Appendix 1: Materials used by Messrs. Gallin, Lehnert, Peach, Rudebusch, and Williams

STRICTLY CONFIDENTIAL (FR) CLASS II-FOMC

Material for

Special Staff Presentations on Housing Valuations and Monetary Policy

June 29, 2005

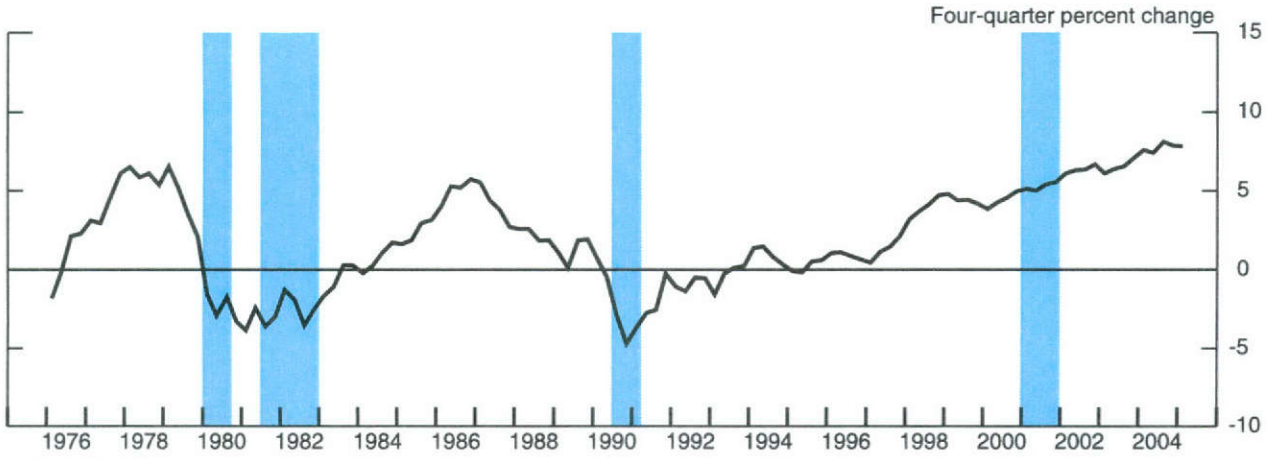
Is Housing Overvalued?

Joshua Gallin
Board of Governors of the Federal Reserve System

Exhibit 1 6-29-05

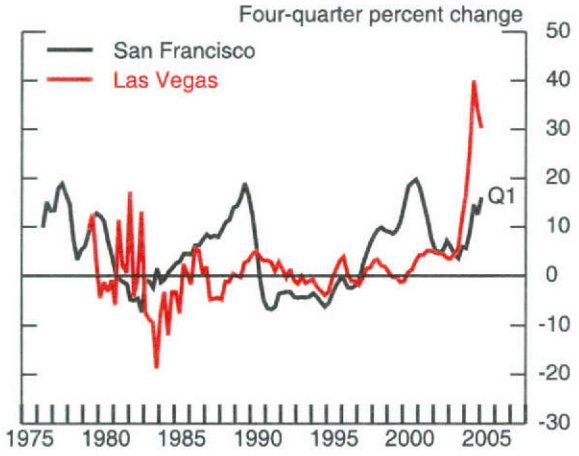
Is Housing Overvalued?

Changes in Real House Prices: The United States

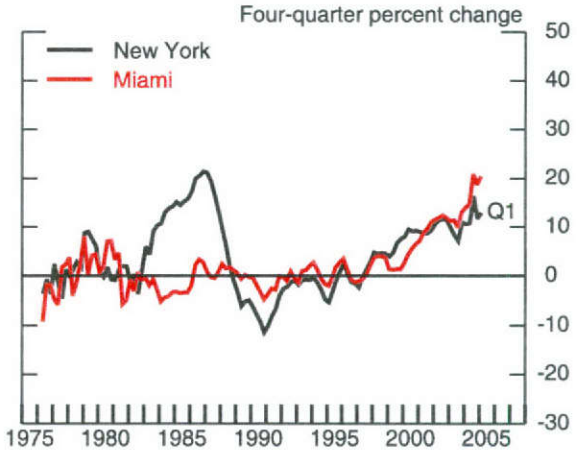


Note: Real house prices are the repeat-transactions price index relative to the personal consumption expenditures chain-price index. Sources. BEA and OFHEO.

Real Price Changes: Western Cities



Real Price Changes: Eastern Cities



Anecdotes from the Housing Market

- Increased speculation.
- Rosy assessments of future appreciation.
- Increased reliance on novel financing without full recognition of the associated risks.

Valuing Housing

- Is housing affordable for the typical household?
  - Are prices too high relative to incomes?
  - Are required mortgage payments affordable?
- Are prices too high relative to rents?

Exhibit 2 6-29-05

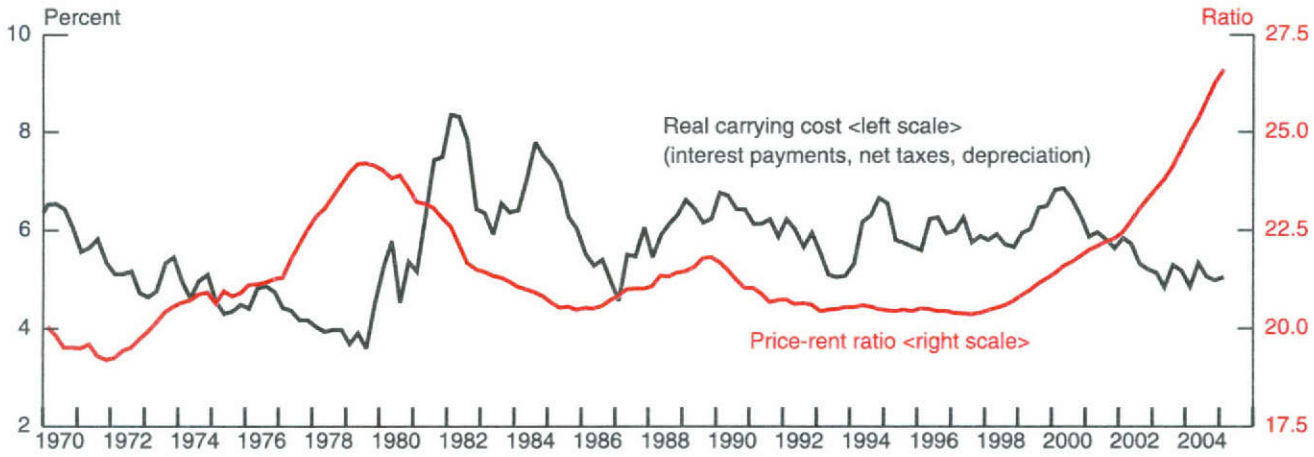
A Framework for Valuing Housing

- Rental payments in the housing market are analogous to dividends in the stock market.
- High prices can be justified by high rents or low carrying costs.
- Carrying costs include interest payments, net taxes, and depreciation.

The Data

- Repeat-transactions price indexes from OFHEO and Freddie Mac.
- Tenants' rent index from the CPI.
- Several adjustments address shortcomings of the data.

Price-Rent Ratio and Real Carrying Costs



Note. The price-rent ratio is the repeat-transactions house-price index divided by CPI tenants' rent, adjusted by Board staff. The real carrying cost includes effective after-tax mortgage rates, local property taxes, and depreciation relative to ten-year inflation expectations from the Philadelphia Fed survey.

Price-Rent Ratios and Subsequent Changes in Real Prices

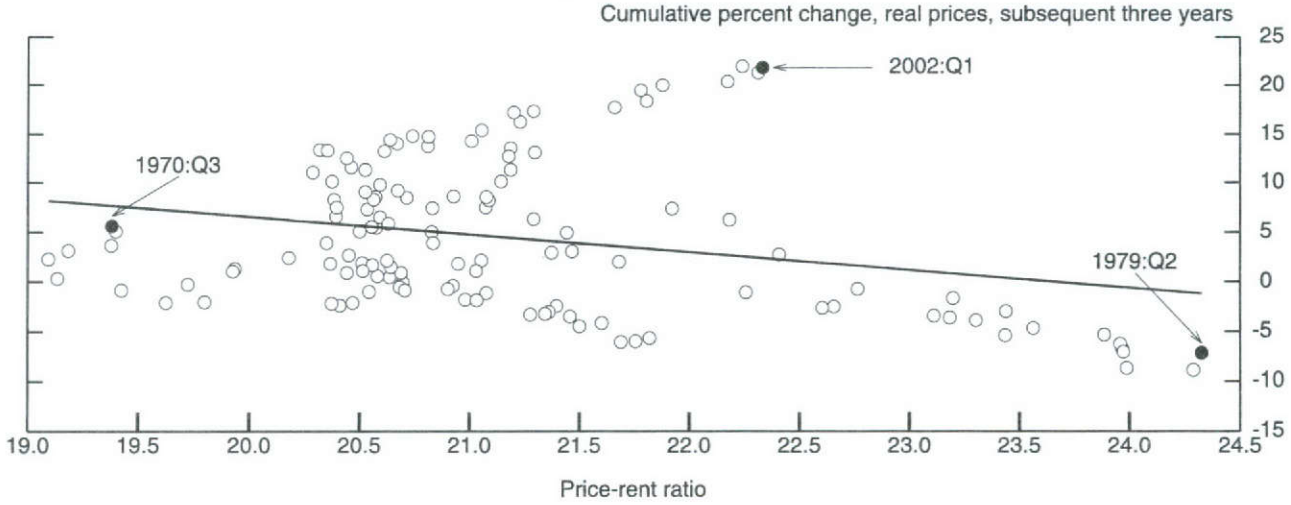


Exhibit 3 6-29-05

Price-Rent Ratios and Subsequent Changes in Real Prices: Selected Cities

Two Models of House Price Changes

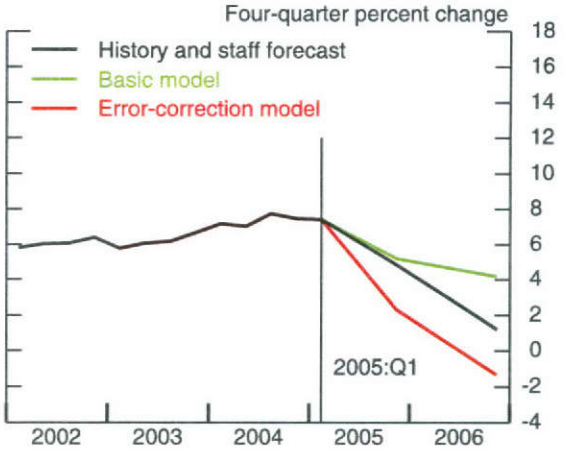
Variables in the basic model

- Recent house prices
- Real income, real carrying costs, and the unemployment rate

Extra variables in error-correction model

- Lagged price-rent ratio
- Lagged level of carrying costs

Projection of Real Price Changes



Conclusions

- The price-rent ratio is very high by historical standards, suggesting that housing might be overvalued by as much as 20 percent.
- Historical experience suggests that the change in real house prices going forward will be slower than in recent years.
- The evidence cannot rule out either further rapid gains in house prices for a time or a rapid correction back toward fundamentals.

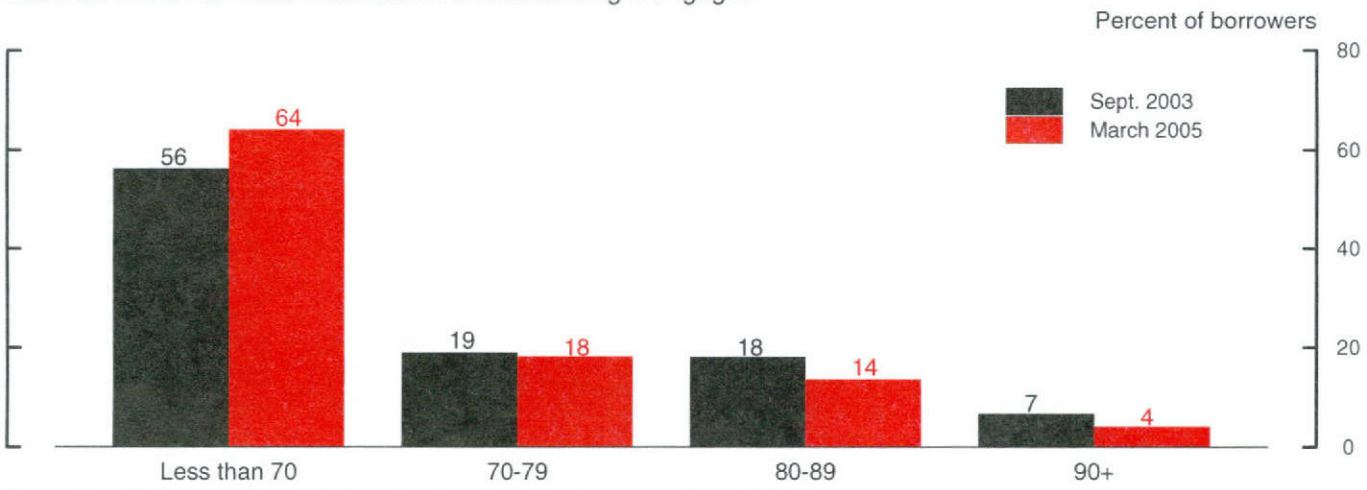
House Prices and Mortgage Finance

Andreas Lehnert
Board of Governors of the Federal Reserve System

Exhibit 1

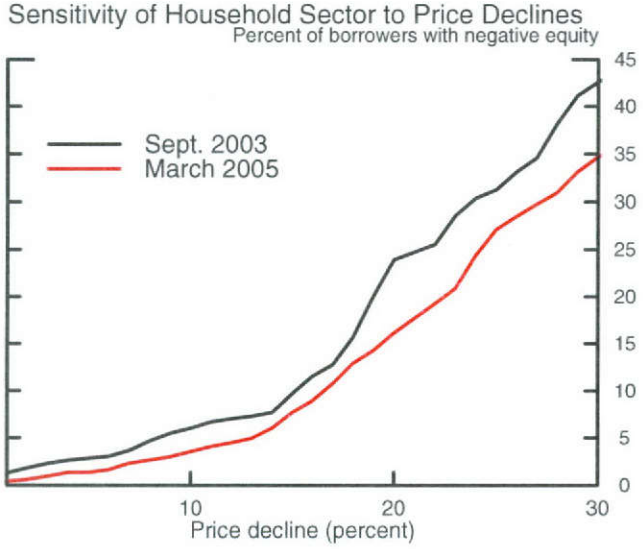
Household Sector Vulnerability to House Price Declines

Estimated Loan-to-Value Distribution of Outstanding Mortgages

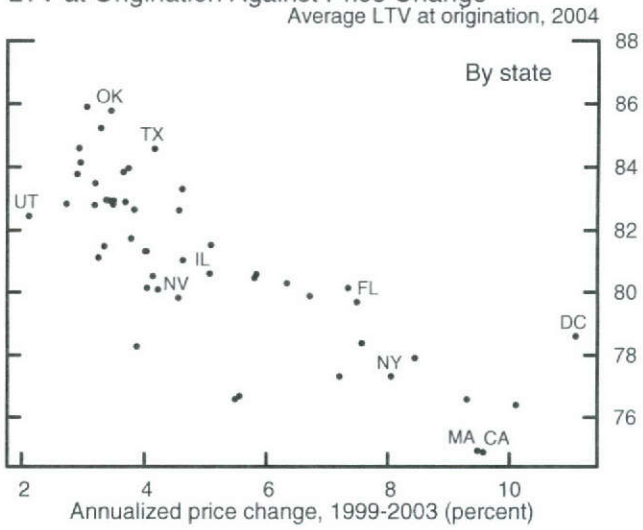


Source. LoanPerformance Corp. (LPC) servicer data, flow of funds accounts (FFA), OFHEO

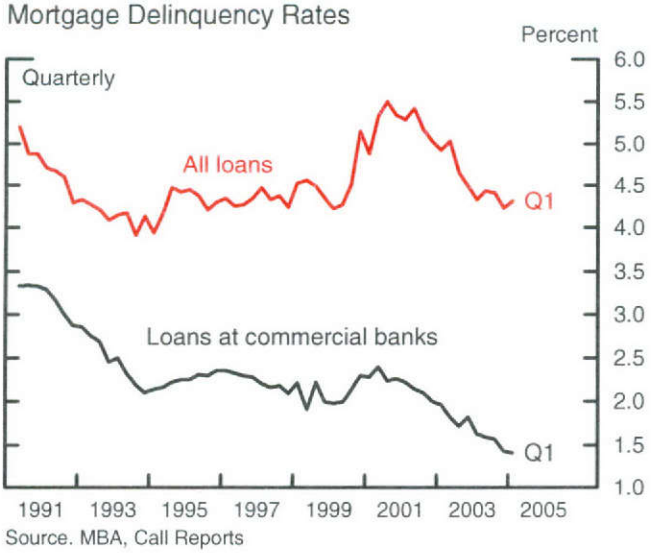
Sensitivity of Household Sector to Price Declines



LTV at Origination Against Price Change



Mortgage Delinquency Rates



Source. MBA, Call Reports

Conclusions

- Average LTV has decreased over the past 18 months
- Most borrowers have substantial equity in their homes
- Rapidly rising house prices have kept mortgage delinquencies and losses low
- Some households are very highly leveraged

Exhibit 2

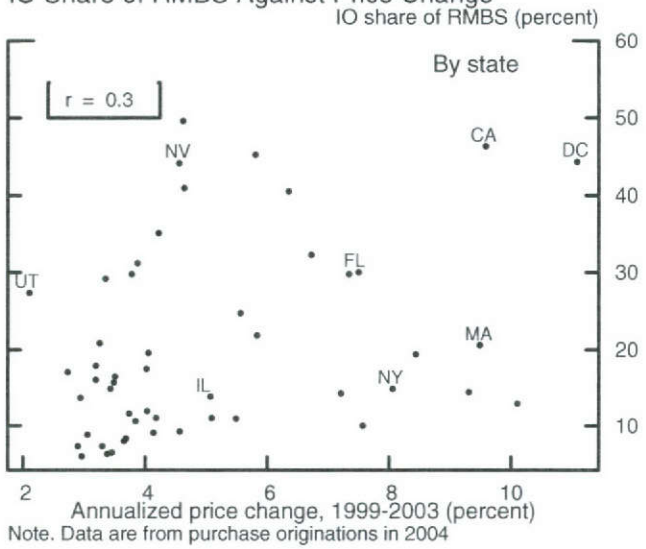
Characteristics of Interest-Only (IO) Mortgages in RMBS Pools

Components of Home Mortgage Debt

	2003:Q1	2005:Q1
	--billions of dollars--	
1. RMBS pools	591	1,191
2. IO RMBS pools	54	296
3. Total home mortgage debt	6,491	8,282
Memo:		
4. IO RMBS share of home mortgages (percent)	0.8	3.6

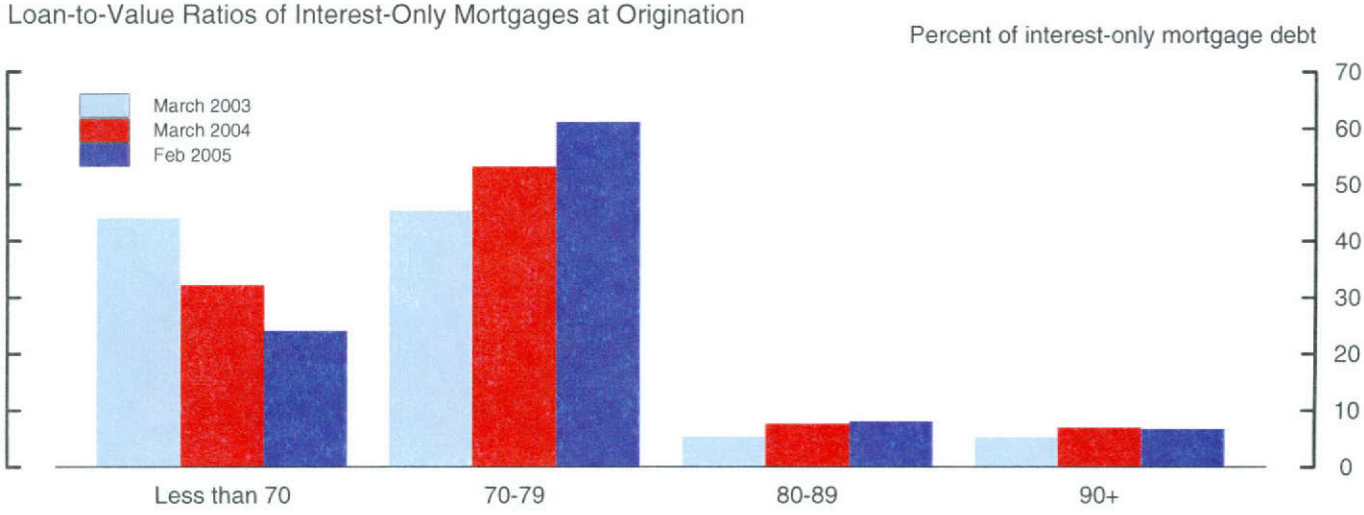
Source. LPC RMBS data, FFA

IO Share of RMBS Against Price Change



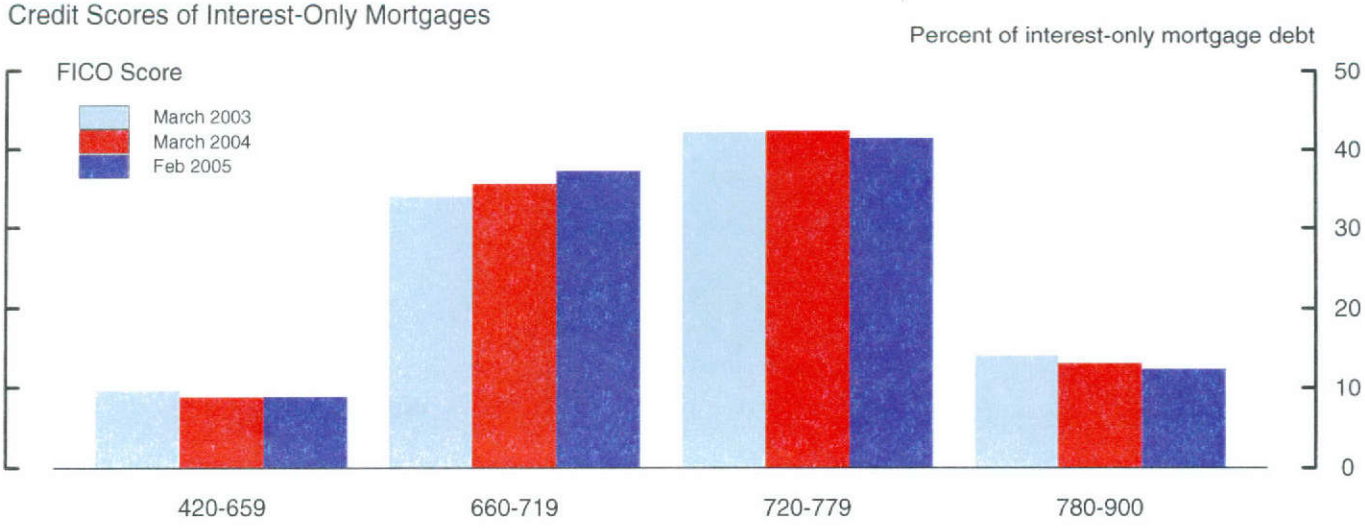
Note. Data are from purchase originations in 2004

Loan-to-Value Ratios of Interest-Only Mortgages at Origination



Note. Data are for IO RMBS pools only; observations are weighted by mortgage size.

