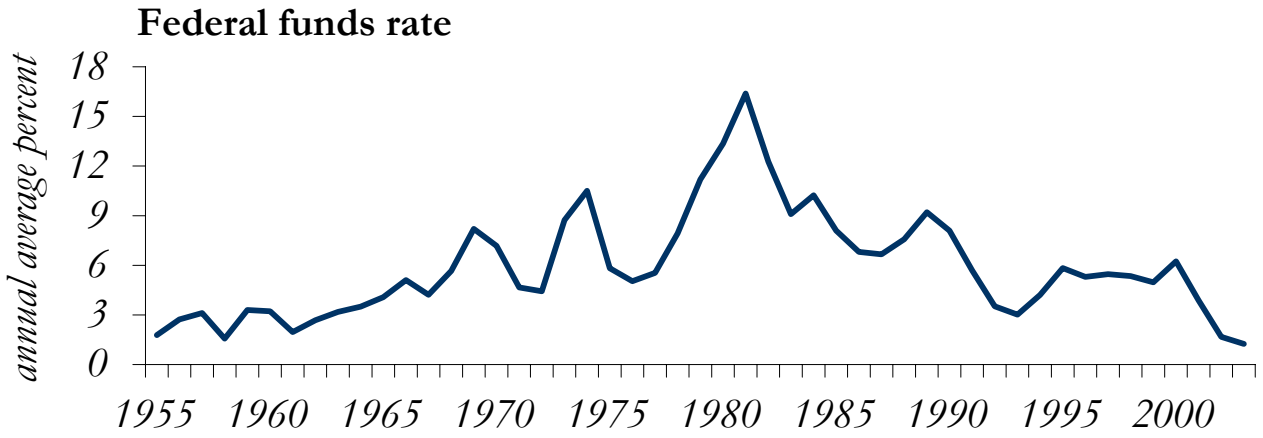
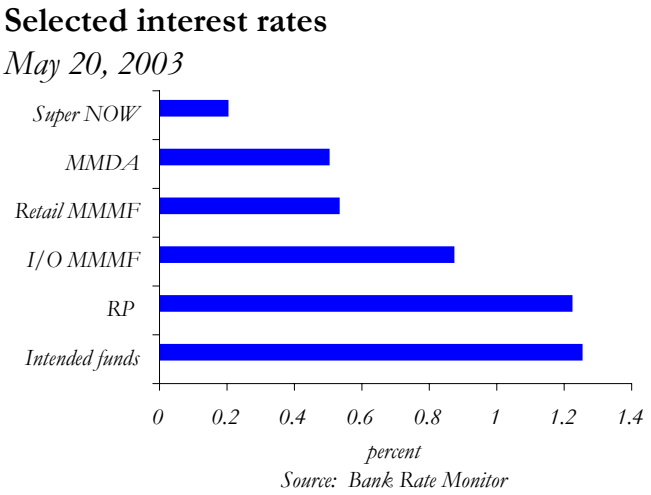
Appendix 1: Materials used by Mr. Reinhart

Exhibit 1



Costs associated with a low overnight nominal interest rate

- Compressing rates on those instruments that typically provide returns below the overnight federal funds rate.



- Thinning brokering; and
- Fostering the misimpression that monetary policy has become ineffective.

Exhibit 2

The Implementation of Monetary Policy

- Monetary policy actions are implemented by altering the Federal Reserve System's balance sheet.

Combined balance sheet of the Federal Reserve System
Billions of U.S. dollars, 6/11/2003

ASSETS		LIABILITIES & CAPITAL	
Treasury securities	652	*Currency*	693
of which:		*Deposits*	
Bills	238	*of depositories*	21
Notes & bonds	399	*of U.S. Treasury*	7
Loans to depositories	0.06	*Other liabilities & capital*	20
Other assets	89		

- Changes in the size of the balance sheet

  are reflected directly in the overnight federal funds rate until it is driven to zero

- Changes in the composition of the balance sheet

  potentially could influence term premiums

- Both could influence expectations about the expected path of policy.

The Transmission of Monetary Policy

- The principal channel of transmission of monetary policy to spending is through the prices and returns of long-lived assets.
- Those returns depend on the current and expected future path of short-term interest rates as well as risk premiums.
- Some economists argue that the quantity of liquidity has an effect on spending independent of its influence on the current overnight interest rate.

Three forms of monetary impetus

The Committee can provide impetus to the economy at an unchanged current short-term interest rate

By encouraging investors to expect short rates to be lower in the future than they currently anticipate, and

By shifting relative supplies to affect risk premiums.

If the overnight rate is already at zero, the Committee may be able to provide additional impetus to the economy

By oversupplying reserves at the zero funds rate.

Exhibit 4

Shaping interest rate expectations

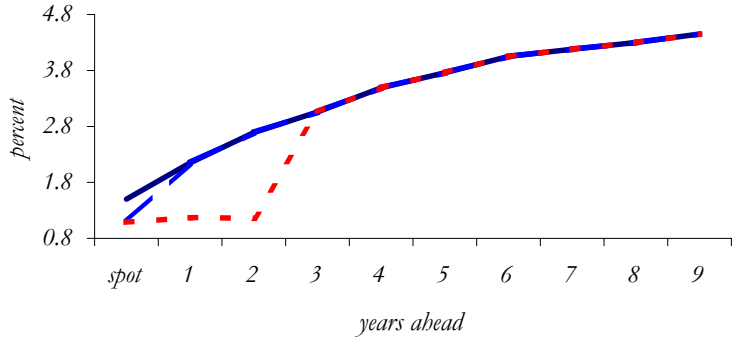
How can the Federal Reserve encourage lower interest rate expectations?

Commitment can take two forms

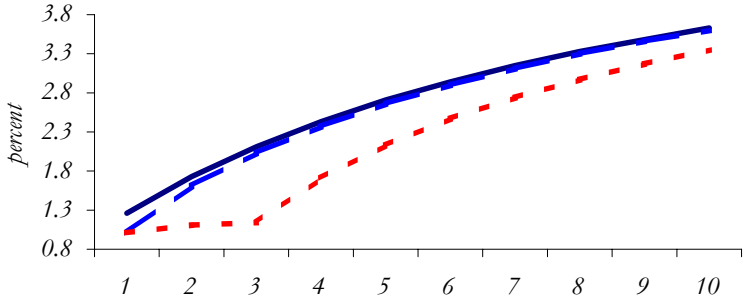
- Unconditional commitment

  The Committee pledges to hold short-term rates at a low level for x period of time.

Expected short-term nominal interest rates implied by swap yields, *June 3, 2003*



Swap yield curve
June 3, 2003



- Conditional commitment

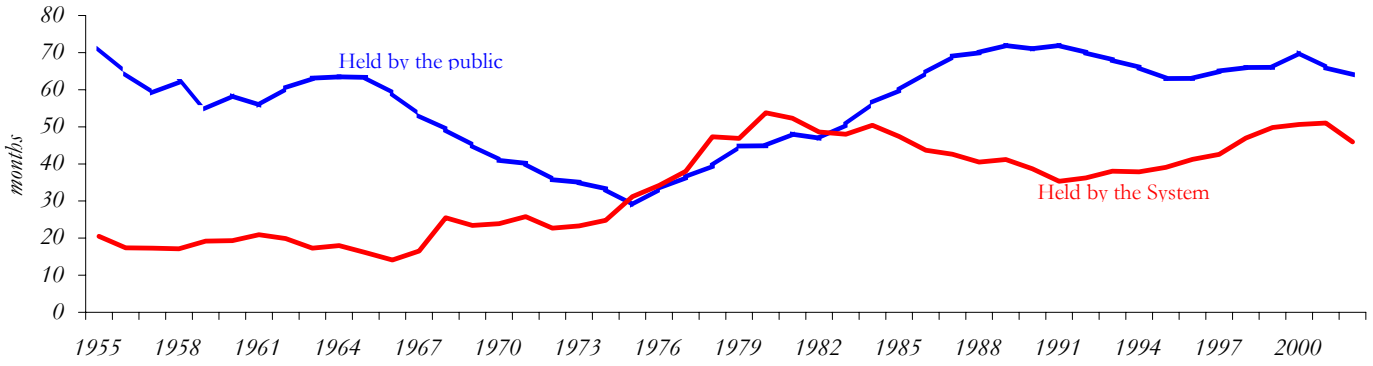
  The Committee pledges to hold short-term rates at a low level until y happens.

Caveats

- Words ultimately have to be matched by deeds for the public to believe.
- The Committee may be concerned about its credibility.

Altering the composition of the central bank balance sheet

Average Maturity of Treasury Debt



- Acquiring longer-term securities

  could lower risk premiums on Treasury securities, and

  may convince investors that the Committee intends to keep interest rates low because lengthening the maturity of the portfolio would impose capital losses in the future should the Committee put policy on a firmer course than currently anticipated.

- The Committee could alter the composition of the System Open Market Account

  indirectly, by instructing the Desk to tilt its purchases toward longer-term issues (perhaps by targeting a longer average maturity of the System Open Market Account), or

  directly, by putting a ceiling on one or more points along the structure of interest rates.

Caveats

- There is little empirical evidence to suggest that relative supplies influence risk premiums.

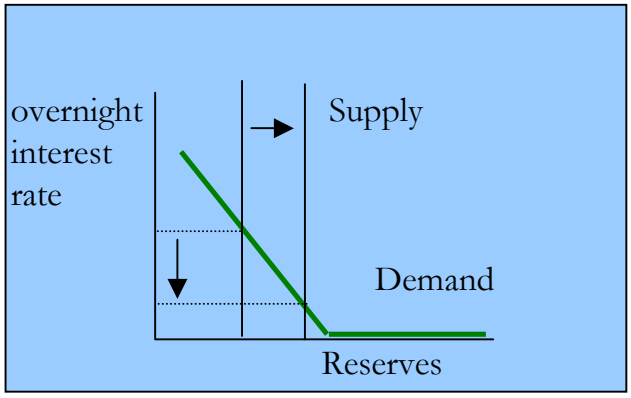
- Purchases of securities might have to be massive to enforce a ceiling if investors came to doubt that the FOMC would keep interest rates low.

  At that point, there would be a risk that the targeted securities would become disconnected from the rest of the yield curve and private rates.

- Why should a central bank issuing a fiat currency care about capital gains or losses?

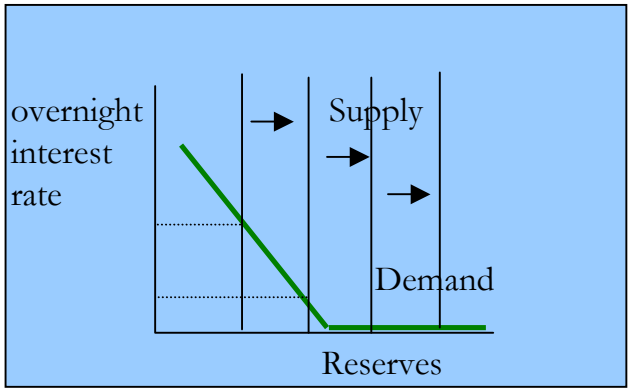
Altering the size of a central bank's balance sheet

- A central bank usually eases monetary policy by expanding the stock of reserves.
- Currently, most central banks calibrate their easing in terms of the price of reserves--i.e., the overnight federal funds rate.



- The Committee could switch its focus from the price of reserves to the quantity of reserves (or the growth of reserves).

to drive the funds rate to zero and possibly provide further monetary stimulus by oversupplying reserves at the zero funds rate.



Oversupplying reserves could affect the economy

- by lowering the returns on the assets purchased to supply those extra reserves,
- by convincing market participants that the overnight interest rate will be kept low, and
- by working through a quantity channel, if it exists.

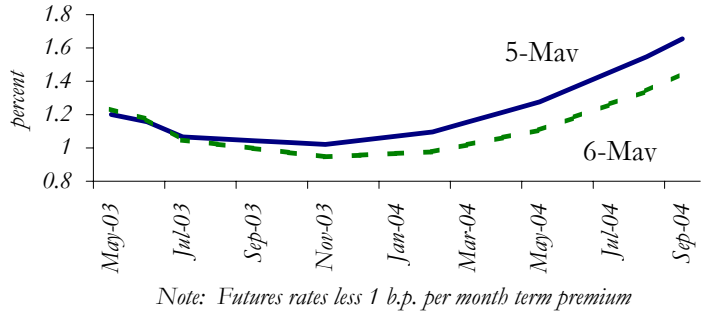
Caveats

- A long-run association does not provide much guidance about the short-run performance of the economy, implying it would be difficult to calibrate the effects of policy and risks confusing market participants.
- The public has to be convinced that the increase in reserves will stick around, so there still will be a communications challenge.

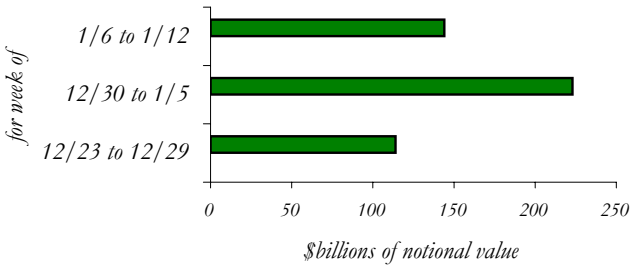
Some precedents

- The Federal Reserve has always appreciated the importance of correctly aligning market expectations.

Expected federal funds rate



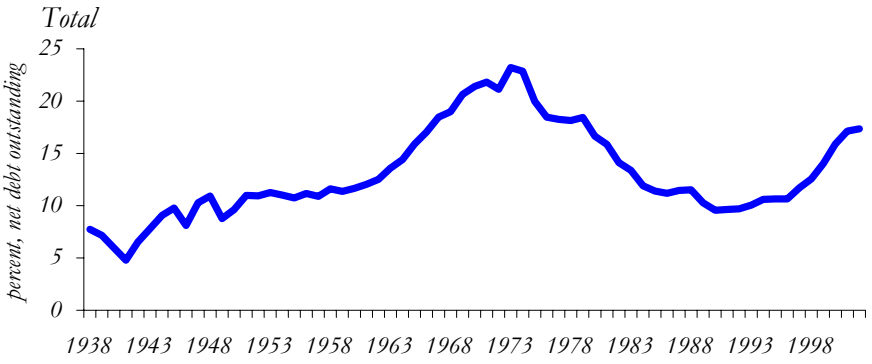
Y2K Options sold by the Desk



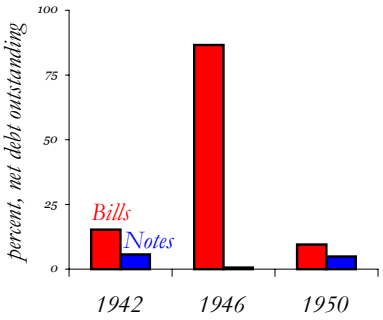
- The Federal Reserve operates in all segments of the Treasury market, and

  from 1942 to 1951 enforced a ceiling on the yield curve.

Federal Reserve Holdings of U.S. Treasury Securities



. . . and by maturity



- The Federal Reserve targeted nonborrowed reserves from 1979 to 1982.

Monetary Base

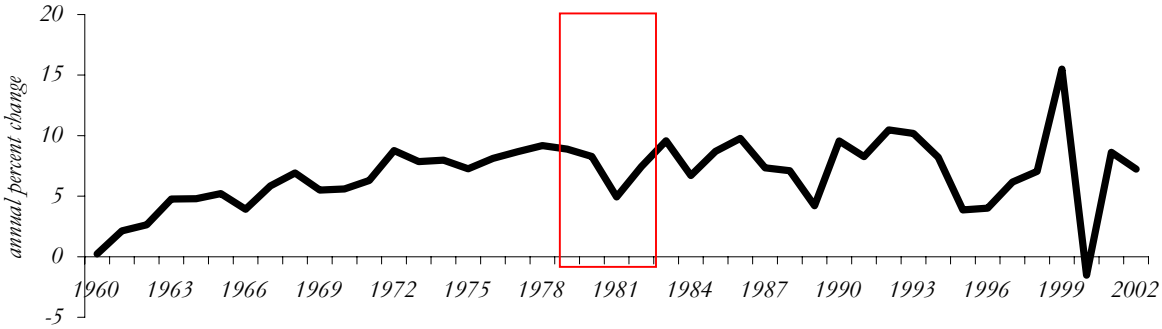


Exhibit 8

Issues regarding sequencing

These forms of monetary policy stimulus could be put in place

- Once the overnight rate has already been driven to zero;
- As a way of driving the overnight rate to zero; or
- Before the overnight rate hits zero (and perhaps as a result it need never get there).

Other alternatives

The Federal Reserve could

- lower the primary credit rate and loosen other discount window policies;
- purchase other assets, perhaps including by seeking legislation to expand its authority; or
- coordinate policy with the Treasury.

Exhibit 9

Four questions

- Are there any alternatives that the Committee particularly favors for additional study?
- Are there any alternatives that should be dropped immediately from consideration?
- How does the Committee assess the costs of very low nominal overnight interest rates, and are they such that an alternative policy should be put in place at a funds rate above zero?
- How should the Committee's assessment of these policy alternatives be conveyed to the public in the months ahead?

Appendix 2: Materials used by Mr. Kos

Exhibit 1

The F.R. Balance Sheet & Domestic Financial Portfolio

Combined balance sheet of the Federal Reserve System
Billions of U.S. dollars, 6/11/2003

ASSETS			LIABILITIES & CAPITAL	
Treasury securities		652	F.R. Notes	659
of which:			Deposits	
Bills	238		of depositories	29
Notes and bonds	399		of U.S. Treasury	6
TIIS	14			
			Reverse RPs in the market	0
RPs		32		
			Other liabilities	32
Loans to depositories		<1		
			Capital	18
Other Assets		60		
			Total Liabilities & Capital	744
Total Assets		744		

The Domestic Financial Portfolio includes

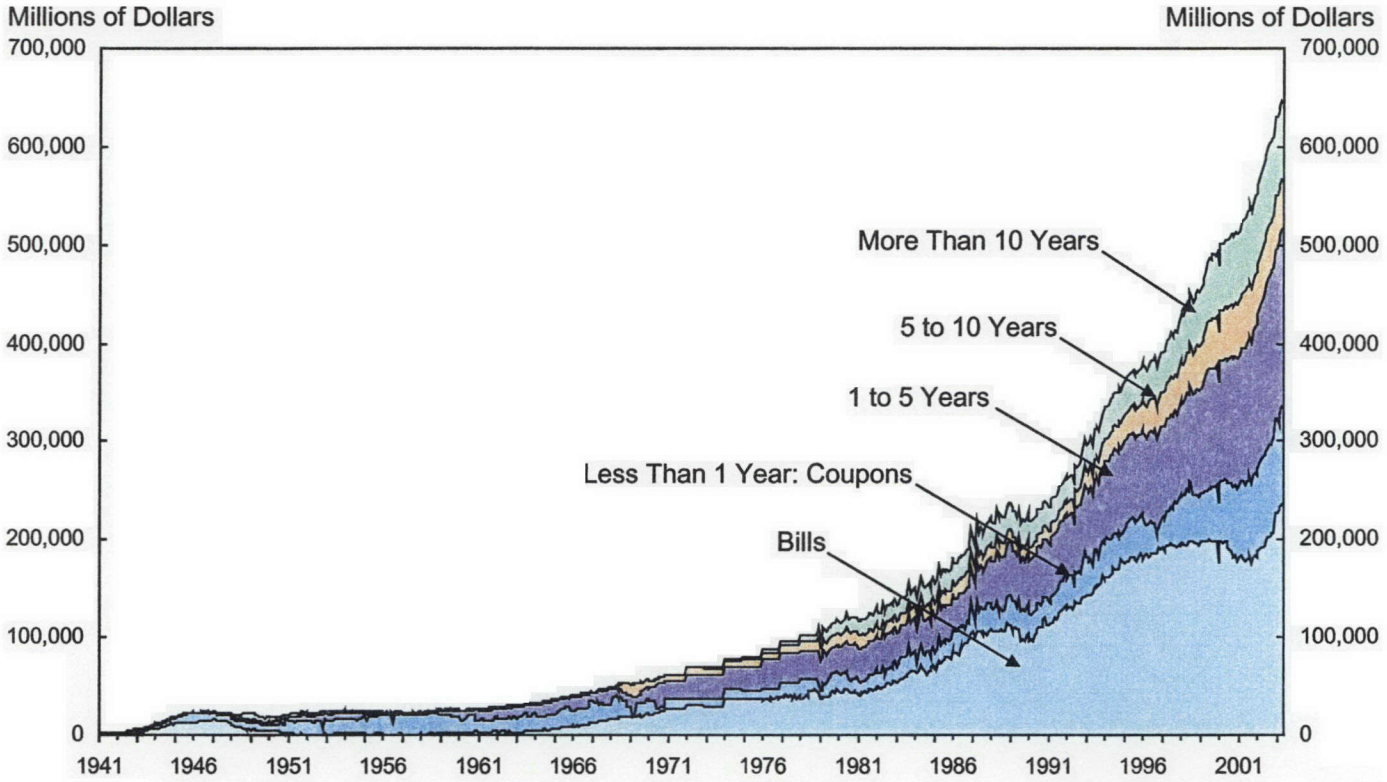
- Outright Holdings of Treasury Securities (domestic SOMA)
- RPs, and Reverse RPs arranged in the market

