The Federal Reserve Board

Meeting of the Federal Open Market Committee
April 29-30, 2008 Presentation Materials -- Text Version

Presentation Materials (PDF)

Pages 192 to 266 of the Transcript

Appendix 1: Materials used by Mr. Dudley

Class II FOMC - Restricted FR

Page 1

Top panel
(1)

Title: U.S. Equity Indices Stabilize
Series: S&P 500 index, Nasdaq index, and S&P 500 financials index
Horizon: August 1, 2007 - April 25, 2008
Description: U.S. equity indices stabilize. Financials continue to underperform against U.S. equity indices.

Source: Bloomberg

Middle panel
(2)

Title: Corporate Credit Spreads Decline
Series: Investment grade and high-yield corporate debt spreads and yields
Horizon: January 1, 2007 - April 25, 2008
Description: Investment grade and high-yield debt option-adjusted spreads narrow from levels seen in March. Yields on high-yield debt decline, while yields on investment grade debt remain stable.

Source: Bloomberg

Bottom panel
(3)

Title: Global Credit Default Swap Spreads Narrow
Series: iTraxx Crossover and investment grade CDX
Horizon: March 1, 2007 - April 25, 2008
Description: ITRAXX Crossover and investment grade CDX spreads have narrowed.

Source: JP Morgan

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Top panel
(4)

Title: Implied Volatility Decreases
Series: VIX index, MOVE index, 1-month Euro-Dollar volatility index, and 1-month Dollar-Yen volatility index
Horizon: January 1, 2007 - April 25, 2008
Description: During the intermeeting period, implied volatility across asset classes has decreased.

Source: Bloomberg

Middle panel
(5)

Title: Prices for AAA-Rated Tranches on ABX Indices Rise
Series: Prices on the 2006-01, 2006-02, 2007-01, and 2007-02 vintages of the AAA-rated tranche of the ABX
Horizon: January 1, 2007 - April 25, 2008
Description: Prices for the AAA-rated tranche of the 06-01, 06-02, 07-01, and 07-02 ABX vintages have risen during the intermeeting period.

Source: JP Morgan

Bottom panel
(6)

Title: Ten and Thirty Year AAA-Rated Municipals Recover
Series: Ratio of the 10-Year AAA-rated municipal yields to the 10-Year Treasury yield, and ratio of the 30-Year AAA-rated municipal yield to the 30-Year Treasury yield
Horizon: January 1, 2007 - April 25, 2008
Description: The ratio of 10- and 30-year AAA-rated municipal debt yields to Treasury yields declined.

Source: Bloomberg

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Top panel
(7)

Title: Investment Bank Equity Prices Stabilize
Series: Equity prices for Morgan Stanley, Goldman Sachs, Lehman Brothers, and Merrill Lynch
Horizon: January 1, 2008 - April 25, 2008
Description: Equity prices for Morgan Stanley, Goldman Sachs, Lehman Brothers, and Merrill Lynch have stabilized.

Source: Markit and Bloomberg

Middle panel
(8)

Title: Investment Bank CDS Spreads Narrow
Series: Credit default swap spreads for Morgan Stanley, Goldman Sachs, Lehman Brothers, and Merrill Lynch

Horizon: January 1, 2008 - April 25, 2008
Description: Credit default swap spreads for Morgan Stanley, Goldman Sachs, Lehman Brothers, and Merrill Lynch have narrowed.

Source: Markit and Bloomberg

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Top panel
(9) Collateral Haircuts Stabilize at Higher Levels

February 1, 2008 - April 9, 2008

		Maturity								
		Overnight			1-Month			3-Month		
COLLATERAL	***Date***	**Average**	**High**	**Low**	**Average**	**High**	**Low**	**Average**	**High**	**Low**
Treasury	9-Apr	**0.5%**	1.5%	0.0%	**0.6%**	1.5%	0.0%	**0.7%**	2.0%	0.0%
	10-Mar	0.3%	1.5%	0.0%	0.4%	1.5%	0.0%	0.4%	1.5%	0.0%
	3-Mar	0.2%	1.5%	0.0%	0.3%	1.5%	0.0%	0.4%	1.5%	0.0%
	1-Feb	0.2%	1.5%	0.0%	0.2%	1.5%	0.0%	0.3%	1.5%	0.0%
Agency Debt	9-Apr	**1.3%**	3.5%	0.0%	**2.1%**	7.5%	0.0%	1.6%	5.0%	0.0%
	10-Mar	0.7%	2.0%	0.0%	1.9%	7.5%	0.0%	1.7%	5.5%	0.0%
	3-Mar	0.6%	2.0%	0.0%	1.1%	3.0%	0.0%	1.4%	4.5%	0.0%
	1-Feb	0.5%	2.0%	0.0%	1.1%	3.0%	0.0%	1.2%	4.5%	0.0%
Agency MBS	9-Apr	5%	7%	3%	**6%**	8%	3%	6%	9%	3%
	10-Mar	5%	7%	3%	5%	8%	3%	6%	10%	3%
	3-Mar	3%	3%	3%	3%	3%	3%	4%	5%	3%
	1-Feb	3%	5%	2%	3%	6%	3%	4%	5%	3%
Non-agency MBS										
Prime	9-Apr	**21%**	28%	15%	**27%**	35%	15%	**25%**	35%	15%
	10-Mar	18%	28%	10%	19%	28%	12%	19%	28%	15%
	3-Mar	16%	18%	15%	16%	18%	15%	18%	18%	18%
	1-Feb	13%	20%	5%	11%	20%	4%	14%	20%	7%
Alt-A	9-Apr	**38%**	43%	30%	**36%**	43%	30%	**33%**	43%	23%
	10-Mar	28%	43%	18%	28%	43%	18%	30%	43%	18%
	3-Mar	14%	18%	10%	16%	20%	10%			
	1-Feb	19%	43%	10%	16%	43%	10%	28%	43%	13%
Corporate Debt										
High Grade	9-Apr	**17%**	25%	10%	**18%**	25%	11%	**19%**	25%	12%
	10-Mar	12%	25%	5%	15%	25%	5%	18%	25%	15%
	3-Mar	11%	25%	3%	13%	25%	3%	18%	25%	15%

		Maturity								
		Overnight			1-Month			3-Month		
COLLATERAL	***Date***	**Average**	**High**	**Low**	**Average**	**High**	**Low**	**Average**	**High**	**Low**
	1-Feb	10%	25%	3%	10%	25%	3%	13%	25%	3%
High Yield	9-Apr	**36%**	70%	19%	**39%**	70%	25%	**39%**	70%	25%
	10-Mar	28%	70%	10%	27%	70%	15%	36%	70%	25%
	3-Mar	26%	70%	9%	27%	70%	10%	35%	70%	20%
	1-Feb	25%	70%	6%	24%	70%	10%	28%	70%	10%

Source: Survey of 14 Hedge Funds and 1 REIT

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Top panel
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Title: Bank Term Funding Pressures Revive: One-Month LIBOR - OIS Spread
Series: Spreads between one-month Libor rates and one-month overnight index swap rates for U.S., U.K., and Euro-Area
Horizon: August 14, 2007 - April 28, 2008
Description: The spreads between one-month Libor rates and one-month overnight index swap rates for U.S., U.K., and Euro-Area continue to rise.

Source: Bloomberg

Middle panel
(11)

Title: Three-Month LIBOR - OIS Spread
Series: Spreads between three-month Libor rate and three-month overnight index swap rates for U.S., U.K., and Euro-Area
Horizon: August 14, 2007 - April 28, 2008
Description: The spreads between three-month Libor rate and three-month overnight index swap rates for U.S., U.K., and Euro-Area continue to rise.

Source: Bloomberg

Bottom panel
(12)

Title: Range of One-Month LIBOR Rates from 16 Contributing Banks
Series: Highest and lowest one-month Libor rate reported among the 16 contributing banks and one-month Libor fixing
Horizon: April 4, 2008 - April 28, 2008
Description: The range of one-month Libor rates reported among the 16 contributing banks and the one-month Libor fixing increase following a Wall Street Journal article on Libor manipulation.

Source: Bloomberg

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Top panel
(13)

Title: Three-month FX Swap Financing Cost to Three-Month LIBOR
Series: Spread between three-month Libor and three-month interest rate swap rates and spread between the implied three-month FX swap and three-month Libor rates
Horizon: August 1, 2007 - April 28, 2008
Description: The spreads between the implied three-month FX swap and three-month Libor rates and the three-month Libor and three-month overnight index swap rates increase.

Source: JP Morgan

Middle panel
(14)

Title: Spread between Jumbo and Conforming Mortgage Rates Remains Wide
Series: Jumbo mortgage rates, conforming mortgage rates, and spread
Horizon: January 1, 2007 - April 25, 2008
Description: The spread between jumbo and conforming mortgage rates remains wide.

Source: Bloomberg

Bottom panel
(15)

Title: TAF Auction Results
Series: TAF auction size and Spread between the TAF stop-out and minimum bid rates
Horizon: December 20, 2007 - April 24, 2008
Description: The spread between the TAF stop-out and minimum bid rates increases, while the size of the TAF auction increases.

Source: Federal Reserve Board

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Top panel
(16) Federal Reserve Term Securities Lending Facility Results

Auction Settlement	Term	Collateral	Amount	Minimum Fee Rate	Stop-out Rate	Propositions	Bid/Cover
3/28/2008	28 Days	Schedule 2	$75 b	0.25%	0.33%	$86.1 b	1.15
4/4/2008	28 Days	Schedule 1	$25 b	0.10%	0.16%	$46.9 b	1.88
4/11/2008	28 Days	Schedule 2	$50 b	0.25%	0.25%	$40.0 b	0.68
4/18/2008	28 Days	Schedule 1	$25 b	0.10%	0.10%	$35.1 b	1.40
4/25/2008	28 Days	Schedule 2	$75 b	0.25%	0.25%	$59.5 b	0.79

Source: Federal Reserve Board

Middle panel
(17)

Title: GC Treasury Repo Market Improves as a Result of TSLF Auctions
Series: Overnight GC Treasury repo rate and fed funds target rate
Horizon: February 1, 2008 - April 25, 2008
Description: The overnight GC Treasury repo rate increases following the first TSLF auction.