Credit Scores of Interest-Only Mortgages



Note. Data are for IO RMBS pools only; observations are weighted by mortgage size.

Exhibit 3

Financial Institution Risk Exposure

Credit Risk Exposure

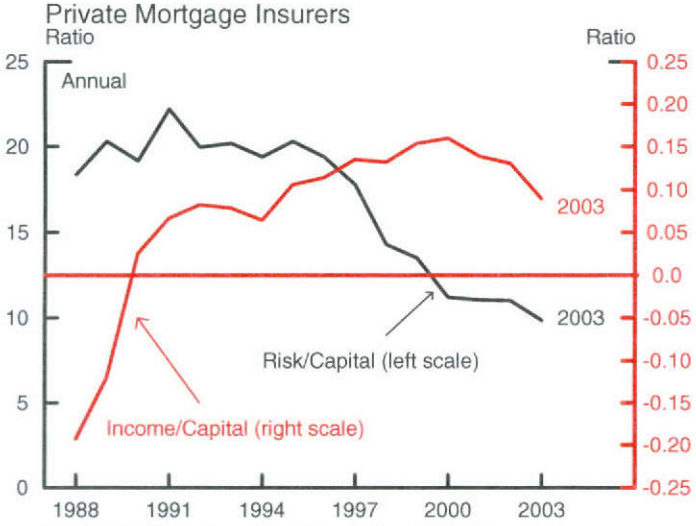
Institutions	Mortgage Types
1. Housing GSEs	Conforming, mostly fixed-rate
2. Private Mortgage Insurers	High LTV
3. RMBS Pools	Wide variety
4. Banks and Thrifts	Wide variety

Housing GSEs

1. Average LTV at origination	70
2. Estimated average current LTV	57
3. Average credit score (FICO)	723
4. Percent of guaranteed mortgages with credit enhancement	19

Note. Data are from Freddie Mac only
Source. Freddie Mac 2004 Annual Report

Private Mortgage Insurers

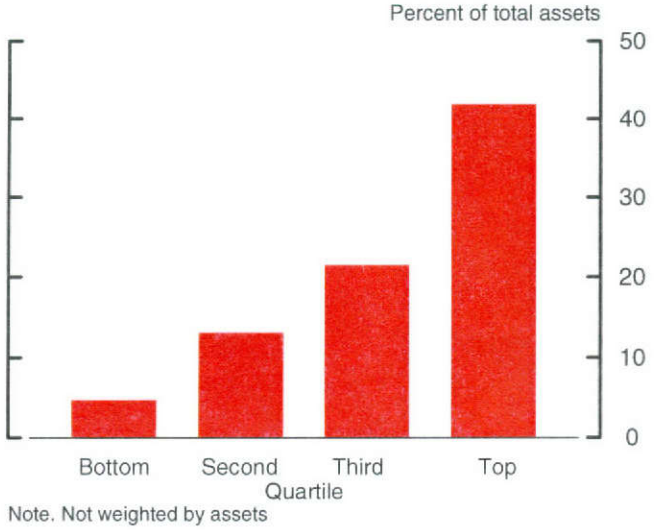


Source. Mortgage Insurance Companies of America

Risks in RMBS Pools

- RMBS pools contain relatively risky mortgages
- Pools are structured to allow investors to choose risk exposure
- Pools are exceptionally transparent
- Pricing depends on loss modeling

Mortgage Share of Assets, Banks and Thrifts



Note. Not weighted by assets

Assets and Capital Ratios

Mortgage Share Quartile	Average Assets (billions)	Average Tier 1 Capital Ratio
1. Bottom	0.9	16.5
2. Second	0.8	10.3
3. Third	1.4	10.1
4. Top	1.4	10.4

Measuring House Prices

Richard Peach
Federal Reserve Bank of New York

The OFHEO Home Price Index

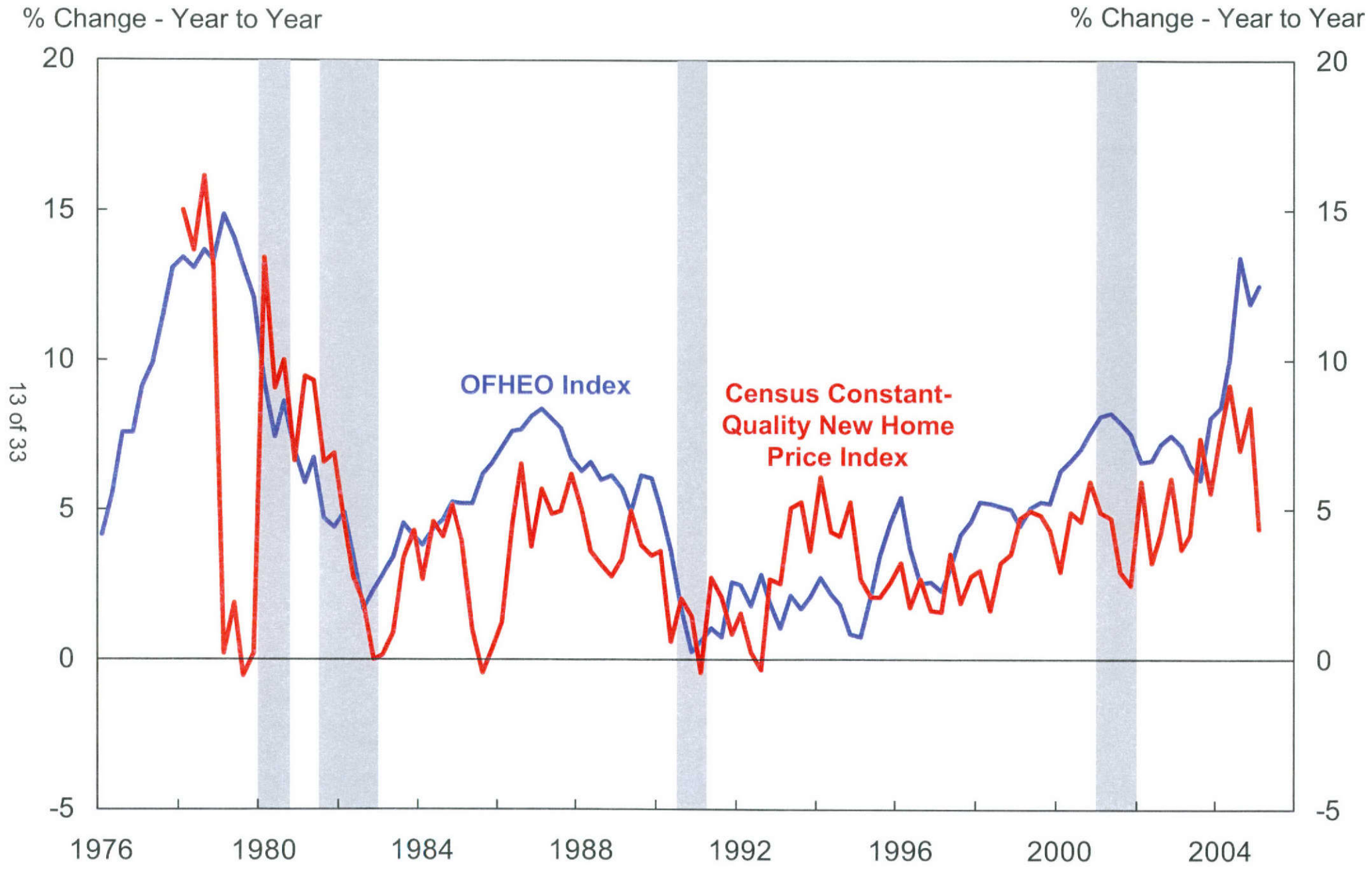
- An index of the average price of single-family homes purchased (refinanced) with conforming, conventional mortgages
  - Excludes cash sales and sales financed with FHA, VA, and jumbo loans.
- A "repeat-sales" index
  - Measures sales prices or appraised values of properties at same address at different points in time.
- A transactions-based price index.

The Constant-Quality New Home Price Index

- Based on a sample of new homes sold, regardless of how the sale was financed.
- Hedonic methods are used to hold physical and locational characteristics constant over time.
  - Sales prices regressed on numerous characteristics such as lot size, square footage of structure, presence of air conditioning, fire places, etc.

3

Nominal Home Price Appreciation

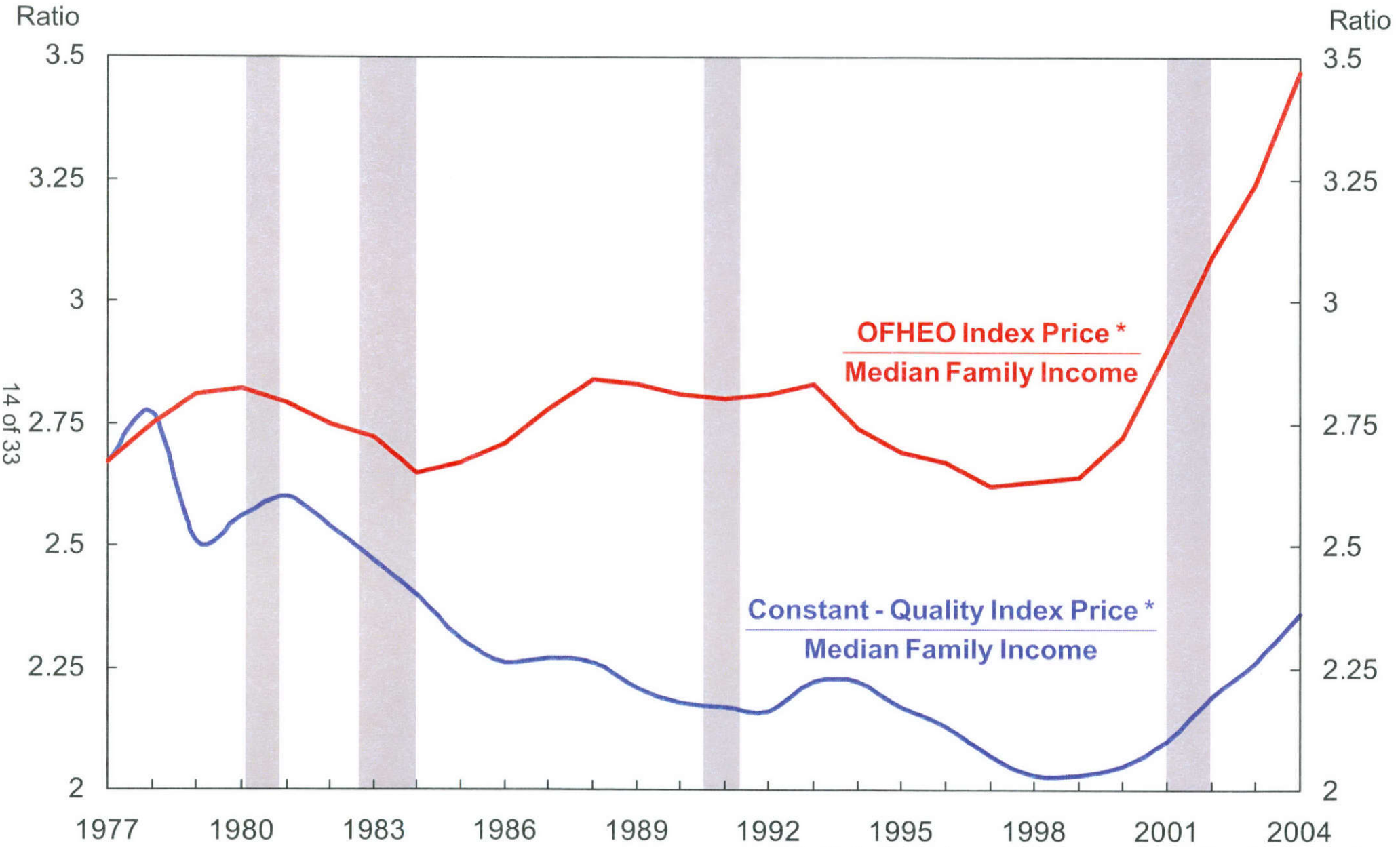


Source: Census Bureau and Office of Federal Housing Enterprise Oversight

Note: Shading represents NBER recessions.

4

Ratio of Home Price Over Median Family Income



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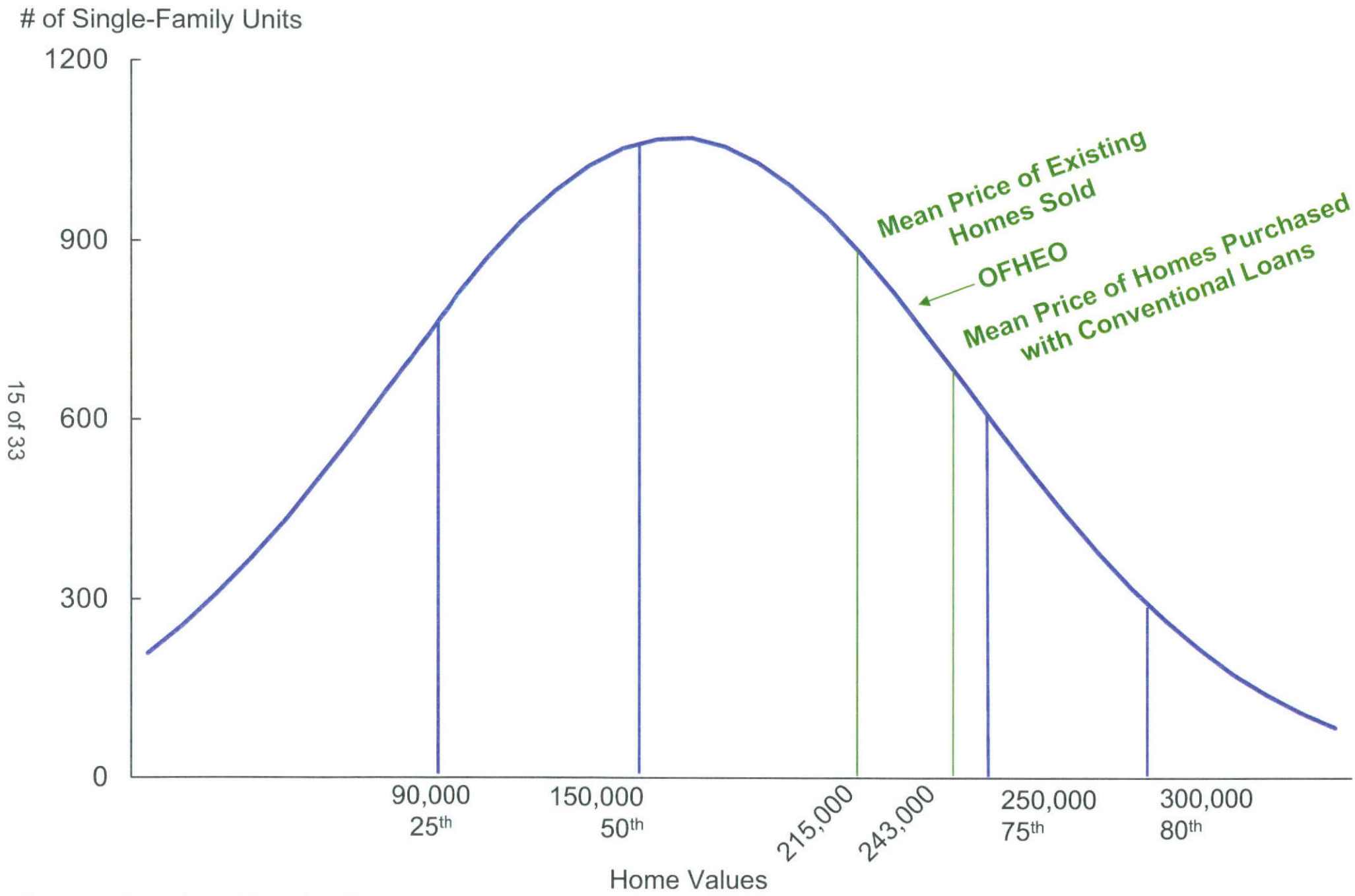
*Both indices have been converted to dollars using the median price of existing homes in 1979Q1.

Source:Office of Federal Housing Enterprise Oversight and Bureau of Economic Analysis

Note: Shading represents NBER recessions.

Distribution of Single-Family Homes by Value: 2003[5]



Source: American Housing Survey

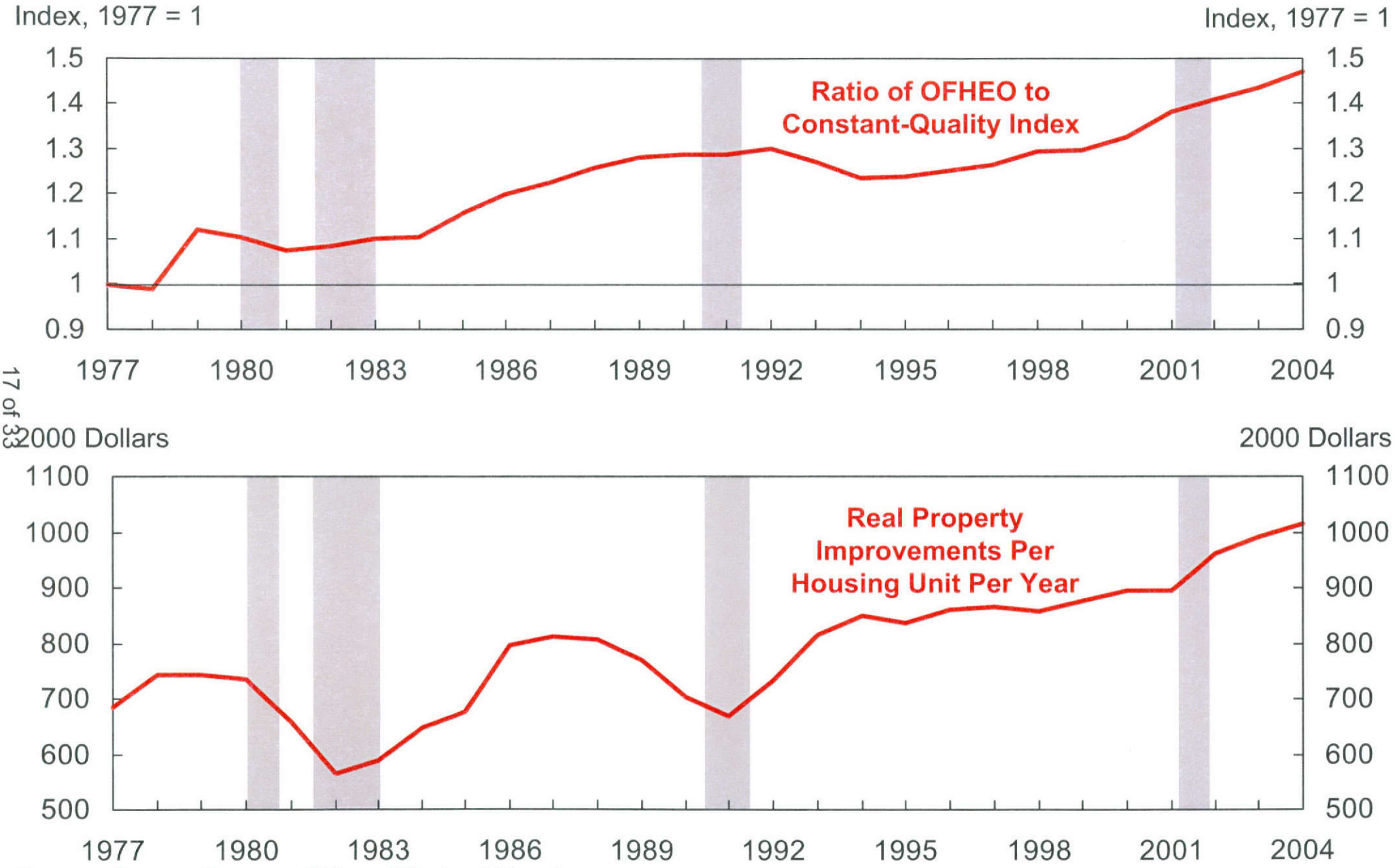
Appreciation and Turnover Rates by Percentile

(percent per year)

	Percentile			
	25th	50th	75th	80th
Appreciation Rate (1997 - 2003)	4.5%	5.6%	7.5%	8.7%
Turnover Rate (average 1997 - 2003)	5.9%	7.5%	8.6%	7.4%

Source: American Housing Survey

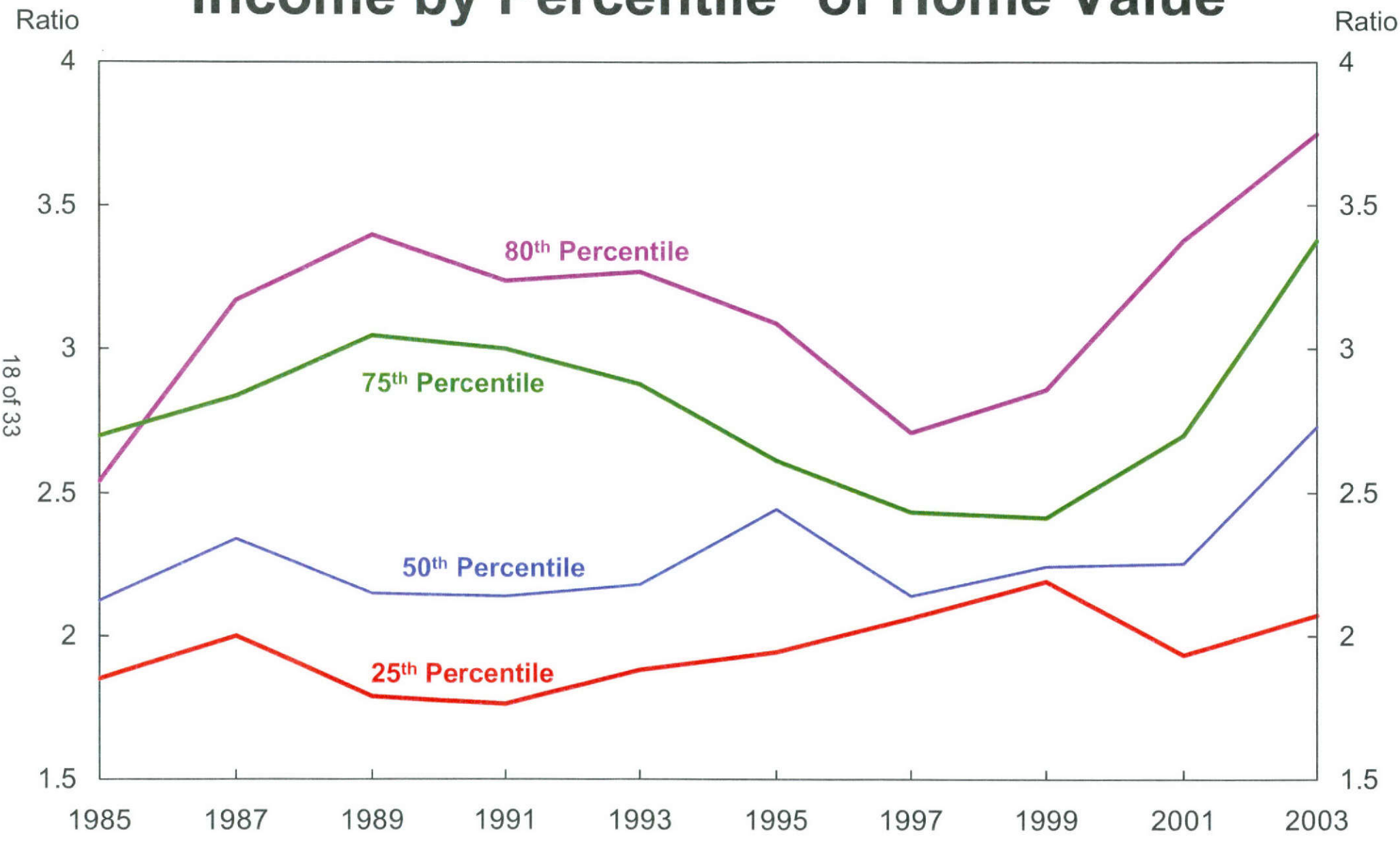
OFHEO Index and Home Improvements



Source: Census Bureau, Office of Federal Housing Enterprise Oversight, and Bureau of Economic Analysis

Note: Shading represents NBER recessions.