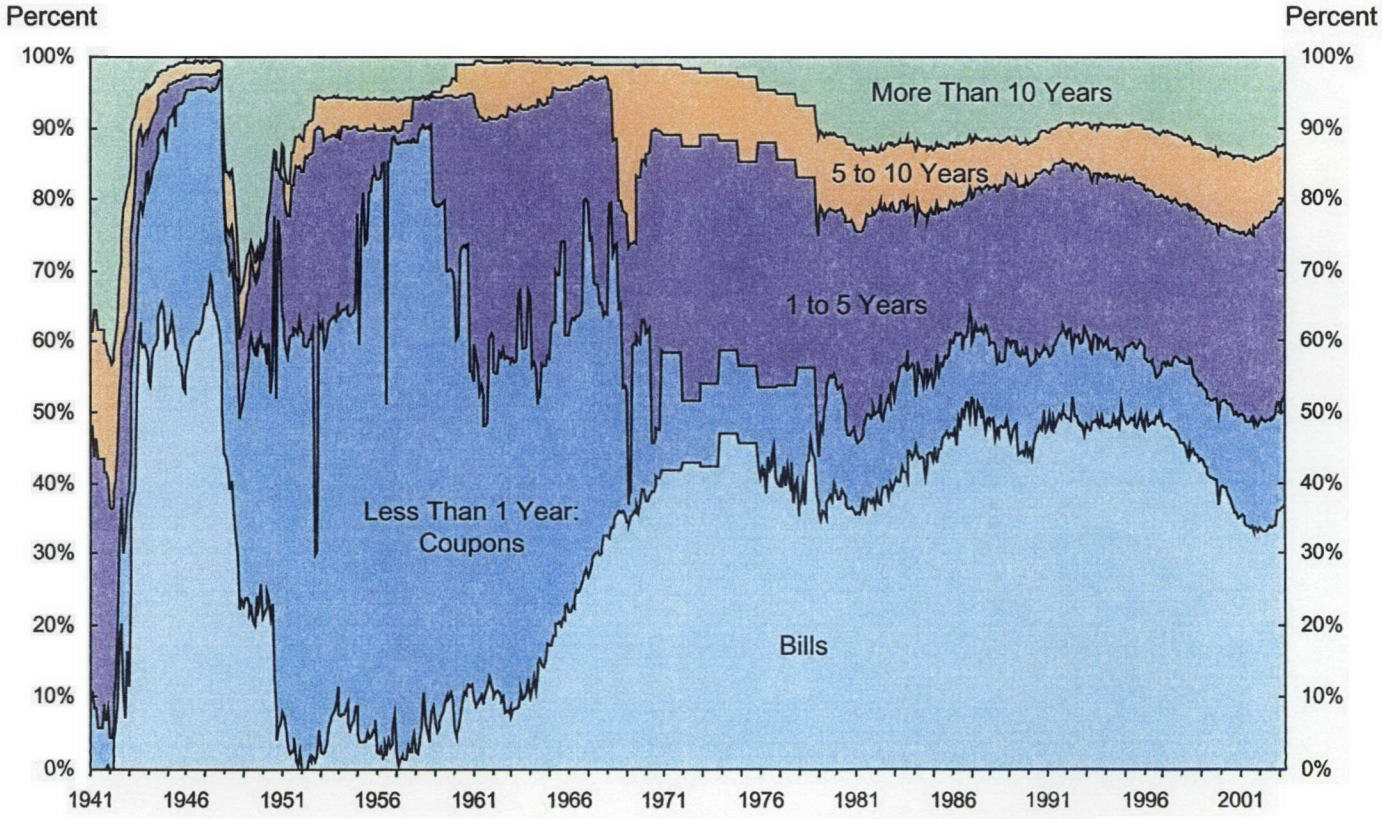
Working Assumption

- only operate in assets currently authorized to hold

Exhibit 2

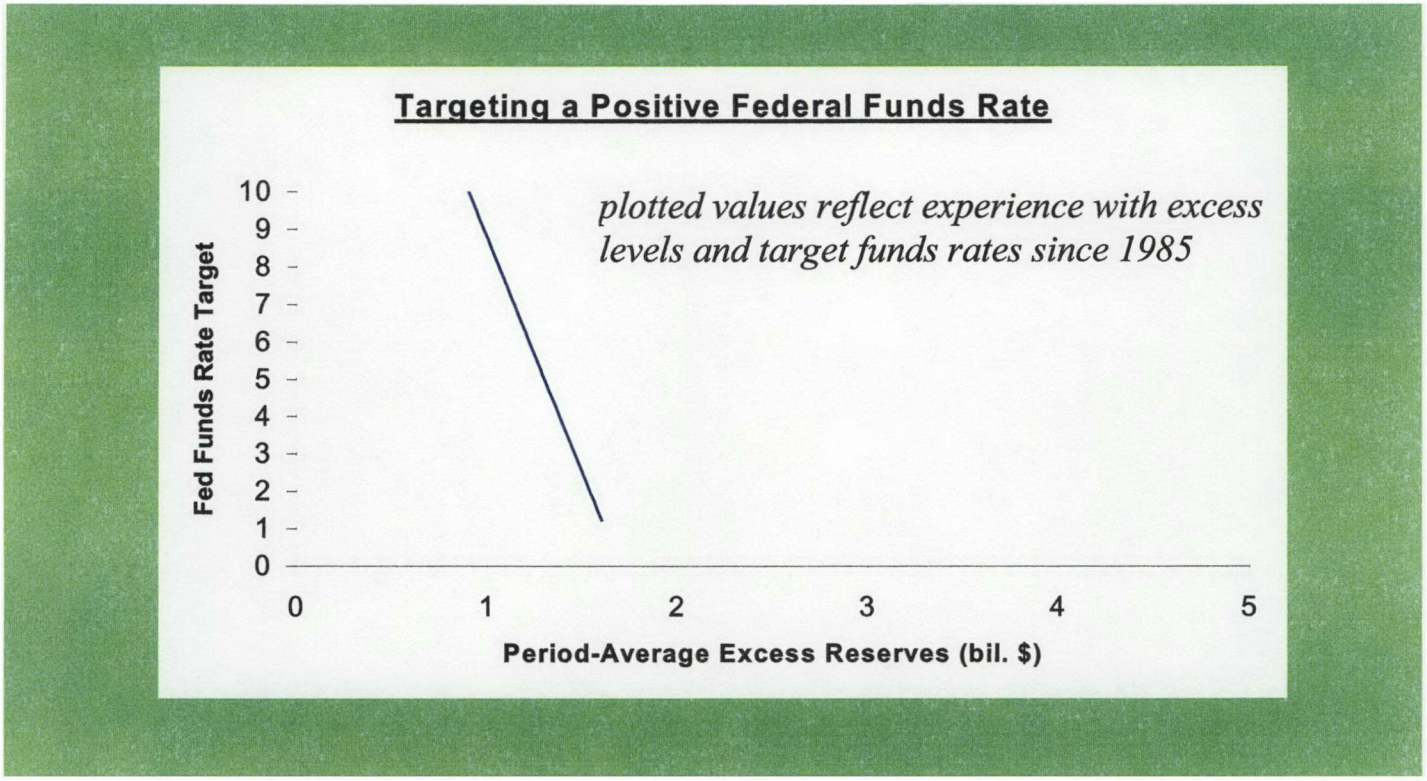
Size and Composition of SOMA Holdings of Treasury Securities by Remaining Maturity





Data from 1971 to 1978 are at an annual frequency.

Exhibit 3



Excess Reserve Levels and the Federal Funds Rate

- Changes in the target funds rate have had little impact on excess demand
- Deviations from period-average excess demand cause sharp rate swings

  - *within a maintenance period, wide daily swings in excess can occur*
- The size of the Domestic Financial Portfolio is set exogenously by:

  - *excess demand associated with the funds rate target*

  - *banks' requirements to hold reserve balances*

  - *autonomous factors (e.g., currency, float)*

Exhibit 4

Alternative Approaches for Conducting Monetary Policy

Change the Composition of the Balance Sheet

- *Extend Average Maturity of the domestic SOMA*

- *Set Ceilings on Treasury Yields*

- *Use of Derivative Instruments*

  - excess reserves stay low and can target a positive funds rate

Expand the Size of the Balance Sheet

- *Use reverse RPs or raise requirements with the above alternative methods*

  - excess reserves remain low in this case

- *Do not sterilize the impact of the above approaches on excess reserves*

- *Quantitative Easing Objective*

  - excess rises and short-term rates fall to zero in these cases

Exhibit 5

Issues Associated with Alternative Approaches

- Operating Objectives
- Instruments and Market Intervention Techniques
- Achieving Policy Objectives
- Exit Strategies
- Co-Ordination with Treasury Debt Management
- Potential for Capital Losses

Average Maturity of SOMA and Public Holdings of Treasury Debt

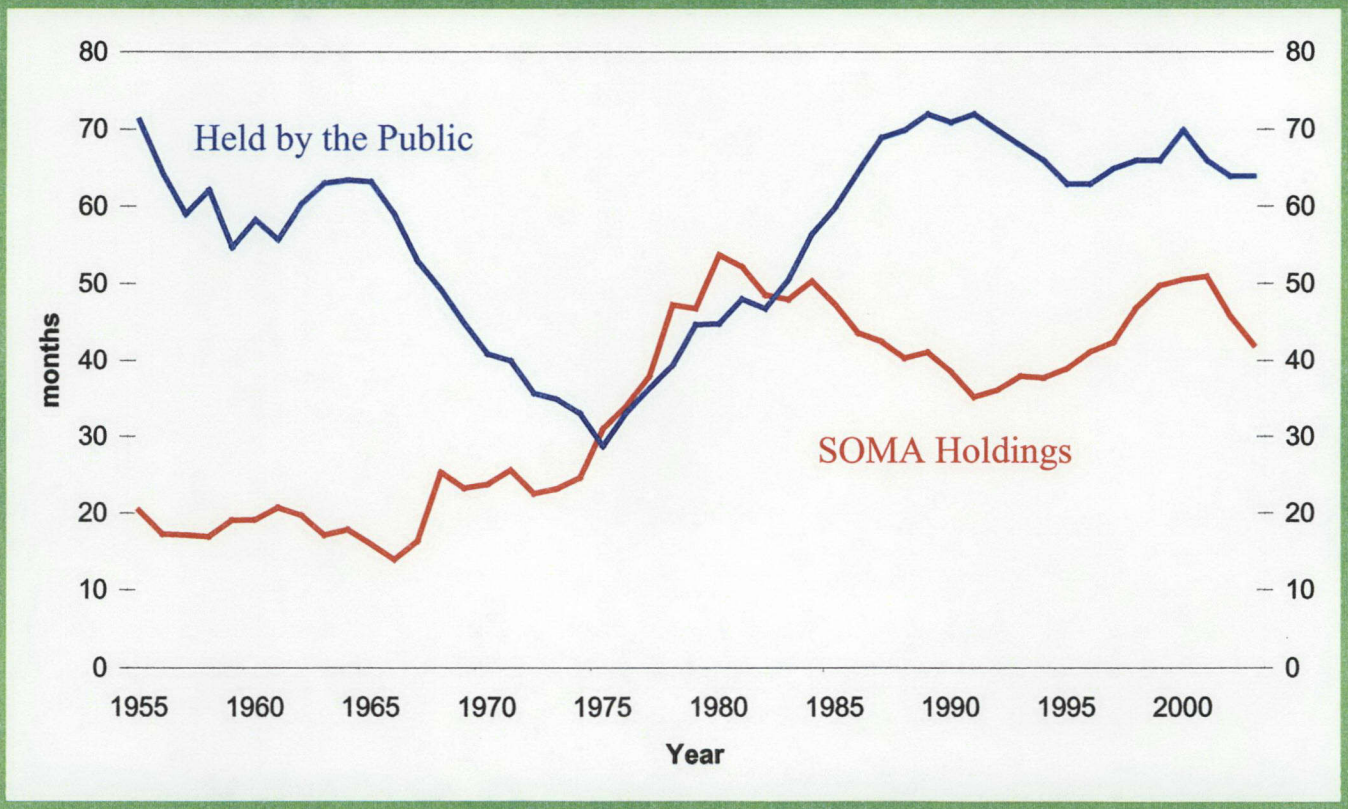
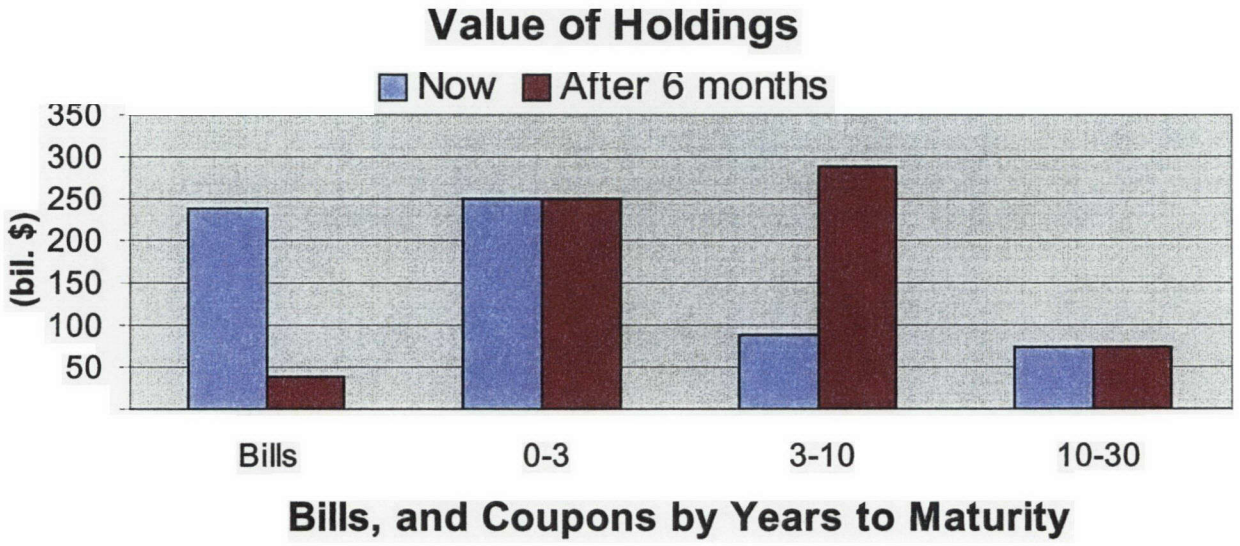


Exhibit 6

Extend Average Maturity of the Domestic SOMA

- redeem $200 billion of bills over six months (≈$8 bn. per week)
- buy 3- to 10-year coupon issues (equal percentage holdings of each issue)
- this extends average maturity of SOMA from 42 to 64 months
- but eliminates most liquidity in the domestic SOMA

SOMA Holdings



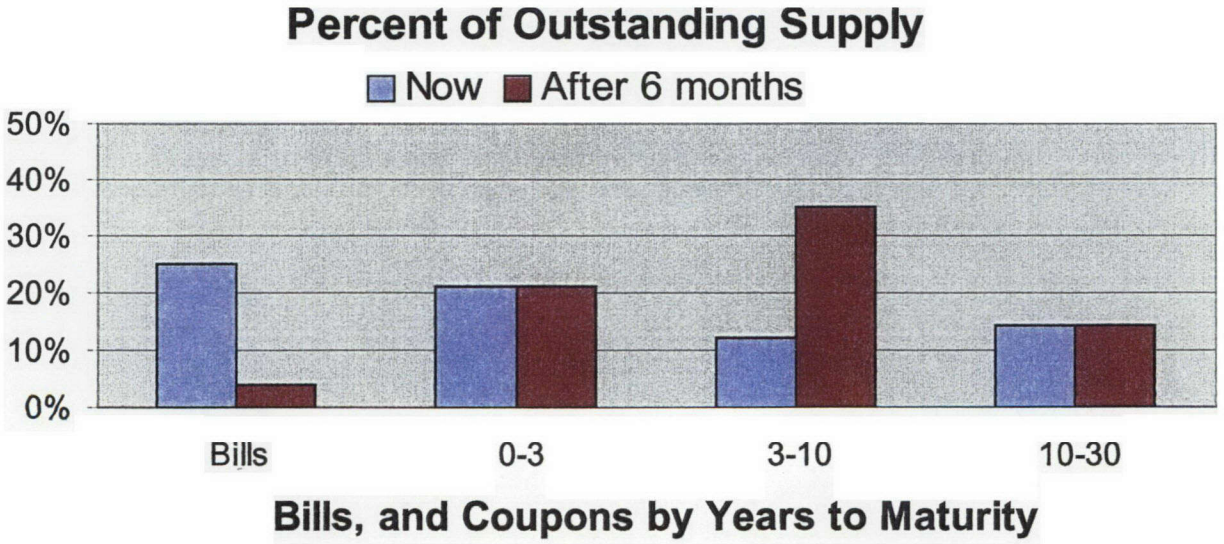
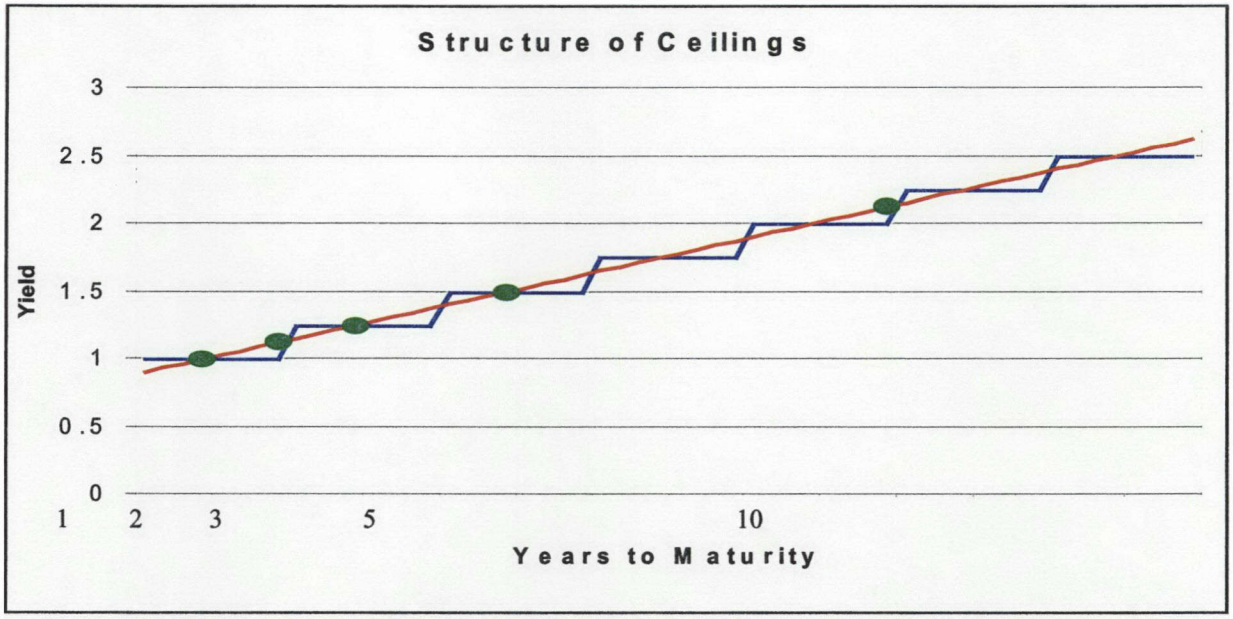


Exhibit 7

Ceilings on Treasury Yields



Design Issues

- Ceiling structures: step function; smooth function; discrete points, etc.
- Desk Operations: "Hard" versus "Soft" ceilings
- Broader Policy Context

  - the primary mechanism for influencing longer term yields

  - supports commitment to a path of future short-term rates

Exhibit 8

Use of Derivative Instruments

Types of Instruments

- Sell options and forwards on term RPs with future settlement dates
- Sell put options on Treasury Securities