Source: Federal Reserve Bank of New York

Bottom panel
(18)

Title: One-Month Libor-OIS Spread Declines After Fed Actions
Series: Spread between one-month Libor rate and one-month overnight index swap rates
Horizon: August 1, 2007 - April 28, 2008
Description: The spread between one-month Libor rate and one-month overnight index swap rates has narrowed following Fed actions.

As shown in the chart, the spread declines after "DW Rate Cut," "FOMC Cuts Policy Rate by 50 bps," "TAF Introduced," "Increase TAF size," "Intermeeting Rate Cut," "Increase TAF size and Term MBS Repo," and "DW Rate Cut and PDCF Introduced."

Source: Bloomberg

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(19)

Title: Fed Funds Futures Curve Shifts Upward
Series: Fed funds futures curve as of 1/29/2008, 3/17/2008, and 4/25/2008
Horizon: January 29, 2008 - April 25, 2008
Description: The fed funds futures curve has shifted higher since the March FOMC meeting.

Source: Bloomberg

Middle panel
(20)

Title: Eurodollar Futures Curve: A Bigger Upward Shift
Series: Eurodollar futures curve as of 1/29/2008, 3/17/2008, and 4/25/2008
Horizon: January 29, 2008 - April 25, 2008
Description: The Eurodollar futures curve has shifted higher since the March FOMC meeting.

Source: Bloomberg

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Top panel
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Title: Distribution of Expected Policy Target Among Primary Dealers Prior to April 29-30 FOMC Meeting
Series: Dealer expectations for policy target rate by quarter, average forecast for policy target by quarter, and market rate for policy expectation by quarter as of 4/21/2008
Horizon: 2008:Q2 - 2009:Q4

Description: Dealers on average expect lower rates than what is currently priced into Eurodollar futures for 2008. The dispersion regarding where dealers expect the policy rate to be in the near term is similar to the March 2008 policy survey.

Source: Dealer Policy Survey

Middle panel
(22)

Title: Distribution of Expected Policy Target Among Primary Dealers Prior to March 18 FOMC Meeting
Series: Dealer expectations for policy target rate by quarter, average forecast for policy target by quarter, and market rate for policy expectation by quarter as of 3/10/2008
Horizon: 2008:Q1 - 2009:Q4
Description: Dealers on average expect higher rates than what is currently priced into Eurodollar futures for 2008. The dispersion of policy rate expectation is similar to the April 2008 policy survey for 2008 and 2009.

Source: Dealer Policy Survey

Bottom panel
(23)

Title: Probabilities for Policy Rate Outcomes for April FOMC meeting
Series: Probabilities for a 1.50, 1.75, 2.00, or 2.25 percent target rate at April FOMC meeting
Horizon: March 1, 2008 - April 25, 2008
Description: In the days leading up to the FOMC meeting, the probability for a 2.00 target rate at the April 30 FOMC meeting was the highest.

Source: Federal Reserve Bank of Cleveland

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Top panel
(24)

Title: Recent Commodity Price Pressures Concentrated in Energy
Series: GSCI spot, energy, agriculture, and industrial metals indices
Horizon: January 1, 2007 - April 25, 2008
Description: The rise in commodity prices during the intermeeting period was largely concentrated in the energy sector.

Source: Bloomberg

Middle panel
(25)

Title: TIPS Implied Average Rate of Inflation: 5-10 Year Horizon
Series: Federal Reserve Board's 5-10 Year horizon TIPS inflation compensation and Barclays' 5-10 Year horizon TIPS inflation compensation
Horizon: August 1, 2007 - April 25, 2008
Description: TIPS inflation compensation over a 5-10 year horizon has decreased since the March FOMC meeting as measured by both the Federal Reserve Board and Barclays.

Source: Federal Reserve Board and Barclays Capital

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Top panel
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Title: Volatility in the Fed Funds Market
Series: Low, high, effective, and target fed funds rate
Horizon: January 1, 2008 - April 25, 2008
Description: The volatility in the fed funds market remains elevated.

Source: Federal Reserve Bank of New York

Middle panel
(27)

Title: Primary Credit Facility and Primary Dealer Credit Facility Borrowing
Series: Borrowing levels for the Primary Credit Facility and Primary Dealer Credit Facility
Horizon: January 1, 2008 - April 25, 2008
Description: Borrowing at the Primary Credit Facility and the Primary Dealer Credit Facility has increased significantly recently.

Source: Federal Reserve Bank of New York

APPENDIX: Reference Exhibits

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Top panel
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Title: Treasury Yield Curve Shifts Upward
Series: Constant maturity Treasury yield curve as of 1/29/2008, 3/17/2008, and 4/25/2008
Horizon: January 29, 2008 - April 25, 2008
Description: The Treasury yield curve has shifted higher since the last FOMC meeting.

Source: Bloomberg

Middle panel
(29)

Title: Dollar Remains Weak
Series: Yen-USD, Euro-USD, and broad trade-weighted dollar
Horizon: January 1, 2006 - April 25, 2008
Description: Since mid-June 2007, the U.S. dollar has depreciated against the Euro and Japanese Yen. Consistent with this, the broad trade-weighted dollar has also been declining.

Source: Bloomberg and Federal Reserve Board

Bottom panel
(30)

Title: Dollar Tracks Interest Rate Differentials

Series: December 2008 Eurodollar and Euribor calendar spread and the Euro
Horizon: January 1, 2007 - April 25, 2008
Description: U.S. dollar weakens against the Euro as the interest rate differential between the U.S. and Euro-area increases.

Source: Bloomberg

Appendix 2: Materials used by Mr. Madigan

Material for Briefing on **FOMC Participants' Economic Projections**
Brian Madigan
April 29, 2008

Class I FOMC - Restricted Controlled (FR)

Table 1:
Economic Projections of Federal Reserve Governors and Reserve Bank Presidents[1]

	2008	2009	2010
Central Tendencies			
Real GDP Growth	0.3 to 1.2	2.0 to 2.8	2.6 to 3.1
January projections	*1.3 to 2.0*	*2.1 to 2.7*	*2.5 to 3.0*
Unemployment Rate	5.5 to 5.7	5.2 to 5.7	4.9 to 5.5
January projections	*5.2 to 5.3*	*5.0 to 5.3*	*4.9 to 5.1*
PCE Inflation	3.1 to 3.4	1.9 to 2.3	1.8 to 2.0
January projections	*2.1 to 2.4*	*1.7 to 2.0*	*1.7 to 2.0*
Core PCE Inflation	2.1 to 2.4	1.9 to 2.1	1.7 to 1.9
January projections	*2.0 to 2.2*	*1.7 to 2.0*	*1.7 to 1.9*
Ranges			
Real GDP Growth	0.0 to 1.5	1.8 to 3.0	2.0 to 3.4
January projections	*1.0 to 2.2*	*1.8 to 3.2*	*2.2 to 3.2*
Unemployment Rate	5.3 to 6.0	5.1 to 6.3	4.7 to 5.9
January projections	*5.0 to 5.5*	*4.9 to 5.7*	*4.7 to 5.4*
PCE Inflation	2.8 to 3.8	1.7 to 3.0	1.5 to 2.0
January projections	*2.0 to 2.8*	*1.7 to 2.3*	*1.5 to 2.0*
Core PCE Inflation	1.9 to 2.5	1.7 to 2.2	1.3 to 2.0
January projections	*1.9 to 2.3*	*1.7 to 2.2*	*1.4 to 2.0*

1. Projections of real GDP growth, PCE inflation and core PCE inflation are fourth-quarter-to-fourth-quarter growth rates, i.e. percentage changes from the fourth quarter of the prior year to the fourth quarter of the indicated year. PCE inflation and core PCE inflation are the percentage rates of change in the price index for personal consumption expenditures and the price index for personal consumption expenditures excluding food and energy, respectively. Each participant's projections are based on his or her assessment of appropriate monetary policy. The range for each variable in a given year includes all participants' projections, from lowest to highest, for that variable in the given year; the central tendencies exclude the three highest and three lowest projections for each variable in each year. Return to text

Exhibit 2
Uncertainty and Risks in Economic Projections

Top-left panel
Degree of Uncertainty about Growth Outlook

Number of Participants

	Lower	Historically Normal	Higher
January	0	2	15
April	0	3	14

Top-right panel
Risk Weighting around Growth Outlook

Number of Participants

	Weighted to Downside	Broadly Balanced	Weighted to Upside
January	13	3	1
April	13	4	0

Bottom-left panel
Degree of Uncertainty about Outlook for Total Inflation

Number of Participants

	Lower	Historically Normal	Higher
January	0	12	5
April	1	6	10

Bottom-right panel
Risk Weighting around Outlook for Total Inflation

Number of Participants

	Weighted to Downside	Broadly Balanced	Weighted to Upside
January	0	11	6
April	0	9	8

Appendix 3: Materials used by Mr. English

Material for the **FOMC Briefing on Monetary Policy Alternatives**
William B. English

April 29-30, 2008

Class I FOMC - Restricted Controlled (FR)

Table 1:
Alternative Language for the April 2008 FOMC Announcement

April 29-30, 2008

[Note: In Appendix 3, Table 1, strong emphasis (bold) has been added to indicate underlined red text in the original document. Emphasis (italic) indicates underlined blue text in the original document. Exceptions: In the Assessment of Risk row under Alternatives B and C, strong emphasis indicates underlined normal text. In the second row of Rationale under Alternative B, strong emphasis on the first word "Although" indicates underlined purple text in the original document.]