Ratios of Median Home Value to Median Family Income by Percentile* of Home Value



Source: American Housing Survey

*Home value percentile groups are defined by 3-percentile ranges centered around the cited percentile point.

Implicit Land Price Increases Derived from Constant-Quality New Home Price Indices*

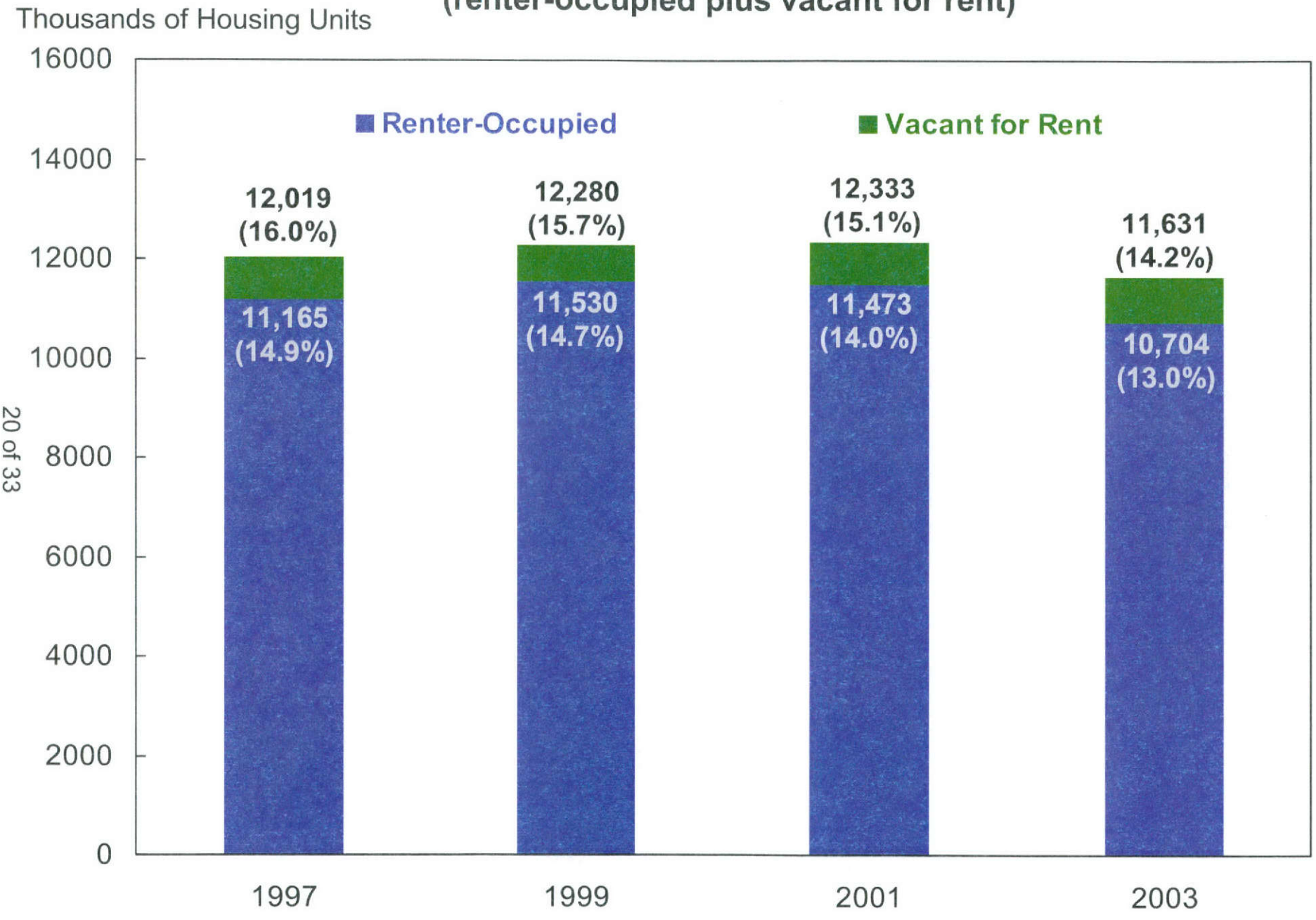
(compound annual rate, 1998-2004)

U.S.	Northeast	Midwest	South	West
5.5%	7.3%	2.9%	2.8%	10.0%

*Based on the assumption that land represents 50 percent of the value of the property.

Single-Family Investment Properties

(renter-occupied plus vacant for rent)



Source: American Housing Survey

Monetary Policy Responses to Asset Price Movements

Glenn D. Rudebusch
Federal Reserve Bank of San Francisco

Monetary Policy and Asset Prices: The Basics

1. Asset price decomposition:

Assume an asset price (AP_t) consists of a component determined by its fundamentals (F_t) and a bubble component (B_t):

$$AP_t = F_t + B_t .$$

2. Two proposals for the appropriate monetary policy reaction to an asset price:

Standard Policy (SP):

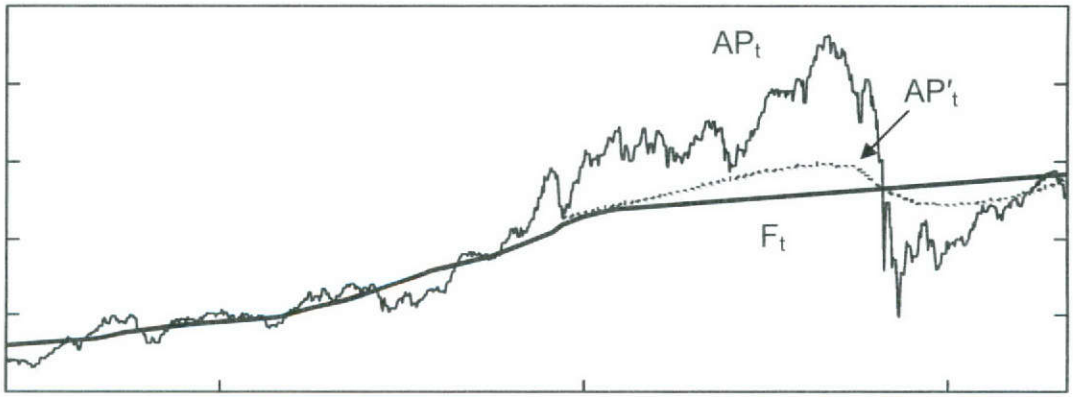
- Widespread agreement that the SP is a minimum appropriate reaction.
- Respond to an asset price insofar as it conveys information about the future evolution of output and inflation—the goal variables of monetary policy.
- In following the SP, it still may be useful—if possible—to identify F_t and B_t.

Bubble Policy (BP):

- Respond to relevant information as in the SP and also try to influence the asset price directly in order to contain or reduce the bubble and limit costs associated with movements in B_t.

3. A best-case scenario for Standard and Bubble Policies:

Example: Consider the *ideal* theoretical conditions where the decomposition of an asset price (AP_t) into its fundamentals (F_t) and a bubble (B_t) is *known*.



The Standard Policy (SP) would:

- Try to offset the effects of AP_t with higher rates than recommended by the fundamentals before the crash and lower rates afterward.

The Bubble Policy (BP) would:

- Respond to information as in the SP, but also try to reduce the bubble fluctuations and achieve, ideally, the AP'_t path. This would likely require higher rates than the SP before the crash and lower rates afterward.

Should Monetary Policy Try to Reduce an Asset Price Bubble?

Decision tree for Standard and Bubble Policies

Q1. Can a bubble—or asset price misalignment—be identified?

→ **No** — The asset price is arguably aligned with fundamentals.

Follow Standard Policy

↓ **Yes**

Asset price appears misaligned.

Q2. Do bubble fluctuations result in large macroeconomic consequences that monetary policy cannot readily offset?

→ **No** — Macroeconomic consequences from asset price boom and bust are minor or they occur with a lag, so monetary policy can effectively offset them.

Follow Standard Policy

↓ **Yes**

Fallout may include a severe financial crisis, imbalances, or misallocations that cannot be well offset by monetary policy.

Q3. Is monetary policy a good way to deflate the bubble?

→ **No** — Interest rate effects on bubble are uncertain or costly, especially relative to alternative deflation strategies.

Follow Standard Policy

↓ **Yes**

Relative to the cost of alternatives the dislocations associated with monetary policy actions are small.

Follow Bubble Policy

Two Episodes of Possible Asset Price Bubbles

Real-time answers to decision-tree questions

1. Equity prices in 1999-2000:

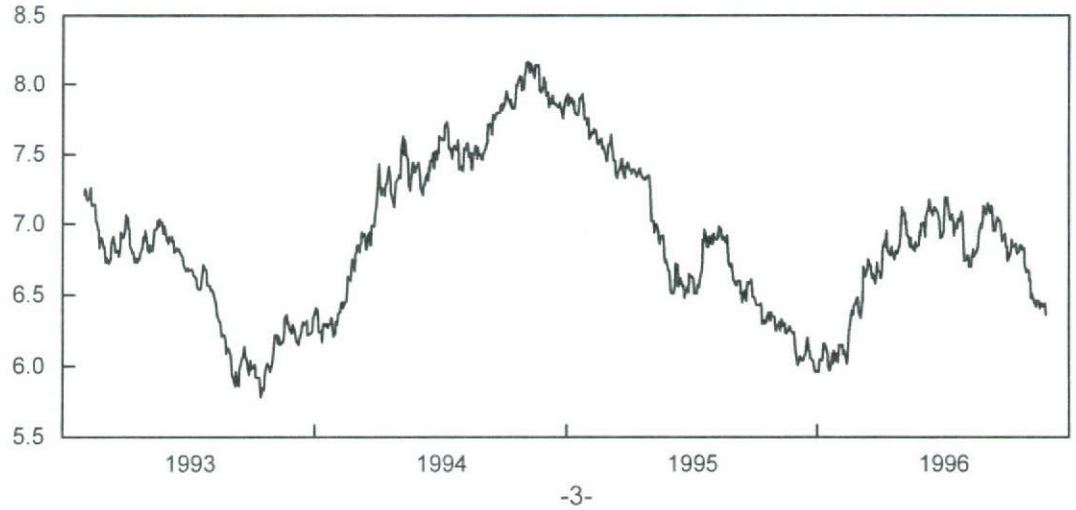
Q1: A bubble could be identified in certain sectors and perhaps in overall market.
Q2: Serious capital misallocation appeared likely during boom and severe fallout from financial instability was possible during bust. Both hard to rectify.
Q3: It appeared unlikely that any bubble could be deflated by monetary policy.

US Stock Market Indexes
January 3, 1995 = 100

2. Bond prices in 1994:

Q1: A bubble or bond price misalignment appeared likely. Termed an "inflation scare" or "credibility gap."
Q2: Possible fallout from propagation of high-inflation expectations.
Q3: It appeared likely monetary policy could guide prices back to fundamentals.

30-Year Treasury Bond Yield
percent



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Monetary Policy Implications of a House Price Bubble

John C. Williams
Federal Reserve Bank of San Francisco

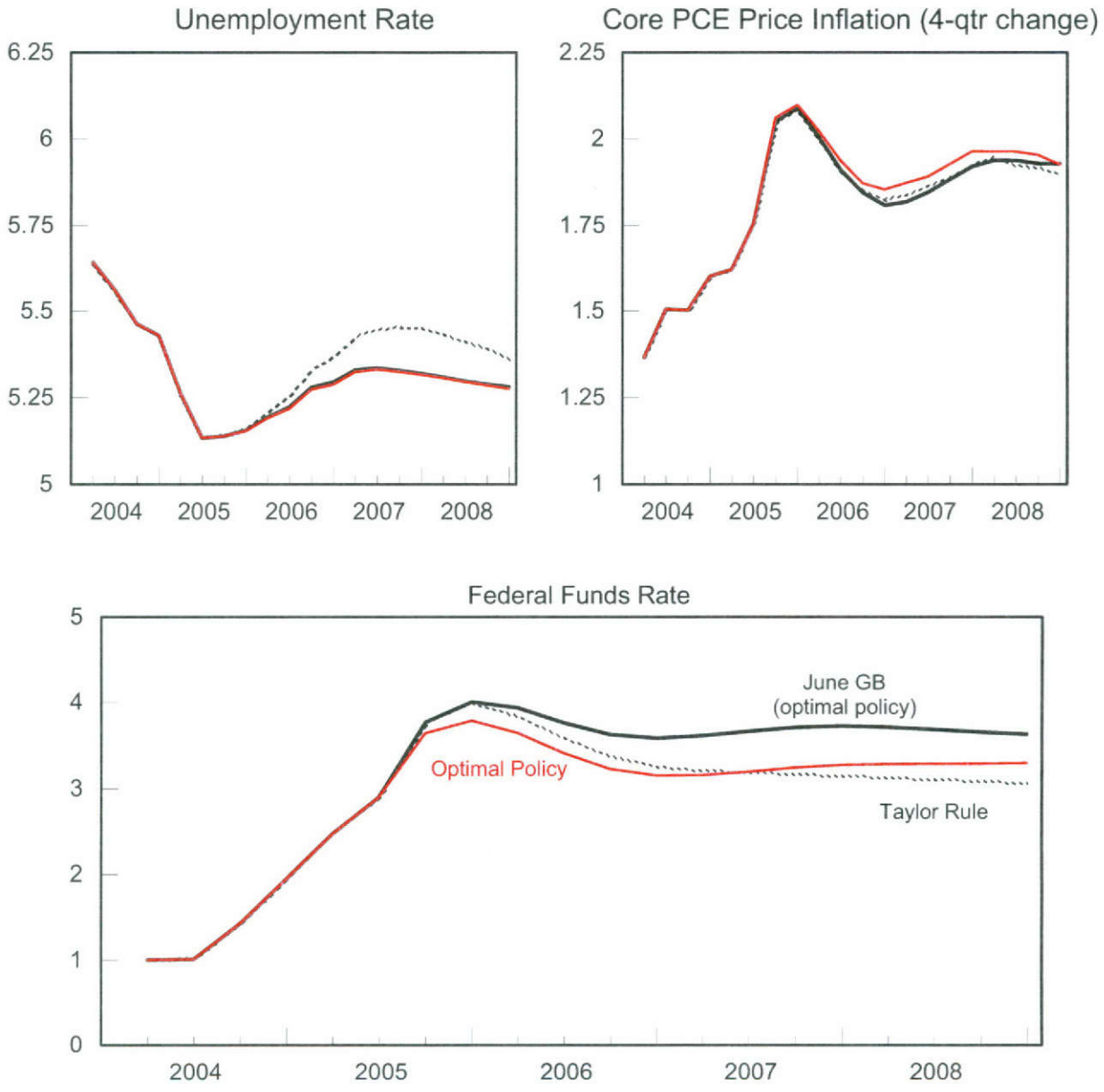
A Tale of Two Bubbles

- House prices today: a 20% decline would
  - reduce household wealth by $3.6 trillion (30% of current GDP)
  - raise saving rate by nearly 1-1/2 percentage points in the long-run
  - lower the long-run equilibrium real funds rate (r*) by 40 basis points.
- Stock prices in early 2000: twice as a large a potential problem as house price overvaluation today.
  - Stock market overvalued by 60% in March 2000; correction implied a $6.7 trillion reduction in wealth (70% of GDP at the time).
  - In the event, stock market wealth fell by $4.6 trillion from March 2000 to March 2001, and at trough was down $8.5 trillion.
- Cautionary note: policy cushion today is noticeably smaller than in early 2000.

Monetary Policy Implications of a Bursting Housing Bubble

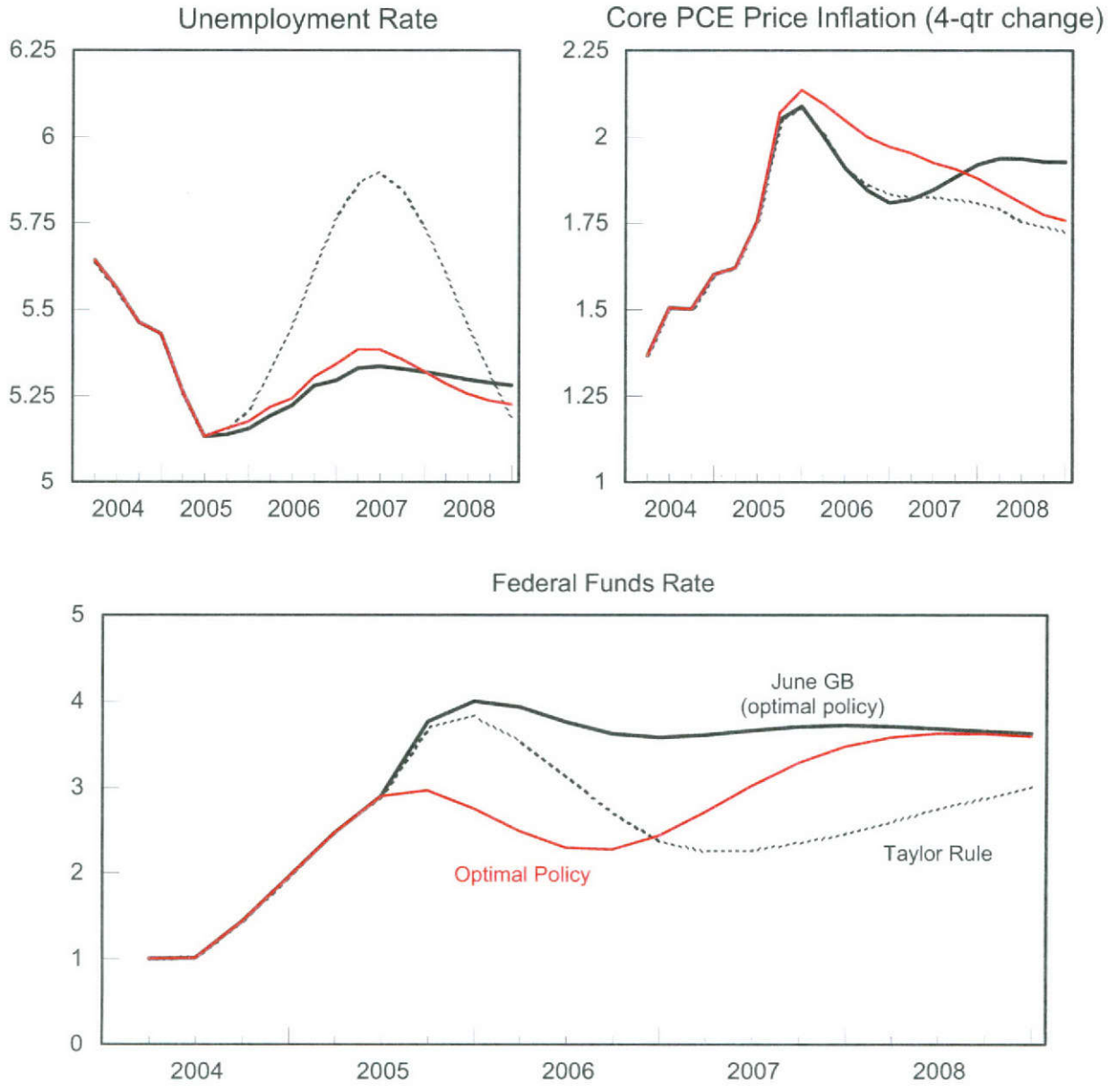
- Three scenarios:
  1. 20% decline in house prices relative to path in June *Greenbook*
  2. Scenario 1 + spillover effects on demand
  3. Scenario 2 + rise in bond premiums.
- Two policies: Optimal policy and Taylor rule
  - Optimal perfect foresight policy: assumes equal weights on unemployment and inflation deviations from targets of 5 and 1.5 percent, respectively, and small penalty on interest rate changes.
  - Taylor Rule: coefficient of 1 on output gap and ½ on inflation gap; r* adjusts to changes in housing wealth and bond premiums.