⇒ Best structure determined by other specific operating objectives

Impact on Portfolio

- None at time of sale
- potentially huge if exercised

  - unless structured to make a net cash payout

Transmission Channel to Longer Term Rates

- provides symbolic support to other policy goals
- adds "credibility" by exposing the Fed to possible losses
- reduces risk premia

Exhibit 9

Reverse RPs and Higher Requirements

Reverse RPs and higher requirements are additional tools that:

- blow up the size of the balance sheet
- but can still target a positive funds rate

Expand Level of Reverse RPs

- term operations, regular auction cycle
- financing through primary dealers' balance sheets may be a constraint
- replacing long-term Treasury debt with a short-term nonnegotiable debt
- but it may just recycle Treasury debt

Expand Level of Requirements to Hold Balances

- imposes costs on banks unless pay interest
- or may be ineffective because of sweep programs

Exhibit 10

Expanding Excess Reserves

Policies that entail an expansion of excess reserves

- also blow up the size of the balance sheet
- and push the funds rate to near-zero

Not Sterilizing Impact of Alternative Approaches

- e.g. extending maturity of portfolio, rate ceilings, use of derivatives

- enhances operational flexibility to pursue other operating objectives

High Excess as an Explicit Objective: Quantitative Easing

- achieved with an orderly purchase of Treasury securities
- could be paired with an objective to extend the maturity of the SOMA

Exhibit 11

Summary Observations

Achieving Policy Objectives

- through direct impact of SOMA holdings on supply and prices
- through market expectations about future policy rates

Other Issues

- Exit Strategies

  - market expectations can complicate a clean exit

  - length of time before the balance sheet returns to its original state

- Co-Ordination with Treasury Debt Management

  - critical if rely on direct impact of SOMA holdings to affect yields

- Capital Losses

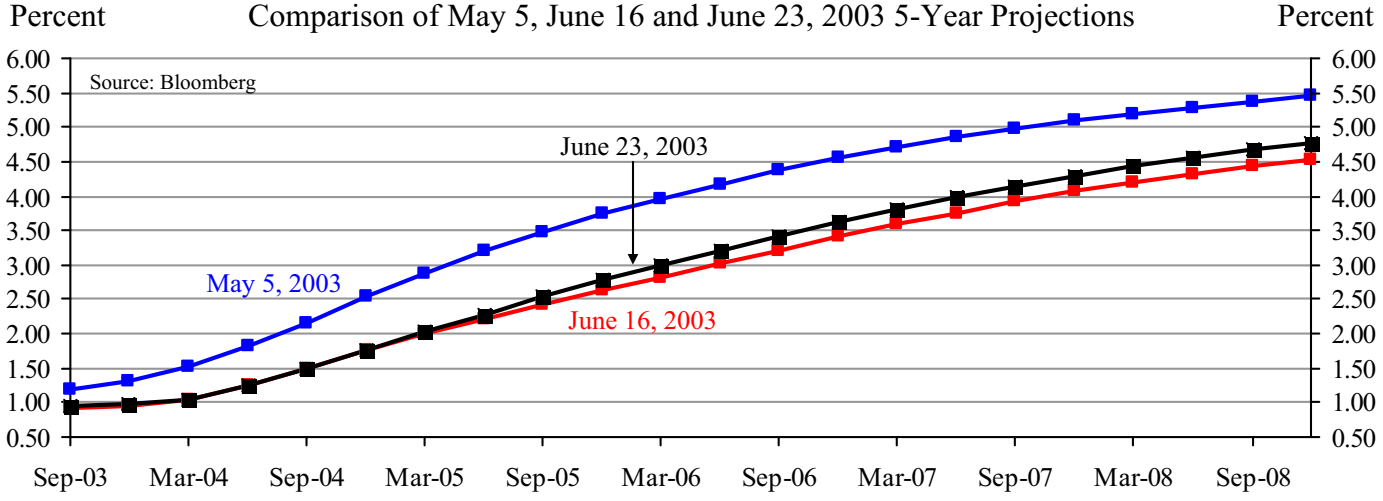
  - potential for realized losses on the F.R. balance sheet

  - potential for private sector losses

Appendix 3: Materials used by Mr. Kos

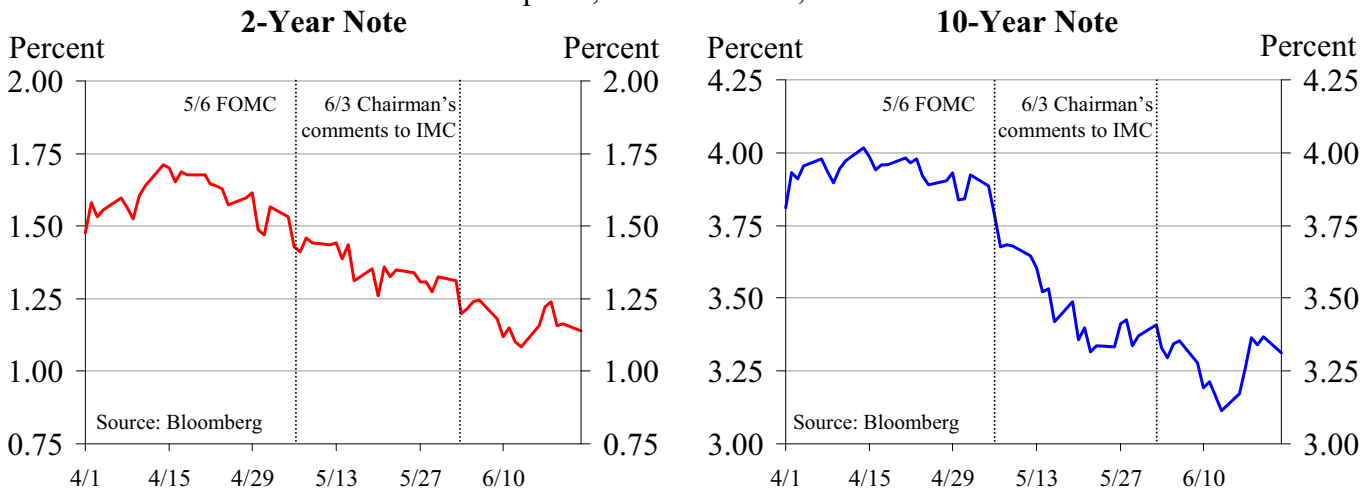
Implied Rates on Eurodollar Futures Contracts

Comparison of May 5, June 16 and June 23, 2003 5-Year Projections



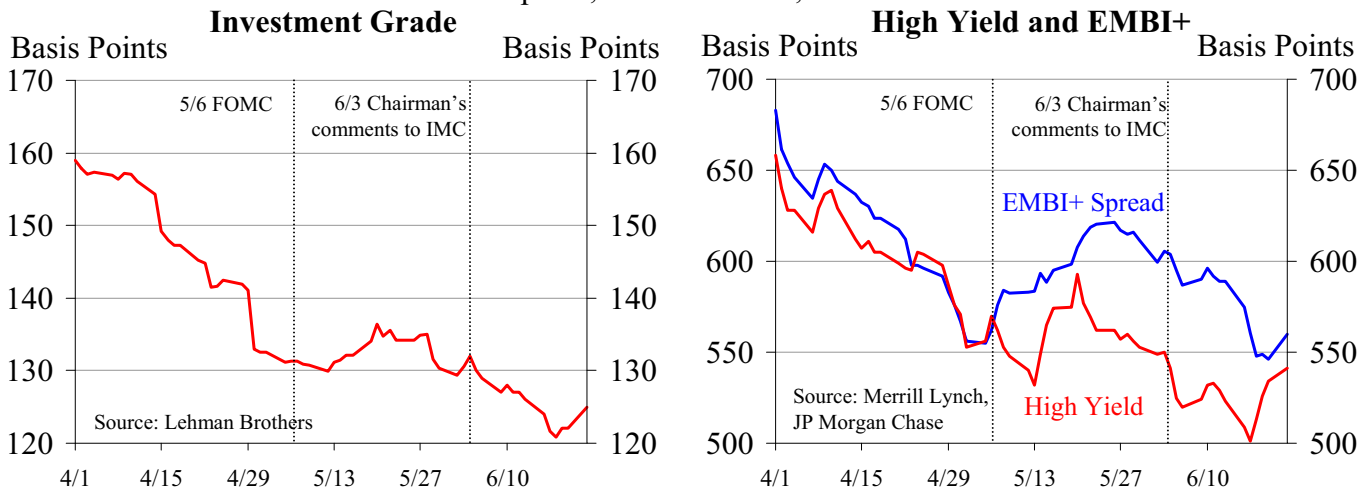
U.S. Treasury Yields

April 1, 2003 - June 23, 2003



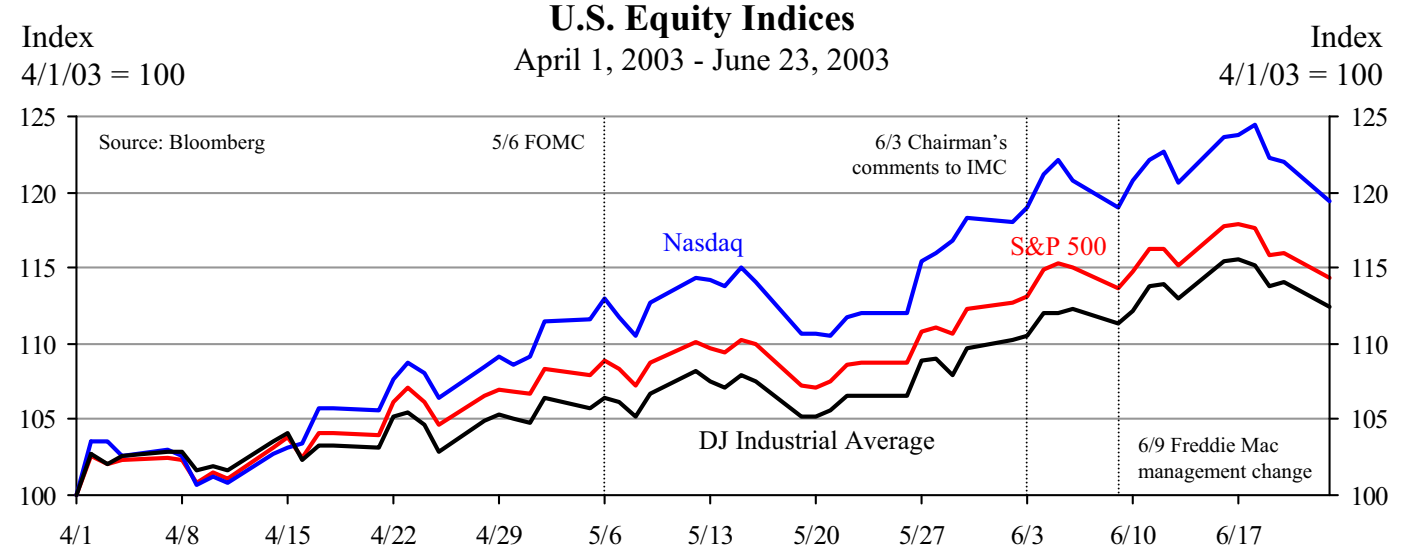
Option-Adjusted Spreads of U.S. Corporates to 10-Year Treasuries