	March FOMC	Alternative A	Alternative B	Alternative C
Policy Decision	1. The Federal Open Market Committee decided today to lower its target for the federal funds rate 75 basis points to 2-¼ percent.	The Federal Open Market Committee decided today to lower its target for the federal funds rate **50** basis points to **1-¾** percent.	The Federal Open Market Committee decided today to lower its target for the federal funds rate **25** basis points to **2** percent.	The Federal Open Market Committee decided today to **keep** its target for the federal funds rate **at** 2-¼ percent.
Rationale	2. Recent information indicates that the outlook for economic activity has weakened further. Growth in consumer spending has slowed and labor markets have softened. Financial markets remain under considerable stress, and the tightening of credit conditions and the deepening of the housing contraction are likely to weigh on economic growth over the next few quarters.	Recent information indicates that economic activity **remains weak**. **Household and business spending has been subdued** and labor markets have softened **further**. Financial markets remain under considerable stress, and **tight** credit conditions and the deepening housing contraction are likely to weigh on economic growth over the next few quarters.	Recent information indicates that economic activity **remains weak**. **Household and business spending has been subdued** and labor markets have softened **further**. Financial markets remain under considerable stress, and **tight** credit conditions and the deepening housing contraction are likely to weigh on economic growth over the next few quarters.	Recent information indicates that economic activity **remains weak**. **Household and business spending has been subdued** and labor markets have softened **further**. Financial markets remain under considerable stress, and **tight** credit conditions and the deepening housing contraction are likely to weigh on economic growth over the next few quarters.
	3. Inflation has been elevated, and some indicators of inflation expectations have risen. The Committee expects inflation to moderate in coming quarters, reflecting a projected leveling-out of energy and other commodity prices and an easing of pressures on resource utilization. Still, uncertainty about the inflation outlook has increased. It will be necessary to continue to monitor inflation developments carefully.	Inflation has been elevated, and some indicators of inflation expectations have risen **in recent months**. The Committee expects inflation to moderate in coming quarters, reflecting a projected leveling-out of energy and other commodity prices and an easing of pressures on resource utilization. Still, uncertainty about the inflation outlook **remains high**. It will be necessary to continue to monitor inflation developments carefully.	**Although** *readings on core inflation have improved somewhat, energy and other commodity prices have increased,* and some indicators of inflation expectations have risen **in recent months**. The Committee expects inflation to moderate in coming quarters, reflecting a projected leveling-out of energy and other commodity prices and an easing of pressures on resource utilization. Still, uncertainty about the inflation outlook **remains high**. It will be necessary to continue to monitor inflation developments carefully.	Inflation has been elevated, and some indicators of inflation expectations have risen **in recent months**. The Committee expects inflation to moderate in coming quarters, **but** uncertainty about the inflation outlook **remains high**. It will be necessary to continue to monitor inflation developments carefully.
Assessment of Risk	4. Today's policy action, combined with those taken earlier, including measures to foster market liquidity, should	**The Committee judged that a further reduction in interest rates was appropriate to foster**	*The substantial easing of monetary policy to date*, **combined with** *ongoing* **measures to foster market**	*Although* downside risks to growth remain, *the substantial easing of monetary policy to date*,

March FOMC	Alternative A	Alternative B	Alternative C
help to promote moderate growth over time and to mitigate the risks to economic activity. However, downside risks to growth remain. The Committee will act in a timely manner as needed to promote sustainable economic growth and price stability.	moderate growth over time and to mitigate the risks to economic activity. The Committee will act in a timely manner as needed to promote sustainable economic growth and price stability.	**liquidity, should help to promote** moderate growth over time and to mitigate risks to economic activity. The Committee *will continue to monitor economic and financial developments and* **will** act as needed to promote sustainable economic growth and price stability.	**combined with** *ongoing* **measures to foster market liquidity, should help to promote** moderate growth over time and to mitigate risks to economic activity. The Committee *will continue to monitor economic and financial developments and* **will** act as needed to promote sustainable economic growth and price stability.

Appendix 4: Materials used by Mr. Stockton

Class II FOMC - RESTRICTED (FR)

Page 1

Top panel
Gross Domestic Product

(percent change at an annual rate)

	2007-Q4	2008-Q1	
	Final	Greenbook	Advance
Real GDP	**0.6**	**0.4**	**0.6**
Final Sales	2.4	-0.3	-0.2
Personal Consumption	2.3	1.0	1.0
Durables	2.0	-7.0	-6.1
Nondurables	1.2	-0.9	-1.3
Services	2.8	3.6	3.4
Business Fixed Investment	6.0	-1.1	-2.5
Nonresidential Structures	12.4	-2.8	-6.2
Equipment and Software	3.1	-0.2	-0.7
Residential Investment	-25.2	-30.9	-26.7
Government	2.0	0.7	2.0
Federal	0.5	1.9	4.6
State and Local	2.8	0.1	0.5
Exports	6.5	6.2	5.5
Imports	-1.4	2.4	2.5
Level in chained 2000 dollars:			
Change in nonfarm business inventories	-21.7	-2.4	2.7

	2007-Q4	2008-Q1	
	Final	Greenbook	Advance
Change in farm inventories	2.2	0.8	-0.7
Net Exports	-503.2	-492.4	-495.9
Price Indexes:			
Total PCE Chain Price Index	3.9	3.5	3.5
Core PCE Chain Price Index	2.5	2.1	2.2

Appendix 5: Materials used by Messrs. Madigan, Meyer, Clouse, Hilton, and Dudley

Class I FOMC - Restricted Controlled (FR)

Implications of Interest on Reserves for Monetary Policy Implementation

Presentation by Federal Reserve Staff
at
Joint Meeting of Board of Governors and Federal Open Market Committee
April 30, 2008

Page 2
New powers effective October 2011

- Board may authorize Reserve Banks to pay interest on balances maintained by depository institutions at a rate or rates not to exceed the general level of short-term interest rates
- Board may set required reserve ratios on transaction deposits in a range of 0 to 14 percent (currently 8 to 14 percent)
    - Permits effective elimination of reserve requirements

Page 3
Remaining statutory constraints

- Reserve requirements can be applied only to transaction deposits, nonpersonal time deposits, and eurodollar liabilities
    - Only depository institutions subject to reserves
    - Reserve requirements were designed to facilitate control of M1
- Prohibition against payment of interest on demand deposits by depository institutions
- Statutory constraints on open market purchases
- Statutory requirements for cost recovery on priced services
- Absence of interest payments to Treasury and foreign central banks on their Fed accounts

Page 4
Process to date

- Chairman asked staff to begin background work
- System workgroup undertook a preliminary study of a range of options for implementing monetary policy

- System workgroup initiated work on implications for priced services and accounting
- Board hosted a workshop on monetary policy implementation attended by five foreign central banks
- Today's joint Board-FOMC meeting

Page 5
Outline of briefing

- Overview (Madigan)
- Current approach to implementing U.S. monetary policy (Meyer)
- Discussion of five options (Clouse and Hilton)
- Concluding comments (Dudley)

Page 6
Following the briefing, we will seek your comments on:

- Criteria for evaluating options
- Options
- Process and Timeline

Page 7
Implementing U.S. Monetary Policy: Current Framework and Operating Procedures

- Summarize
  - banking system's demand for central bank balances
  - Desk's management of the supply of balances
  - equilibrium in the federal funds market
- Focus on policy implementation in normal times
  - brief discussion of policy implementation since August
- Conclude with strengths and shortcomings of current approach

Pages 8-9
Demand: Reserve Requirements

2008 Reserve Requirement Ratios

Type of liability	Requirement (% of liabilities)
Net transaction accounts	
$0 to $9.3 million	0 %
> $9.3 million to $43.9 million	3 %
> $43.9 million	10 %
Nonpersonal time deposits	0 %
Eurocurrency liabilities	0 %

For details on the multitude of complex definitions, rules, carryover provisions, etc., see the 135 page Reserve Maintenance Manual

- DIs meet reserve requirements by holding
  - currency in vaults and ATMs
  - reserve balances at a Federal Reserve Bank

    - balances at a correspondent bank
- No remuneration, so DIs try to reduce required reserves to the level of vault cash and balances they would hold if there were no requirements
    - sweep programs reduce reservable deposits
    - only 1,500 of 17,000 DIs need to hold reserve balances
    - required reserve balances ≈ 0.1% of total deposits

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Demand: Contractual Clearing Balances

- Many DIs want working balances larger than their required reserve balances
    - to clear Fedwire and other payments
    - to provide a cushion against overnight overdrafts
- Thousands of DIs hold contractual clearing balances
    - accrue "earnings credits" at 80% of 3-month T-bill rate
    - credits can be used only to offset fees for priced services

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Required Reserve Balances & Contractual Clearing Balances

Weekly average
Billions of $

Period	Required Reserve Balances	Contractual Clearing Balances
7 January 2004	9.27	11.83
14 January 2004	11.50	10.18
21 January 2004	11.50	10.18
28 January 2004	10.56	10.62
4 February 2004	10.56	10.61
11 February 2004	8.28	10.94
18 February 2004	8.28	10.94
25 February 2004	11.20	10.08
3 March 2004	11.20	10.08
10 March 2004	9.96	10.88
17 March 2004	9.96	10.89
24 March 2004	10.32	10.41
31 March 2004	10.32	10.41
7 April 2004	10.23	10.56
14 April 2004	10.23	10.57
21 April 2004	14.43	9.97
28 April 2004	14.43	9.97
5 May 2004	11.69	10.56
12 May 2004	11.69	10.56
19 May 2004	13.20	9.78
26 May 2004	13.20	9.79

