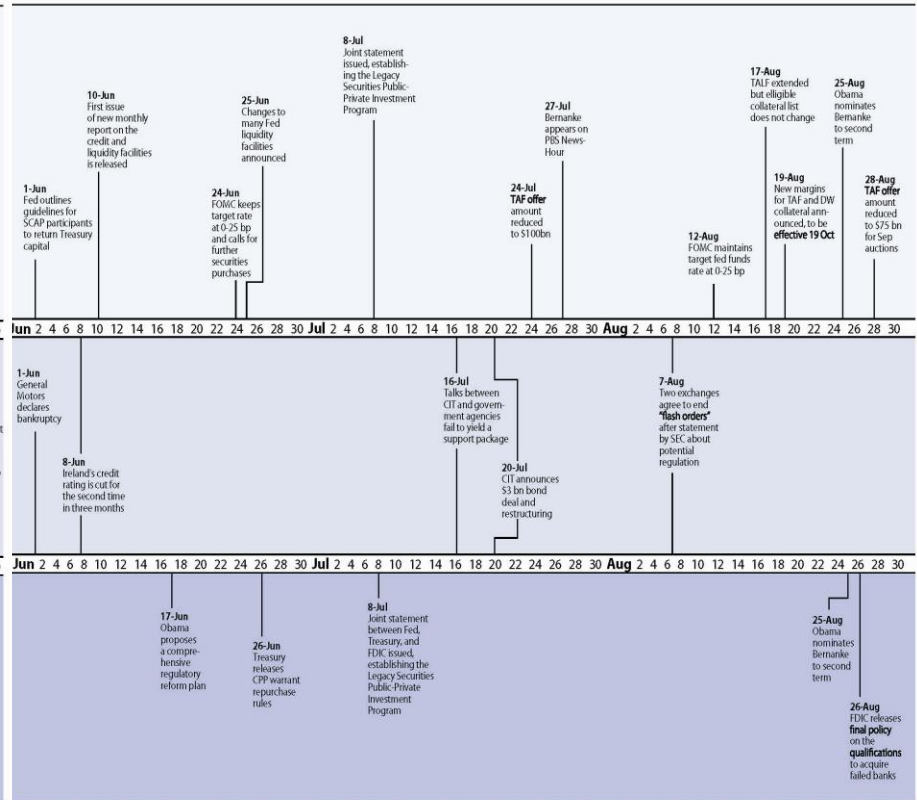
Financial Turmoil Timeline (June 2009 - August 2009)

Fed Policy Actions

1-Jun — Fed outlines guidelines for SCAP participants to return Treasury capital

10-Jun — First issue of new monthly report on the credit and liquidity facilities is released

24-Jun — FOMC keeps target rate at 0-25 bp and calls for further securities purchases

25-Jun — Changes to many Fed liquidity facilities announced

8-Jul — Joint statement issued, establishing the Legacy Securities Public-Private Investment Program

24-Jul — TAF offer amount reduced to $100bn

27-Jul — Bernanke appears on PBS News-Hour

12-Aug — FOMC maintains target fed funds rate at 0-25 bp

17-Aug — TALF extended but eligible collateral list does not change

19-Aug — New margins for TAF and DW collateral announced, to be effective 19 Oct

25-Aug — Obama nominates Bernanke to second term

28-Aug — TAF offer amount reduced to $75 bn for Sep auctions

Market Events

1-Jun — General Motors declares bankruptcy

8-Jun — Ireland's credit rating is cut for the second time in three months

16-Jul — Talks between CIT and government agencies fail to yield a support package

20-Jul — CIT announces $3 bn bond deal and restructuring

7-Aug — Two exchanges agree to end "flash orders" after statement by SEC about potential regulation

Other Policy Actions

17-Jun — Obama proposes a comprehensive regulatory reform plan

26-Jun — Treasury releases CPP warrant repurchase rules

8-Jul — Joint statement between Fed, Treasury, and FDIC issued, establishing the Legacy Securities Public-Private Investment Program

25-Aug — Obama nominates Bernanke to second term

26-Aug — FDIC releases final policy on the qualifications to acquire failed banks

Click on any event for further information. This timeline is updated on the first of every month. If you encounter broken links or have other feedback, please email lauri.feldman@ny.frb.org.