April 1, 2003 - June 23, 2003



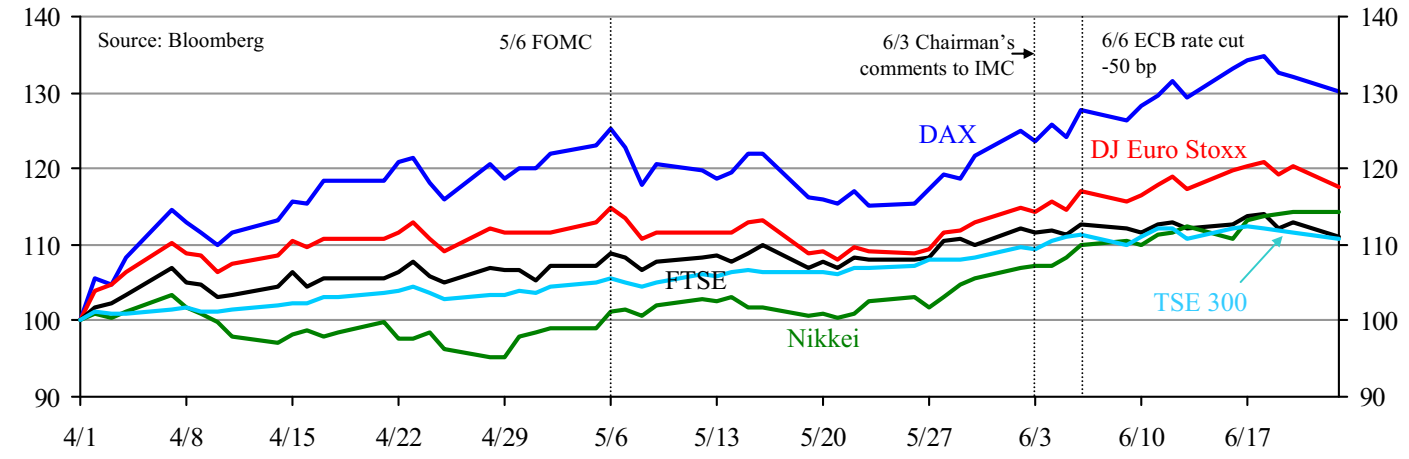
U.S. Equity Indices

April 1, 2003 - June 23, 2003



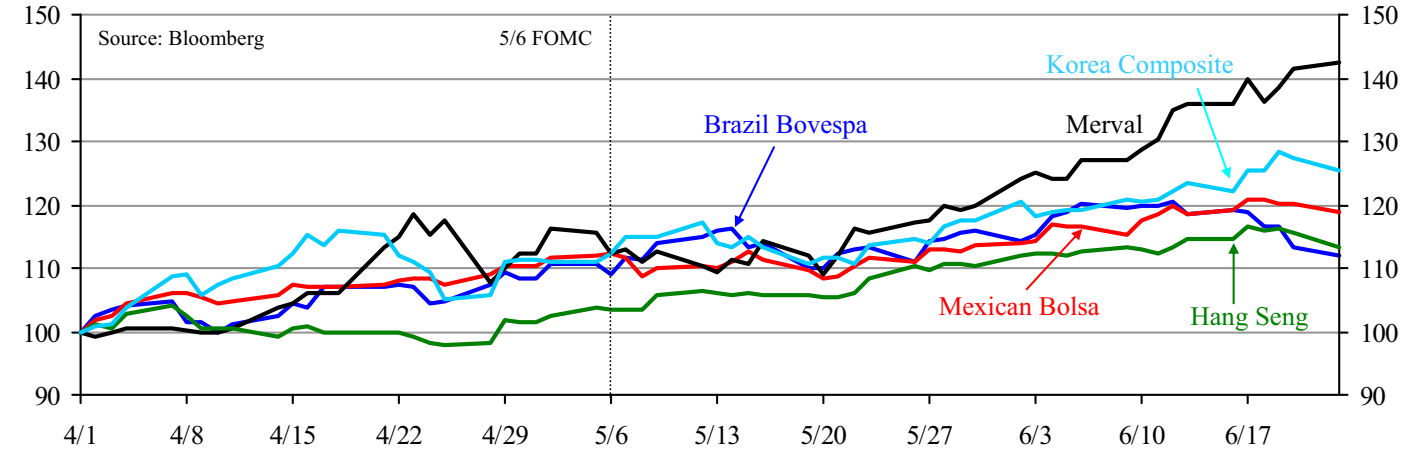
Select Global Equity Indices

April 1, 2003 - June 23, 2003



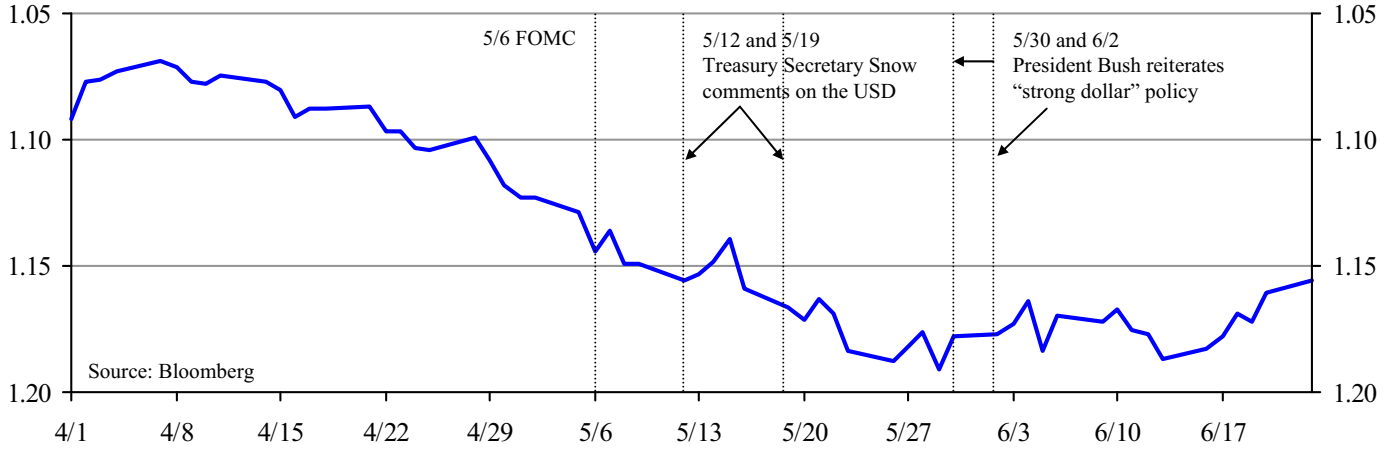
Select Emerging Market Equity Indices

April 1, 2003 - June 23, 2003



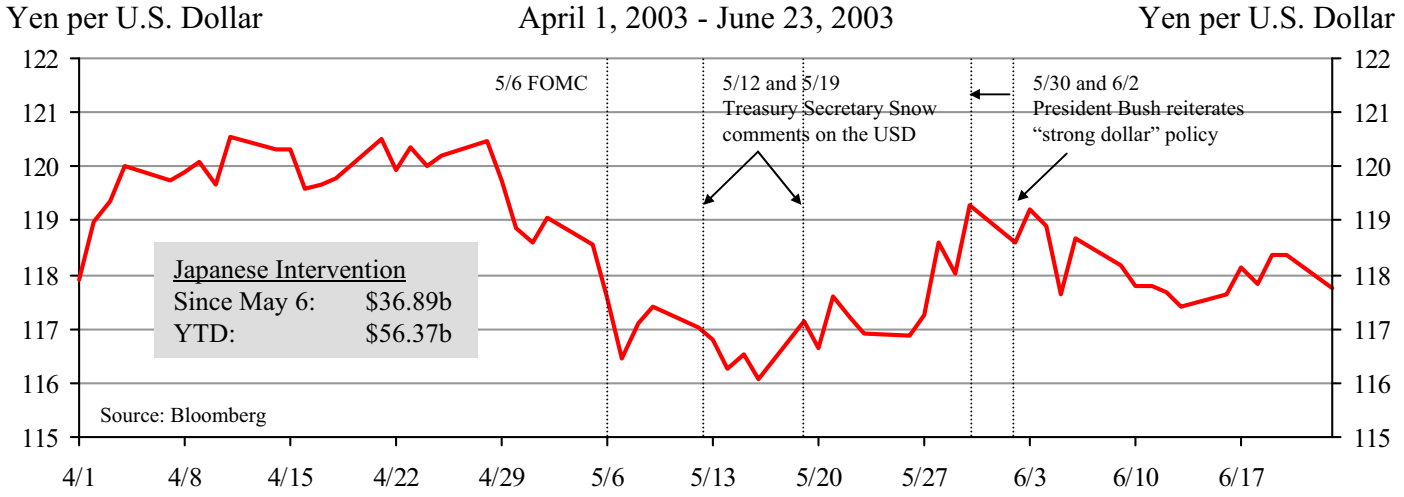
Euro-Dollar Exchange Rate

April 1, 2003 - June 23, 2003



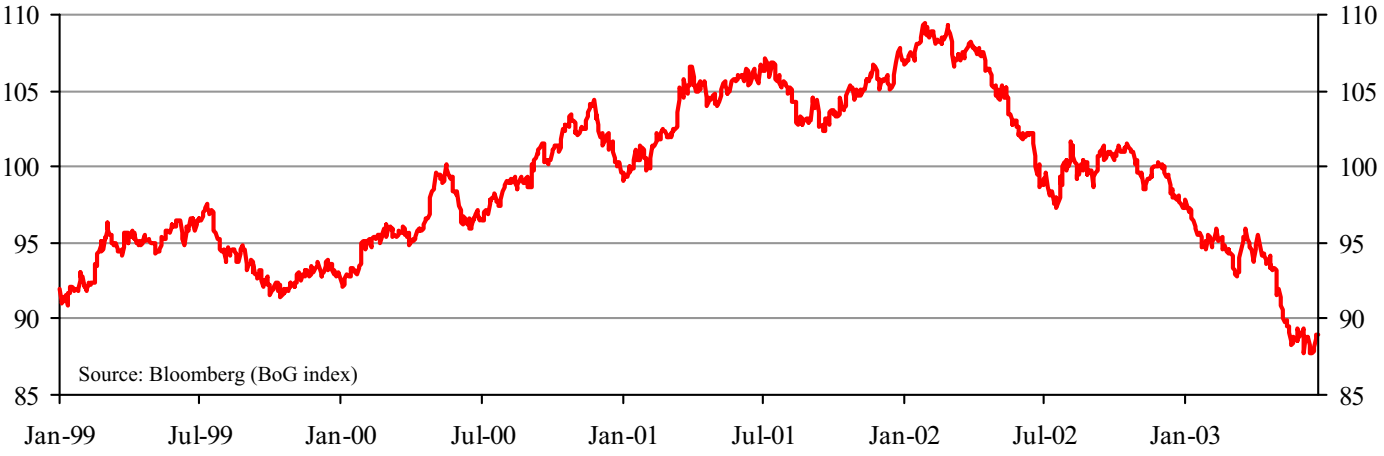
Dollar-Yen Exchange Rate

April 1, 2003 - June 23, 2003



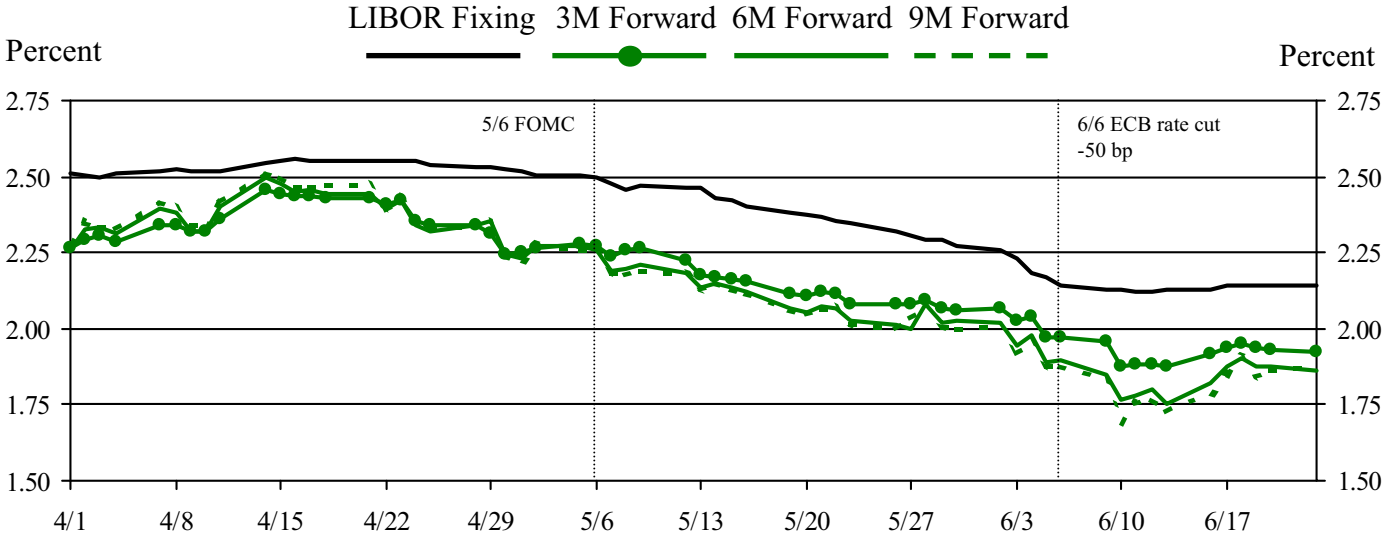
Trade Weighted U.S. Dollar

January 1, 1999 - June 23, 2003



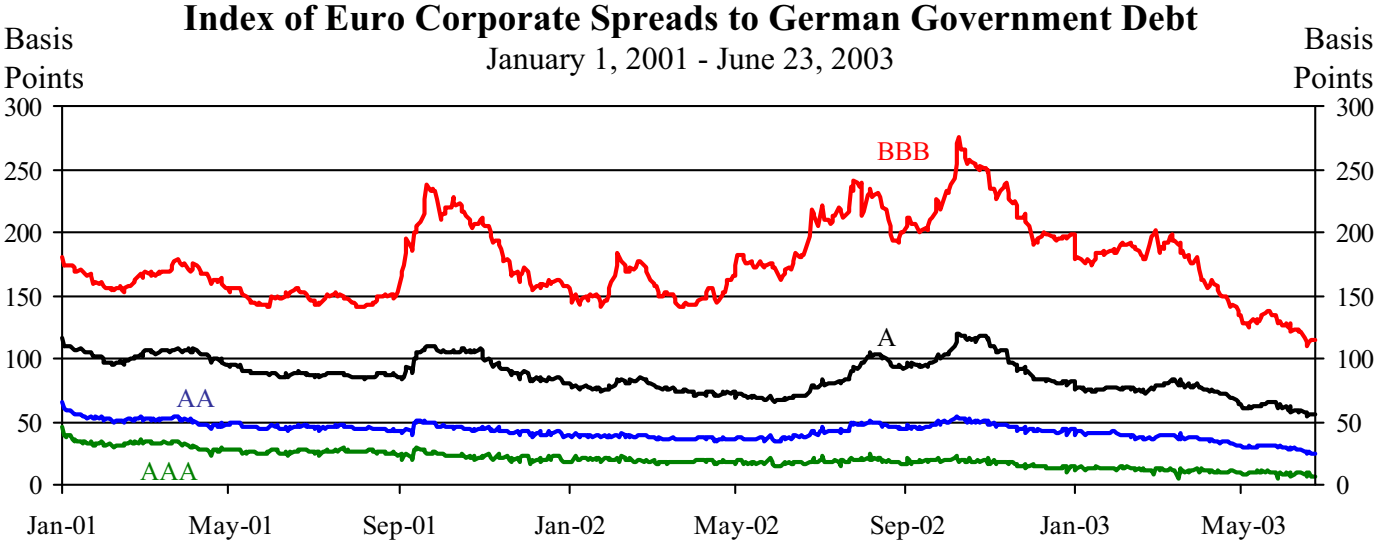
Euro-Area 3-Month Deposit Rates and Rates Implied by Traded Forward Rate Agreements

April 1, 2003 - June 23, 2003



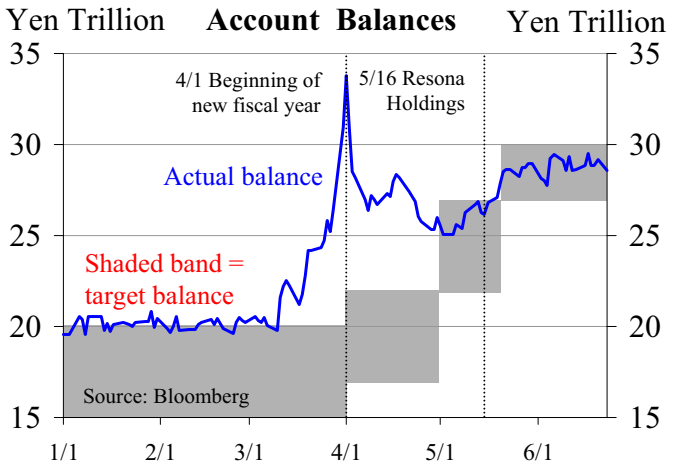
Index of Euro Corporate Spreads to German Government Debt

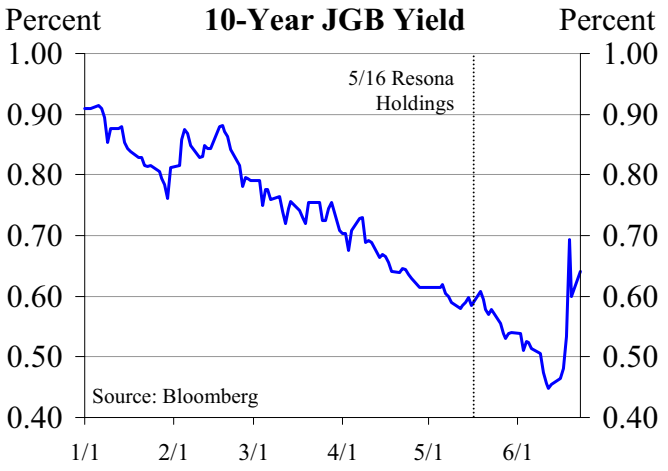
January 1, 2001 - June 23, 2003

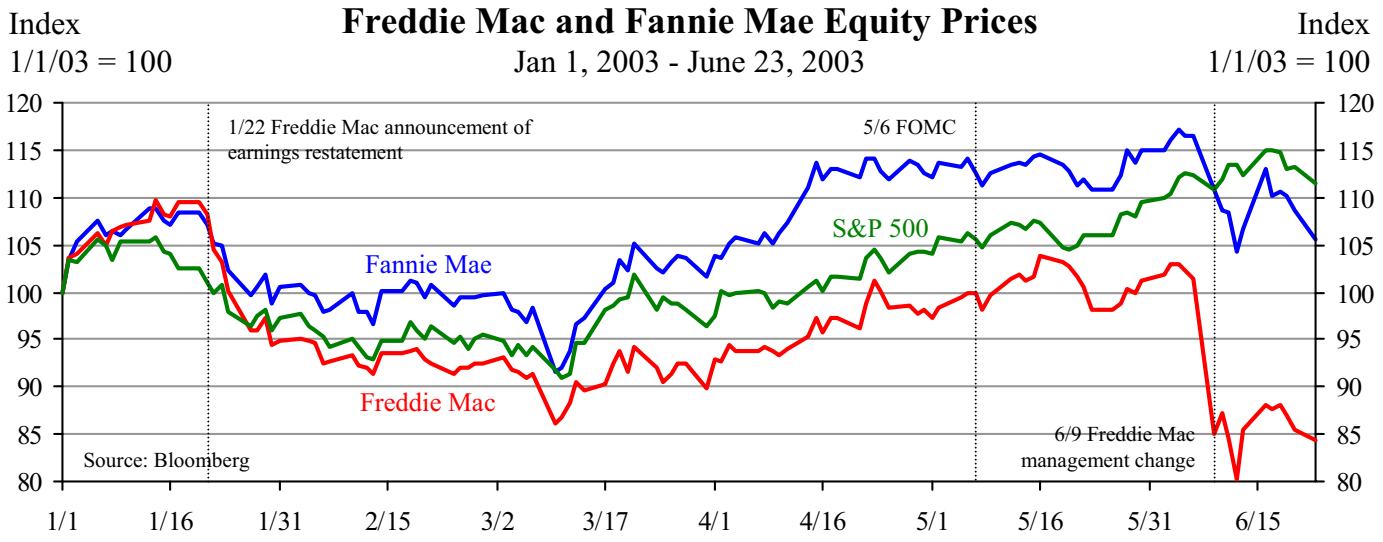


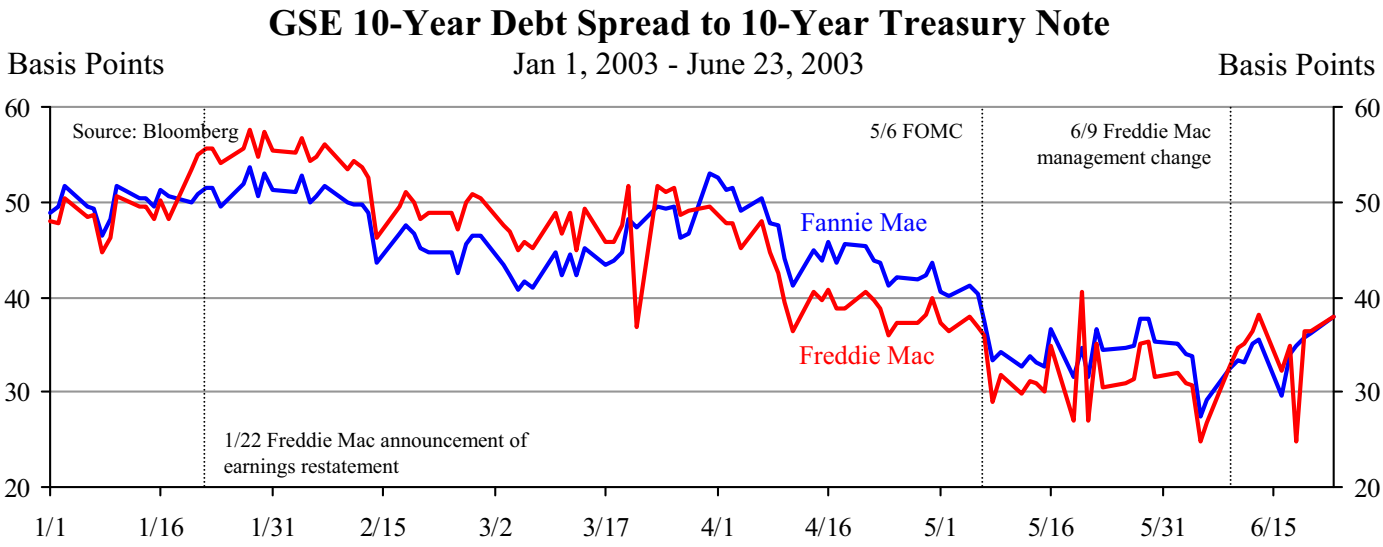
Japan

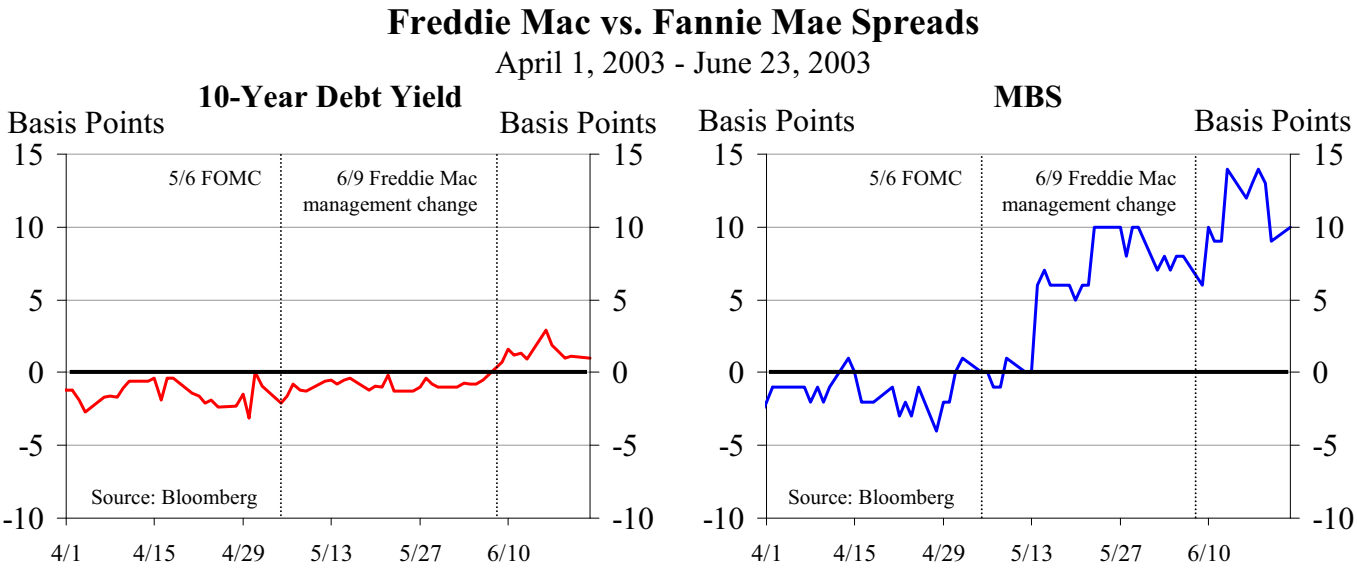
January 1, 2003 - June 23, 2003






Freddie Mac and Fannie Mae Equity Prices
Jan 1, 2003 - June 23, 2003
Index
1/1/03 = 100
Index
1/1/03 = 100
1/22 Freddie Mac announcement of earnings restatement
5/6 FOMC
S&P 500
Fannie Mae
Freddie Mac
6/9 Freddie Mac management change
Source: Bloomberg
120
115
110
105
100
95
90
85
80
1/1
1/16
1/31
2/15
3/2
3/17
4/1
4/16
5/1
5/16
5/31
6/15


GSE 10-Year Debt Spread to 10-Year Treasury Note
Jan 1, 2003 - June 23, 2003
Basis Points
Basis Points
Source: Bloomberg
5/6 FOMC
6/9 Freddie Mac management change
Fannie Mae
Freddie Mac
1/22 Freddie Mac announcement of earnings restatement
60
50
40
30
20
1/1
1/16
1/31
2/15
3/2
3/17
4/1
4/16
5/1
5/16
5/31
6/15


Freddie Mac vs. Fannie Mae Spreads
April 1, 2003 - June 23, 2003
10-Year Debt Yield
MBS
Basis Points
Basis Points
Basis Points
Basis Points
5/6 FOMC
6/9 Freddie Mac management change
Source: Bloomberg
15
10
5
0
-5
-10
4/1
4/15
4/29
5/13
5/27
6/10

Appendix 4: Materials used by Mr. Oliner, Ms. Johnson, and Mr. Wilcox

STRICTLY CONFIDENTIAL (FR) CLASS I-FOMC*

Material for

Staff Presentation on the Economic Outlook

June 24, 2003

*Downgraded to Class II upon release of the July 2003 Monetary Policy Report.

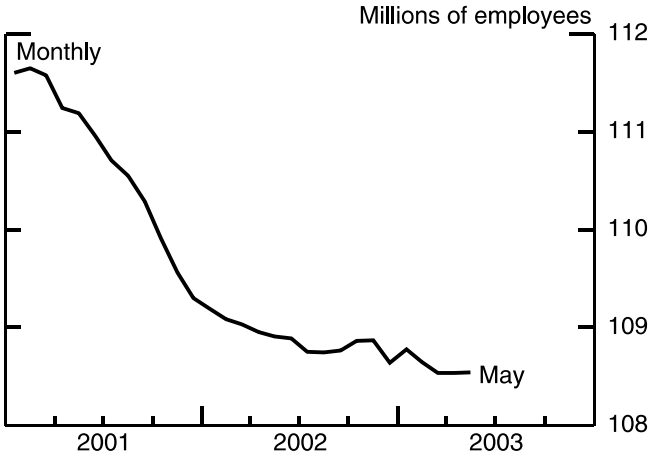
Chart 1

GDP Forecast and Recent Indicators

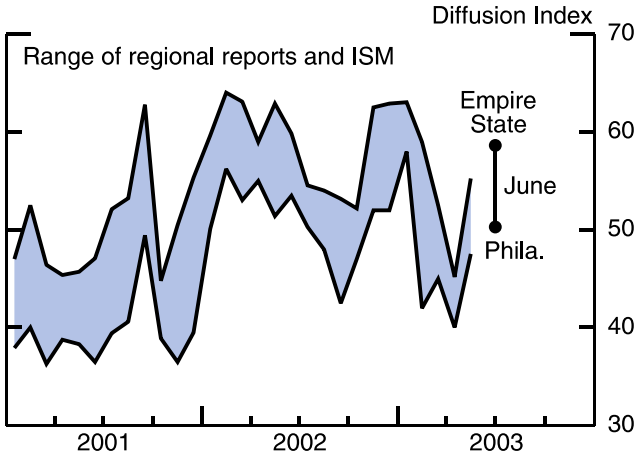
	2003				2004
	Q1	Q2	Q3	Q4	Q4/Q4
1. Real GDP[1]	1.6	1.5	3.8	4.6	5.3
2. *(Jan. GB)*	*(2.6)*	*(2.9)*	*(4.3)*	*(4.6)*	*(4.7)*
Contributions to real GDP growth[2]					
3. Personal consumption expenditures	1.4	1.4	2.7	3.2	3.2
4. Equipment and software	-.6	.5	.5	.6	1.4
5. Inventories	-.6	-.5	-.5	.0	.8
Memo:					
6. Unemployment rate[3]	5.8	6.1	6.2	6.1	5.4
7. *(Jan. GB)*	*(6.2)*	*(6.2)*	*(6.2)*	*(6.1)*	*(5.4)*

1. Percent change. Quarterly figures at annual rates.
2. Percentage points.
3. Percent. 2004 figure is average for Q4.

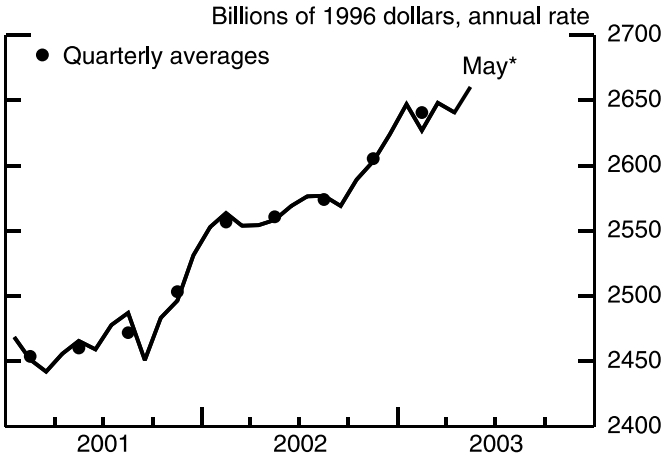
Private Payroll Employment



New Orders: Purchasing Managers Indexes

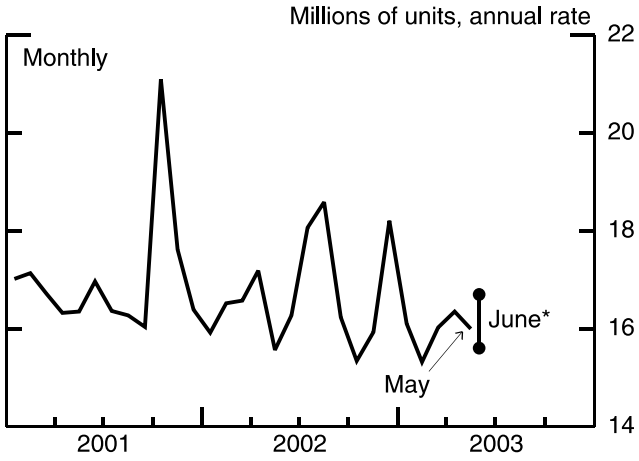


Real PCE Goods Excl. Motor Vehicles



*Staff estimate.