Period	Required Reserve Balances	Contractual Clearing Balances
2 June 2004	11.86	10.15
9 June 2004	11.86	10.14
16 June 2004	11.17	10.30
23 June 2004	11.17	10.29
30 June 2004	10.71	10.86
7 July 2004	10.71	10.86
14 July 2004	11.46	10.42
21 July 2004	11.46	10.42
28 July 2004	12.40	9.80
4 August 2004	12.40	9.80
11 August 2004	9.01	10.53
18 August 2004	9.01	10.53
25 August 2004	12.25	10.21
1 September 2004	12.25	10.21
8 September 2004	10.20	10.23
15 September 2004	10.20	10.22
22 September 2004	12.61	10.16
29 September 2004	12.61	10.16
6 October 2004	9.17	10.72
13 October 2004	9.17	10.72
20 October 2004	11.08	10.49
27 October 2004	11.08	10.49
3 November 2004	10.25	10.57
10 November 2004	10.25	10.57
17 November 2004	10.30	9.96
24 November 2004	10.30	9.96
1 December 2004	10.40	10.02
8 December 2004	10.40	10.02
15 December 2004	9.87	9.76
22 December 2004	9.87	9.76
29 December 2004	10.32	9.97
5 January 2005	10.32	9.96
12 January 2005	10.54	9.59
19 January 2005	10.54	9.59
26 January 2005	15.27	8.94
2 February 2005	15.27	8.95
9 February 2005	8.79	9.77

Period	Required Reserve Balances	Contractual Clearing Balances
16 February 2005	8.79	9.77
23 February 2005	12.25	8.67
2 March 2005	12.25	8.67
9 March 2005	9.27	9.55
16 March 2005	9.27	9.55
23 March 2005	11.02	8.73
30 March 2005	11.02	8.73
6 April 2005	9.27	9.51
13 April 2005	9.27	9.51
20 April 2005	13.38	8.43
27 April 2005	13.38	8.42
4 May 2005	9.85	9.03
11 May 2005	9.85	9.02
18 May 2005	11.02	8.34
25 May 2005	11.02	8.34
1 June 2005	9.93	8.85
8 June 2005	9.93	8.85
15 June 2005	9.26	8.61
22 June 2005	9.26	8.61
29 June 2005	9.18	8.28
6 July 2005	9.18	8.28
13 July 2005	8.69	9.01
20 July 2005	8.69	9.00
27 July 2005	11.30	8.68
3 August 2005	11.30	8.68
10 August 2005	7.97	9.12
17 August 2005	7.97	9.12
24 August 2005	10.44	8.72
31 August 2005	10.44	8.72
7 September 2005	8.48	8.88
14 September 2005	8.48	8.88
21 September 2005	11.25	8.24
28 September 2005	11.25	8.24
5 October 2005	7.62	8.86
12 October 2005	7.62	8.86
19 October 2005	8.93	8.59
26 October 2005	8.93	8.59

Period	Required Reserve Balances	Contractual Clearing Balances
2 November 2005	8.60	8.78
9 November 2005	8.60	8.78
16 November 2005	8.02	8.82
23 November 2005	8.02	8.82
30 November 2005	8.77	8.75
7 December 2005	8.77	8.73
14 December 2005	7.53	8.81
21 December 2005	7.53	8.80
28 December 2005	8.58	8.65
4 January 2006	8.58	8.65
11 January 2006	7.55	9.37
18 January 2006	7.55	9.37
25 January 2006	9.97	8.71
1 February 2006	9.97	8.71
8 February 2006	7.03	8.47
15 February 2006	7.03	8.47
22 February 2006	8.59	8.02
1 March 2006	8.59	8.02
8 March 2006	7.25	8.14
15 March 2006	7.25	8.15
22 March 2006	8.01	7.98
29 March 2006	8.01	7.98
5 April 2006	7.14	7.73
12 April 2006	7.14	7.73
19 April 2006	9.54	7.61
26 April 2006	9.54	7.61
3 May 2006	8.78	6.70
10 May 2006	8.78	6.70
17 May 2006	9.26	7.37
24 May 2006	9.26	7.37
31 May 2006	8.45	7.58
7 June 2006	8.45	7.58
14 June 2006	8.07	7.32
21 June 2006	8.07	7.32
28 June 2006	8.24	7.17
5 July 2006	8.24	7.16
12 July 2006	7.04	7.22

Period	Required Reserve Balances	Contractual Clearing Balances
19 July 2006	7.04	7.22
26 July 2006	9.37	7.03
2 August 2006	9.37	7.03
9 August 2006	6.10	7.20
16 August 2006	6.10	7.20
23 August 2006	8.34	6.98
30 August 2006	8.34	6.98
6 September 2006	6.29	6.79
13 September 2006	6.29	6.79
20 September 2006	8.69	6.97
27 September 2006	8.69	6.97
4 October 2006	6.17	6.99
11 October 2006	6.17	6.99
18 October 2006	6.73	6.92
25 October 2006	6.73	6.91
1 November 2006	6.74	6.93
8 November 2006	6.74	6.93
15 November 2006	6.30	6.81
22 November 2006	6.30	6.81
29 November 2006	7.30	6.83
6 December 2006	7.30	6.83
13 December 2006	5.76	7.02
20 December 2006	5.76	7.02
27 December 2006	7.34	6.84
3 January 2007	7.34	6.84
10 January 2007	6.03	6.92
17 January 2007	6.03	6.92
24 January 2007	8.35	6.84
31 January 2007	8.35	6.84
7 February 2007	5.44	6.86
14 February 2007	5.44	6.86
21 February 2007	6.89	6.74
28 February 2007	6.89	6.74
7 March 2007	5.96	6.69
14 March 2007	5.96	6.69
21 March 2007	5.65	7.04
28 March 2007	5.65	7.04

Period	Required Reserve Balances	Contractual Clearing Balances
4 April 2007	5.90	6.99
11 April 2007	5.90	6.99
18 April 2007	7.23	6.55
25 April 2007	7.23	6.56
2 May 2007	8.30	6.51
9 May 2007	8.30	6.51
16 May 2007	7.32	6.47
23 May 2007	7.32	6.47
30 May 2007	7.59	6.58
6 June 2007	7.59	6.58
13 June 2007	6.68	6.58
20 June 2007	6.68	6.58
27 June 2007	7.04	6.39
4 July 2007	7.04	6.39
11 July 2007	5.72	6.43
18 July 2007	5.72	6.43
25 July 2007	7.56	6.47
1 August 2007	7.56	6.47
8 August 2007	5.25	6.56
15 August 2007	5.25	6.56
22 August 2007	6.81	6.86
29 August 2007	6.81	6.85
5 September 2007	6.08	6.61
12 September 2007	6.08	6.61
19 September 2007	7.59	6.65
26 September 2007	7.59	6.65
3 October 2007	7.66	6.47
10 October 2007	7.66	6.47
17 October 2007	6.19	6.58
24 October 2007	6.19	6.58
31 October 2007	6.85	6.58
7 November 2007	6.85	6.58
14 November 2007	6.30	6.38
21 November 2007	6.30	6.38
28 November 2007	7.55	6.49
5 December 2007	7.55	6.49
12 December 2007	5.29	6.54

Period	Required Reserve Balances	Contractual Clearing Balances
19 December 2007	5.29	6.54
26 December 2007	7.00	6.61
2 January 2008	7.00	6.61
9 January 2008	6.10	6.65
16 January 2008	6.10	6.65
23 January 2008	8.02	6.68
30 January 2008	8.02	6.67
6 February 2008	5.81	6.81
13 February 2008	5.81	6.81

As shown in the figure, Required Reserve Balances are about $7.1 billion by February 20, 2008, about $7.05 billion by March 5, and about $6.3 billion by March 26, the end of the period. Contractual Clearing Balances are constant at about $6.75 billion over the same period.

Page 12
Role of Required and Contractual Balances

- Establish a predictable lower bound on period-average demand for balances
  - levels of required & contractual balances are set before each reserve maintenance period
- Averaging provision, carry-over, & clearing band make demand for balances interest-elastic
  - until final day of maintenance period

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Demand: Excess Reserves

- Large DIs seek to hold zero excess reserves on avg.
  - but level varies widely from day to day, reflecting volume of Fedwire payments
- Small DIs hold $1.5 billion of ex. res. on avg.
  - may need a cushion against overdrafts but not use priced services, so contractual clearing balance unappealing
- Total balances (required + clearing + excess) vary between $10 and $25 billion per day in normal times; wider variation since August

Page 14
Depository Institutions' Total Balances at Federal Reserve Banks

A line chart depicts the daily total balances of depository institutions that are held at Federal Reserve Banks from January 1, 2007 to March 31, 2008. Unit is billions of dollars. The daily balances fluctuated around the range of $10 to $25 billion until a spike in balances on August 10, 2007 to over $50 billion dollars and then a second larger spike of around $54 billion dollars on March 17, 2008.