1. Effects of 20 Percent Decline in House Prices



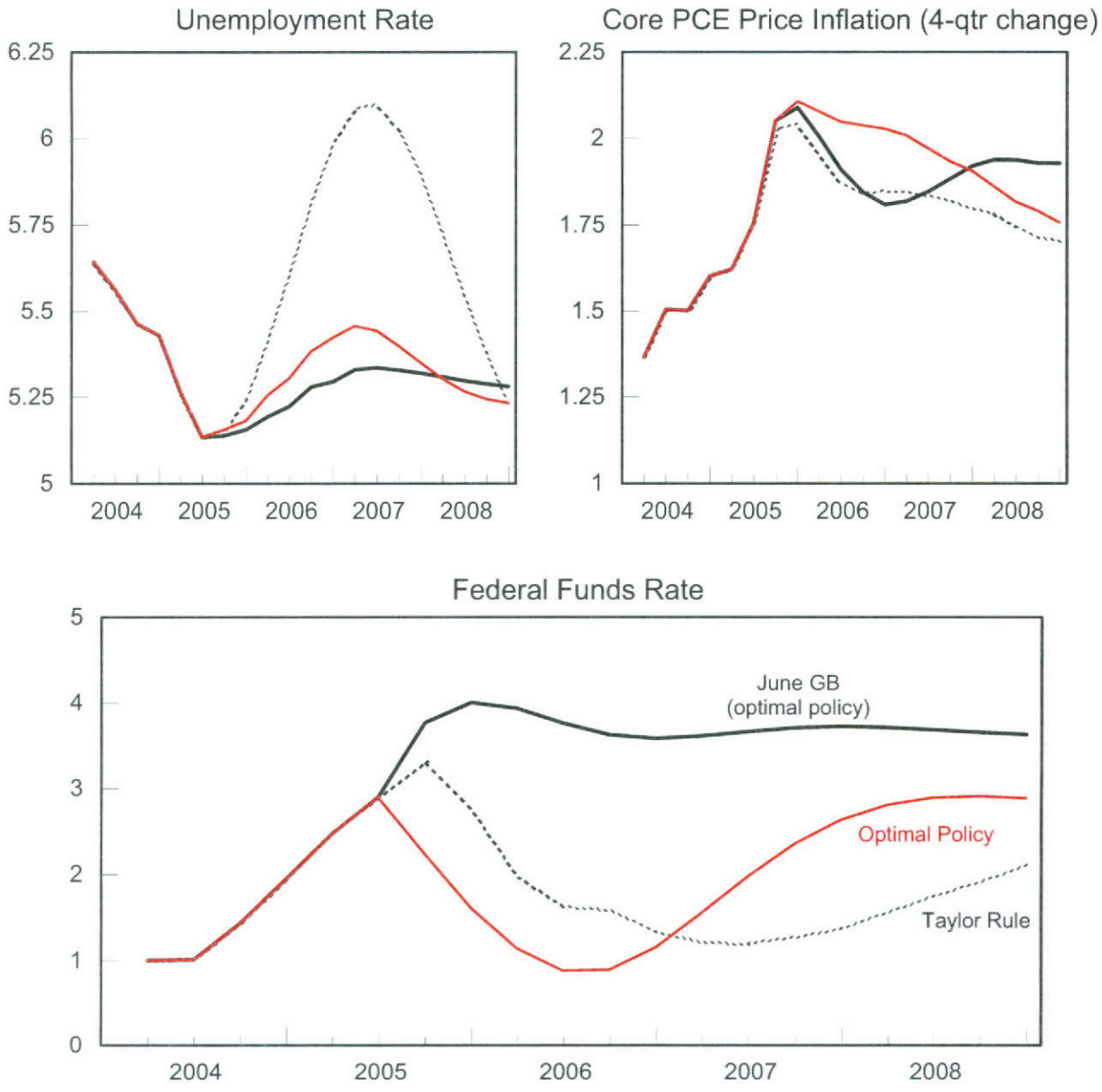
- House prices decline 20% relative to June Greenbook path by end of 2007.
- Demand shock: no significant tradeoff of goals.
- Macroeconomic effects build gradually: Under Taylor Rule, policy can respond to them as they develop.

2. Scenario 1 + Demand Spillovers



- House price declines rattle consumer confidence and dry up equity extraction from mortgage refinancing, crimping household spending.
- Optimal policy: funds rate declines to 2-1/4% by middle of 2006.
- Taylor Rule fails to act in anticipation of spillover effects and responds too gradually once they occur.

3. Scenario 2 + Falling Bond Prices



- House prices decline 20% as before, with demand spillovers.
- Term premiums on long-term bonds increase 75 basis points by year-end.
- Optimal policy drives funds rate below 1 percent by middle of 2006.
- Optimal policy able to forestall significant rise in unemployment rate; under Taylor Rule, unemployment rate reaches 6 percent.

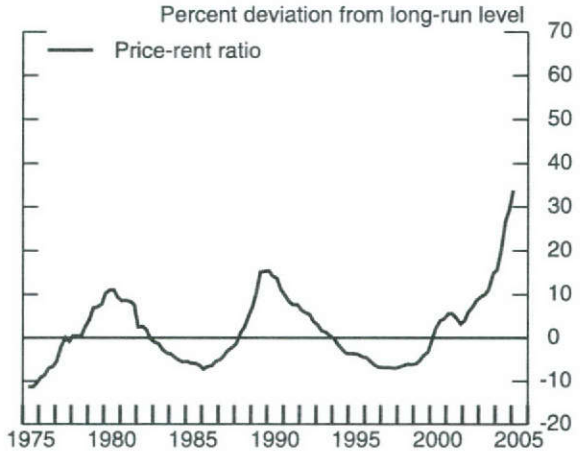
Using Monetary Policy to Preempt a Worsening House Price Misalignment

- Pro: House price misalignment may
  - contribute to conditions that lead to a sharp contraction in economic activity that is difficult for policy to counteract
  - misallocate resources toward housing-related activities.
- Con: Effectiveness of such policies is open to question
  - uncertain empirical relationship between housing prices, interest rates, and other factors
  - difficulties in assessing existence and magnitude of misalignment.

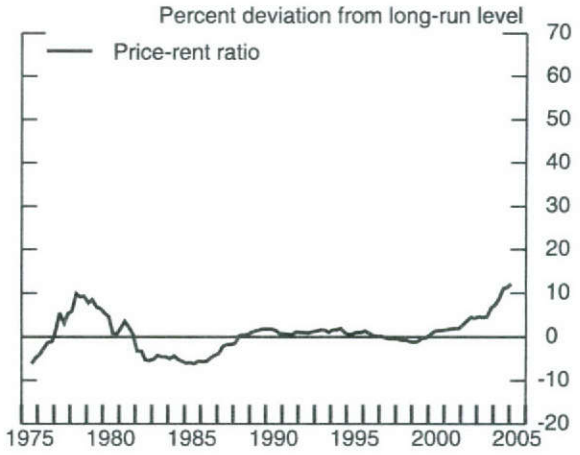
6-29-05

House Prices and Rents in Selected Metropolitan Areas

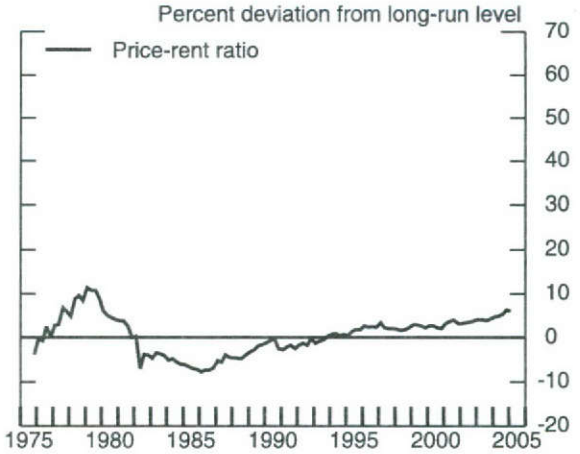
San Francisco



Chicago



Cleveland



Sources: OFHEO, BEA, and BLS.

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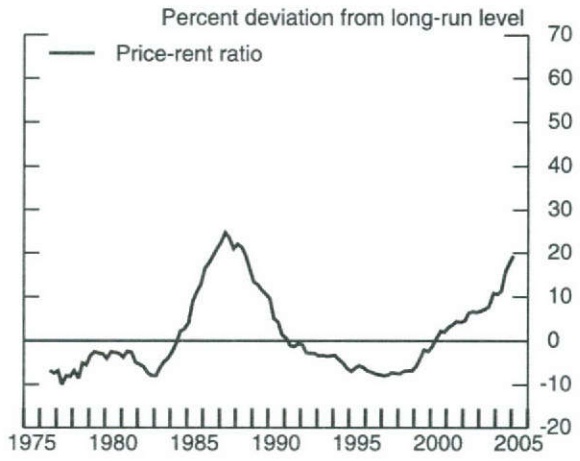
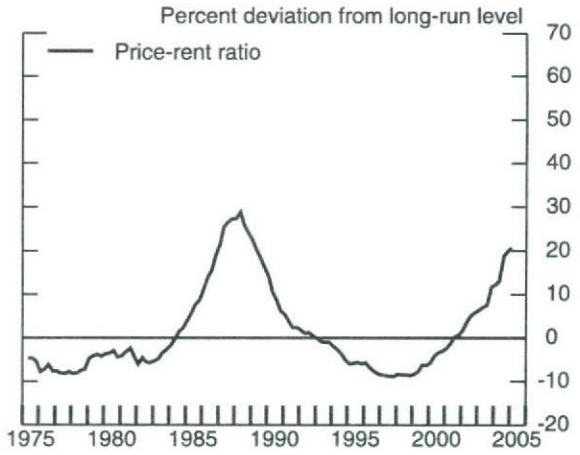
House Prices and Rents in Selected Metropolitan Areas

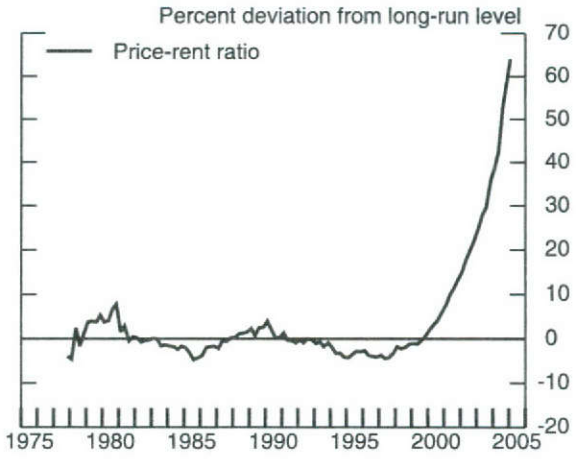
Boston



New York



Miami



Sources: OFHEO, BEA, and BLS.

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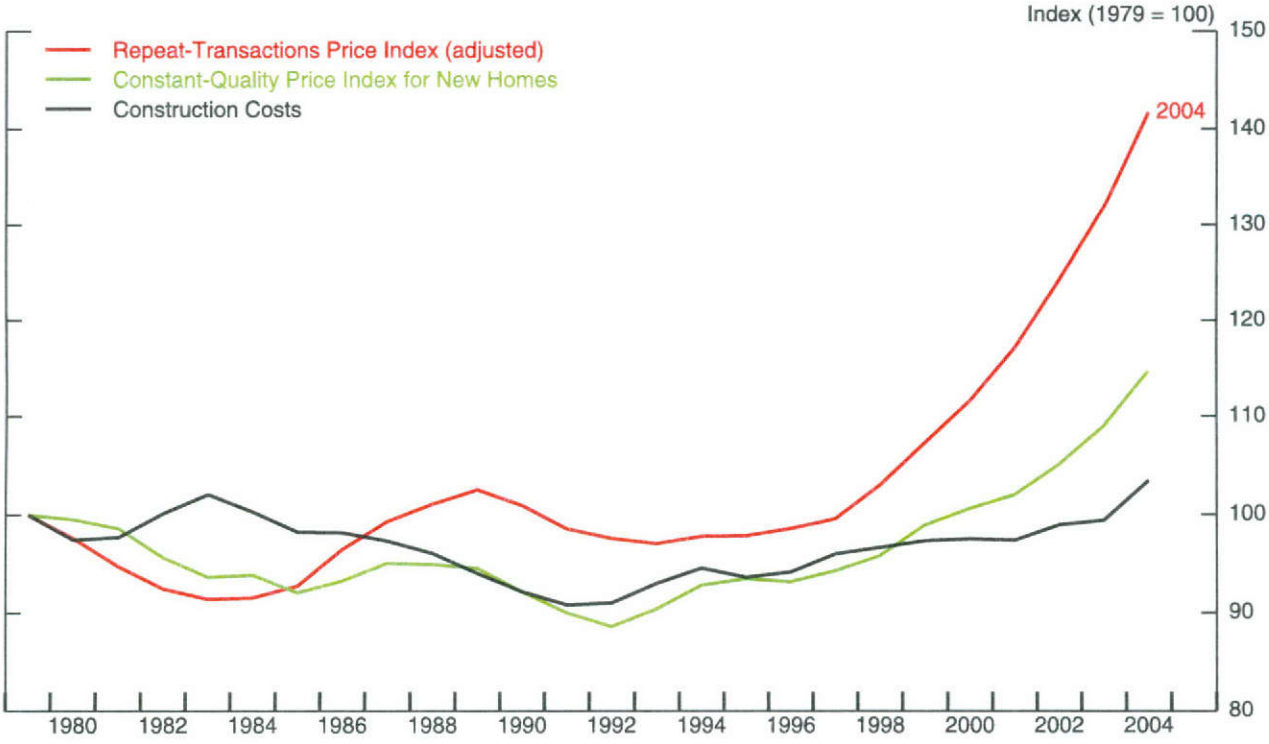
Measures of Prices, Rents, and Costs in the Housing Market

Changes in Real House Prices and Rents

Levels of Real House Prices and Construction Costs

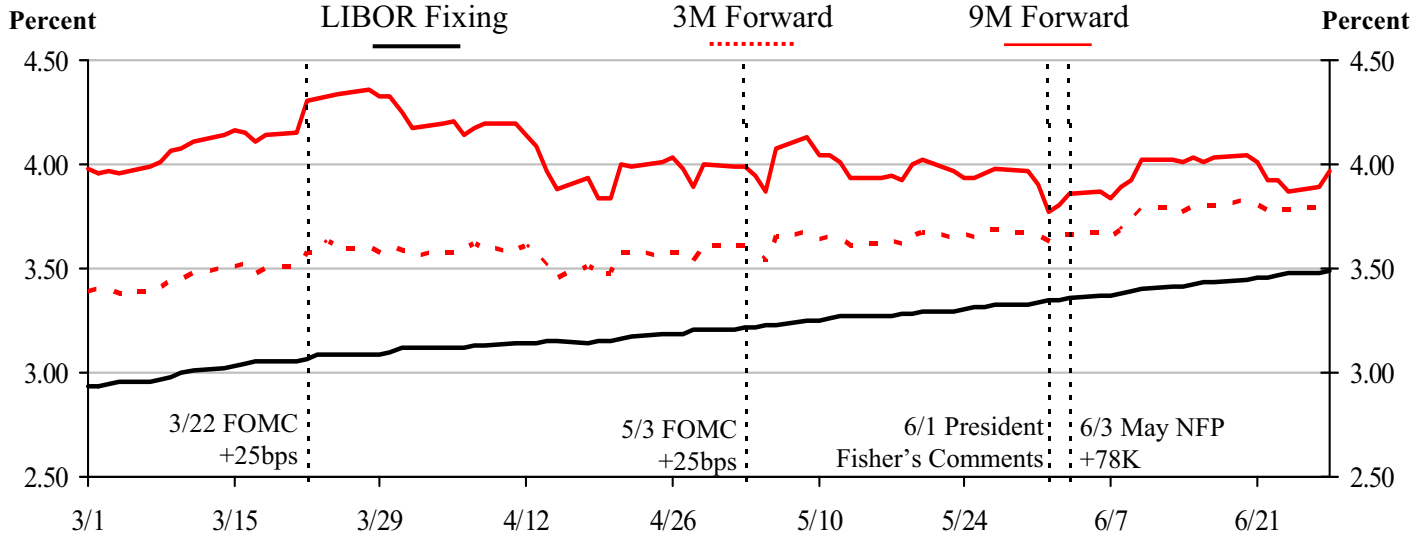


Sources: OFHEO, Freddie Mac, BLS, Census, BEA, and Engineering News Record.

Appendix 2: Materials used by Mr. Kos

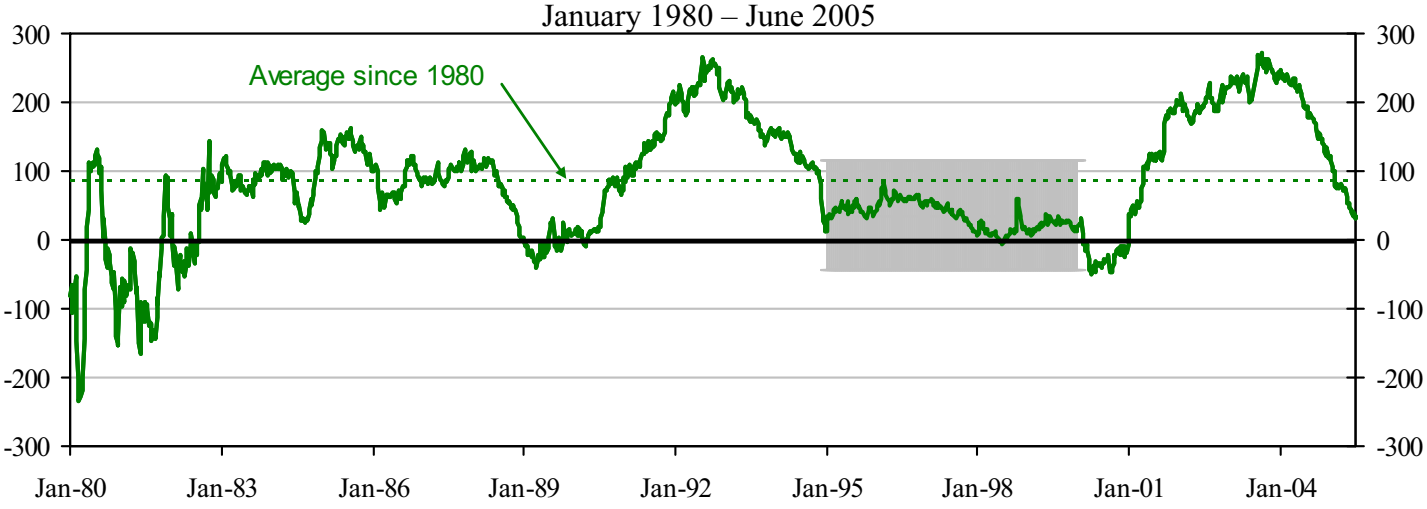
Current U.S. 3-Month Deposit Rates and Rates Implied by Traded Forward Rate Agreements

March 1, 2005 – June 28, 2005



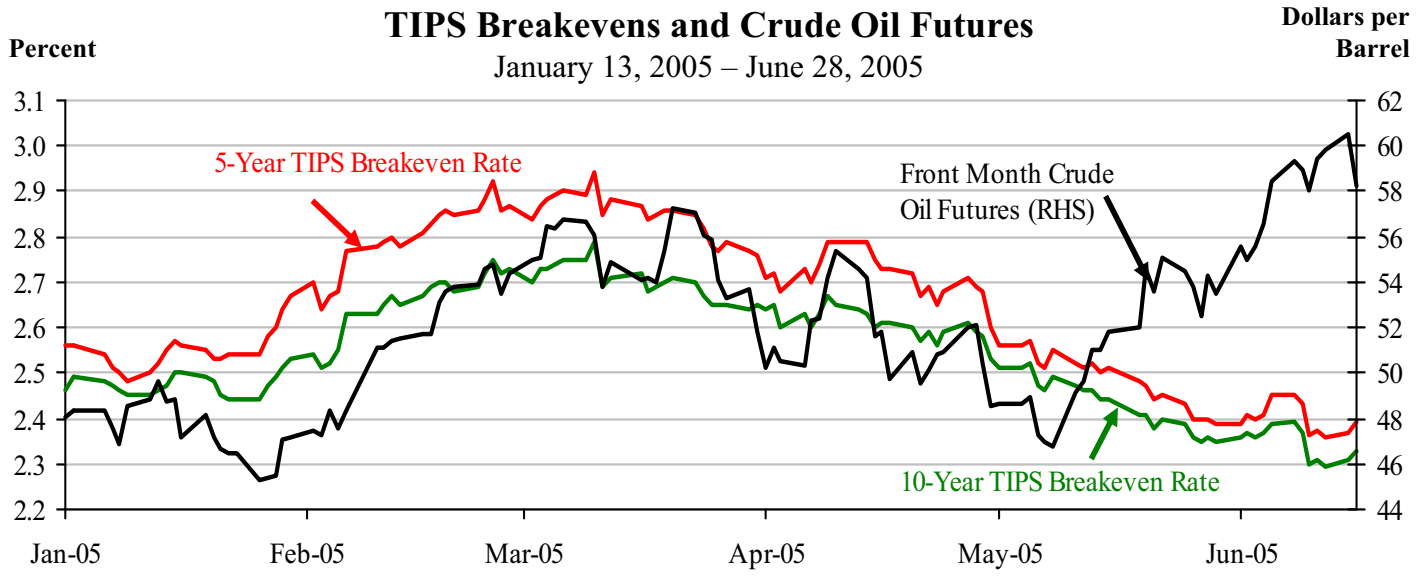
Spread Between 2- and 10-Year Treasury Yields