Light Vehicle Sales



*Range of automakers' forecasts.

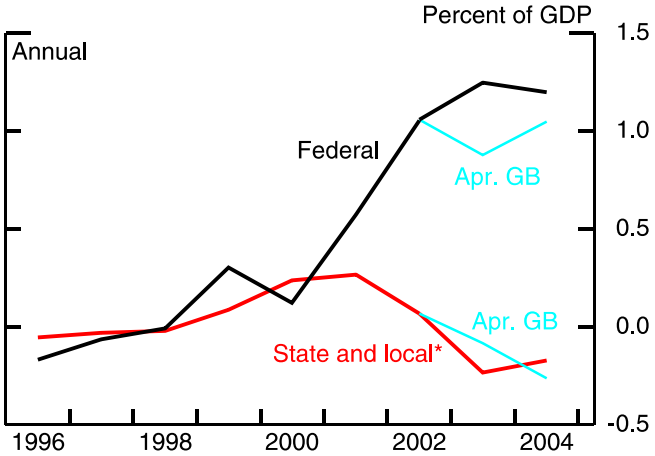
Chart 2

Key Background Conditions

Recently Enacted Tax Law

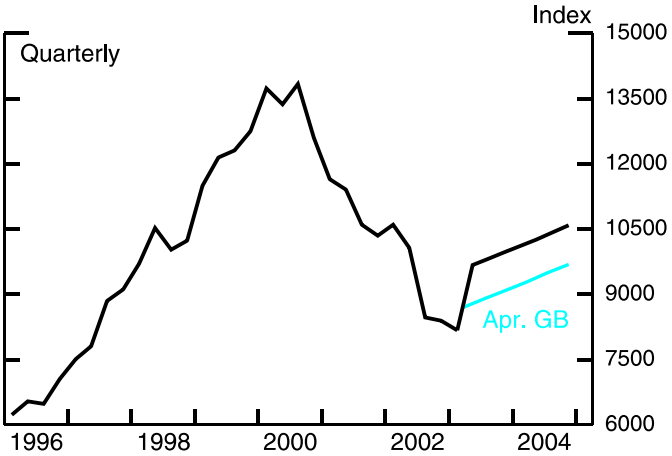
Anticipated Provisions	Unanticipated Provisions
• Pull-forward of cuts in marginal tax rates	• Dividend and capital gains tax cuts
• Marriage-penalty relief	• Increase in partial expensing
• Boost in child tax credit	• Grants to states

Fiscal Impetus

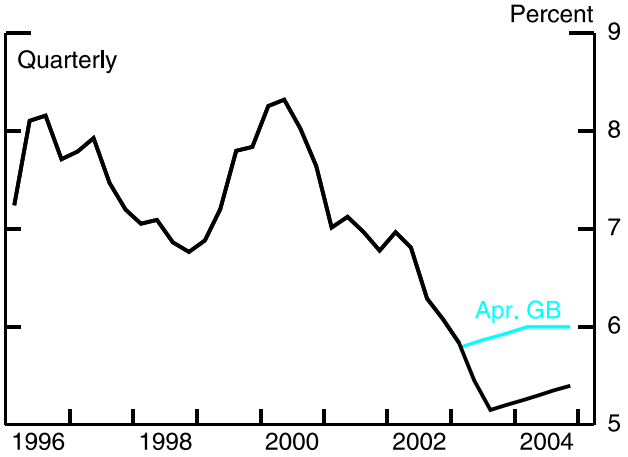


*Change in the high-employment budget deficit, scaled by GDP.

Equity Prices, Wilshire 5000



30-year Fixed Mortgage Rate



Exchange Value of the U.S. Dollar

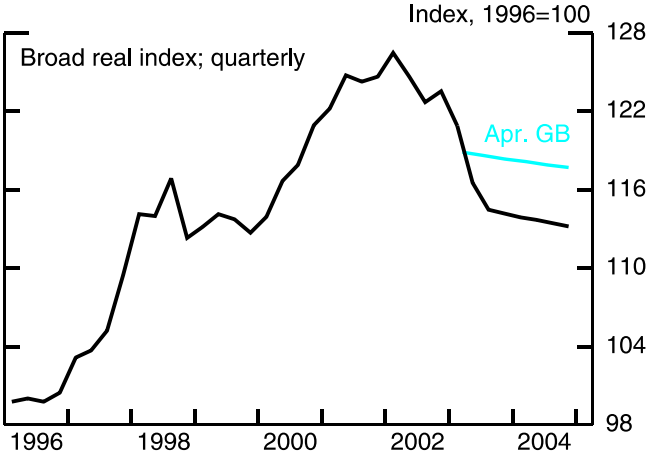
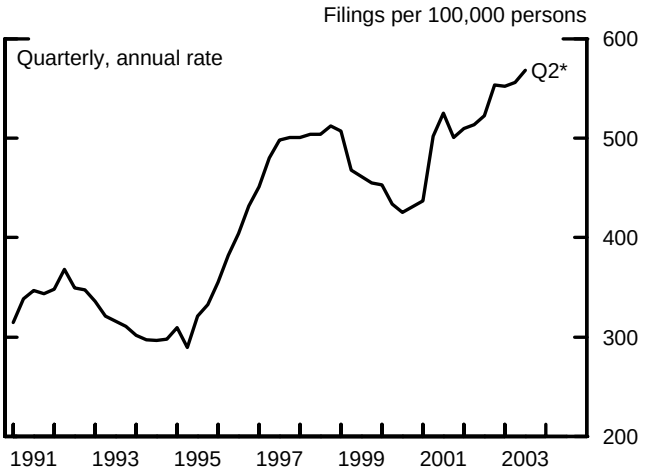


Chart 3

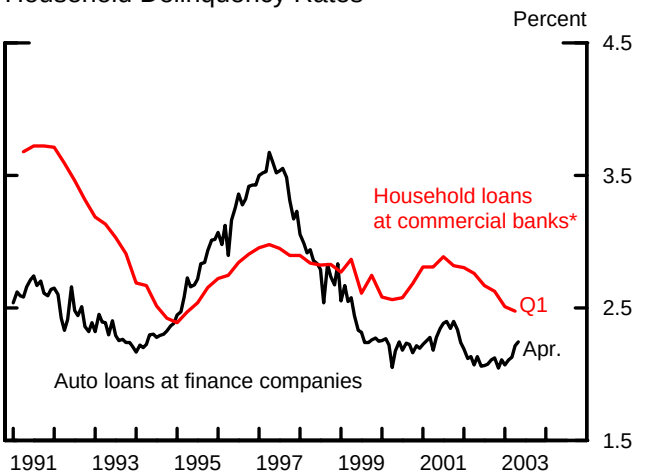
Household Financial Conditions

Personal Bankruptcy Rate*



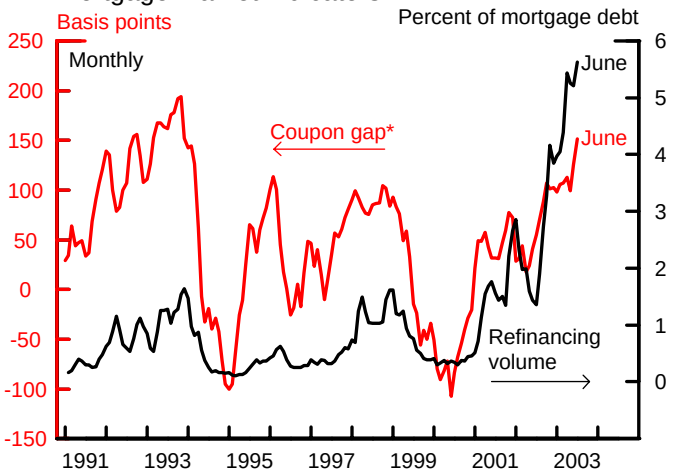
*Based on data through June 14.

Household Delinquency Rates



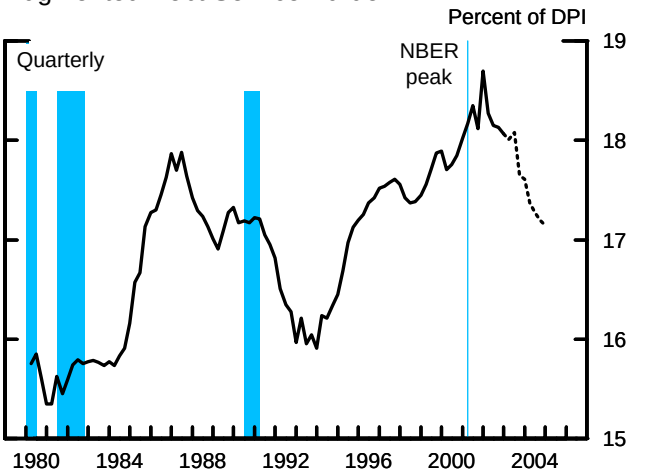
* Consumer and residential real estate loans.

Mortgage Market Indicators



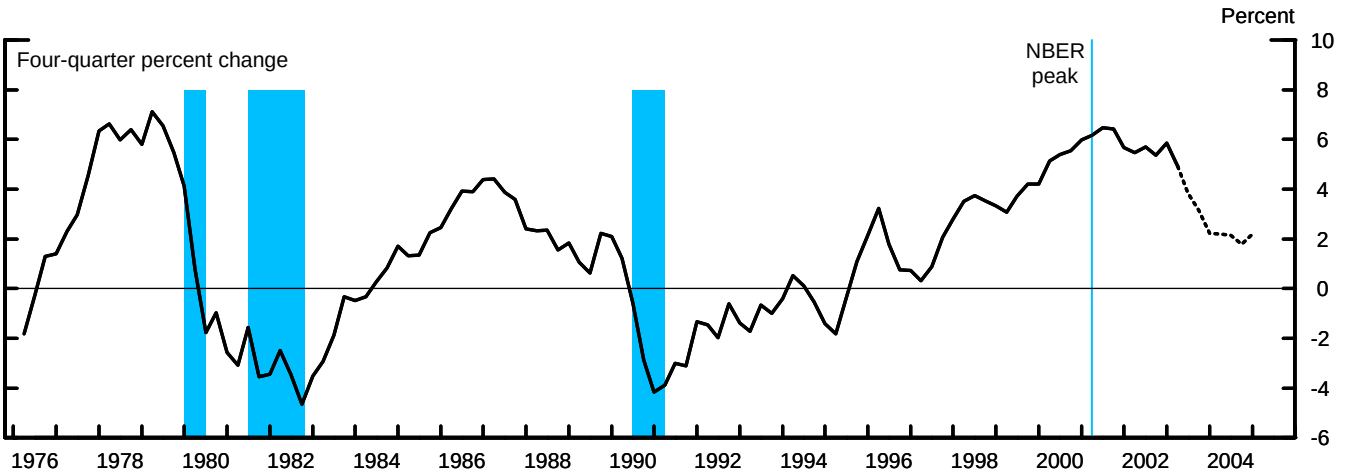
*30-year fixed mortgage rate minus average rate on mortgages in GSE pools.

Augmented Debt Service Burden*



*Standard series augmented to include rent payments, auto lease payments, property taxes, and homeowners' insurance.

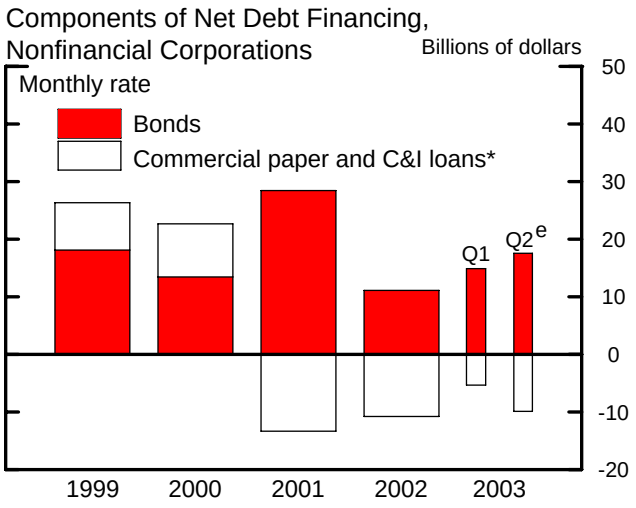
Real House Prices*



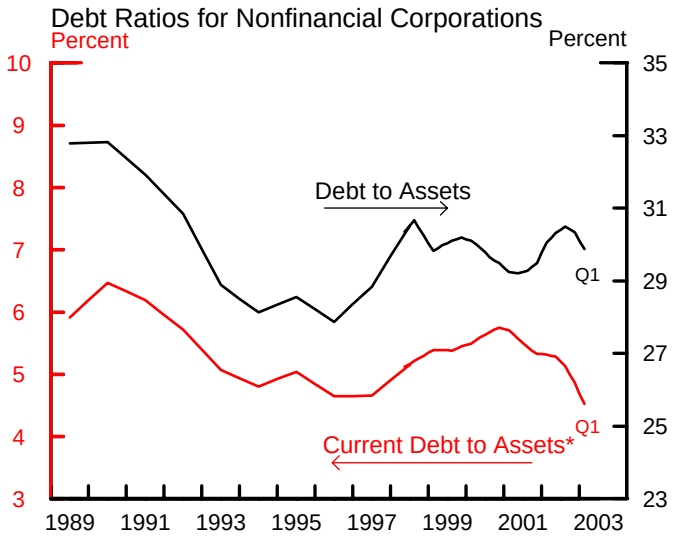
*OFHEO repeat sales index deflated by core PCE chain-weight price index.

Chart 4

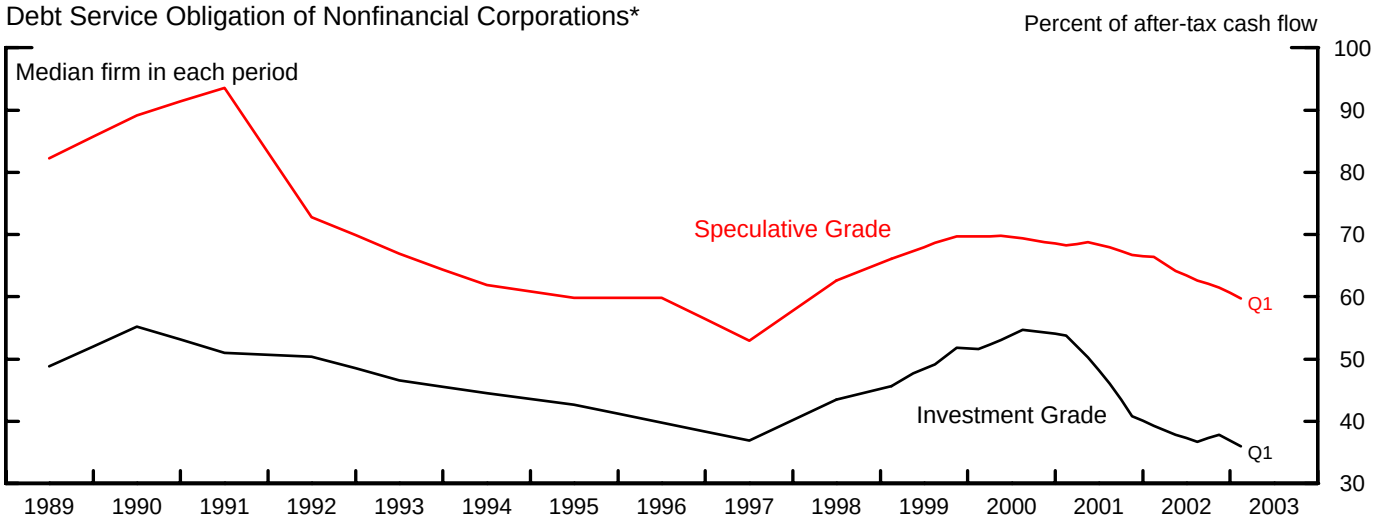
Corporate Financial Conditions



* Seasonally adjusted.
e Staff estimate.



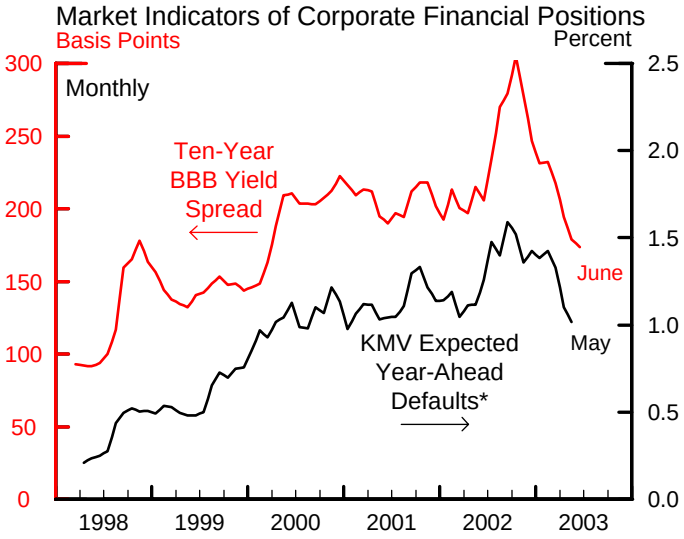
* Current debt equals short-term notes and the portion of long-term debt due within one year. Source. Compustat.



* Ratio of interest expense plus current debt to after-tax cash flow. Source. Compustat.

Defined-Benefit Pension Plans

- Contributions by S&P 500 firms tripled in 2002, reaching $45 billion.
- Funding gap is concentrated among investment-grade firms.
- Even for these firms, last year's contributions amounted to only a small part of their cash flow.

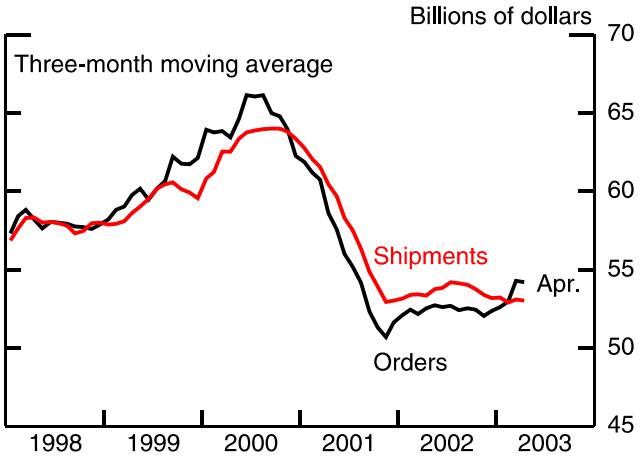


* Weighted by firm-level liabilities. Excludes defaulted firms.