Page 15
Daylight Credit Reduces Demand for Balances

- Fedwire processes > 0.5 million interbank payments (with a value of ≈ $2.5 trillion) per day
- Rather than holding large non-interest-bearing balances at the Fed, DIs make heavy use of daylight credit to clear interbank payments.
  - sum of end-of-minute overdrafts averages ≈ $60 billion per day

- Proposed revision to PSR Policy may further reduce demand for balances
  - Fed now charges 36 basis points/yr for daylight credit
  - proposal would make collateralized daylight credit free

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Supply of Balances

- Desk's tries to keep S = D to keep ffr = target
  - Desk seeks to offset changes in autonomous factors and discount window credit that affect supply of balances
  - also seeks to accommodate changes in demand
- Outright purchases/sales, plus 14- & 28-day repo, supply a base of balances < projected demand
- Temporary open market operations add (or drain) balances almost every day
- Desk trades with 20 primary dealers
  - interbank markets distribute balances

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Supply: Autonomous Factors and D.W. Credit

- Unanticipated changes in autonomous factors can make supply of balances differ from projected level
  - currency in circulation
  - float
  - Treasury balance (Treasury deposits at FRBs)
  - foreign repo pool
- Unexpected changes in PDCF credit also can make supply of balances differ from projection
  - Changes in TAF credit are known in advance, and offset

Page 18
Supply: Temporary Open Market Operations

- Desk executes repo almost every day
  - Size typically from $2 billion to $20 billion
  - Maturities from 1 to 7 days, depending on persistence of projected need
  - Daily o.m.o. are in addition to 14-day & 28-day repo
- Replacing maturing repo with larger repo adds to supply of balances
- Replacing maturing repo with smaller repo (or none) reduces supply of balances
  - Reverse repo to drain balances are rare

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How well does our current approach work?

- In normal times, current approach usually keeps effective funds rate close to target
- But current approach allows larger deviations during periods of stress in interbank markets

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Effective FFR minus Target: Normal Times vs. Market Turmoil

Daily, January 2007 to March 2008
Percentage points

Date	Effective FFR minus Target
2 January 2007	0.05
3 January 2007	0.03
4 January 2007	-0.01
5 January 2007	-0.04
8 January 2007	-0.02
9 January 2007	0.00
10 January 2007	0.01
11 January 2007	0.02
12 January 2007	-0.03
16 January 2007	0.03
17 January 2007	0.00
18 January 2007	-0.02
19 January 2007	0.00
22 January 2007	-0.01
23 January 2007	0.01
24 January 2007	0.02
25 January 2007	0.06
26 January 2007	0.01
29 January 2007	0.01
30 January 2007	-0.02
31 January 2007	0.08
1 February 2007	0.04
2 February 2007	-0.01
5 February 2007	0.00
6 February 2007	-0.01
7 February 2007	-0.02
8 February 2007	0.00
9 February 2007	0.00
12 February 2007	0.03
13 February 2007	0.01
14 February 2007	0.02
15 February 2007	0.04
16 February 2007	-0.01
20 February 2007	0.02
21 February 2007	-0.02

Date	Effective FFR minus Target
22 February 2007	0.01
23 February 2007	-0.01
26 February 2007	0.05
27 February 2007	0.02
28 February 2007	0.16
1 March 2007	0.06
2 March 2007	-0.02
5 March 2007	0.02
6 March 2007	-0.03
7 March 2007	-0.01
8 March 2007	-0.01
9 March 2007	-0.01
12 March 2007	0.00
13 March 2007	0.00
14 March 2007	0.02
15 March 2007	0.04
16 March 2007	0.00
19 March 2007	0.01
20 March 2007	0.01
21 March 2007	0.01
22 March 2007	0.02
23 March 2007	-0.01
26 March 2007	0.03
27 March 2007	0.00
28 March 2007	0.02
29 March 2007	0.04
30 March 2007	0.05
2 April 2007	0.00
3 April 2007	-0.05
4 April 2007	-0.04
5 April 2007	0.05
6 April 2007	0.05
9 April 2007	0.03
10 April 2007	0.01
11 April 2007	-0.01
12 April 2007	0.02
13 April 2007	0.00

Date	Effective FFR minus Target
16 April 2007	0.04
17 April 2007	-0.05
18 April 2007	-0.06
19 April 2007	-0.02
20 April 2007	0.00
23 April 2007	-0.02
24 April 2007	-0.05
25 April 2007	-0.06
26 April 2007	-0.01
27 April 2007	-0.01
30 April 2007	0.04
1 May 2007	0.01
2 May 2007	-0.04
3 May 2007	-0.01
4 May 2007	-0.01
7 May 2007	-0.01
8 May 2007	-0.04
9 May 2007	-0.04
10 May 2007	0.00
11 May 2007	0.02
14 May 2007	0.01
15 May 2007	0.04
16 May 2007	0.00
17 May 2007	0.00
18 May 2007	-0.01
21 May 2007	-0.01
22 May 2007	-0.02
23 May 2007	0.00
24 May 2007	-0.01
25 May 2007	0.04
29 May 2007	0.04
30 May 2007	0.00
31 May 2007	0.03
1 June 2007	-0.02
4 June 2007	-0.01
5 June 2007	-0.06
6 June 2007	0.00

Date	Effective FFR minus Target
7 June 2007	0.00
8 June 2007	0.01
11 June 2007	0.02
12 June 2007	0.01
13 June 2007	0.01
14 June 2007	0.03
15 June 2007	0.01
18 June 2007	-0.02
19 June 2007	-0.04
20 June 2007	0.02
21 June 2007	0.01
22 June 2007	-0.01
25 June 2007	0.04
26 June 2007	0.00
27 June 2007	0.01
28 June 2007	0.01
29 June 2007	0.06
2 July 2007	0.06
3 July 2007	-0.01
5 July 2007	0.00
6 July 2007	-0.03
9 July 2007	-0.03
10 July 2007	-0.01
11 July 2007	-0.01
12 July 2007	0.01
13 July 2007	0.00
16 July 2007	0.07
17 July 2007	0.03
18 July 2007	0.01
19 July 2007	0.00
20 July 2007	0.00
23 July 2007	0.01
24 July 2007	0.00
25 July 2007	0.07
26 July 2007	0.03
27 July 2007	0.00
30 July 2007	0.04

Date	Effective FFR minus Target
31 July 2007	0.03
1 August 2007	0.05
2 August 2007	-0.01
3 August 2007	-0.01
6 August 2007	0.01
7 August 2007	0.01
8 August 2007	0.02
9 August 2007	0.16
10 August 2007	-0.57
13 August 2007	-0.44
14 August 2007	-0.71
15 August 2007	-0.54
16 August 2007	-0.28
17 August 2007	-0.34
20 August 2007	-0.22
21 August 2007	-0.36
22 August 2007	-0.48
23 August 2007	-0.37
24 August 2007	-0.14
27 August 2007	0.02
28 August 2007	0.05
29 August 2007	-0.25
30 August 2007	-0.25
31 August 2007	-0.29
4 September 2007	-0.03
5 September 2007	-0.07
6 September 2007	-0.27
7 September 2007	-0.39
10 September 2007	-0.18
11 September 2007	-0.19
12 September 2007	-0.07
13 September 2007	-0.16
14 September 2007	0.00
17 September 2007	0.08
18 September 2007	0.17
19 September 2007	-0.01
20 September 2007	0.02

Date	Effective FFR minus Target
21 September 2007	0.01
24 September 2007	-0.01
25 September 2007	0.07
26 September 2007	0.13
27 September 2007	0.18
28 September 2007	-0.17
1 October 2007	0.17
2 October 2007	0.03
3 October 2007	-0.07
4 October 2007	-0.01
5 October 2007	0.02
9 October 2007	0.16
10 October 2007	-0.23
11 October 2007	0.00
12 October 2007	0.00
15 October 2007	0.06
16 October 2007	-0.07
17 October 2007	-0.05
18 October 2007	-0.06
19 October 2007	0.02
22 October 2007	-0.04
23 October 2007	-0.08
24 October 2007	-0.01
25 October 2007	0.11
26 October 2007	0.05
29 October 2007	0.09
30 October 2007	0.03
31 October 2007	0.10
1 November 2007	0.09
2 November 2007	-0.22
5 November 2007	-0.21
6 November 2007	-0.28
7 November 2007	-0.11
8 November 2007	0.08
9 November 2007	-0.01
13 November 2007	0.11
14 November 2007	0.10

Date	Effective FFR minus Target
15 November 2007	0.04
16 November 2007	0.01
19 November 2007	0.01
20 November 2007	0.01
21 November 2007	0.00
23 November 2007	0.06
26 November 2007	0.12
27 November 2007	-0.11
28 November 2007	0.03
29 November 2007	0.05
30 November 2007	0.16
3 December 2007	0.02
4 December 2007	0.00
5 December 2007	-0.19
6 December 2007	-0.01
7 December 2007	-0.09
10 December 2007	-0.04
11 December 2007	0.04
12 December 2007	0.03
13 December 2007	0.05
14 December 2007	-0.01
17 December 2007	0.06
18 December 2007	-0.09
19 December 2007	-0.27
20 December 2007	0.12
21 December 2007	0.03
24 December 2007	-0.25
26 December 2007	0.01
27 December 2007	-0.10
28 December 2007	-0.24
31 December 2007	-1.19
2 January 2008	-0.14
3 January 2008	0.00
4 January 2008	-0.07
7 January 2008	0.02
8 January 2008	0.02
9 January 2008	0.01

Date	Effective FFR minus Target
10 January 2008	0.01
11 January 2008	-0.02
14 January 2008	-0.01
15 January 2008	-0.01
16 January 2008	-0.03
17 January 2008	-0.02
18 January 2008	-0.08
22 January 2008	0.18
23 January 2008	-0.07
24 January 2008	-0.03
25 January 2008	0.10
28 January 2008	0.00
29 January 2008	-0.03
30 January 2008	0.26
31 January 2008	0.22
1 February 2008	0.12
4 February 2008	-0.18
5 February 2008	-0.29
6 February 2008	-0.06
7 February 2008	0.03
8 February 2008	0.05
11 February 2008	-0.12
12 February 2008	-0.09
13 February 2008	0.02
14 February 2008	0.03
15 February 2008	-0.03
19 February 2008	-0.06
20 February 2008	0.00
21 February 2008	0.01
22 February 2008	-0.03
25 February 2008	0.00
26 February 2008	-0.15
27 February 2008	-0.07
28 February 2008	0.06
29 February 2008	0.01
3 March 2008	0.10
4 March 2008	-0.10

Date	Effective FFR minus Target
5 March 2008	-0.07
6 March 2008	-0.01
7 March 2008	-0.04
10 March 2008	-0.01
11 March 2008	-0.05
12 March 2008	-0.03
13 March 2008	-0.02
14 March 2008	-0.01
17 March 2008	-0.31
18 March 2008	-0.09
19 March 2008	-0.17
20 March 2008	-0.03
21 March 2008	-0.17
24 March 2008	-0.17
25 March 2008	0.17
26 March 2008	0.05
27 March 2008	0.02
28 March 2008	-0.16

As shown in the figure, red horizontal lines are plotted at about -0.1 and 0.1 percentage point. The series curve begins on January 1, 2007 at about -0.08 percentage point. Except for a brief spike on February 28, 2007, the curve remains within the red lines through August 8, 2007, and then begins to vary more widely.