January 1980 – June 2005

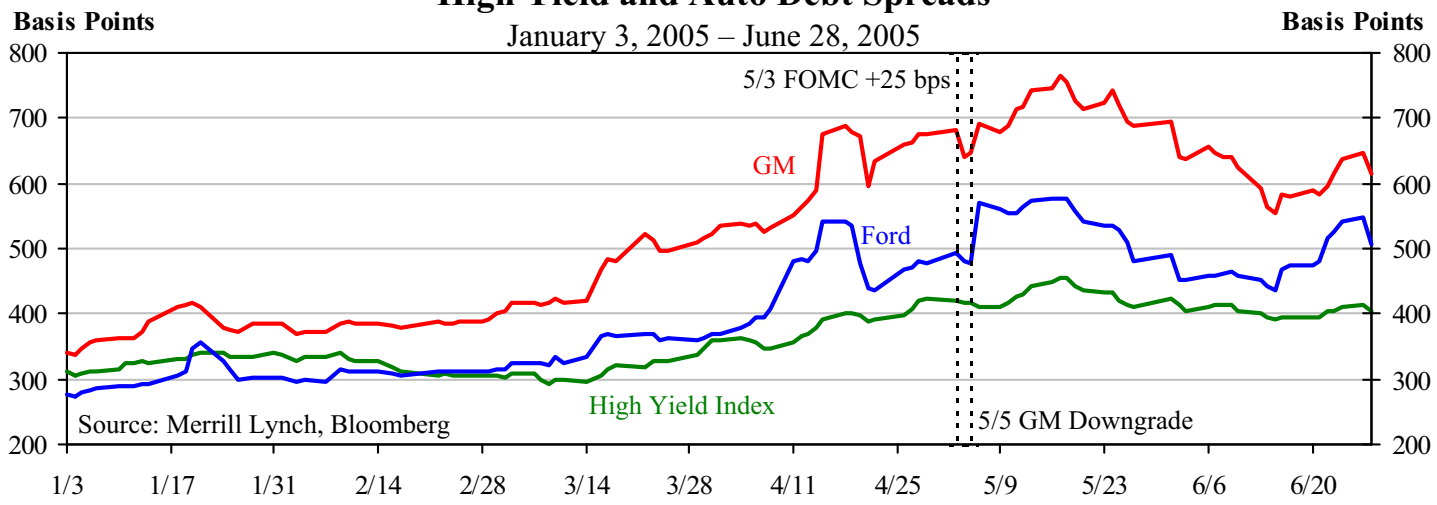


TIPS Breakevens and Crude Oil Futures

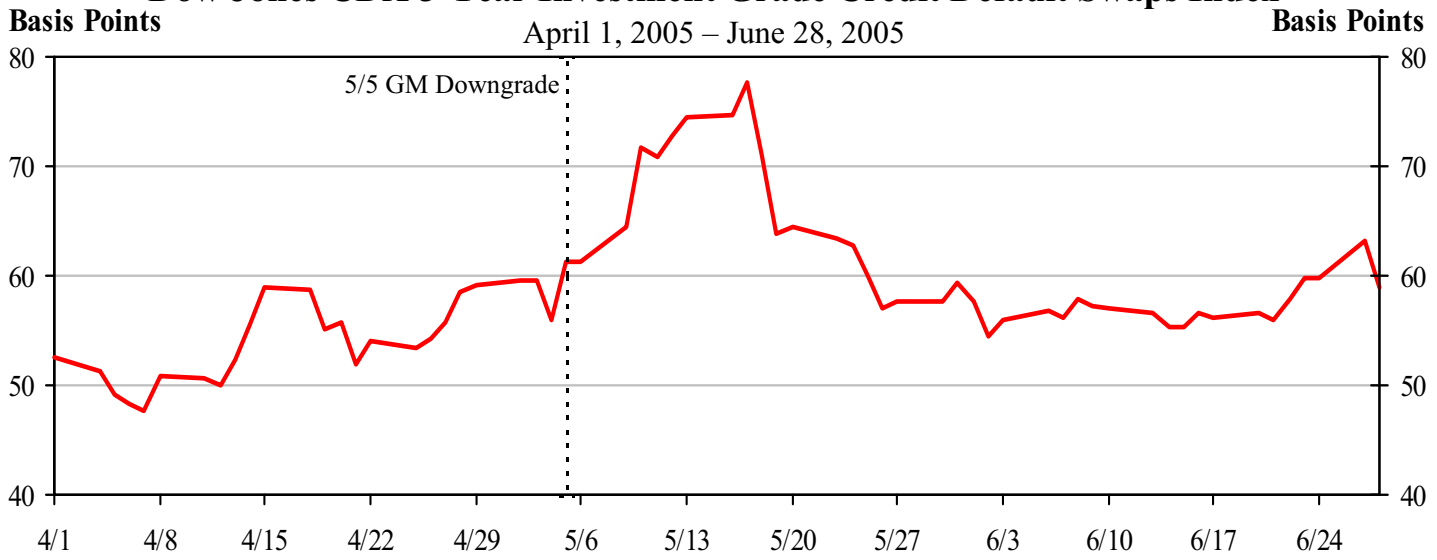
January 13, 2005 – June 28, 2005



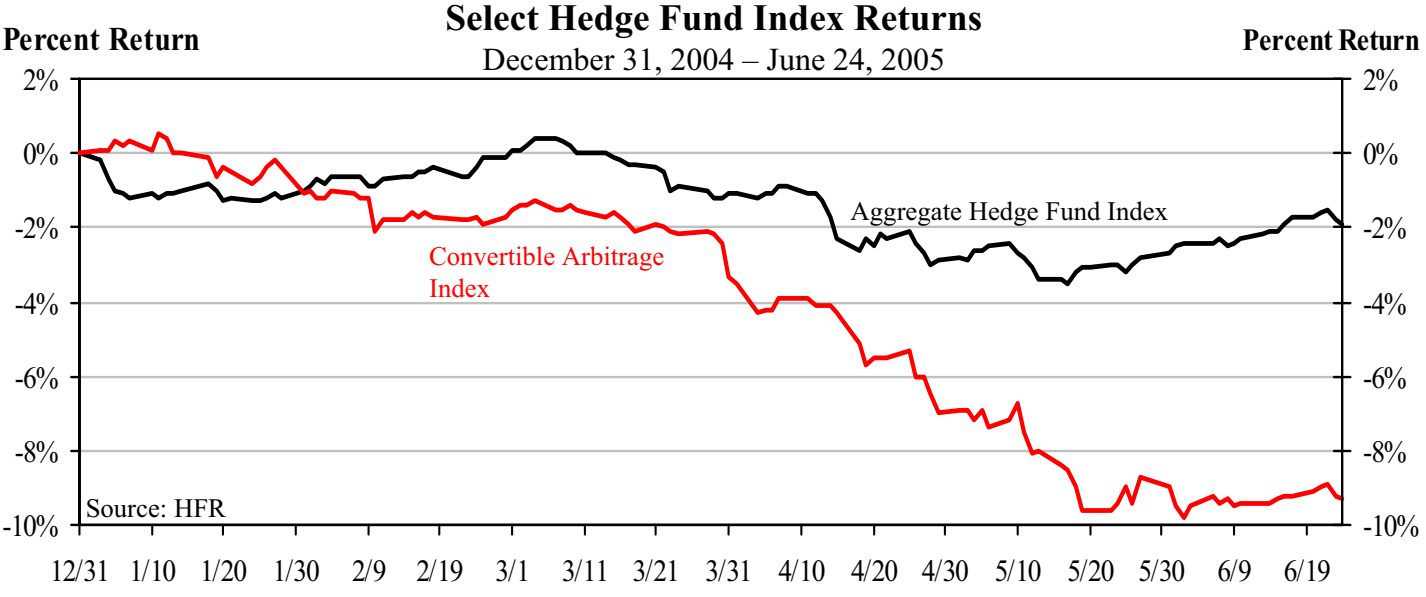
High Yield and Auto Debt Spreads



Dow Jones CDX 5-Year Investment Grade Credit Default Swaps Index

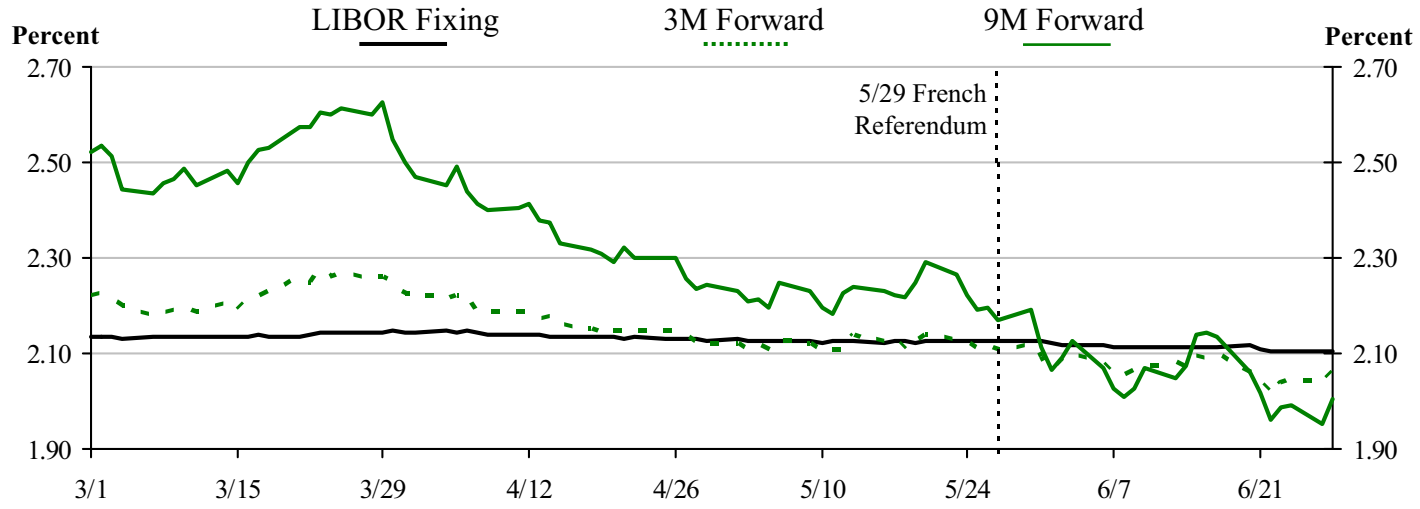


Select Hedge Fund Index Returns



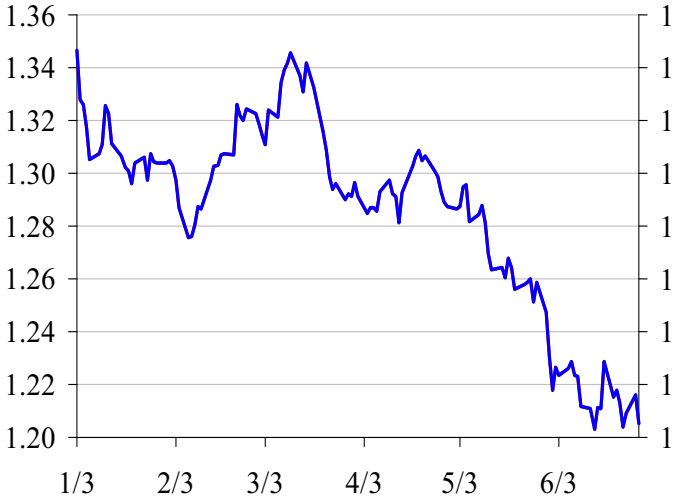
Euro-Area 3-Month Deposit Rates and Rates Implied by Traded Forward Rate Agreements

March 1, 2005 – June 28, 2005



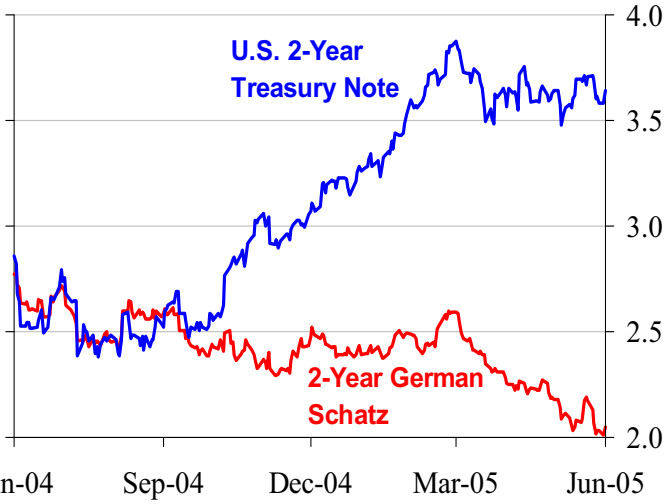
Euro-Dollar

Euro/$ January 3, 2004 – June 28, 2005



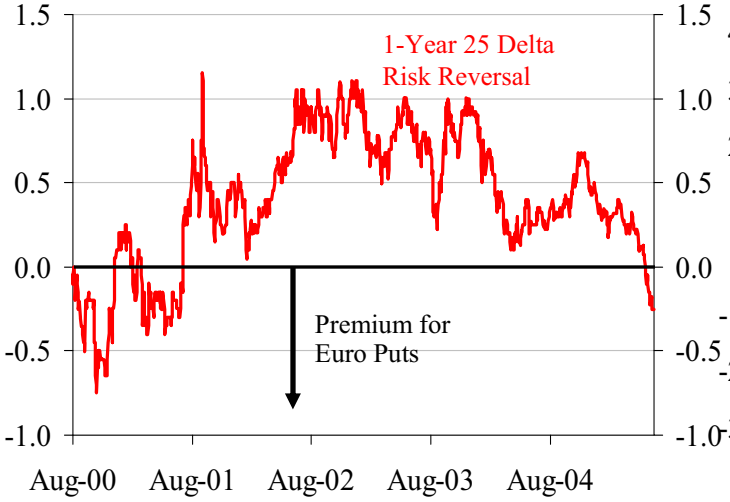
Interest Rate Differentials

June 28, 2004 – June 28, 2005

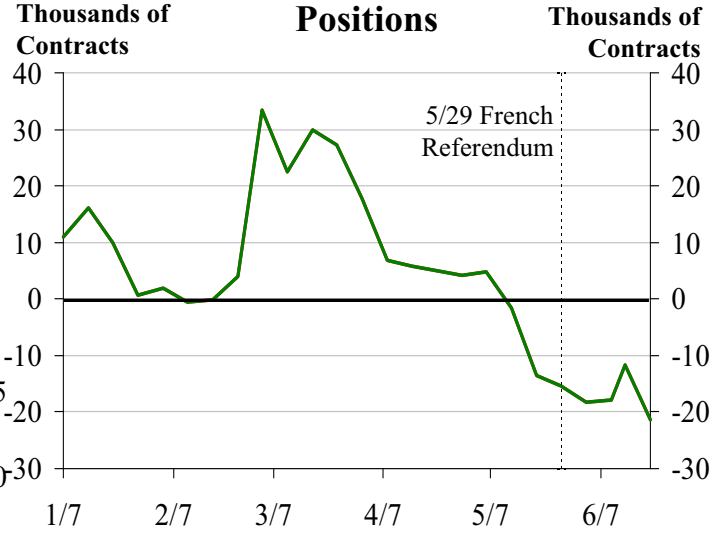


Euro-Dollar Risk Reversals

Percent February 1, 2000 – June 28, 2005 Percent

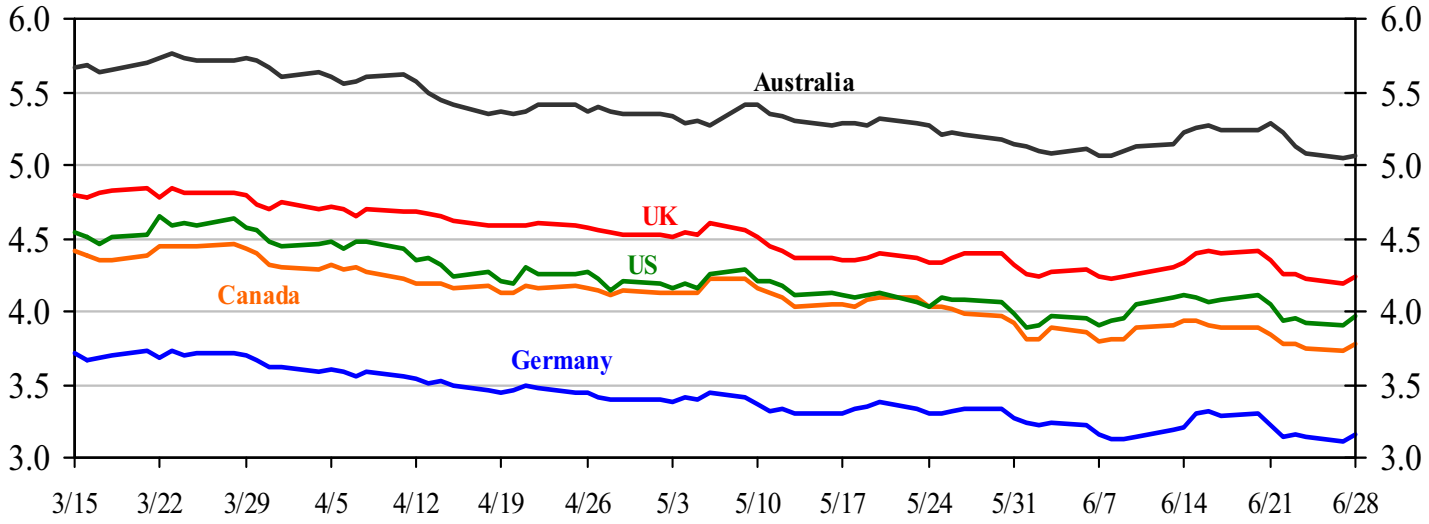


IMM Net Non-Commercial Euro Positions

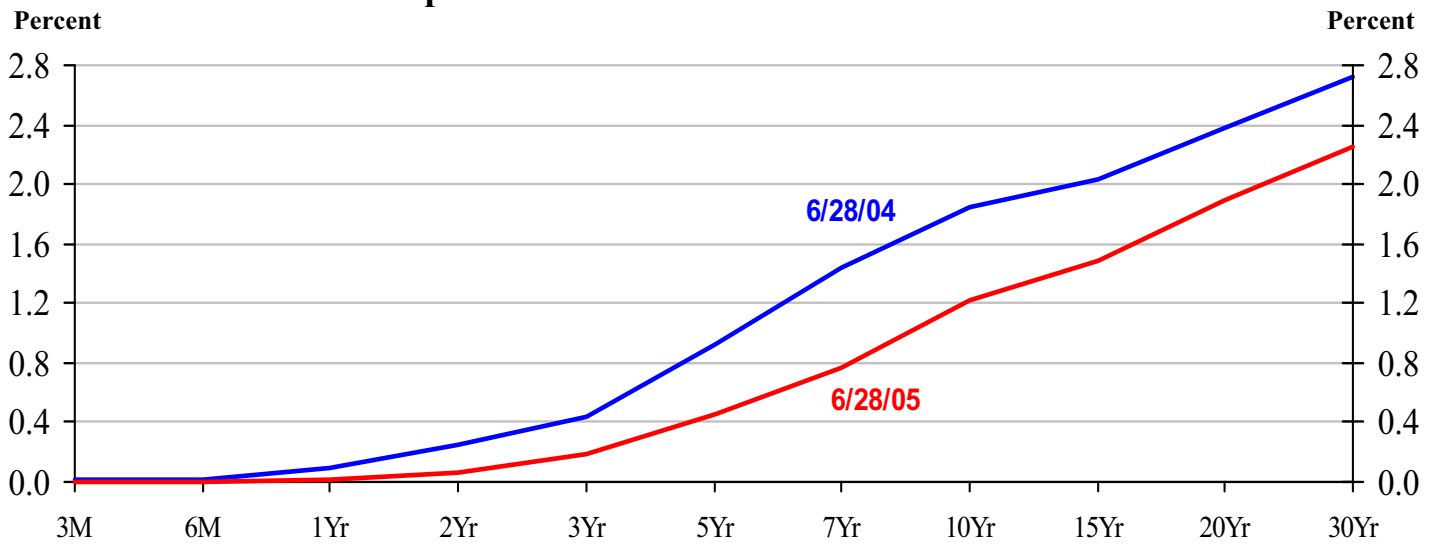


Global 10-Year Sovereign Debt Yields

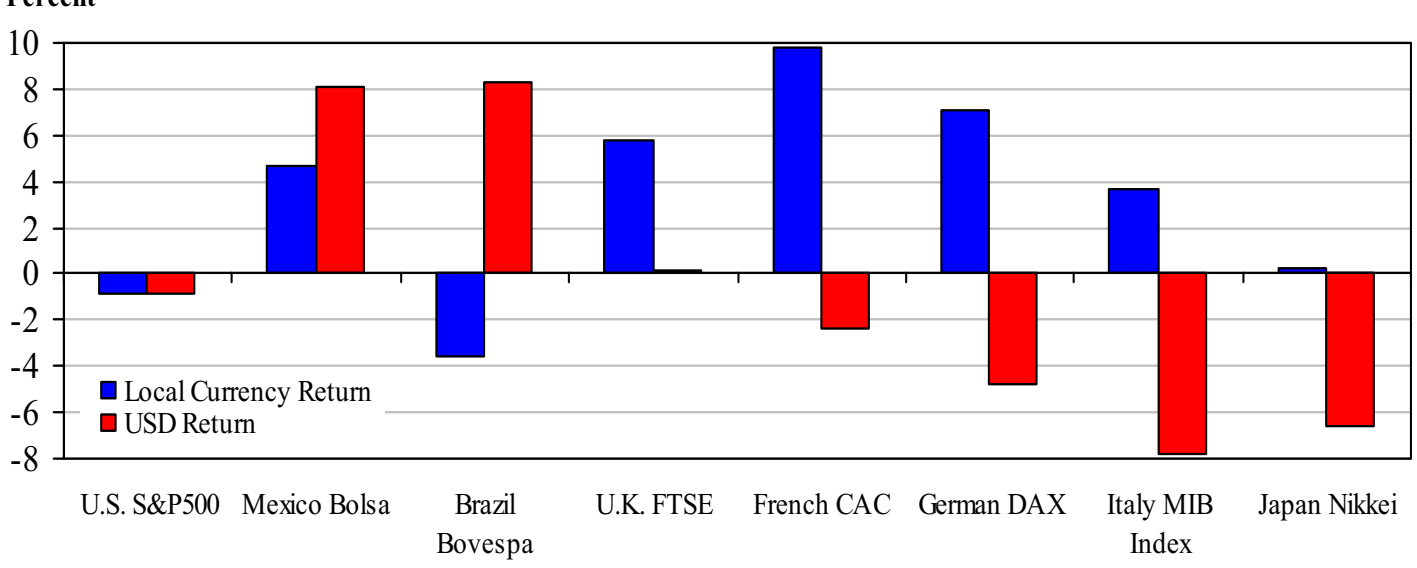
March 15, 2005 – June 28, 2005



Japanese Government Bond Yield Curve



Year-To-Date Global Equity Performance



Appendix 3: Materials used by Messrs. Oliner, Wilcox, and Leahy

STRICTLY CONFIDENTIAL (FR) CLASS I-FOMC*

Material for

Staff Presentation on the Economic Outlook

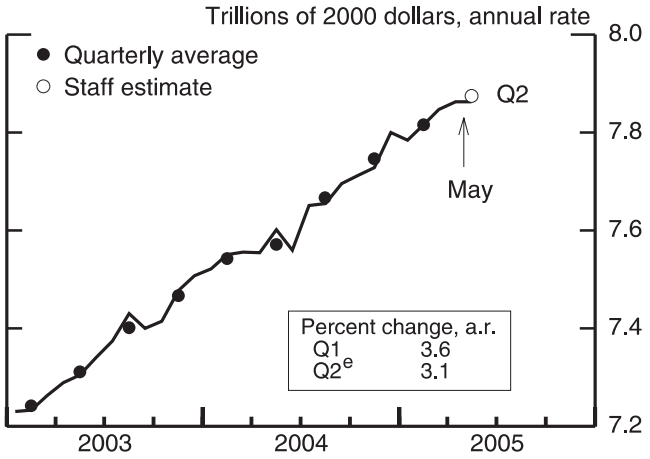
June 30, 2005

*Downgraded to Class II upon release of the July 2005 Monetary Policy Report.