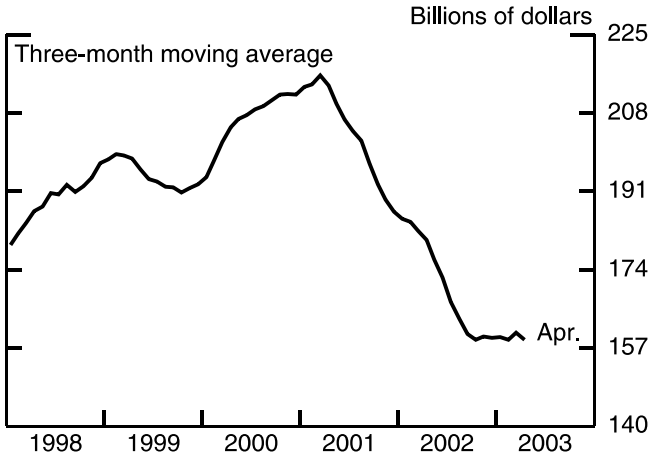
Chart 5

Business Investment

Nondefense Capital Goods Excluding Aircraft



Nonresidential Construction Put-In-Place



Reserve Bank Survey of Capital Spending Plans

- 35 percent: increase spending. 20 percent: reduce spending.
- Two-thirds of those planning increases have already started to place orders.
- Few mentioned external finance or partial expensing.
- Sales growth cited most often, in accord with an accelerator model.

Accelerator Effects

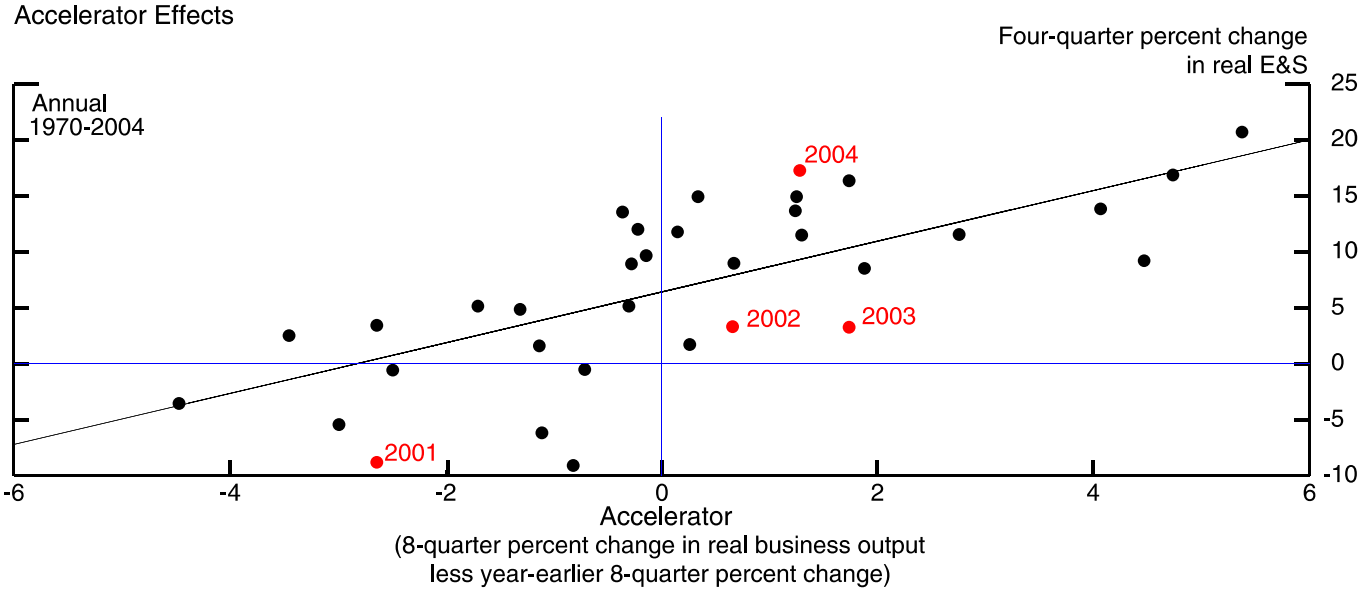
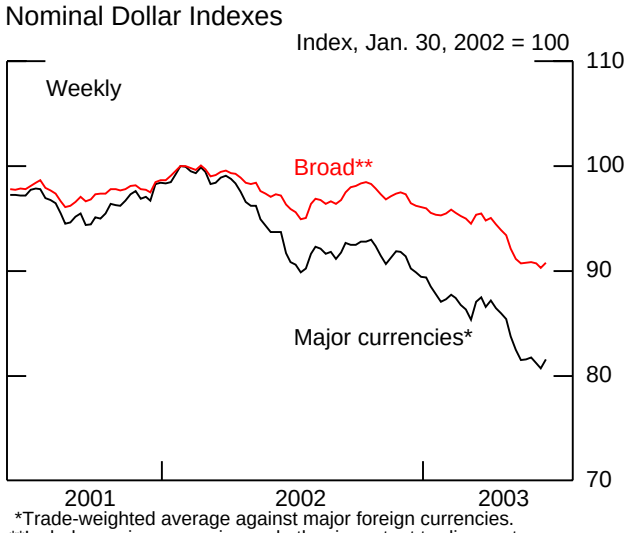
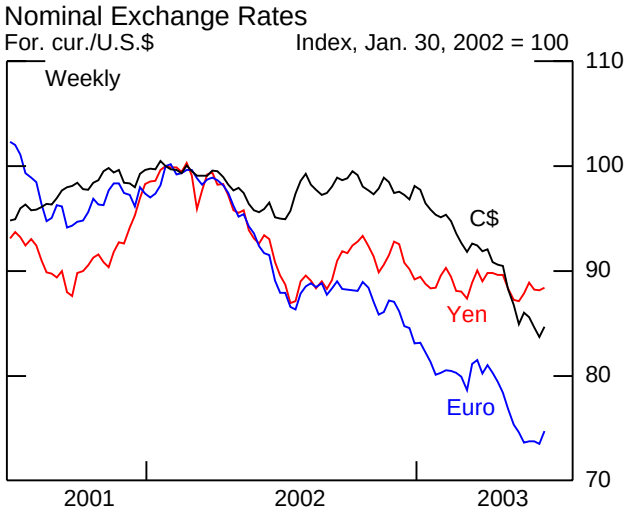


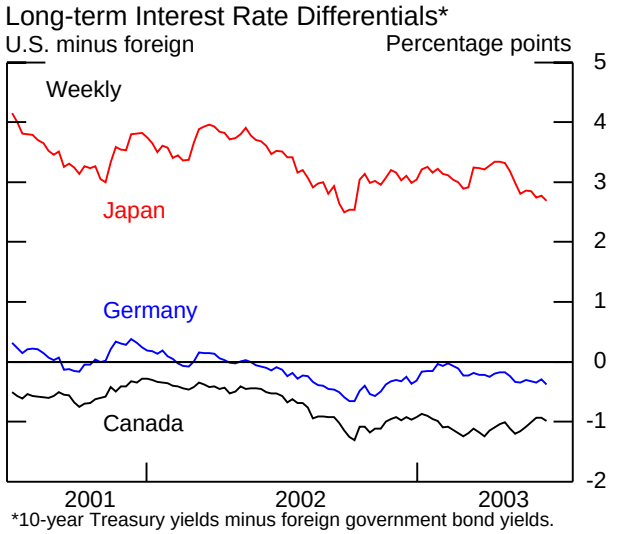
Chart 6

Financial Developments

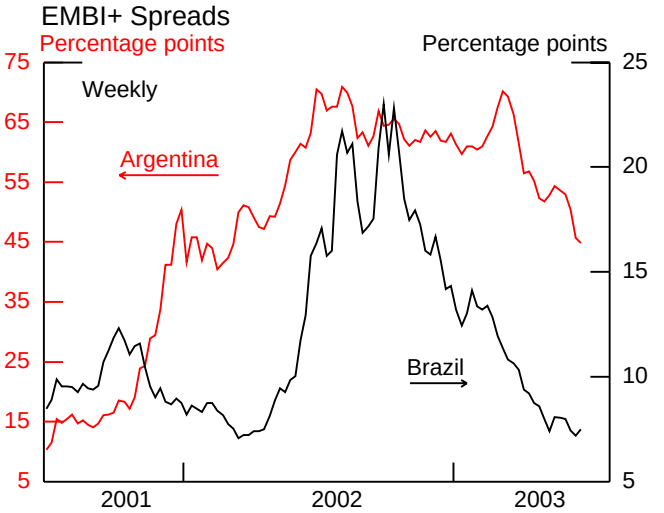


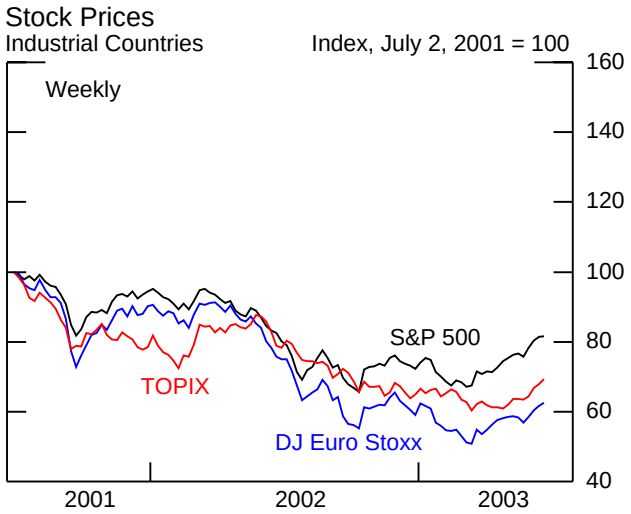
*Trade-weighted average against major foreign currencies.
**Includes major currencies and other important trading partners.





*10-year Treasury yields minus foreign government bond yields.





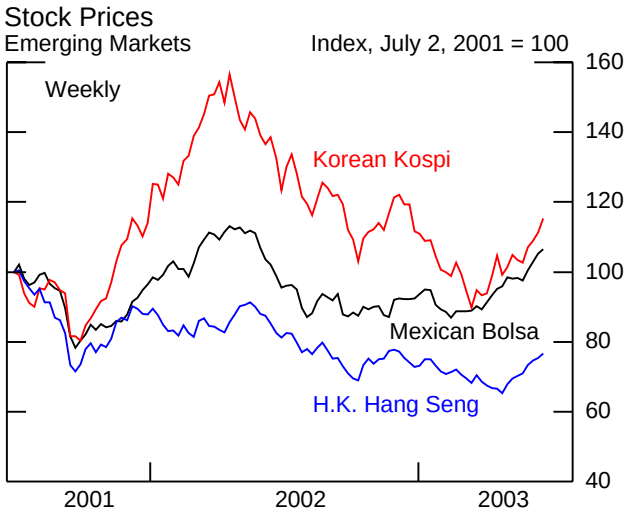
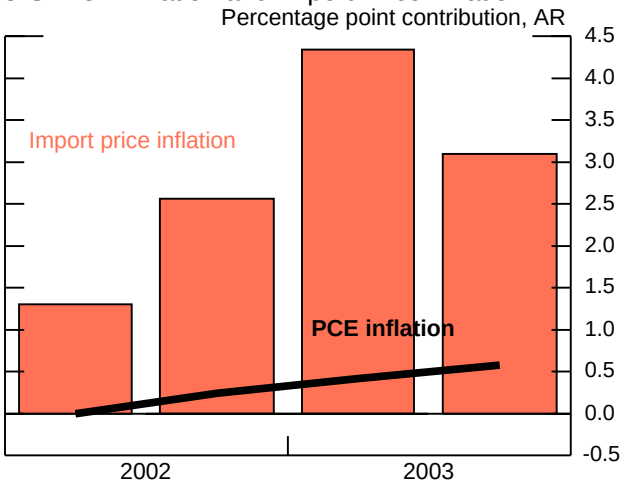


Chart 7

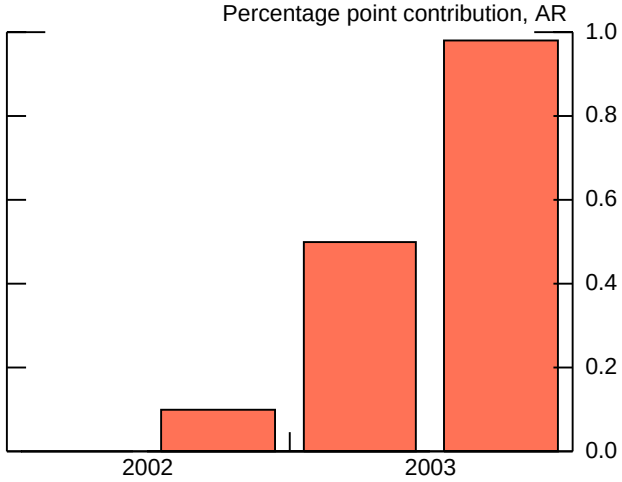
Effects of U.S. Dollar Depreciation

Constant Short-Term Interest Rates

U.S. PCE Inflation and Import Price Inflation

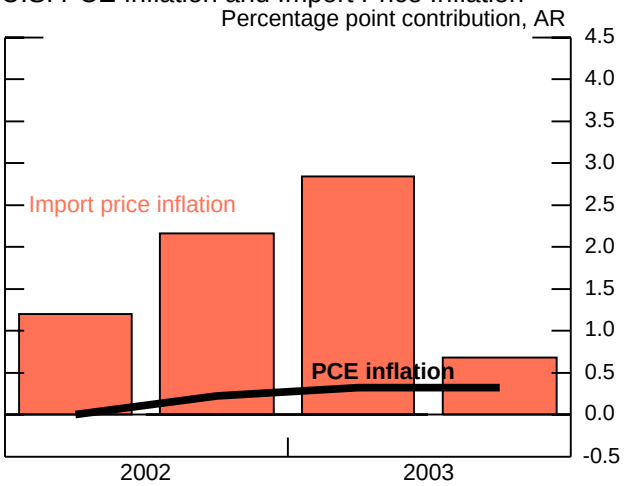


U.S. Real GDP Growth

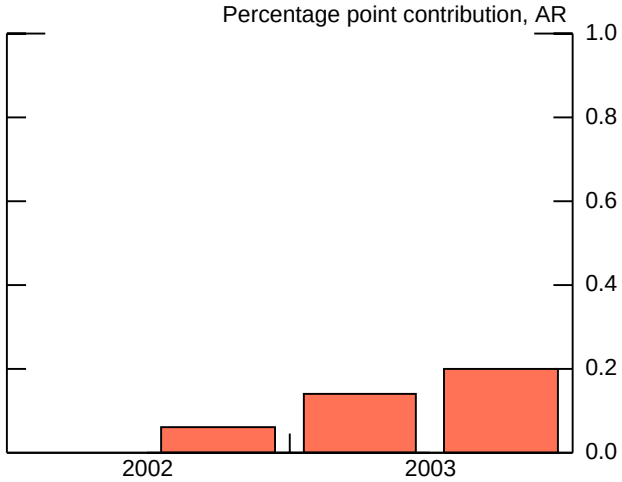


Taylor Rule Case

U.S. PCE Inflation and Import Price Inflation



U.S. Real GDP Growth



Effects in Foreign Countries

(Contribution in percentage points, AR)

	PCE Inflation				Real GDP Growth			
	2002		2003		2002		2003	
	Fixed*	Taylor**	Fixed	Taylor	Fixed	Taylor	Fixed	Taylor
Canada	-.1	.4	-2.7	.0	-.3	.0	-.8	.7
Euro area	-.9	-.7	-3.6	-1.6	-.5	-.3	-2.8	-1.2
Japan	-.4	-.4	-.3	.0	-.5	-.4	-.3	.0
U.K.	-.2	-.2	.3	-.1	-.3	-.3	-.8	-.6
Dev. Asia	.7	.6	2.0	.8	-.2	-.2	2.7	1.8
Mexico	2.7	.6	5.4	-.2	2.5	.5	6.4	-.1

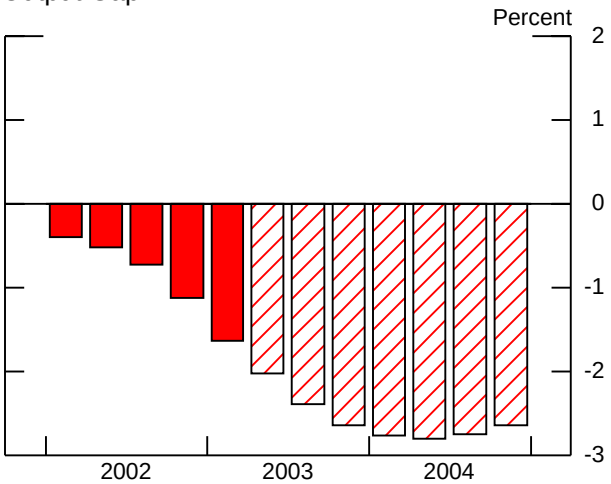
*Exchange rates and short-term interest rates at 2002:Q1 values.
**Taylor Rules govern short-term interest rates. Exchange rates react.

Chart 8

Monetary Policy Stance Abroad

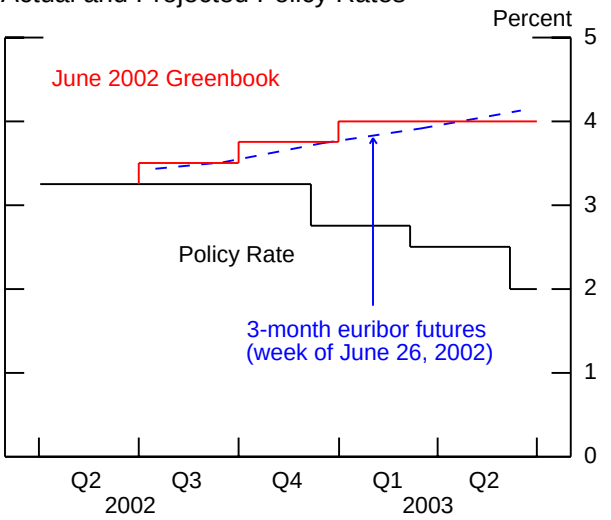
Euro Area

Output Gap*

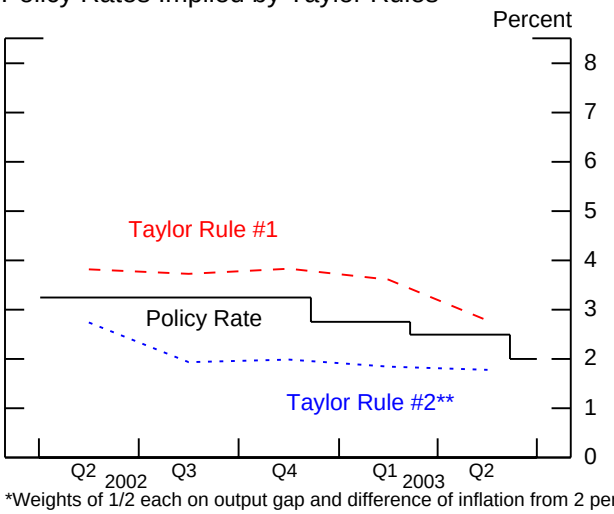


*(Actual GDP - Potential GDP)/Potential GDP.

Actual and Projected Policy Rates



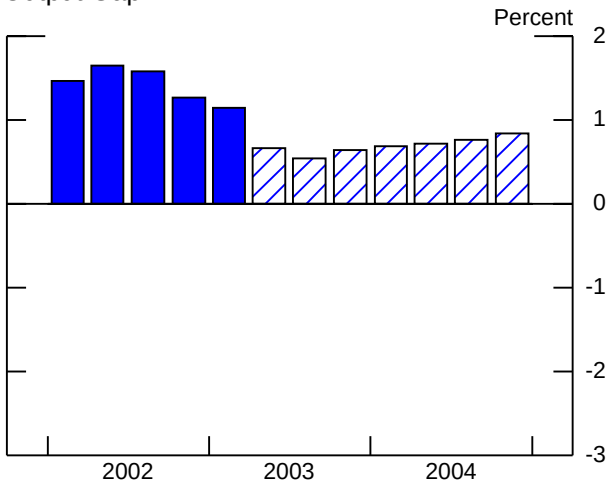
Policy Rates Implied by Taylor Rules*



*Weights of 1/2 each on output gap and difference of inflation from 2 percent.
**6-quarter ahead staff forecast for headline inflation.