Overview of Results
(Table 3)

	Subprime Phase	Global Phase
Lower interest rates	**Good**	**Good**
Liquidity (domestic)	**Bad**	**Good**
Swaps	**Good**	**Bad**
Guarantees	**Good**	**Bad**
Bailouts/failures	**Bad**	**Bad**
Credit easing, QE, recapitalization, asset purchases	**Mixed**	**Mixed**

Comments

- Ambitious multinational empirical study of effects of a wide gamut of policies during crisis using panel of events.

- Focus on announcement effects avoids some difficult identification issues (but not all!)

- Most provocative result: standard monetary policy actions/inactions have large effect on Libor-OIS spreads.

Comments

- Should include complete event listing in appendix.

- Look more carefully at effects on CDS rates, bond spreads, equity prices, etc. and connections between these variables.

- Focus on major policy actions; for example, 12/12/07 TAF/swap announcement had large effect, but other actions didn't.

- Stress test results is an important date.
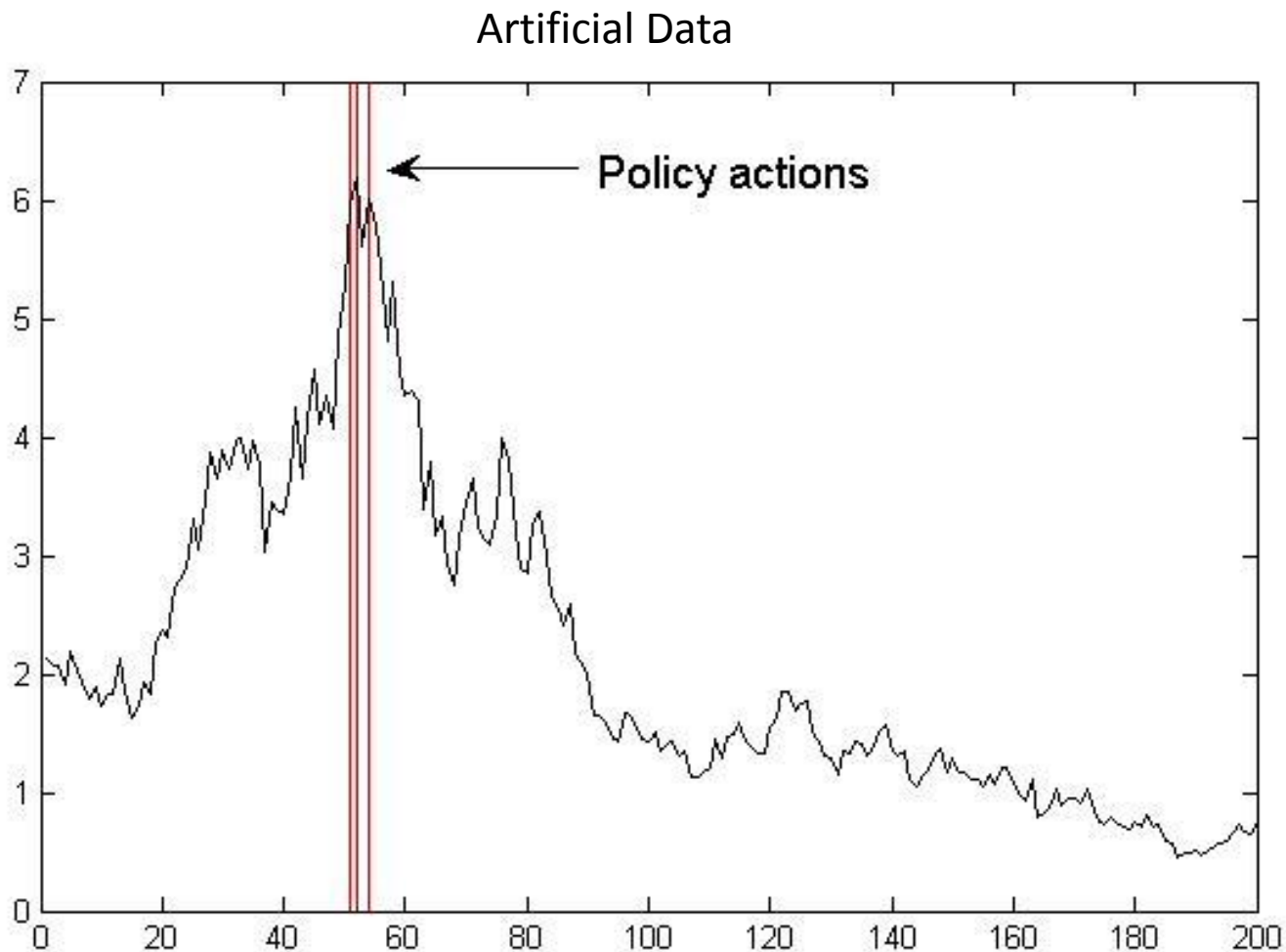
- Thorny problem of endogeneity of policy actions