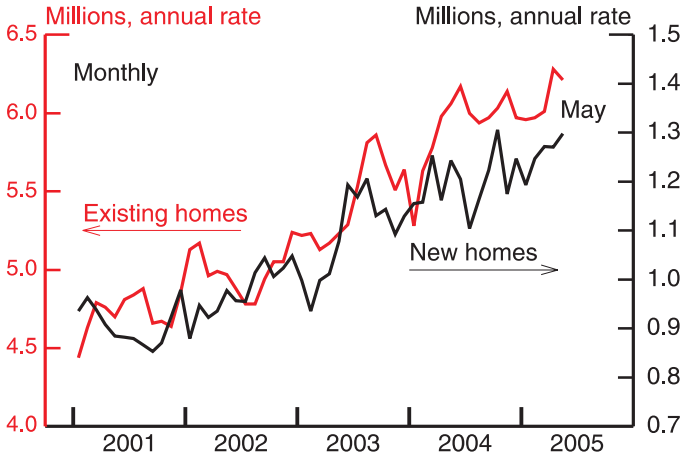
Exhibit 1

Recent Indicators

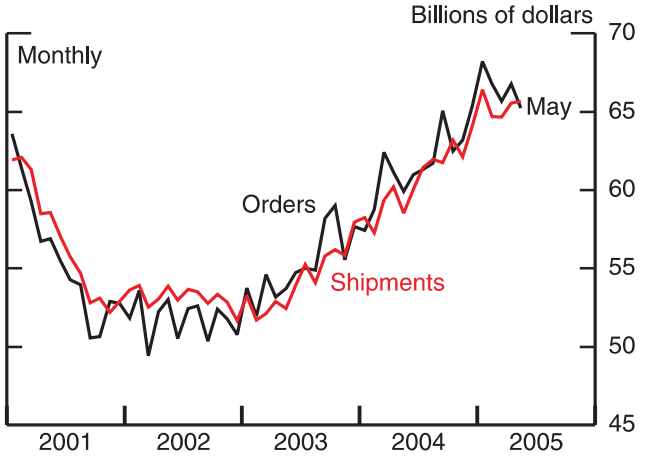
Real Personal Consumption Expenditures



Sales of Single-family Homes



Orders and Shipments of Nondefense Capital Goods*



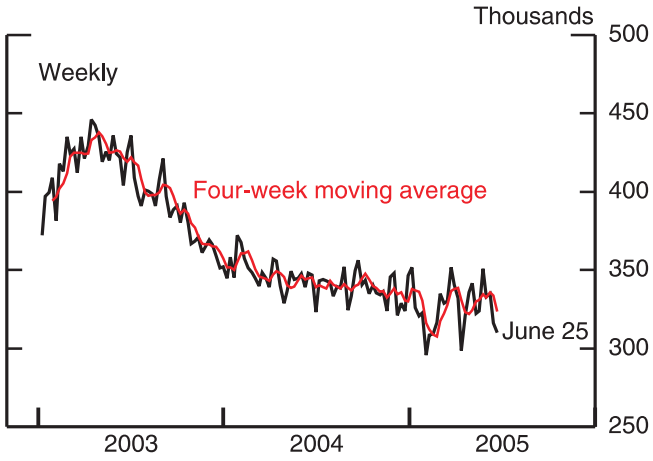
*Excluding aircraft.

Reserve Bank Queries on Capital Spending Plans Over Next 6-12 Months

	Jan. 2005	June 2005
Expect spending will:	- - - percent - - -	
Increase	47	42
Decrease	13	12
Be about unchanged	39	46

Note. Figures for Jan. 2005 do not sum to 100 because of rounding.

Initial Claims



Core PCE Prices

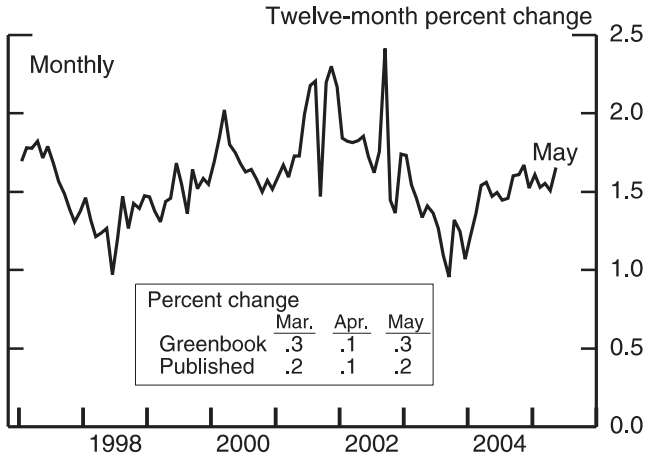
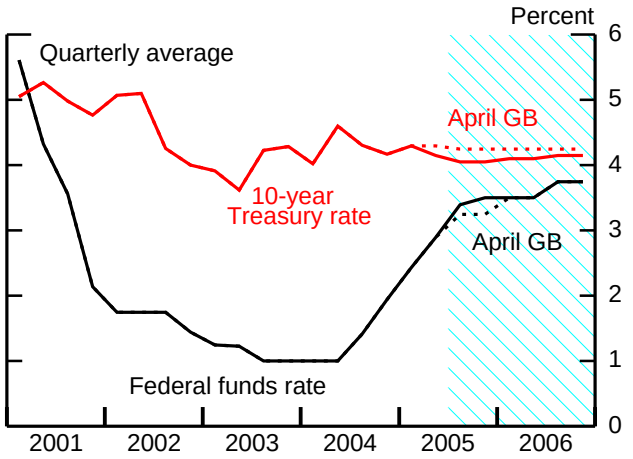


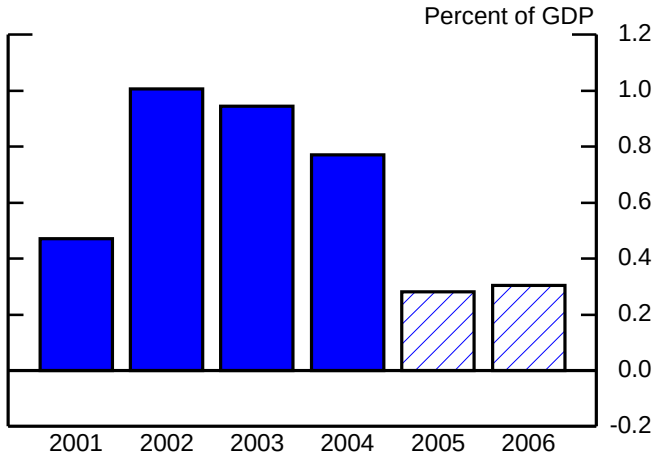
Exhibit 2

Key Background Factors

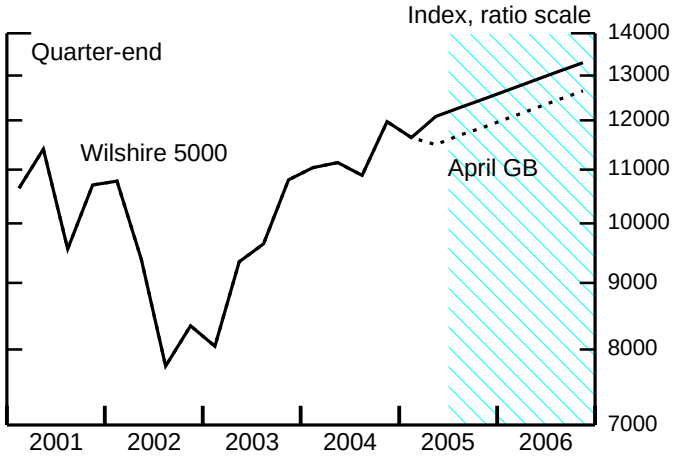
Interest Rates



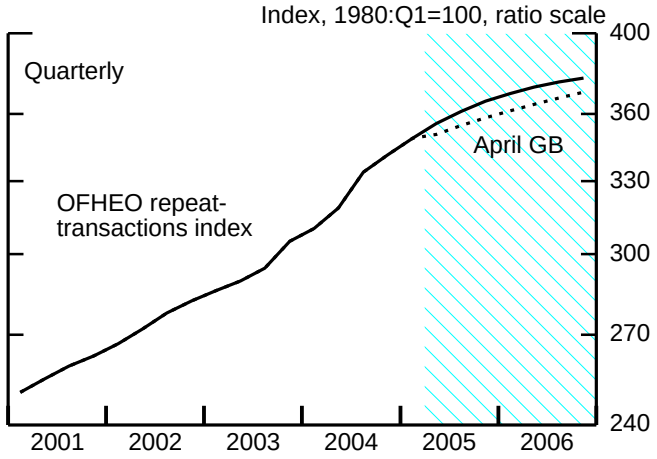
Fiscal Impetus



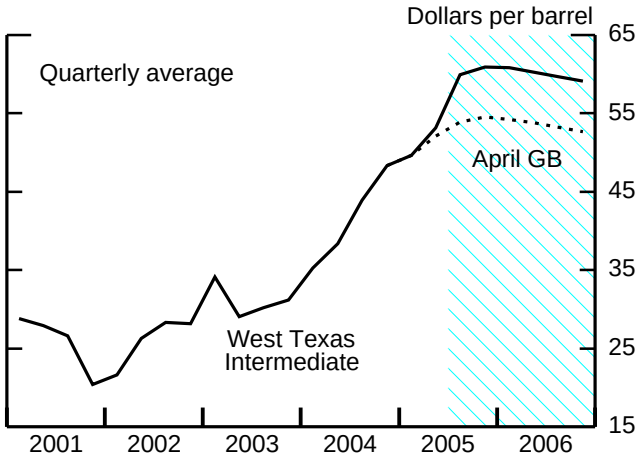
Equity Prices



House Prices



Crude Oil Prices



Broad Real Dollar

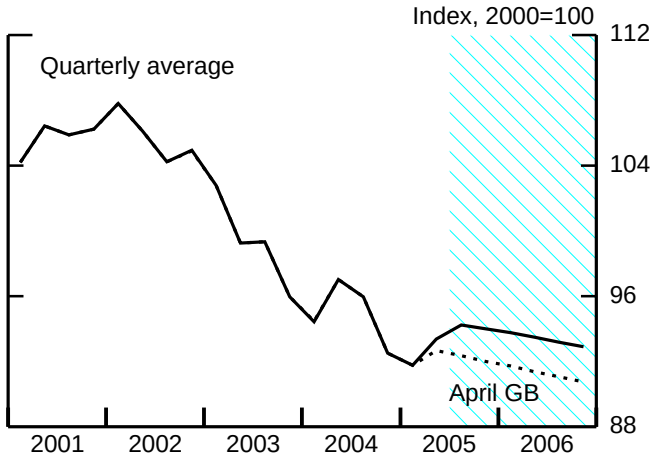
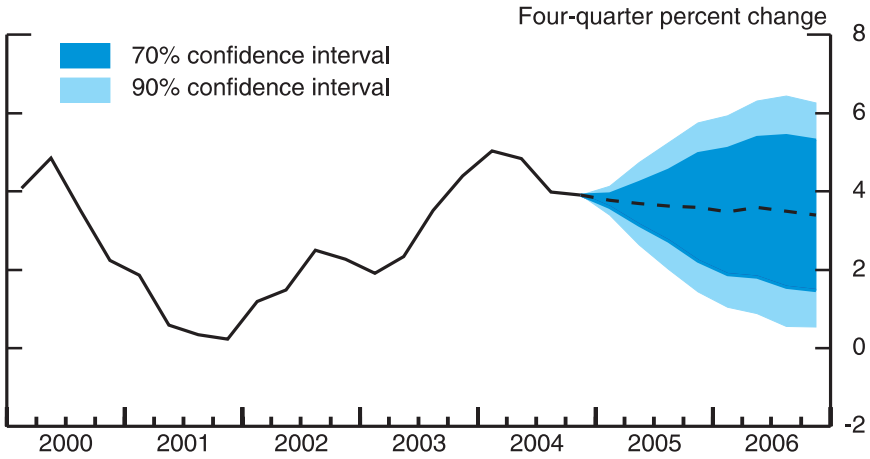


Exhibit 3

Forecast Summary

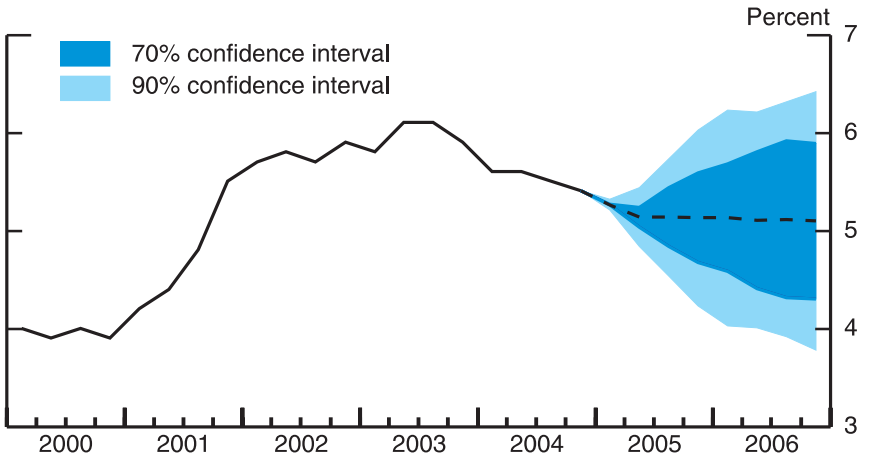
Real GDP



Real GDP
(Percent change, Q4 to Q4)

	Jan. GB	June GB	Revision
2004	3.8	3.9	.1
2005	3.9	3.6	-.3
2006	3.6	3.4	-.2

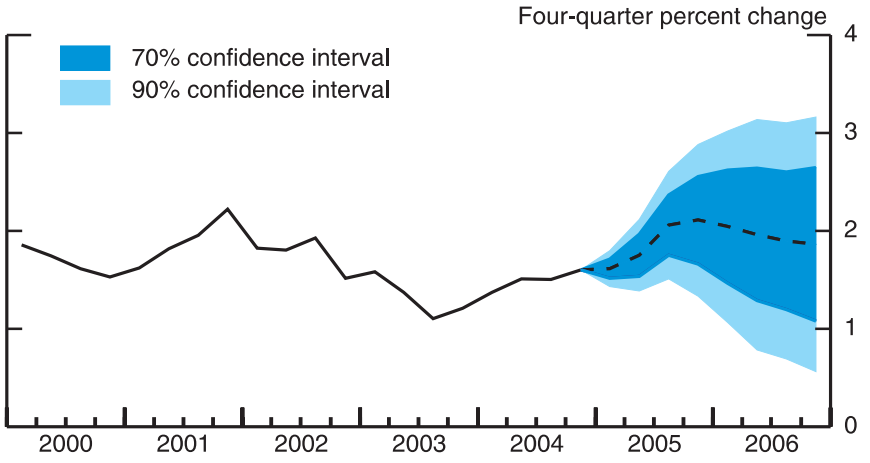
Unemployment Rate



Unemployment Rate
(Percent, Q4)

	Jan. GB	June GB	Revision
2004	5.4	5.4	.0
2005	5.3	5.1	-.2
2006	5.1	5.1	.0

Core PCE Prices



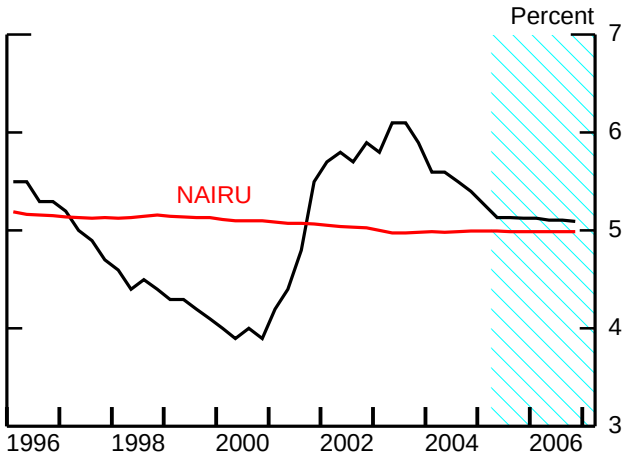
Core PCE Prices
(Percent change, Q4 to Q4)

	Jan. GB	June GB	Revision
2004	1.5	1.6	.1
2005	1.6	2.1	.5
2006	1.4	1.9	.5

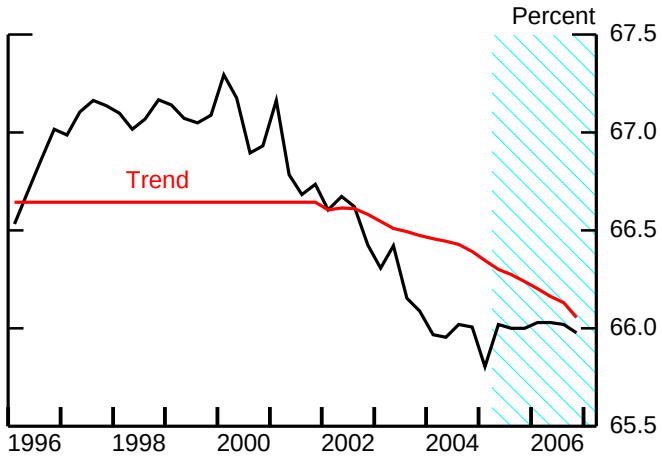
Exhibit 4

Does Any Slack Remain In The Labor Market?

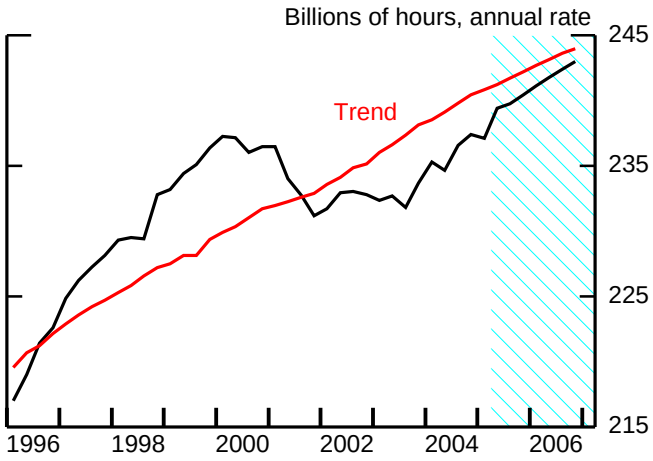
Unemployment Rate



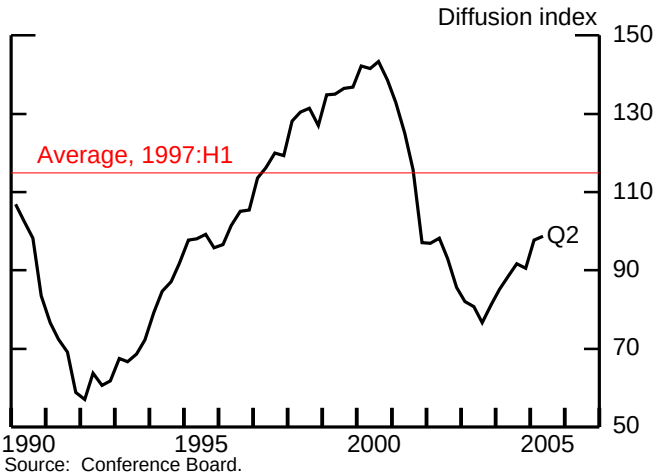
Labor Force Participation Rate



Total Hours Worked

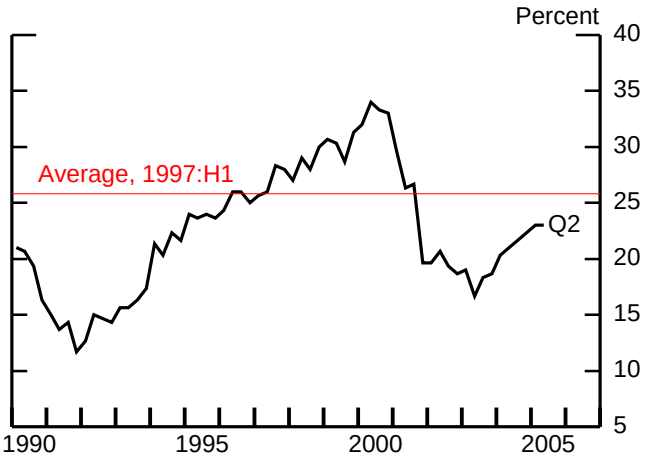


Jobs Plentiful Versus Hard to Get



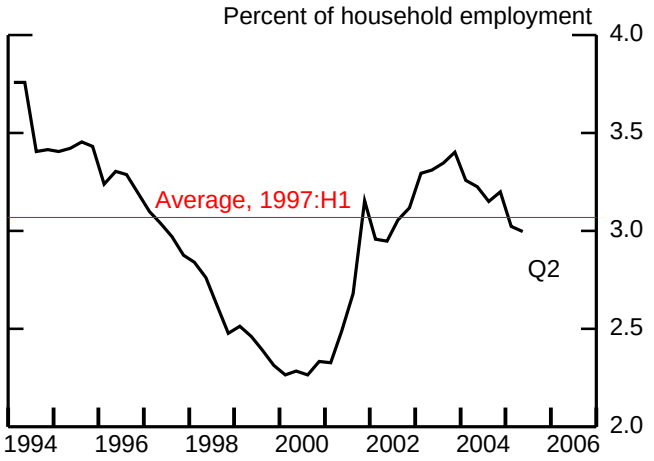
Source: Conference Board.

Jobs Hard to Fill



Note. 2005:Q2 is the April-May average.
Source: National Federation of Independent Business.

Persons Working Part-Time for Economic Reasons



Note. 2005:Q2 is the April-May average.