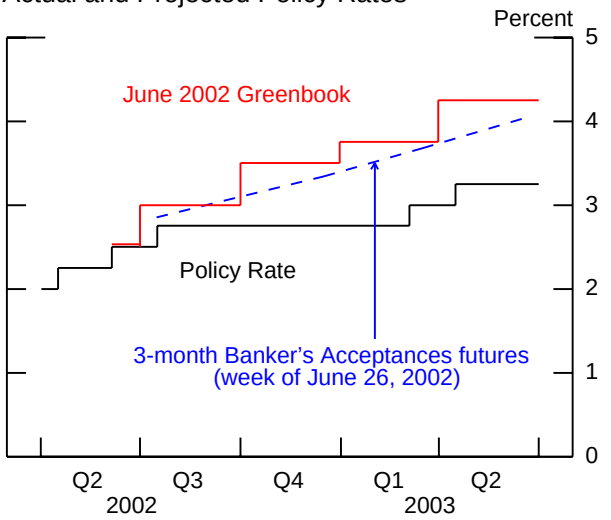
Canada

Output Gap*

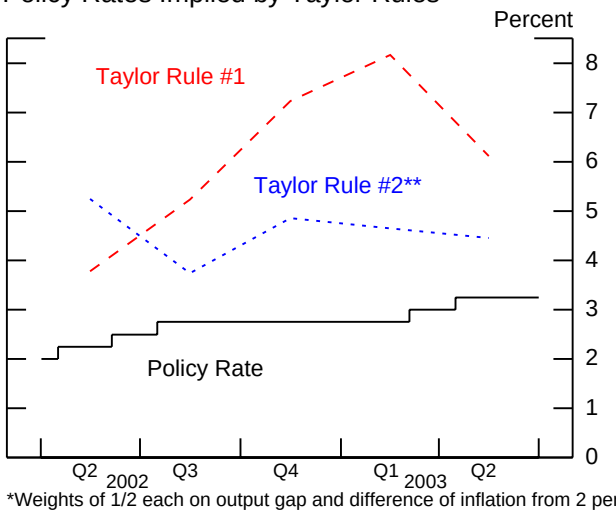


*(Actual GDP - Potential GDP)/Potential GDP.

Actual and Projected Policy Rates



Policy Rates Implied by Taylor Rules*



*Weights of 1/2 each on output gap and difference of inflation from 2 percent.
**6-quarter ahead staff forecast for headline inflation.

Chart 9

U.S. External Outlook

Real GDP Growth: Industrial Countries

Percent, SAAR*

	2002	2003		2004
	H2	H1	H2	
1. Total Foreign**	2.1	0.6	2.6	3.4
2. Indust. countries	1.9	1.0	1.8	2.5
of which:				
3. Euro Area	0.8	0.2	0.7	2.0
4. Japan	2.1	0.2	0.2	1.0
5. Canada	2.2	1.7	2.9	3.2
6. United Kingdom	2.9	0.9	1.8	2.5

*Years are Q4/Q4; half years are Q2/Q4 or Q4/Q2.
**Aggregates weighted by shares of U.S. exports.

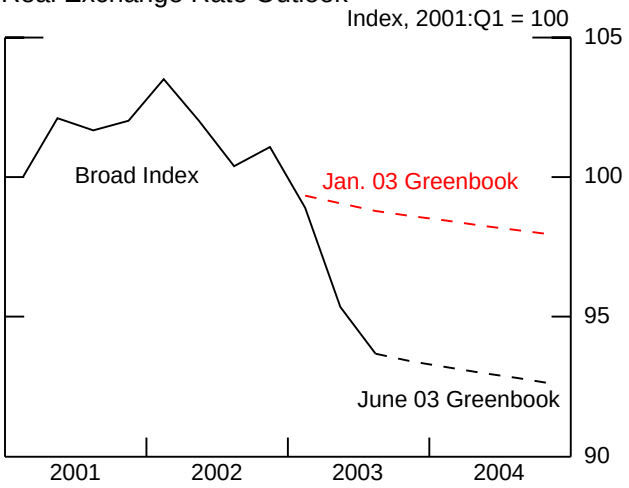
Real GDP Growth: Developing Countries

Percent, SAAR*

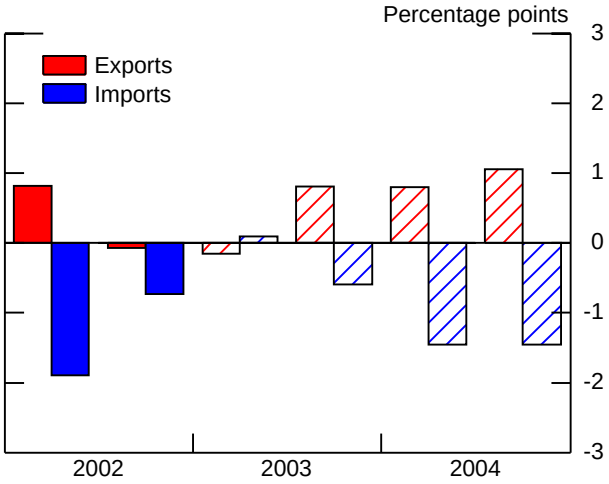
	2002	2003		2004
	H2	H1	H2	
1. Total Developing**	2.4	-0.0	3.8	4.8
2. Developing Asia	4.4	1.3	4.5	5.7
of which:				
3. China	7.1	6.2	7.2	8.1
4. Korea	6.1	0.5	5.7	5.4
5. Latin America	0.7	-1.5	3.3	4.4
of which:				
6. Mexico	1.1	-0.7	2.8	5.0
7. Brazil	3.5	0.9	2.7	3.0

*Years are Q4/Q4; half years are Q2/Q4 or Q4/Q2.
**Aggregates weighted by shares of U.S. exports.

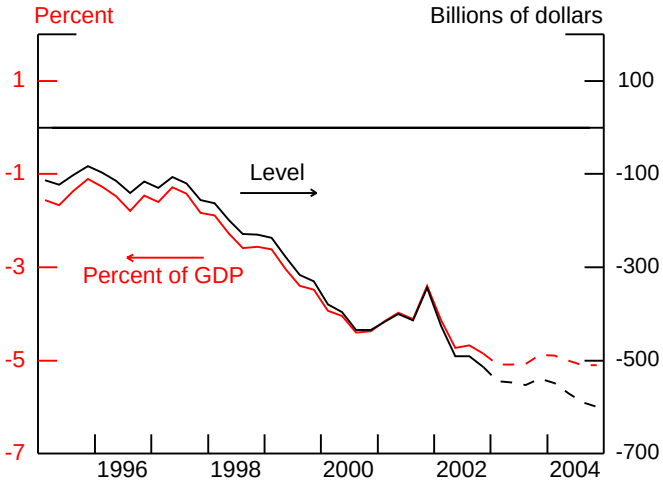
Real Exchange Rate Outlook



Contribution to U.S. GDP Growth



Current Account Balance



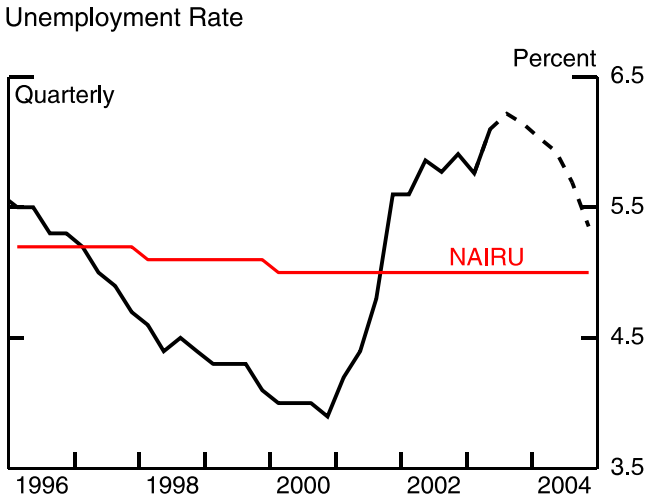
Financial Flows

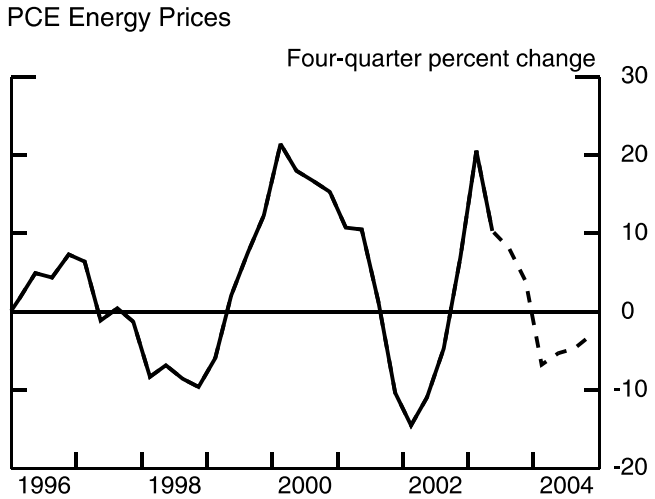
Billions of dollars, AR

	2002	2003:Q1
1. Official capital, net	91	144
2. Private capital, net	437	307
of which:		
3. For. purch. of U.S. sec.	388	258
4. *of which:* Equities	55	-13
5. U.S. purch. of for. sec.	16	-103
6. *of which:* Equities	-18	-133
7. For. D.I. in U.S.	40	103
8. U.S. D.I. abroad	-138	-116

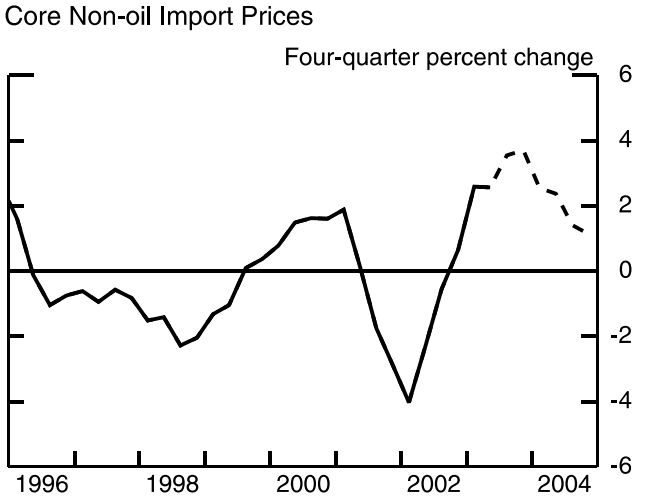
Chart 10

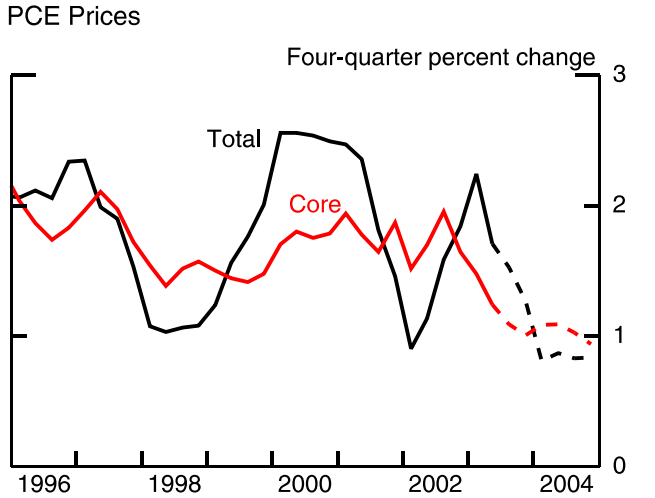
Inflation Outlook*





*In the four upper panels, figures for 2003:Q2 are staff estimates.





GDP Price Inflation and Related Items
(Percent change, Q4/Q4)

	2002	2003	2004
1. GDP	1.3	1.2	1.1
2. *(Jan. GB)*		*(1.2)*	*(1.3)*
3. PCE	1.8	1.3	.8
4. *(Jan. GB)*		*(1.3)*	*(1.2)*
5. Core PCE	1.6	1.0	.9
6. *(Jan. GB)*		*(1.3)*	*(1.2)*

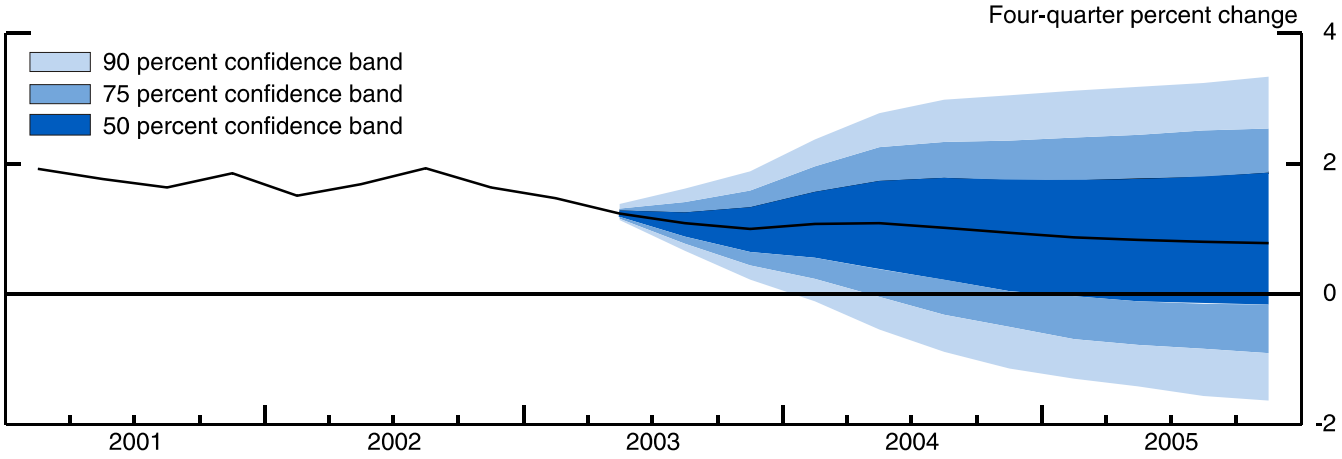
Chart 11

The Probability of Deflation and Related Events

To assess the risks in the outlook, we conduct stochastic simulations of FRB/US.

- Deflation defined as Q4/Q4 change in core PCE prices less than 0.5 percent.
- Hitting the zero bound defined as an annual average funds rate less than 25 basis points.
- Monetary policy assumed to follow a Taylor rule, but with the zero bound enforced.

Core PCE Prices



Estimated Probabilities of Deflation and Related Events (percent)

	2003	2004	2005
Deflation	15	37	41
Hitting the zero bound	0	22	17
Deflation and hitting the zero bound	0	18	14

Note. Calculated using the June Greenbook as baseline.

Average Macroeconomic Performance at Different Average Inflation Rates

	Measured Average CPI Inflation	
	0	2
Standard deviation of the unemployment rate (percentage points)	1.8	1.5
Frequency of deep recessions (number per 100 years)*	5.2	4.6

*"Deep recessions" defined as downturns during which the unemployment rate peaks at or above 7-1/2 percent.

Chart 12

Implications for Monetary Policy

1. Put an additional cushion between zero and the long-run average inflation rate?

Factors pointing to a larger cushion

- Concern about the adverse effects of the zero bound and nominal wage rigidity.
- Underlying volatility of the economy.

Factors pointing to a smaller cushion

- Confidence in the efficacy of non-traditional forms of monetary policy.
- Concern about the efficiency losses associated even with low positive inflation.

2. Move aggressively to head off any incipient deflation?

Arguments for more aggressiveness

- Concern that non-traditional approaches would not be effective.
- Concern about the uncertainty surrounding non-traditional approaches.

Arguments for less aggressiveness

- Concern that markets would interpret an easing as signaling a downbeat assessment of the economy.
- Concern that markets would become unnerved when they saw that you had no more scope for traditional actions.

3. Counteract deflation even if real activity is currently at a satisfactory level?

Arguments for taking action

- Concern about the efficiency cost of deflation.
- Concern that deflation could limit your ability to fight a future downturn.

Arguments for sitting tight

- Belief that the factors giving rise to deflation were temporary.
- Belief that the deflation would be self-correcting.

Chart 13

ECONOMIC PROJECTIONS FOR 2003

	FOMC		
	Range	Central Tendency	Staff
	----------Percentage change, Q4 to Q4----------		
Nominal GDP	3½ to 4¾	3¾ to 4½	4.1
February 2003	(4½ to 5½)	(4¾ to 5)	(4.8)
Real GDP	2¼ to 3	2½ to 2¾	2.9
February 2003	(3 to 3¾)	(3¼ to 3½)	(3.6)
PCE Prices	1 to 1¾	1¼ to 1½	1.3
February 2003	(1¼ to 1¾)	(1¼ to1½)	(1.3)
	----------Average level, Q4, percent----------		
Unemployment rate	6 to 6¼	6 to 6¼	6.1
February 2003	(5¾ to 6)	(5¾ to 6)	(6.1)

Central tendencies calculated by dropping high and low three from ranges.

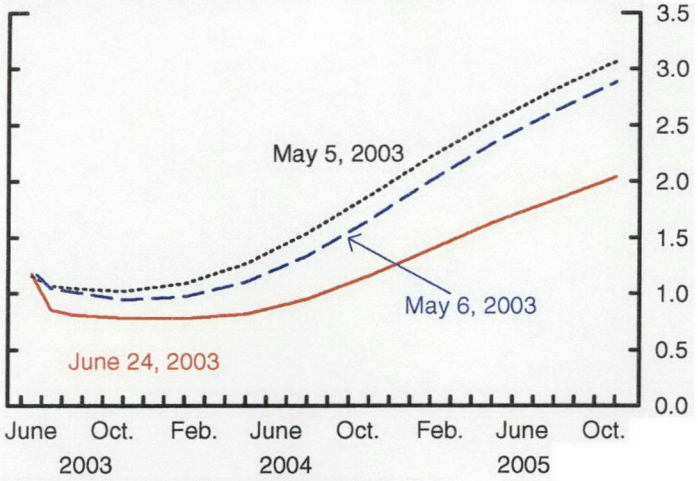
ECONOMIC PROJECTIONS FOR 2004

	FOMC		
	Range	Central Tendency	Staff
	----------Percentage change, Q4 to Q4----------		
Nominal GDP	4¾ to 6½	5¼ to 6¼	6.5
Real GDP	3½ to 5¼	3¾ to 4¾	5.3
PCE Prices	¾ to 2	1 to 1½	.8
	----------Average level, Q4, percent----------		
Unemployment rate	5½ to 6¼	5½ to 6	5.4

Appendix 5: Materials used by Mr. Reinhart

Exhibit 1

Expected Federal Funds Rates*

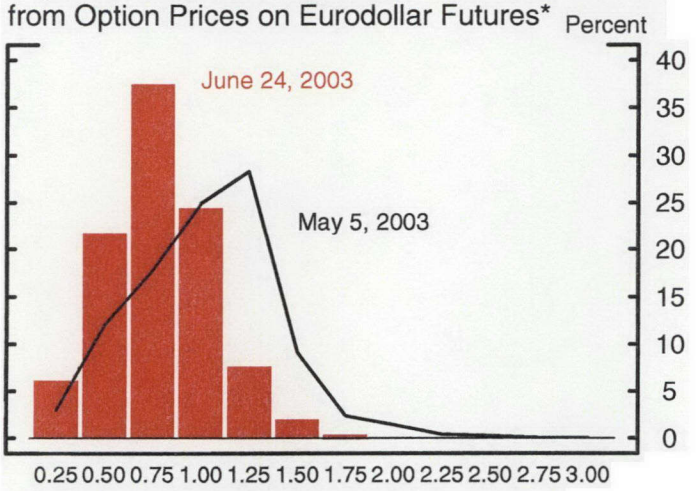


*Estimates from federal funds and eurodollar futures

Probability of Policy Action Implied by Option Prices on Federal Funds Futures

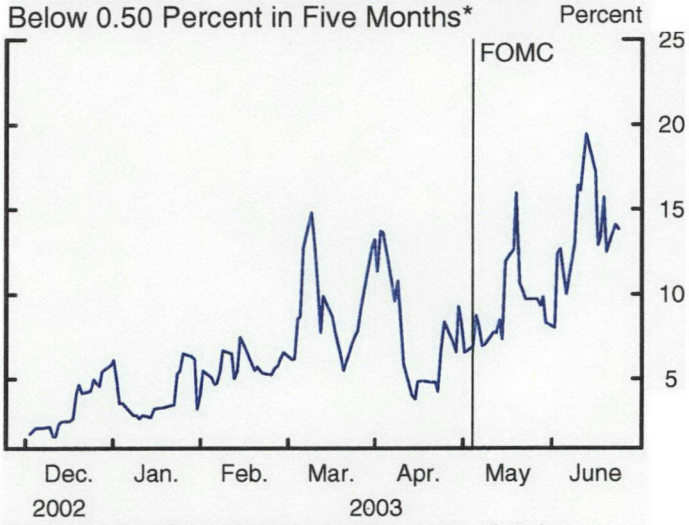
	May 5	Jun 24
	-percent-	
1. Easing	42	99
2. 25 bp	17	45
3. 50 bp	25	54
4. No Change	58	1

Implied Distribution of Federal Funds Rate Derived from Option Prices on Eurodollar Futures*



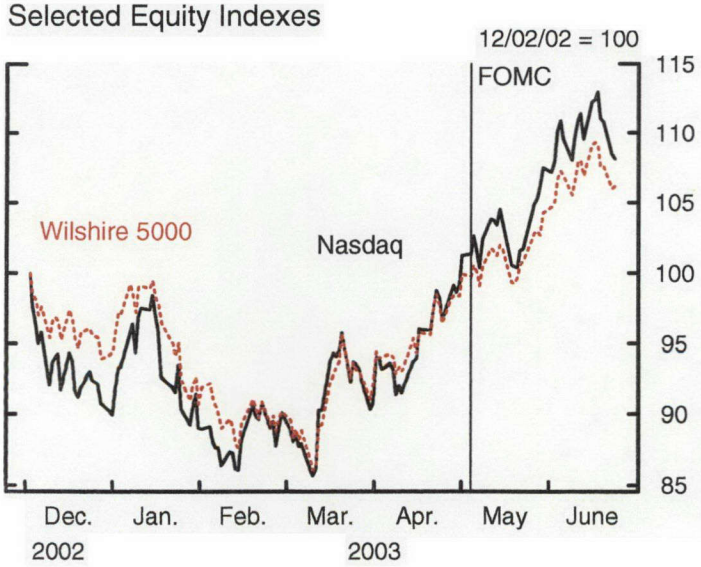
*Estimates from options on eurodollar futures contracts, adjusted to estimate expectations for the federal funds rate, five months hence.