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Equilibrium in the Federal Funds Market (1)

- DIs' demand for balances varies from day to day, reflecting reserve requirements, clearing balance commitments, and volume of payments
- In morning, fed funds usually trade at or near target rate because DIs expect Desk to supply enough balances to make ffr ≈ target
    - a firm or soft rate signals excess demand or supply
- Desk conducts open market operation to make day's projected supply = forecast of quantity demanded

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Equilibrium in the Federal Funds Market (2)

- As day progresses, autonomous factors and demand are realized; banks make and settle payments and trade fed funds; and actual ffr is determined
- Desk cannot adjust S of balances late in day, so if realized S ≠ actual D, ffr will deviate from target
    - because balances are not remunerated, an excess supply can push ffr down to zero in the afternoon
    - reluctance to borrow means an excess demand can cause ffr to rise above primary credit rate in the afternoon

- a small volume of trades at very low or very high rates can make effective (daily average) ffr deviate from target

Page 23
Burdens Imposed by Current Approach

- Reserve requirements, deposit reports, zero interest on balances impose unnecessary burdens on society
  - Reserves tax from zero interest on required reserve balances ≈ $380 million in 2006, $340 million in 2007
- Sweep programs and other methods DIs use to minimize reserves tax waste real resources
- High costs to collect/process deposit data and to monitor/ensure compliance with complex rules for required reserves and contractual clearing balances

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Strengths & Shortcomings of U.S. Approach

- Usually keeps funds rate close to target in normal times but allows occasional large deviations
- Allows larger and more frequent deviations from target during periods of market stress
  - Large deviations reflect: projection errors; reluctance to borrow; no remuneration of balances; inability to adjust supply of balances late in day
- Even sophisticated market participants find current approach hard to understand, somewhat opaque
- Reserve requirements & zero interest on balances impose burdens, but are not needed to hit ffr target

Page 25
Core Structural Elements

- Balance Targets: Mandatory, Voluntary, or None
- Bands Around Target Balances
- Maintenance Period: Single or Multiple Day
- Funds Rate Corridor
  - Upper Bound: Standing Lending Facility
  - Lower Bound: Interest on Excess Reserves (or Redeposit Facility)

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Possible Limitations: Stigma and the Standing Lending Facility

- Standing lending facility should, in theory, place a cap on the federal funds rate.
- But stigma may impair the effectiveness of the cap.
- Potentially undermines effectiveness of systems that rely heavily on standing lending facility.
  - Disadvantages institutions that are the least inclined to borrow.

Overnight Borrowing in the Federal Funds Market
(March 24 - April 24)

Institution Name	Number of Trades	Average Trade Size ($ Millions)	Average Spread over Primary Credit Rate (Basis Points)
Citibank	108	340	18
Bank of America	102	338	35

Institution Name	Number of Trades	Average Trade Size ($ Millions)	Average Spread over Primary Credit Rate (Basis Points)
JP Morgan Chase	185	345	44
Wachovia	7	239	100
State Street	4	312	31
Bank of New York	43	381	23
Wells Fargo	32	199	73

Page 27
Multiple- and Single-Day Systems

- Multiple Day Systems
  - Options 1 and 2
  - Intraperiod arbitrage to stabilize the funds rate
- Single-Day Systems
  - Options 3-5
  - Standing facilities and rates of remuneration to stabilize the funds rate.

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Option 1: Remunerate Required and Excess Reserve Balances

Key Structural Features

- Standing lending facility sets upper bound on funds rate
- Interest on excess reserves sets lower bound on funds rate
- Mandatory requirements and two-week maintenance period

How it Should Work

- Downward sloping demand curve on last day of maintenance period
- Demand curve on earlier days in the period relatively flat at the target rate over a wide range.
  - Banks can substitute balances across days of the maintenance period
- Desk adjusts supply of balances each day to address daily demands and maintenance-period average needs.

Figure

A line chart. The x-axis is reserves, and the y-axis is the federal funds rate. The supply of reserves is represented by a vertical line--set at the same value regardless of the federal funds rate. Required reserve balances are represented by a vertical line slightly to the left of the reserve supply. The primary credit rate is represented by a horizontal line. Below the primary credit rate is a horizontal line representing the target federal funds rate. Below the target federal funds rate is a dotted horizontal line representing the remuneration rate on excess reserves. The vertical distance between the target federal funds rate line and the primary credit rate line above is roughly equal to the distance between the target federal funds rate line and the remuneration rate line below.

The intra-period demand for reserves and the end-of-period demand for reserves are represented by two S-curves, of different convexities. Near the y-axis, where the level of reserves is 0, intra-period demand for reserves and end-of-period demand for reserves trace the primary credit rate. As the level of reserves increases, both the intra-period demand for reserves and the end-of-period demand for

reserves fall. The slope of the intra-period demand for reserves is initially steeper than the slope of the end-of-period demand for reserves. However, the slope of the line representing the intra-period demand for reserves flattens as the slope of the line representing end-of-period demand for reserves steepens, so that the lines intersect right at the point where the target federal funds rate intersects the reserve supply. (Note that end-of-period demand for reserves is above intra-period demand for reserves when the lines pass the vertical line representing required reserve balances.) As the level of reserves increases beyond the reserve supply, the end-of period demand for reserves line decreases toward the remuneration rate on excess reserves. The intra-period demand for reserves traces the target federal funds rate line for a while before falling towards the remuneration rate and eventually meeting the end-of-period demand for reserves. Both lines move slightly above the horizontal line representing the remuneration rate on excess reserves indefinitely as the level of reserves continues to increase.

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Option 2: Voluntary Balance Targets

Key Structural Features

- Voluntary Balance Target
- Multiple-day Period (between FOMC meetings)
- Relatively narrow target band
- Funds Rate Corridor

How it Should Work

- Basic mechanics similar to option 1
- Longer maintenance period should allow more scope for substitution of balances across days of the period
- Might require less fine-tuning of daily balances but…
- Key question is the magnitude of voluntary requirements
    - Low level could limit scope for substitution and arbitrage

Figure

A line chart. The x-axis is reserves, and the y-axis is the federal funds rate. The supply of reserves is represented by a vertical line--set at the same value regardless of the federal funds rate. Voluntary target balances is represented by a vertical line slightly to the left of the reserve supply. The primary credit rate is represented by a horizontal line. Below the primary credit rate is a horizontal line representing the target federal funds rate. Below the target federal funds rate is a dotted horizontal line representing the remuneration rate on excess reserves. The vertical distance between the target federal funds rate line and the primary credit rate line above is roughly equal to the distance between the target federal funds rate line and the remuneration rate line below.

The intra-period demand for reserves and the end-of-period demand for reserves are represented by two S-curves, of different convexities. Near the y-axis, where the level of reserves is 0, intra-period demand for reserves and end-of-period demand for reserves trace the primary credit rate. As the level of reserves increases, both the intra-period demand for reserves and the end-of-period demand for reserves fall. The slope of the intra-period demand for reserves is initially steeper than the slope of the end-of-period demand for reserves. However, the slope of the line representing the intra-period demand for reserves flattens as the slope of the line representing end-of-period demand for reserves steepens, so that the lines intersect right at the point where the target federal funds rate intersects the reserve supply. (Note that end-of-period demand for reserves is above intra-period demand for

reserves when the lines pass the vertical line representing voluntary target balances.) As the level of reserves increases beyond the reserve supply, the end-of period demand for reserves line decreases toward the remuneration rate on excess reserves. The intra-period demand for reserves traces the target federal funds rate line for a while before falling towards the remuneration rate and eventually meeting the end-of-period demand for reserves. Both lines move slightly above the horizontal line representing the remuneration rate on excess reserves indefinitely as the level of reserves continues to increase.

Page 30
Option 3: Simple Corridor

Key Structural Features

- No target balance
- Narrow symmetric funds rate corridor

How It Should Work

- Downward sloping demand for reserves within the corridor
- Demand for reserves stems from precautionary motive to avoid overnight overdrafts
- Staff would estimate daily demand at the target rate
- Desk would supply daily balances to meet estimated demand at target rate
- Demand curve could be rather steep
- Funds rate could be volatile within the corridor

Figure

A line chart. The x-axis is reserves, and the y-axis is the federal funds rate. The supply of reserves is represented by a vertical line--set at the same value regardless of the federal funds rate. This line is equal to 0 on the x-axis. The primary credit rate is represented by a horizontal line. Below the primary credit rate is a horizontal line representing the target federal funds rate. Below the target federal funds rate is a dotted horizontal line representing the remuneration rate on reserves. The vertical distance between the target federal funds rate line and the primary credit rate line above is roughly equal to the distance between the target federal funds rate line and the remuneration rate line below.