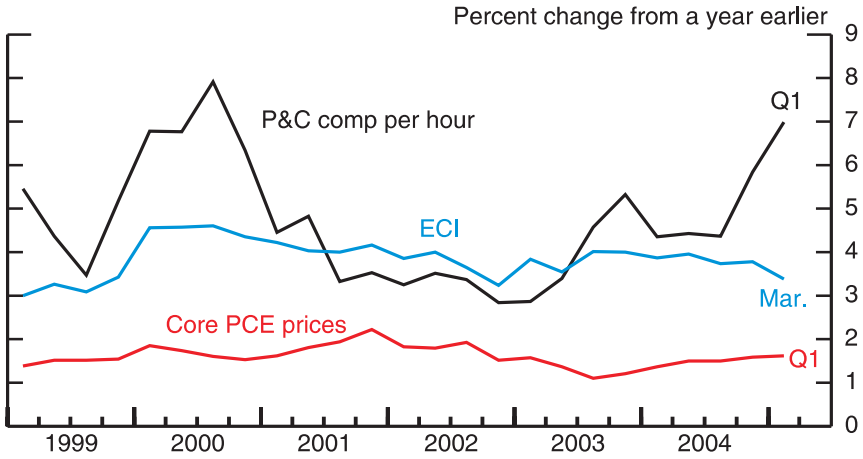
Exhibit 5

Is Compensation Growth Feeding Price Inflation?

P&C Compensation Per Hour
(Percent change, annual rate)

2004: Q1	2.1
Q2	6.0
Q3	5.5
Q4	10.2
2005: Q1	6.3

Hourly Compensation and Core PCE Prices



Why The Bulge in CPH Likely Reflects Stock Option Exercises

- Option exercises included in CPH but not in ECI.
- Industry composition of revision to CPH in 2004:Q4 looks suggestive.
- Exercises by senior executives stepped up in 2004.
- Stock prices rose and accounting rules changed in 2004:Q4.

Compensation Per Hour
(Percent change over the year)

	2004	2005	2006
1. P&C comp per hour	5.9	4.0	5.0
2. ECI total comp	3.8	4.0	4.8
3. Wage and salaries	2.4	3.5	4.4
4. Benefit costs	6.9	5.4	5.5

Alternative Scenario:
Stronger Compensation Pressures

- Hourly compensation increases 1 percentage point per year faster than in the baseline.
- Firms protect their profit margins. By the end of the scenario, markup is back at baseline.

Core PCE Prices

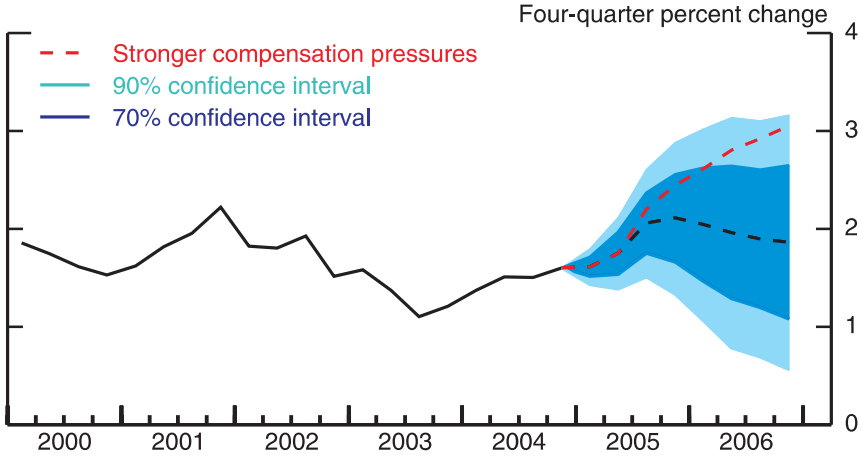
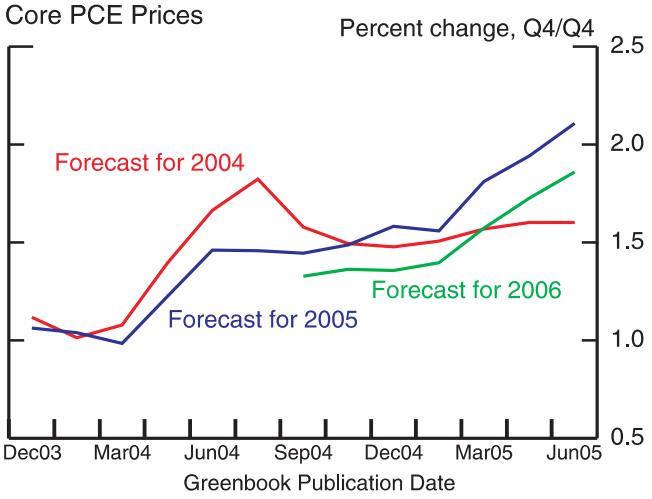


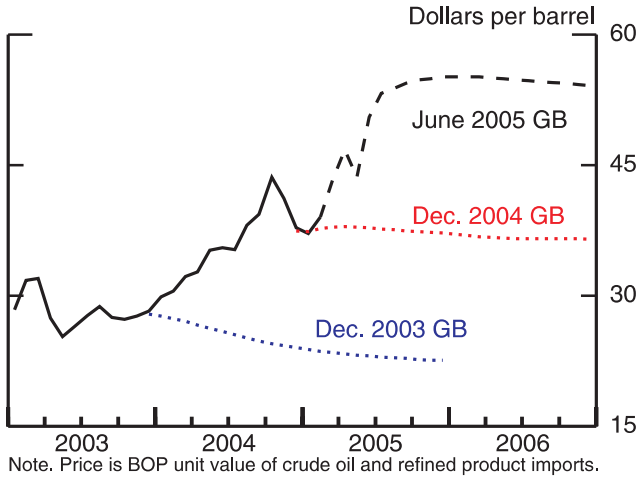
Exhibit 6

Why Has Core Inflation Sped Up?

Evolution of the Greenbook Forecast For Core PCE Prices

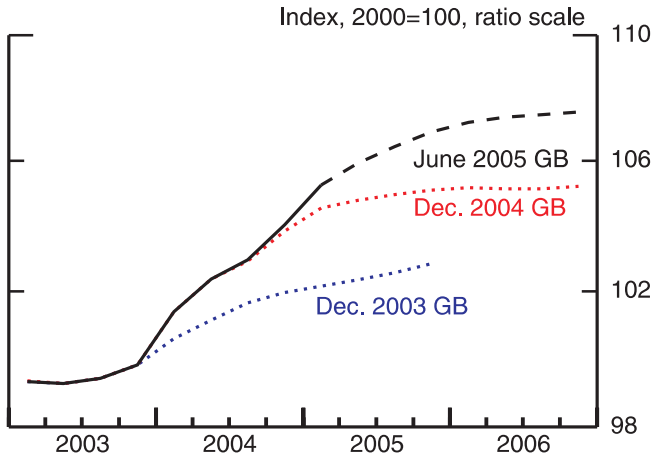


Price of Imported Oil

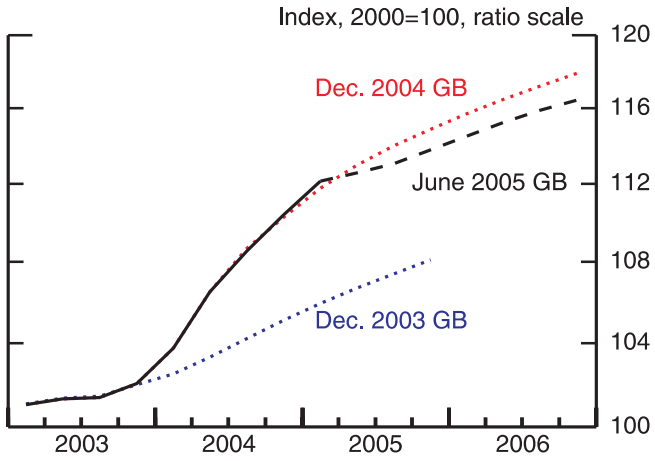


Note. Price is BOP unit value of crude oil and refined product imports.

Core PPI Intermediate Materials Prices



Core Nonfuel Import Prices



Revisions to Staff Projections of Core PCE Inflation
(Percentage points)

	2004	2005
1. Revision since Dec. 2003 Greenbook	.5	1.0
Contribution of:		
2. Energy prices	.2	.5
3. Import and commodity prices	.3	.4
4. Other factors	.0	.1

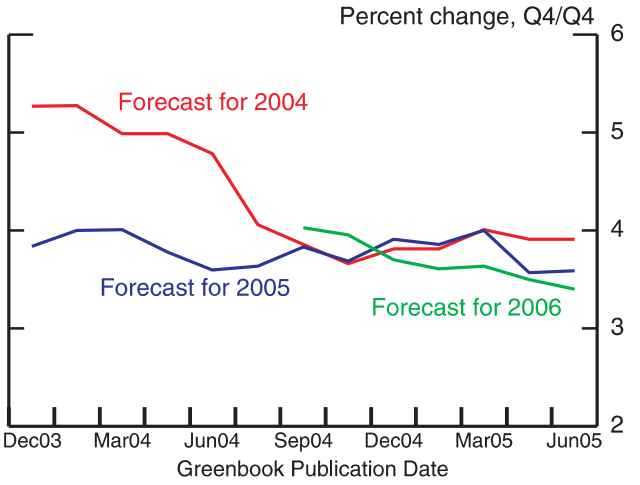
PCE Prices
(Percent change, Q4/Q4)

	2004	2005	2006
1. Total	**2.6**	**2.5**	**1.7**
2. Energy	18.5	9.9	-1.4
3. Food	2.9	2.2	2.2
4. Core	**1.6**	**2.1**	**1.9**

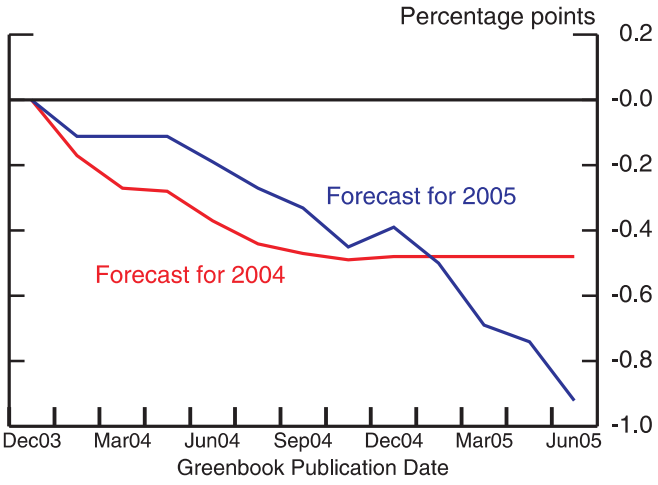
Exhibit 7

Why Hasn't Real GDP Growth Been Marked Down More?

Evolution of the Greenbook Forecast for Real GDP

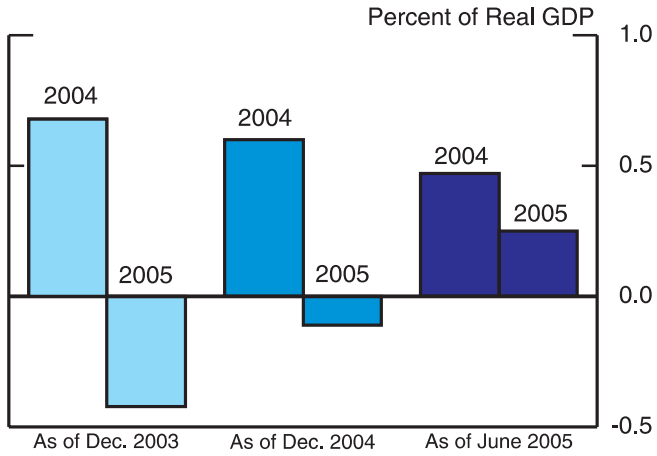


Contribution of Oil Prices to Real GDP Growth*



*Relative to prices in the December 2003 Greenbook.

Greenbook Forecasts of Fiscal Impetus



Revisions to Staff Projections of Real GDP Growth
(Percentage points)

	2004	2005
1. Revision since Dec. 2003 Greenbook	-1.4	-.2
Contribution of:		
2. Oil prices	-.5	-.9
3. Fiscal Impetus	-.2	.7
4. Other factors	-.7	.0

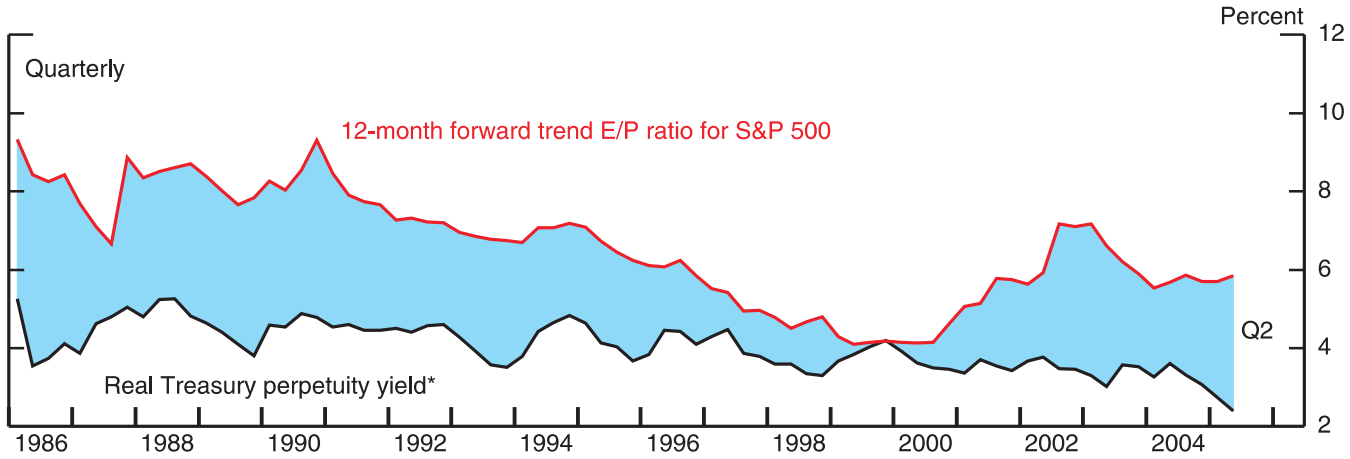
Real GDP and Selected Components
(Percent change, Q4/Q4)

	2004	2005	2006
1. Real GDP	3.9	3.6	3.4
2. (January GB)	*(3.8)*	*(3.9)*	*(3.6)*
Contributions to real GDP growth (percentage points):			
3. Domestic final sales	4.4	3.9	3.8
4. (January GB)	*(4.2)*	*(4.0)*	*(4.0)*
5. Net exports	-.8	-.1	-.4
6. Inventory investment	.4	-.1	.0
Memo:			
7. Output gap (Q4 levels)	1.1	.7	.7

Exhibit 8

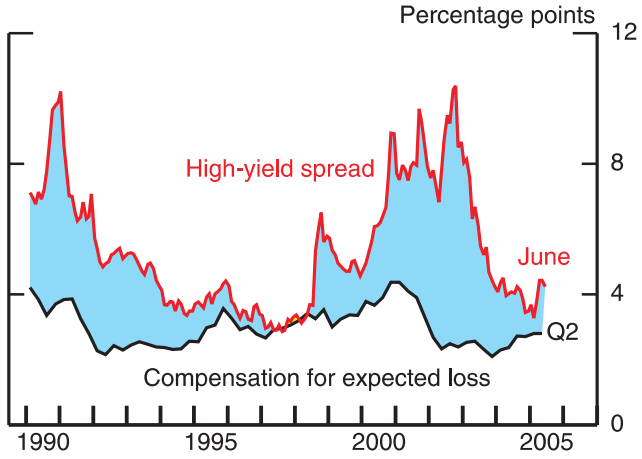
Have Markets Built in Sufficient Allowance for Risk?

Equity Valuation

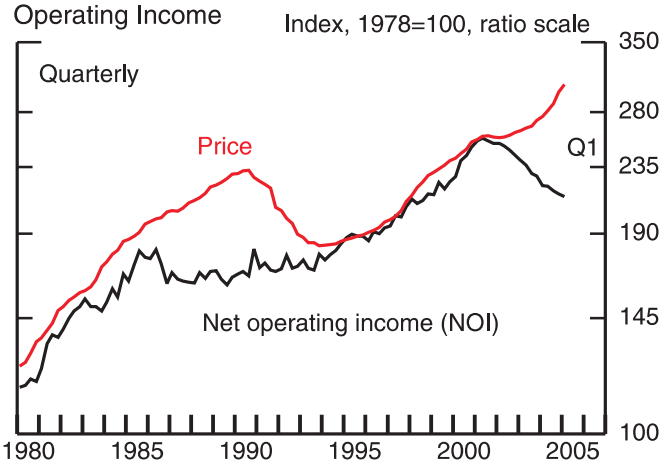


*Yield on synthetic Treasury perpetuity minus Philadelphia Fed 10-year expected inflation.

Decomposition of High-Yield Spread

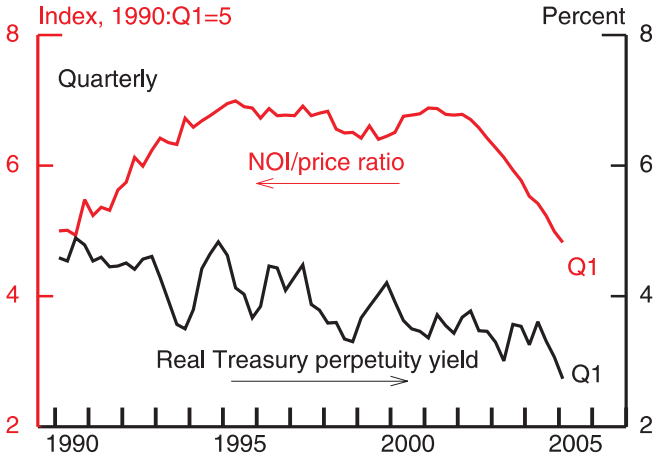


Commercial Real Estate Prices and Net Operating Income

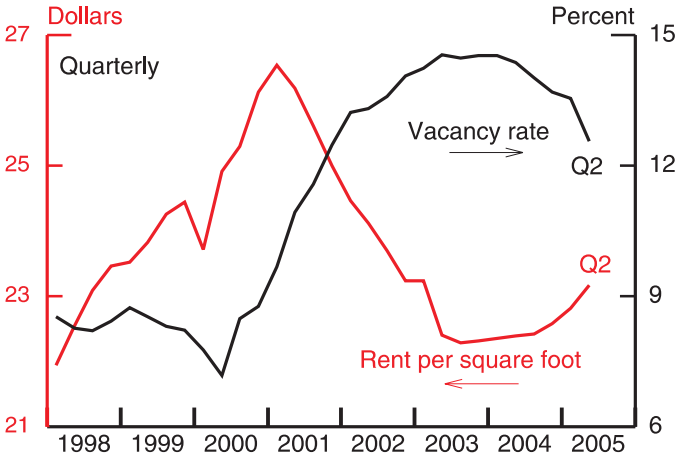


Source: NCREIF.

Commercial Real Estate Valuation



Office Vacancy Rate and Rent per Square Foot

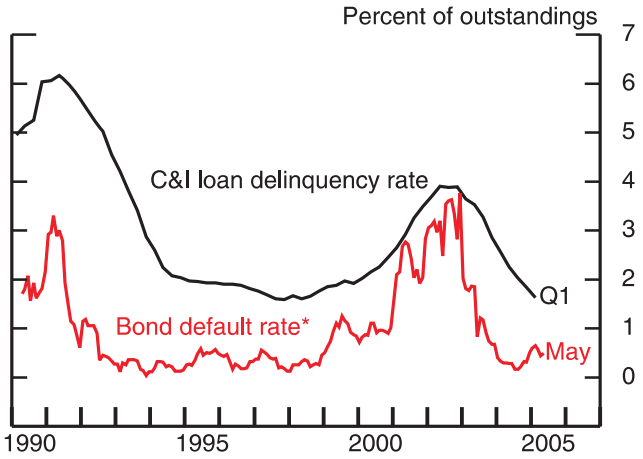


Source: CoStar. Data for 2005:Q2 are preliminary.

Exhibit 9

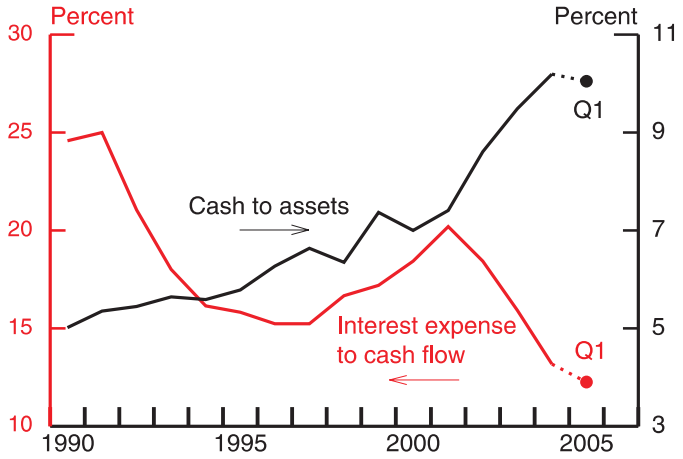
Is Corporate Credit Quality Starting to Slip?

Bond Default and C&I Loan Delinquency Rates



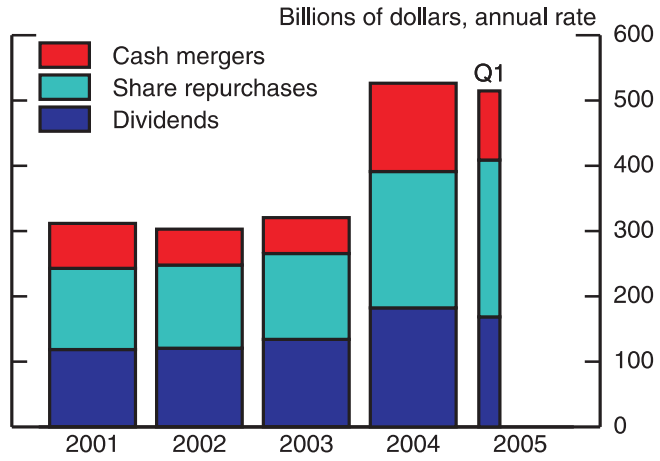
*Six-month moving average.

Financial Ratios*



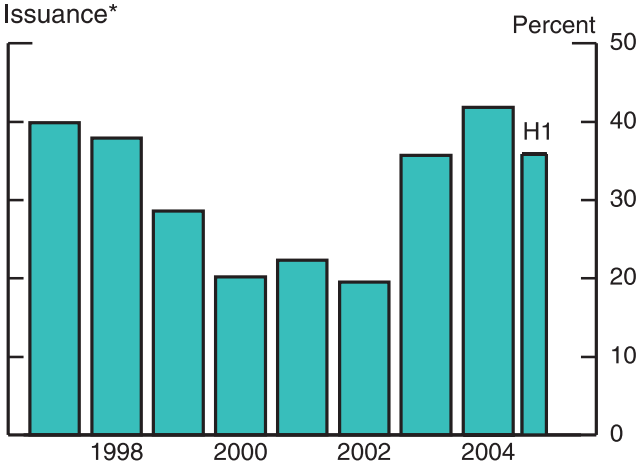
*Nonfinancial corporations.
Source: Compustat.