Probability the Federal Funds Rate will be at or Below 0.50 Percent in Five Months*

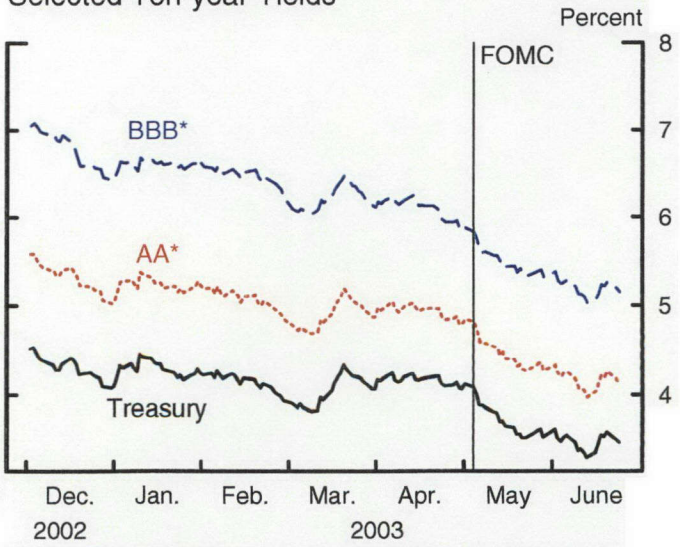


*Estimates from options on eurodollar futures contracts, adjusted to estimate expectations for the federal funds rate.

Selected Equity Indexes



Selected Ten-year Yields

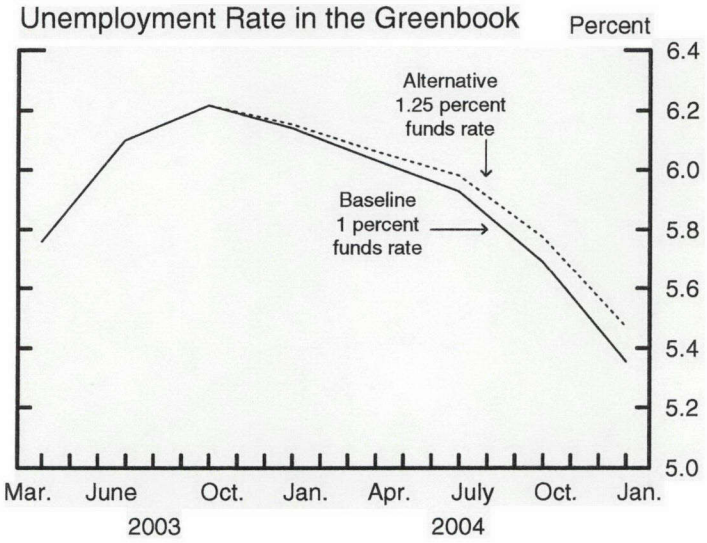


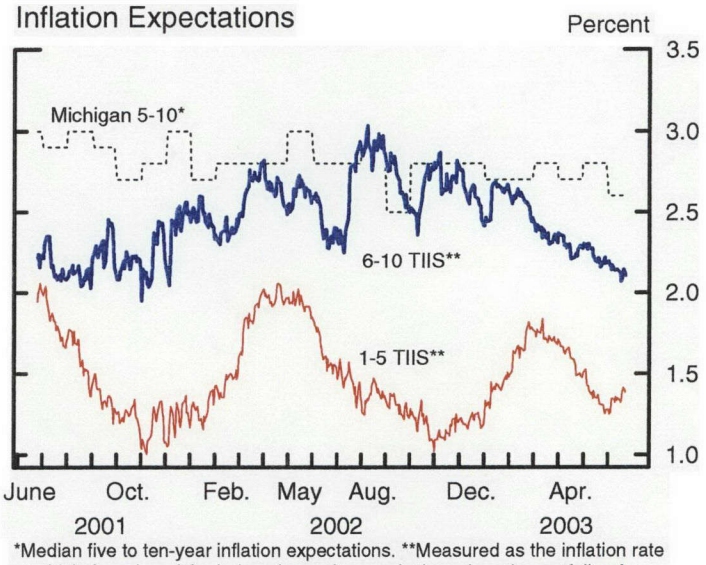
*AA and BBB rates based on yield curves derived from Merrill Lynch data.

Exhibit 2

The Case for Easing 25 Basis Points

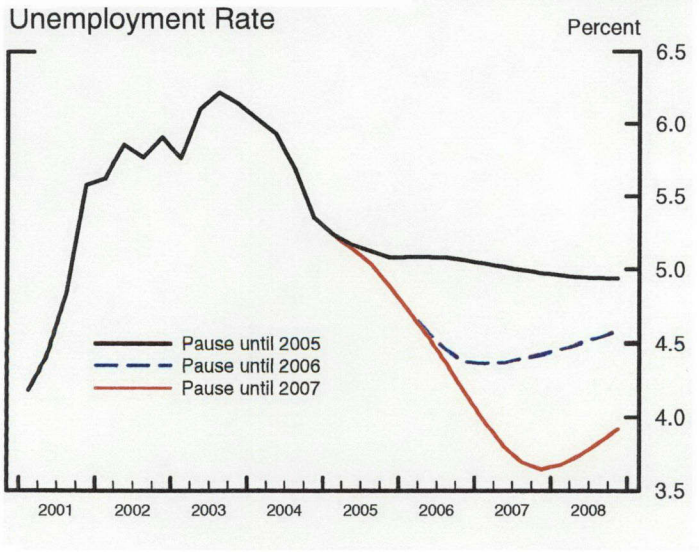
- Ratify at least a portion of the easing currently built into market prices.
- Work down resource slack quicker.
- View the costs of insurance as low given that inflation expectations are well contained.

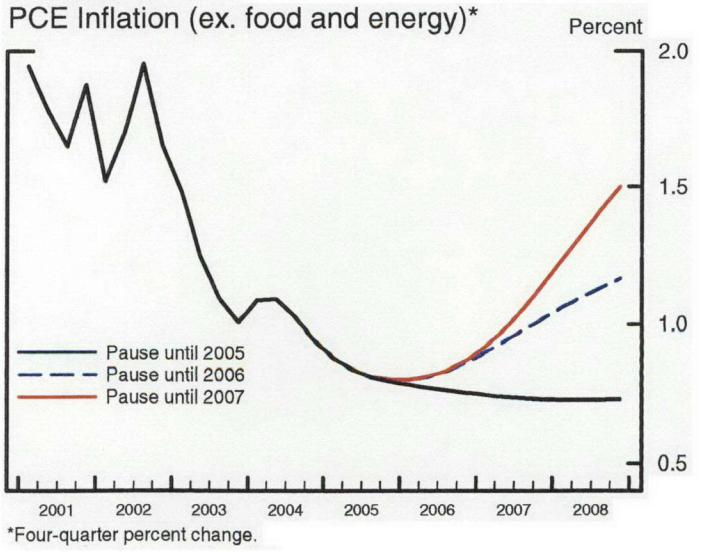




*Median five to ten-year inflation expectations. **Measured as the inflation rate at which the price of the indexed security equals the value of a portfolio of zero-coupon securities that replicates its payments.

Alternative Simulations of the FRB/US Model





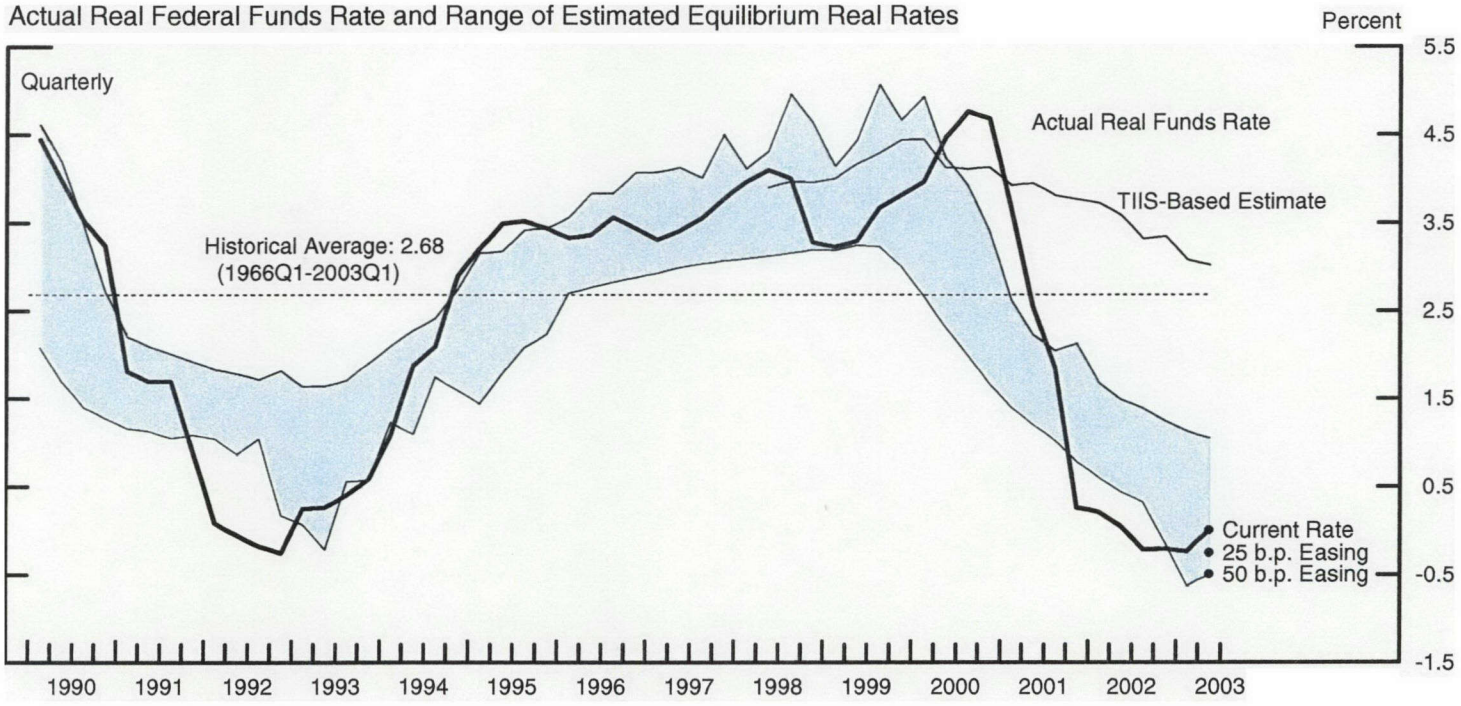
*Four-quarter percent change.

Exhibit 3

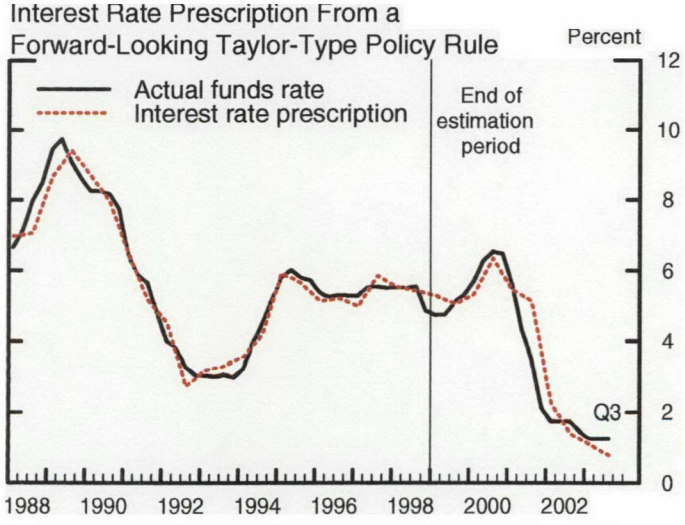
The Case for Easing 50 Basis Points

- Re-establish the degree of monetary policy accommodation of late last year.
- Fatten the cushion of inflation protection from the zero bound.
- Provide needed stimulus if the Greenbook assessment of aggregate demand is too optimistic.

Actual Real Federal Funds Rate and Range of Estimated Equilibrium Real Rates



Interest Rate Prescription From a Forward-Looking Taylor-Type Policy Rule



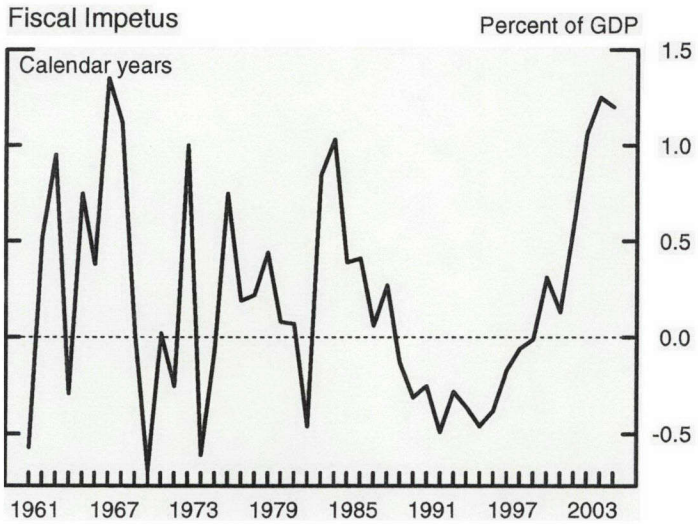
Private Sector Forecasts

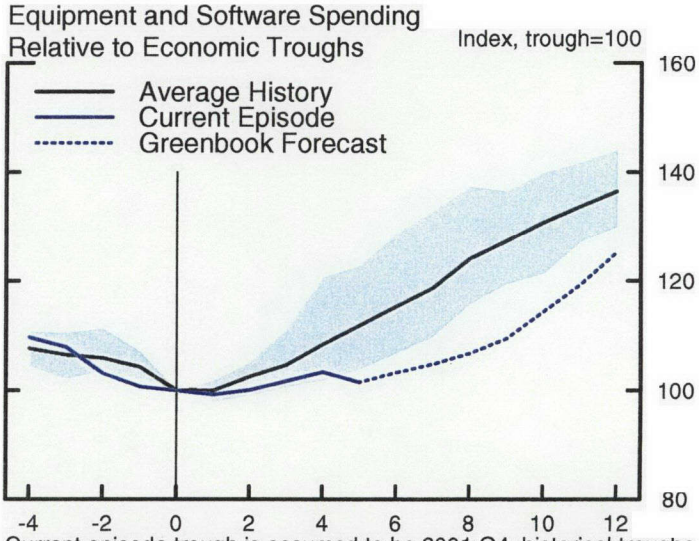
	2004	
	Q4/Q4 Real GDP	Q4 Unemp. Rate
1. Merrill Lynch (6/6/03)	3.80	6.00
2. Bear Stearns (6/12/03)	4.21	5.60
3. Morgan Stanley (6/19/03)	4.90	5.50
4. JP Morgan Chase (6/17/03)	2.80	6.00
5. Goldman Sachs (6/18/03)	2.00	6.50
6. Memo: Greenbook	***5.30***	***5.40***

Exhibit 4

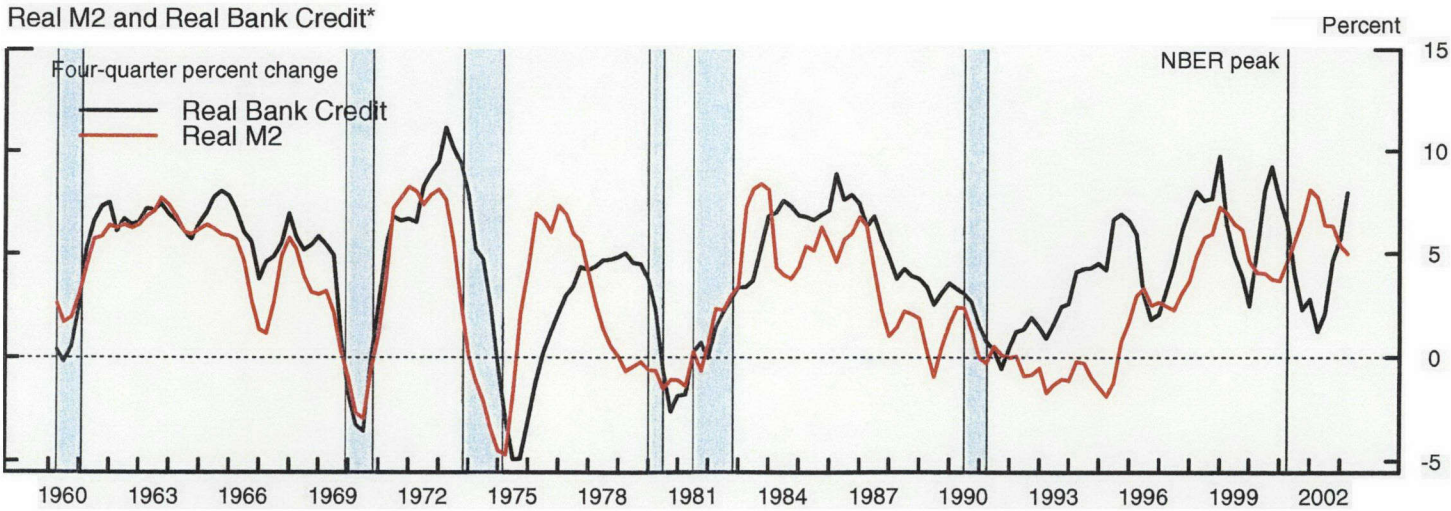
The Case for Keeping the Funds Rate Unchanged

- View easing as unnecessary because
  - -- Considerable fiscal impetus is in train.
  - -- The Greenbook is too gloomy about investment.
  - -- Put some weight on the recent rapid expansion of liquidity.





Current episode trough is assumed to be 2001:Q4; historical troughs included are 1970q4, 1975q1, 1982q4, 1991q1.



*Seasonally adjusted. Real values calculated using the GDP deflator. Shading indicates regions declared by the National Bureau of Economic Research as recessions.

Exhibit 5

The Assessment of Risks

On May 6th, the Committee

- Separated the risk assessment,
  - -- Risks regarding its objective of sustainable economic growth
  - -- Risks regarding its objective of price stability
  - -- Balance of those two risks
- Voted only on the policy rate

A Proposal

- Return to the practice of voting on the assessment of risks
- Choose among generic formulations of the three sentences
- Allow discretion to the drafters

For Today's Choice

- At a funds rate of 3/4, 1, or even 1-1/4 percent,
  - -- Growth rate risks are balanced
  - -- Inflation risks are to the downside
  - -- Balance to the downside
- Arguably, at a funds rate of 3/4 percent,
  - -- Risks may be seen as balanced

MMS Survey Results

Fraction of Respondents

	Target Rate		
	0.75	1.00	Total
Balance of Risks			
Downside	0.29	0.42	0.71
Neutral	0.21	0.08	0.29
Total	0.50	0.50	1.00