At the intersection of the y-axis, the demand for reserves curve is slightly below the primary credit rate. Moving along the x-axis, the demand for reserves begins to fall and crosses the intersection of the reserve supply and the target federal funds rate. The demand for reserves continues to fall and then levels off slightly above the remuneration rate on reserves. Demand for reserves continues on this horizontal path as reserves increase indefinitely.

Page 31
Option 4: Floor with High Balances

Key Structural Features

- No target balance
- Asymmetric funds rate corridor
    - Remuneration rate set just below target funds rate
- High balances to keep funds rate near the floor of the corridor

How it Should Work

- Desk provides an ample supply of balances each day ($50 billion)
- Funds rate should trade near the lower bound of the corridor
- Fluctuations in reserve factors should have little impact on funds rate
- Could reduce daylight overdrafts
- Potential for strategic behavior?
    - Minimal costs in holding large reserve position

Figure

A line chart. The x-axis is reserves, and the y-axis is the federal funds rate. The supply of reserves is represented by a vertical line--set at the same value regardless of the federal funds rate. The primary credit rate is represented by a horizontal line. Below the primary credit rate is a horizontal line representing the target federal funds rate. Slightly below the target federal funds rate is a dotted horizontal line representing the remuneration rate on reserves. Note that the vertical distance between the primary credit rate line and the target federal funds rate line is greater than the vertical distance between the target federal funds rate line and the remuneration rate on reserves line.

At the intersection of the y-axis, the demand for reserves curve is slightly below the primary credit rate. As the level of reserves increases (moving right along the x-axis), the demand for reserves begins to slope downwards towards the target federal funds rate and then eventually meets the target federal funds rate when reserves are greater than zero. The demand for reserves then traces the target federal funds rate horizontal line indefinitely as the level of reserves increases. Equilibrium is where the reserve supply vertical line and the target federal funds rate/demand for reserves horizontal line meet.

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Option 5: Voluntary Daily Target with Target Band

Key Structural Elements

- Voluntary Daily Balance Target
- Relatively wide target band
- Upper bound on full remuneration of balances
- Penalty for shortfalls
- Wide funds rate corridor

How it Should Work

- Demand curve relatively flat within the target band
    - But downward sloping near the boundaries of the target band.
- Desk supplies balances each day close to the midpoint of the target band.
- Key Questions:
    - How large would aggregate level of targets be?
    - How wide to set target band?

Figure

A line chart. The x-axis is reserves, and the y-axis is the federal funds rate. The voluntary target balance is represented by a vertical line--set at the same value regardless of the federal funds rate. Two vertical lines, equidistant from the voluntary target balance line on either side, represent the daily band. In other words, any level of reserve balances that falls within the lower daily band and the upper daily band lines are within the daily band.

The primary credit rate is represented by a horizontal line. Below the primary credit rate is a horizontal line representing the target federal funds rate. Slightly below the target federal funds rate is a dotted horizontal line representing the remuneration rate on reserves; however, the remuneration rate line decreases in a step-wise manner at the upper bound of the daily band. Beyond the upper bound of the daily band, the vertical distance between the target federal funds rate line and the primary credit rate line above is roughly equal to the distance between the target federal funds rate line and the remuneration rate line below.

Near the y-axis, where the level of reserves is 0, the demand for reserves is slightly below the primary credit rate. As demand approaches the lower bound of the daily band (i.e., moving right along the x-axis away from the y-axis), demand for reserves falls. Within the daily band, demand for reserves traces the horizontal target federal funds rate line. Once demand approaches the upper bound of the daily band, demand for reserves again falls to a level right above the remuneration rates on reserves. Demand for reserves continues on this horizontal path as reserves increase indefinitely.

Page 33
General Issues

- Competitive issues
  - Restrictions on payment of interest on demand deposits
- Appropriate setting of remuneration rate
  - Somewhat below target rate to reflect risk premium
- Governance: FOMC and Board Roles
  - FOMC target rate and Board-determined remuneration rate
- Transition
  - Moving from current system to new system could be complicated

Page 34
Assessment of Different Options: Objectives

- Reduce burdens and deadweight losses
- Enhance monetary policy implementation
- Promote efficient and resilient money markets and government securities markets
- Promote an efficient and resilient payments system

Page 35
Option 1: Remunerate Required and Excess Reserve Balances

- Advantages:
  - Easy to implement given where we are now
  - Tested basic framework that would represent an improvement over the status quo
- Disadvantages:
  - Retains current administrative burdens
  - Limited flexibility in reserve averaging parameters
- Open Issues
  - Uncertain by how much required reserve balances would rise

Page 36
Option 2: Voluntary Balance Targets

- Advantages:

    - Significant reduction in administrative burdens
    - Also a tested basic framework
    - Offers more flexibility in reserve targets
- Disadvantages:
    - Retains some administrative burden, for both DIs and FRS
- Open issues:
    - Identifying a system of voluntary targets that yields sufficient balances and is administratively workable

Page 37
Option 3: Simple Corridor

- Advantages:
    - Eliminates administrative burdens of reserve requirements/targets and reserve maintenance periods
    - Should keep funds rate within a narrow corridor
- Disadvantages:
    - Funds rate would be more volatile within the corridor
    - Heavy use of standing facilities under a narrow corridor increases role of Fed as market intermediary
- Open issues:
    - Would our lending facility be sufficiently effective in limiting rates on the upside?
    - May need a better ability to make late-day reserve adjustments

Page 38
Option 4: Floor with High Balances

- Advantages:
    - Eliminates administrative burdens of reserve requirements/targets and maintenance periods
    - Sharply reduces account management burden on DIs
    - Substantial balance sheet/reserve movements may have little impact on rates (although a possible double-edged sword)
- Disadvantages:
    - A radical change from the current framework, with limited experience of other central banks upon which to base informed judgments
- Open issues:
    - Implications for reserve demand and the functioning of the interbank market, under both normal circumstances and periods of stress

Page 39
Option 5: Voluntary Daily Target with Clearing Band

- Advantages:
    - Significant reduction in administrative burdens
    - Reserve smoothing parameters (voluntary target levels and bands) may be very flexible
- Disadvantages:
    - Retains some administrative burden, for both DIs and FRS
    - Limited experience with some features of this framework
- Open issues:
    - Identifying a system of voluntary targets that yields sufficient balances and is

administratively workable

Pages 40-41
Overall Assessment Against Objectives

1. Reduce burdens and deadweight losses
    - All options eliminate the reserve tax, either by remunerating required reserves or eliminating requirements
    - But some options have fewer administrative burdens than others
2. Enhance monetary policy implementation
    - All options set a floor for the fed funds rate, and most introduce additional features to help control rate volatility
    - But some options may have more flexible parameters that could be adjusted during periods of stress
3. Promote efficient and resilient money markets and government securities markets
    - Most options would still rely on active short-term markets for the distribution of liquidity
    - But there are possible differences in the Fed's role as market intermediary, and in the impact on the interbank market
4. Promote an efficient and resilient payments system
    - All options are consistent with proposed PSR policy changes
    - But some could yield a higher level of reserves than others as an alternative to daylight credit

Page 42
Interest on Reserves in a Broader Context

- Consider as part of process of improving overall monetary policy framework
- Current system works well during normal times
- Less robust during times of stress

Page 43
Weaknesses of Current Monetary Policy Framework

- Volatility of the federal funds rate
- PCF rate not a binding ceiling
- Potential loss of control of federal funds rate after large reserve adds
- Limited ability to constrain upward pressure in term funding rates

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Federal Funds Rate Volatility (I)

Daily Average less Target Federal Funds Rate: March 2007 to Present

Date	Percent
1 March 2007	0.06
2 March 2007	-0.02
5 March 2007	0.02
6 March 2007	-0.03

Date	Percent
7 March 2007	-0.01
8 March 2007	-0.01
9 March 2007	-0.01
12 March 2007	0.00
13 March 2007	0.00
14 March 2007	0.02
15 March 2007	0.04
16 March 2007	0.00
19 March 2007	0.01
20 March 2007	0.01
21 March 2007	0.01
22 March 2007	0.02
23 March 2007	-0.01
26 March 2007	0.03
27 March 2007	0.00
28 March 2007	0.02
29 March 2007	0.04
30 March 2007	0.05
2 April 2007	0.00
3 April 2007	-0.05
4 April 2007	-0.04
5 April 2007	0.05
6 April 2007	0.05
9 April 2007	0.03
10 April 2007	0.01
11 April 2007	-0.01
12 April 2007	0.02
13 April 2007	0.00
16 April 2007	0.04
17 April 2007	-0.05
18 April 2007	-0.06
19 April 2007	-0.02
20 April 2007	0.00
23 April 2007	-0.02
24 April 2007	-0.05
25 April 2007	-0.06
26 April 2007	-0.01

Date	Percent
27 April 2007	-0.01
30 April 2007	0.04
1 May 2007	0.01
2 May 2007	-0.04
3 May 2007	-0.01
4 May 2007	-0.01
7 May 2007	-0.01
8 May 2007	-0.04
9 May 2007	-0.04
10 May 2007	0.00
11 May 2007	0.02
14 May 2007	0.01
15 May 2007	0.04
16 May 2007	0.00
17 May 2007	0.00
18 May 2007	-0.01
21 May 2007	-0.01
22 May 2007	-0.02
23 May 2007	0.00
24 May 2007	-0.01
25 May 2007	0.04
29 May 2007	0.04
30 May 2007	0.00
31 May 2007	0.03
1 June 2007	-0.02
4 June 2007	-0.01
5 June 2007	-0.06
6 June 2007	0.00
7 June 2007	0.00
8 June 2007	0.01
11 June 2007	0.02
12 June 2007	0.01
13 June 2007	0.01
14 June 2007	0.03
15 June 2007	0.01
18 June 2007	-0.02
19 June 2007	-0.04