Decomposing the Effects of Policy Actions

Average CDS Spread for the Five Largest SCAP BHCs
Weekly average; BoA, JPM, Citigroup, Wells Fargo, Goldman Sachs
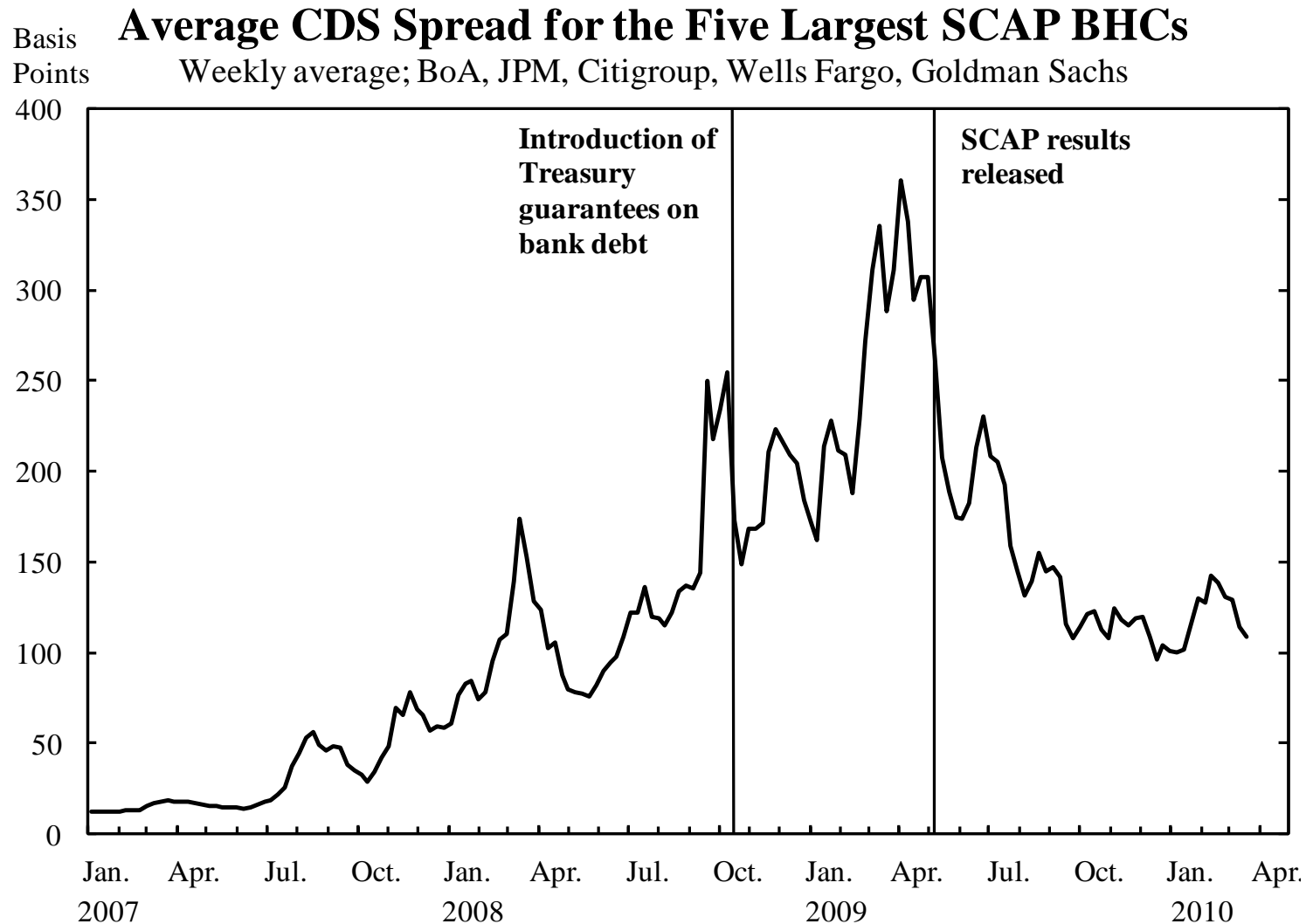
LOLR vs. Policies Directed at Solvency Fears