Date	Percent
20 June 2007	0.02
21 June 2007	0.01
22 June 2007	-0.01
25 June 2007	0.04
26 June 2007	0.00
27 June 2007	0.01
28 June 2007	0.01
29 June 2007	0.06
2 July 2007	0.06
3 July 2007	-0.01
5 July 2007	0.00
6 July 2007	-0.03
9 July 2007	-0.03
10 July 2007	-0.01
11 July 2007	-0.01
12 July 2007	0.01
13 July 2007	0.00
16 July 2007	0.07
17 July 2007	0.03
18 July 2007	0.01
19 July 2007	0.00
20 July 2007	0.00
23 July 2007	0.01
24 July 2007	0.00
25 July 2007	0.07
26 July 2007	0.03
27 July 2007	0.00
30 July 2007	0.04
31 July 2007	0.03
1 August 2007	0.05
2 August 2007	-0.01
3 August 2007	-0.01
6 August 2007	0.01
7 August 2007	0.01
8 August 2007	0.02
9 August 2007	0.16
10 August 2007	-0.57

Date	Percent
13 August 2007	-0.44
14 August 2007	-0.71
15 August 2007	-0.54
16 August 2007	-0.28
17 August 2007	-0.34
20 August 2007	-0.22
21 August 2007	-0.36
22 August 2007	-0.48
23 August 2007	-0.37
24 August 2007	-0.14
27 August 2007	0.02
28 August 2007	0.05
29 August 2007	-0.25
30 August 2007	-0.25
31 August 2007	-0.29
4 September 2007	-0.03
5 September 2007	-0.07
6 September 2007	-0.27
7 September 2007	-0.39
10 September 2007	-0.18
11 September 2007	-0.19
12 September 2007	-0.07
13 September 2007	-0.16
14 September 2007	0.00
17 September 2007	0.08
18 September 2007	0.17
19 September 2007	-0.01
20 September 2007	0.02
21 September 2007	0.01
24 September 2007	-0.01
25 September 2007	0.07
26 September 2007	0.13
27 September 2007	0.18
28 September 2007	-0.17
1 October 2007	0.17
2 October 2007	0.03
3 October 2007	-0.07

Date	Percent
4 October 2007	-0.01
5 October 2007	0.02
9 October 2007	0.16
10 October 2007	-0.23
11 October 2007	0.00
12 October 2007	0.00
15 October 2007	0.06
16 October 2007	-0.07
17 October 2007	-0.05
18 October 2007	-0.06
19 October 2007	0.02
22 October 2007	-0.04
23 October 2007	-0.08
24 October 2007	-0.01
25 October 2007	0.11
26 October 2007	0.05
29 October 2007	0.09
30 October 2007	0.03
31 October 2007	0.10
1 November 2007	0.09
2 November 2007	-0.22
5 November 2007	-0.21
6 November 2007	-0.28
7 November 2007	-0.11
8 November 2007	0.08
9 November 2007	-0.01
13 November 2007	0.11
14 November 2007	0.10
15 November 2007	0.04
16 November 2007	0.01
19 November 2007	0.01
20 November 2007	0.01
21 November 2007	0.00
23 November 2007	0.06
26 November 2007	0.12
27 November 2007	-0.11
28 November 2007	0.03

Date	Percent
29 November 2007	0.05
30 November 2007	0.16
3 December 2007	0.02
4 December 2007	0.00
5 December 2007	-0.19
6 December 2007	-0.01
7 December 2007	-0.09
10 December 2007	-0.04
11 December 2007	0.04
12 December 2007	0.03
13 December 2007	0.05
14 December 2007	-0.01
17 December 2007	0.06
18 December 2007	-0.09
19 December 2007	-0.27
20 December 2007	0.12
21 December 2007	0.03
24 December 2007	-0.25
26 December 2007	0.01
27 December 2007	-0.10
28 December 2007	-0.24
31 December 2007	-1.19
2 January 2008	-0.14
3 January 2008	0.00
4 January 2008	-0.07
7 January 2008	0.02
8 January 2008	0.02
9 January 2008	0.01
10 January 2008	0.01
11 January 2008	-0.02
14 January 2008	-0.01
15 January 2008	-0.01
16 January 2008	-0.03
17 January 2008	-0.02
18 January 2008	-0.08
22 January 2008	0.18
23 January 2008	-0.07

Date	Percent
24 January 2008	-0.03
25 January 2008	0.10
28 January 2008	0.00
29 January 2008	-0.03
30 January 2008	0.26
31 January 2008	0.22
1 February 2008	0.12
4 February 2008	-0.18
5 February 2008	-0.29
6 February 2008	-0.06
7 February 2008	0.03
8 February 2008	0.05
11 February 2008	-0.12
12 February 2008	-0.09
13 February 2008	0.02
14 February 2008	0.03
15 February 2008	-0.03
19 February 2008	-0.06
20 February 2008	0.00
21 February 2008	0.01
22 February 2008	-0.03
25 February 2008	0.00
26 February 2008	-0.15
27 February 2008	-0.07
28 February 2008	0.06
29 February 2008	0.01
3 March 2008	0.10
4 March 2008	-0.10
5 March 2008	-0.07
6 March 2008	-0.01
7 March 2008	-0.04
10 March 2008	-0.01
11 March 2008	-0.05
12 March 2008	-0.03
13 March 2008	-0.02
14 March 2008	-0.01
17 March 2008	-0.31

Date	Percent
18 March 2008	-0.09
19 March 2008	-0.17
20 March 2008	-0.03
21 March 2008	-0.17
24 March 2008	-0.17
25 March 2008	0.17

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Federal Funds Rate Volatility (II)

A line chart shows Daily Fed Funds Rates and Ranges: March 2008 to Present. The x-axis is the date from March 3, 2008 to April 16, 2008. The y-axis is the interest rate with a range from zero to five percent. This graph depicts three separate interest rates that all run horizontally: the effective federal funds rate is represented by blue dots, the target federal funds rate is represented by a solid black line, and the primary credit rate is represented by a bold red solid line. March 17, 2008 is marked with a vertical dashed red line that is labeled "PCF spread to target rate lowered to 25bp; PDCF introduced". (PDCF is the Primary Dealer Credit Facility.)

At each blue dot that represents the daily average federal funds rate line, a dashed vertical line is shown to represent the daily upper and lower bounds for the federal funds rate, with the upper bound reaching as high as 10 percent before falling back down on April 7, 2008 and the lower bound reaching or close to zero numerous times after the opening of the PDCF. The daily effective federal funds rate fluctuates between 3.0 percent and 2.0 percent. The target federal funds rate is set at 3.0 percent through March 17, 2008, and then is set at 2.25 percent for the remainder of the period. The primary credit rate runs 50 basis points above the target federal funds rate until March 17, 2008, and then narrows to a constant 25 basis points above the target federal funds rate. The blue dots that represent the daily effective federal funds rate fall either above or below or on the black solid line that represents the target federal funds rate.

Pages 46-47
Implications for Interest on Reserves

- Consider in tandem with changes to overall framework
- Be willing to make significant adjustments to facilitate monetary policy implementation and market robustness
- Options 1 and 2 eliminate reserve tax distortions and Option 2 eliminates most of regulatory burden
- Option 2 has several advantages:
  - Less regulatory burden, voluntary
  - Averaging dampens shocks
  - Considerable experience with this type of framework--similarities with the contractual clearing program
  - Bank of England has been using it successfully
- But other proposals go further in altering fundamental framework
- Option 5 is potentially more robust than Option 3 or Option 4:
  - Flexible in that number of parameters that can be adjusted--width of corridor and size of voluntary reserve band
  - As a result, it could be adjusted readily in response to experience and/or changes in

market conditions
    - But less empirical evidence available as no other central bank has adopted such a model

Page 48
Recommendation - Interest on Reserves

- Reserve maintenance periods have advantages and disadvantages
- Smoothing reduces volatility, but shocks get dispersed through the reserve maintenance period
- Single day systems, reserve shocks do not persist
- Recommendation: Develop best proposal within each broad class
- Focus on Options 2 and 5

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Next Steps

- Identify workable systems of voluntary targets for reserves, needed for either option 2 or 5
    - Set clear objectives for aggregate size and distribution across DIs
    - Determine how such a system would be applied to a heterogeneous banking system
- Critically assess relative merits of maintenance periods vs. daily clearing bands as a source of reserve management flexibility
    - and optimum sizes of maintenance period and clearing band width
- Define the optimal width of a rate corridor under both options
    - understand implications for rate dynamics and the functioning of the interbank market under normal conditions and during times of stress
- Assess compatibility of either option with possible changes in counterparties and collateral for central bank credit operations

Page 50
Possible Timeline (I)

Apr-08	Board announces System studying approaches to policy implementation and will consult with public
May-08	Publish white paper on possible approach(es) for three months of public comment
Apr-08 to Nov-08	Intensive study of two options (options 2 and 5) - public comment consultation with System groups and public
Oct-08	FRBNY conference on monetary policy implementation
Dec-08	Staff proposes specific approach to Board and FOMC

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Possible Timeline (II)

Jan-09	Board and FOMC discussion; preliminary decision on approach
Jan-09 to Jul-09	Staff develops detailed proposal--further consultation with System groups and public
Aug-09	Board publishes final proposal in Federal Register for public comment

Oct-09	Board publishes rules
Oct-09 to Oct-11	Prepare for implementation
Oct-11	Implement

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We seek your guidance on several key issues

- Criteria for the evaluation of policy options
  - In particular, the weight to place on reduction in burden and distortions associated with reserve requirements
- Specific options that should be studied further
- Process and timeline going forward
- Interaction with other aspects of policy implementation

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