Interbank Lending Conditions

Percent

Announcement of Term Auction Facility

Introduction of Treasury guarantees on bank debt

SCAP results released

1-Month Libor-OIS Spread

3-Month Libor-OIS Spread
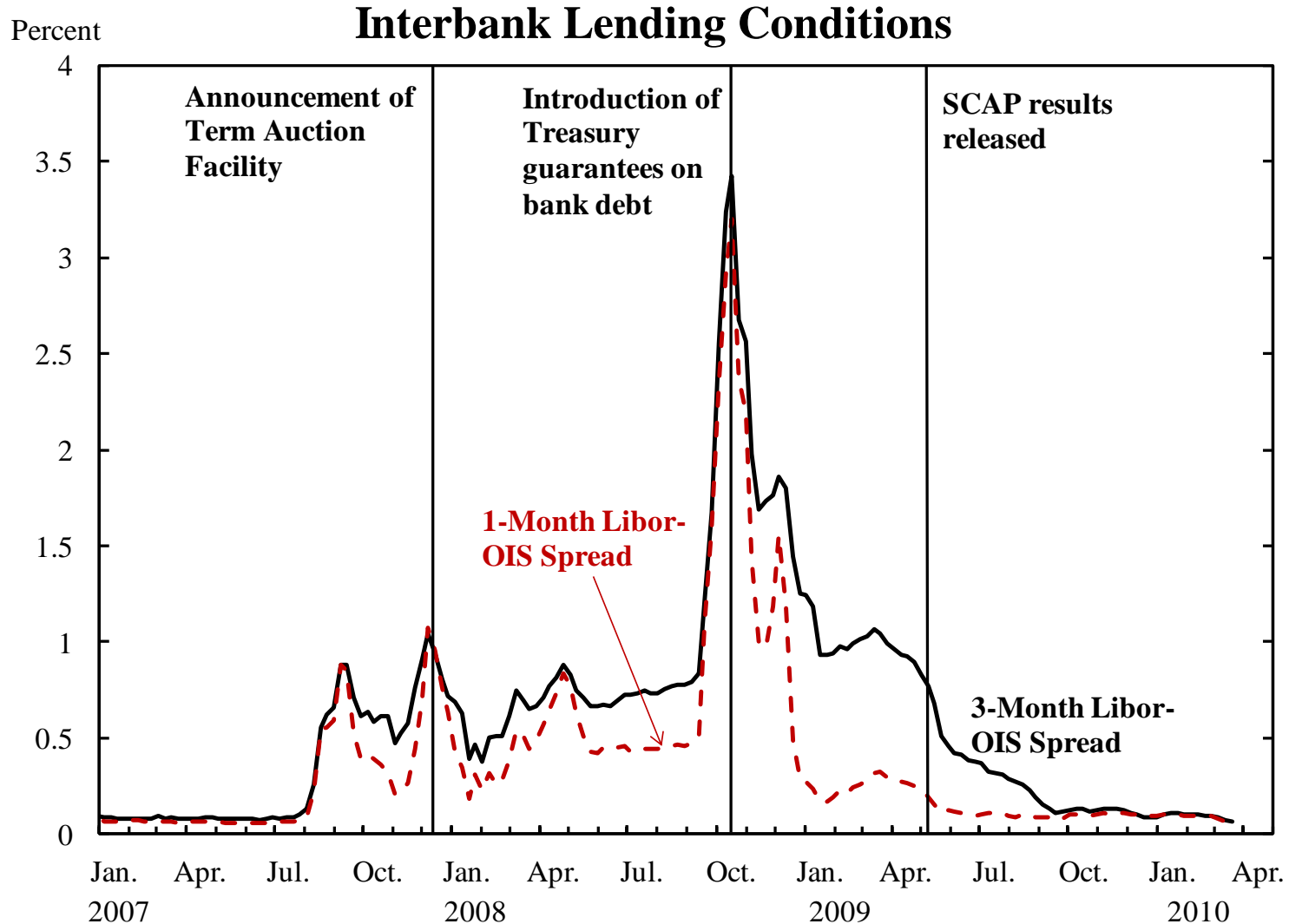
Policy Endogeneity
and Tests of Policy Effectiveness

Artificial Data

Monte Carlo Experiment

- Assume true DGP is a stationary process:

$$y(t) = 0.99*y(t-1) + u(t), \quad u \sim N(0,1)$$

- Define a "crisis" as occurring whenever $y(t) > 2.5*\sigma_y$

- Assume there is a policy action [z(t)=1] in each crisis period.

- Policy has no effect by assumption.

Monte Carlo Experiment

- Regression:

    $y(t)-y(t-1) = a + b1*z(t-1) + e(t)$ (1)

    $y(t)-y(t-3) = a + b3*z(t-3) + e(t)$ (2)

- Estimation results using simulated data:

    $b1 = - 0.2$ (1)

    $b3 = -0.5$ (2)

Challenges in Evaluating Policy Actions

- This example illustrates potential spurious estimates of policy actions even when policy is ineffective.

- The opposite issue can occur when policy is effective but occurs in response to shocks. In this case, estimated policy effect may be biased toward zero.

- Finally, announcements contain information regarding other future policy actions, so it is difficult to discern whether the action itself is effective or if it is the signal of future action.

Financial Turmoil Timeline (September 2009 - November 2009)

Fed Policy Actions

23-Sep Target rate kept at 0-25 bp, agency purchases set to expire after Q1 2010

24-Sep TSLF and TAF offer amount reductions announced

5-Oct Changes to process for evaluating ABS pledged to TALF announced

22-Oct Proposed guidance on bank incentive compensation released

4-Nov FOMC maintains target rate at 0-25 bp, citing subdued inflation

Sep 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Oct 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Nov 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

Market Events

25-Sep Trade volumes for July rose at fastest rate in over 5 years

1-Nov CIT Group files for bankruptcy with support of debt holders

13-Nov Federal Housing Finance Agency capital reserves fall to 0.53%

26-Nov Dubai World requests 6-month debt standstill

Sep 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Oct 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Nov 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30

Other Policy Actions

9-Sep FDIC board approves expiration of Temporary Liquidity Guarantee Program on 31 Oct

17-Sep SEC proposes flash order ban

17-Sep SEC approves new rules to govern rating agencies

18-Sep Treasury Guarantee Program for Money Markets expires

29-Sep FDIC requires insured institutions to prepay quarterly risk-based assessments to strengthen its cash position

22-Oct Treasury issues first rulings on executive compensation for 7 firms that recieved TARP assistance

9-Nov Treasury Capital Assistance Program will close without making any investments

17-Nov President Obama establishes Financial Fraud Enforcement Task Force

Click on any event for further information. This timeline is updated on the first of every month. If you encounter broken links or have other feedback, please email lauri.feldman@ny.frb.org.

Financial Turmoil Timeline (December 2009 - February 2010)

Fed Policy Actions

16-Dec Target rate kept at 0-25 bp, agency purchases on track to be completed by Q1 2010

28-Dec Board proposes amending Reg. D to establish a term deposit facility

Dec 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Jan 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Feb 2 4 6 8 10 12 14 16 18 20 22 24 26 28

Market Events

9-Dec Bank of America repays TARP funds

23-Dec Citibank and Wells Fargo repay TARP funds

Dec 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Jan 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 Feb 2 4 6 8 10 12 14 16 18 20 22 24 26 28

Other Policy Actions

9-Dec Treasury extends TARP until October 2010

24-Dec Treasury uncaps the available capital for PSPAs with Fannie Mae and Freddie Mac

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