Payouts to Shareholders*



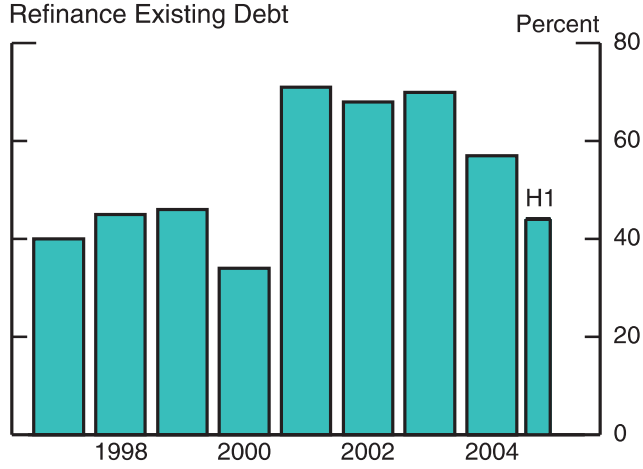
*Nonfinancial corporations.

High-Yield Bond Issuance as a Share of Total Bond Issuance*

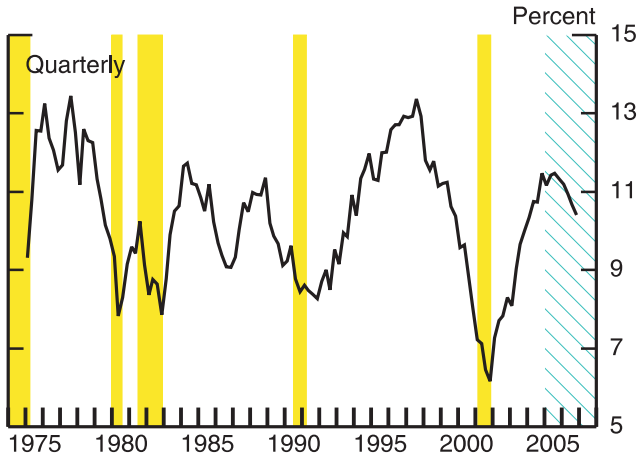


*Nonfinancial corporations.

Share of High-Yield Bond Proceeds Used to Refinance Existing Debt



Profit Share*

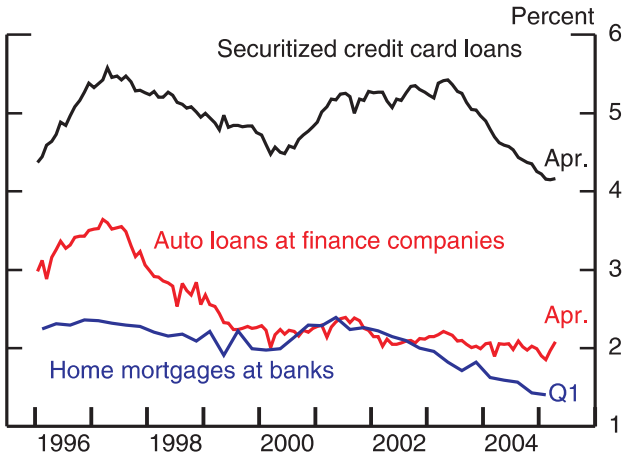


*Domestic nonfinancial corporations' ratio of economic profits before tax to sector GDP.

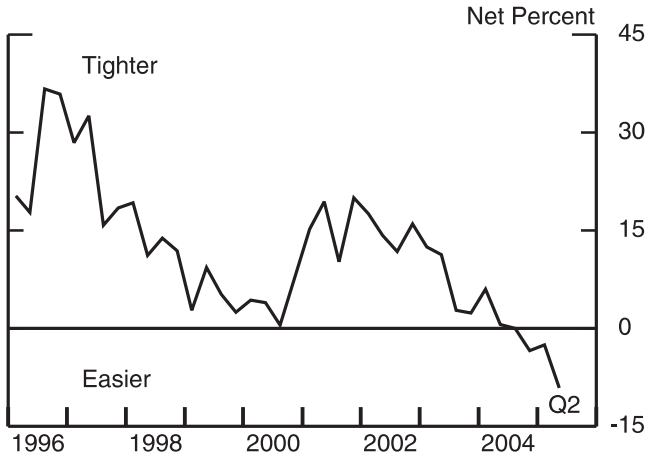
Exhibit 10

Are Households Facing Significant Financial Stress?

Delinquency Rates



Bank Lending Standards for Consumer Loans*

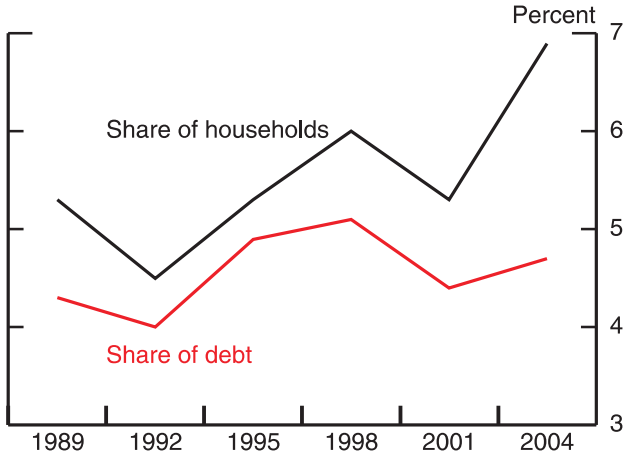


*Average for credit cards and other consumer loans.
Source: Senior Loan Officer Survey.

2004 Survey of Consumer Finances

- Results are preliminary.
- Subject to revision as SCF staff continues to process the data.
- Results are confidential until public release of 2004 data next January.

Households With Any Payments 60 Days Past Due



Source: Survey of Consumer Finances.

Assets, Debt, and Net Worth, Change from 2001 to 2004

- Substantial rise in assets. Driven by appreciation in house prices. Fairly widespread across income groups.
- Rapid debt growth throughout the income distribution.
- For median-income households, little change in net worth. But net worth rose for high-income households.

Source: Survey of Consumer Finances.

Household Net Worth to DPI

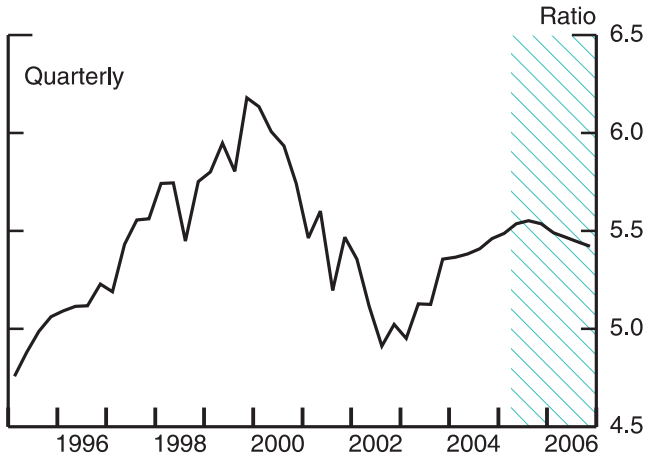
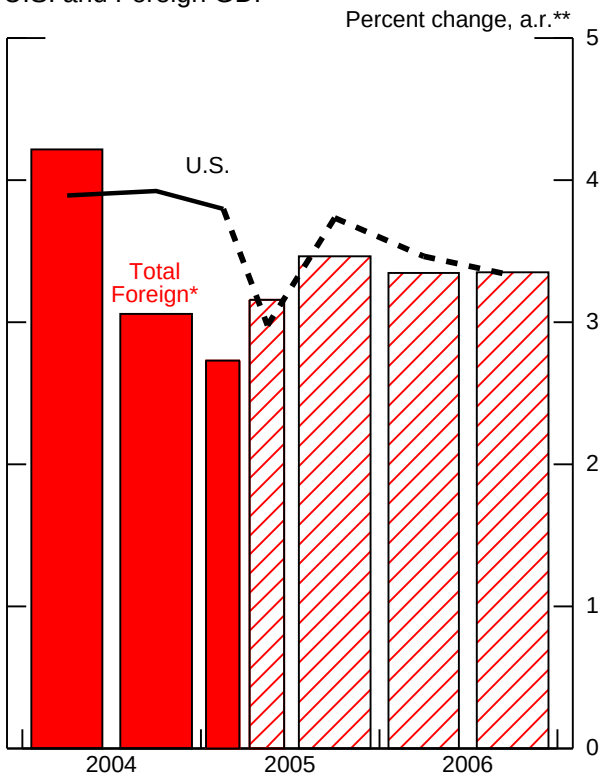


Exhibit 11

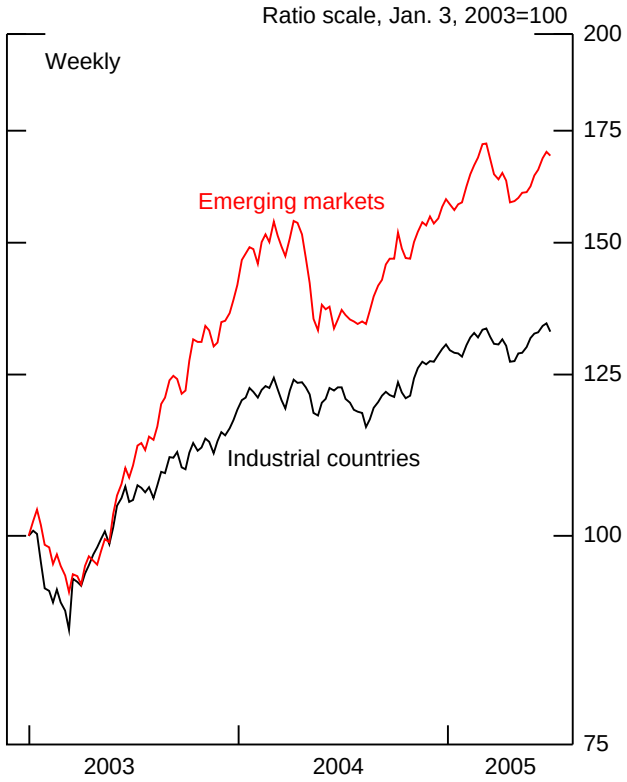
Foreign Outlook and Financial Market Indicators

U.S. and Foreign GDP



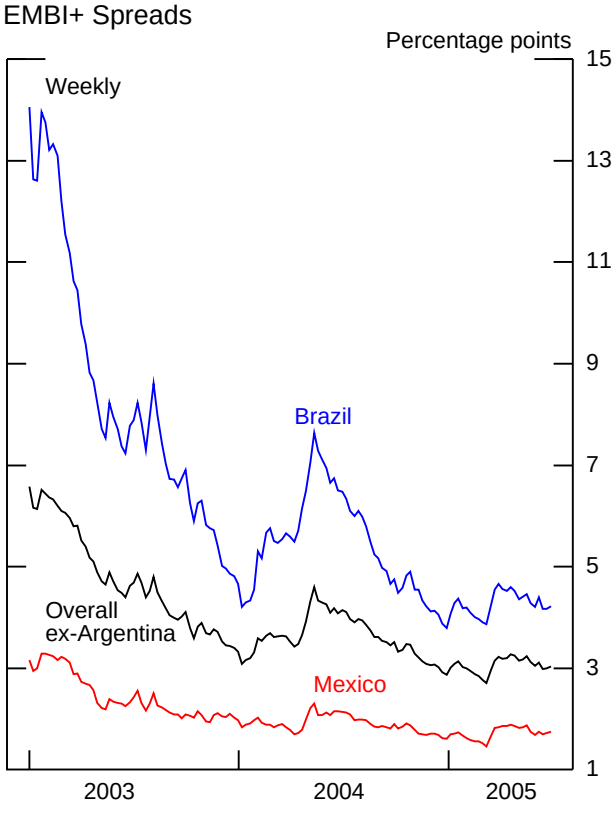
*Weighted by shares of U.S. merchandise exports.
**Years are Q4/Q4. Half-years are Q2/Q4 or Q4/Q2.

Stock Prices*

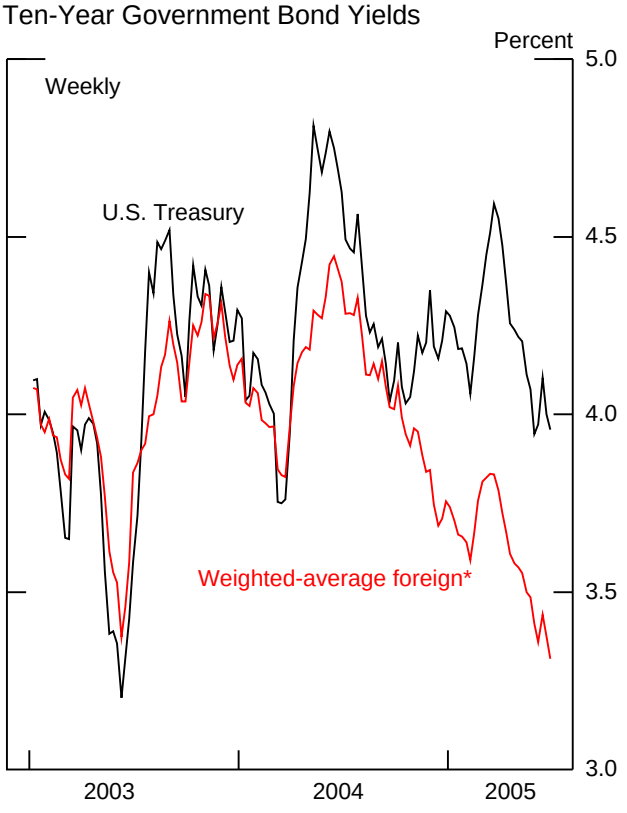


* Source: MSCI.

EMBI+ Spreads



Ten-Year Government Bond Yields



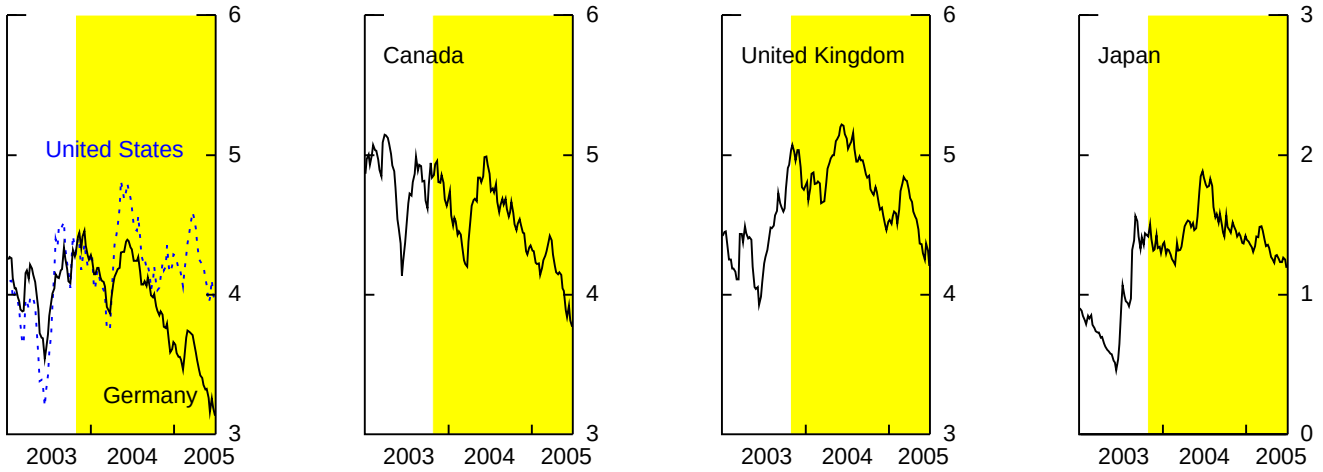
* Average of rates for Australia, Canada, euro area, Japan, Sweden, Switzerland, and United Kingdom, weighted by trade shares.

Exhibit 12

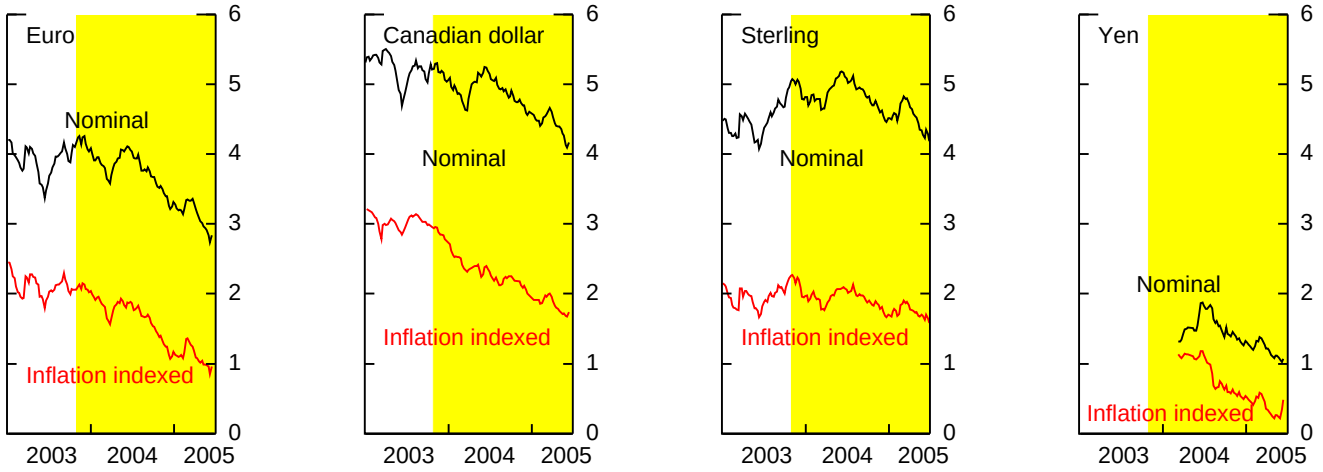
Long-Term Interest Rates and Monetary Policy

(Weekly data, percent)

Ten-Year Government Bond Yields



Long-Term Nominal and Inflation-Indexed Yields



Monetary Policy Indicators

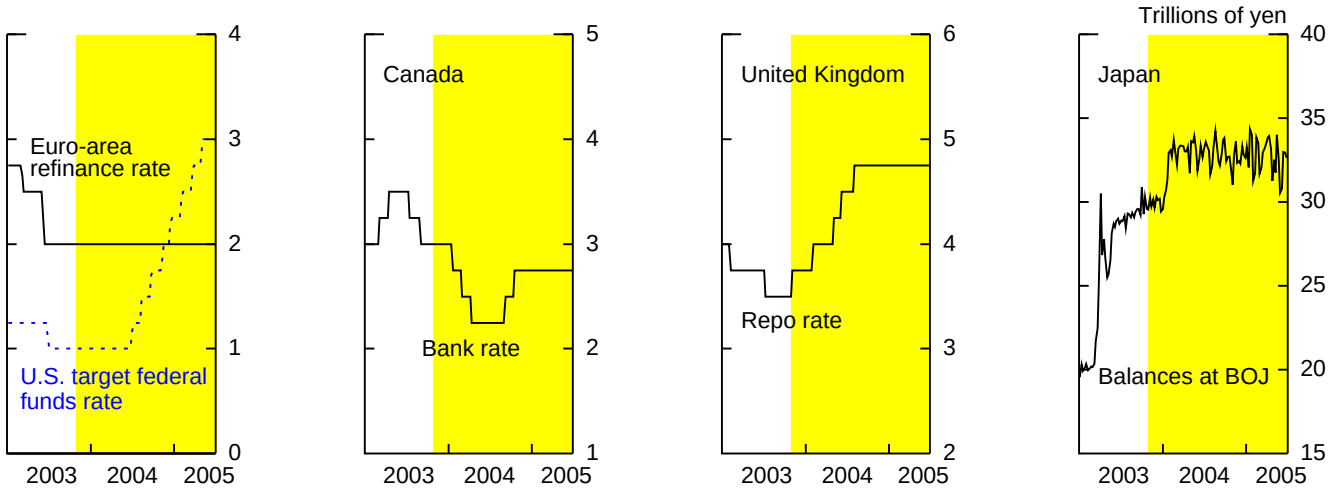
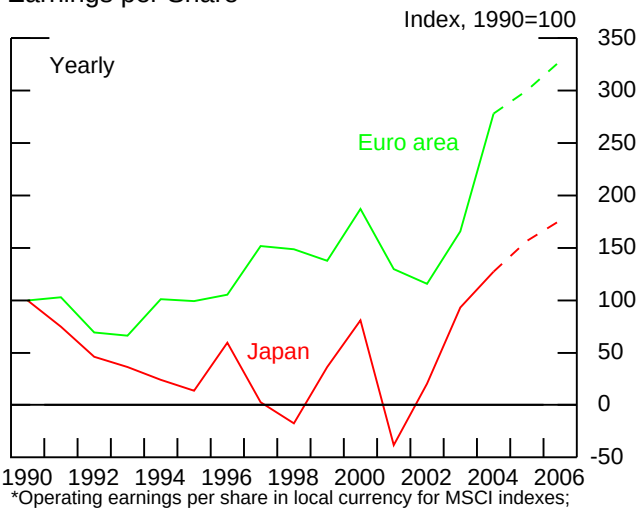


Exhibit 13

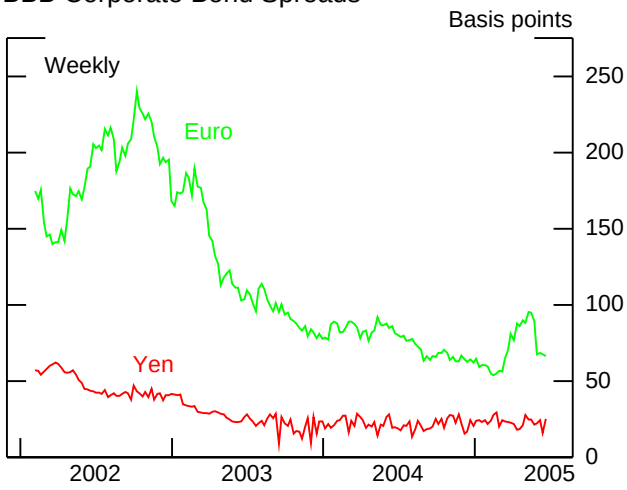
Euro Area and Japan

Earnings per Share*

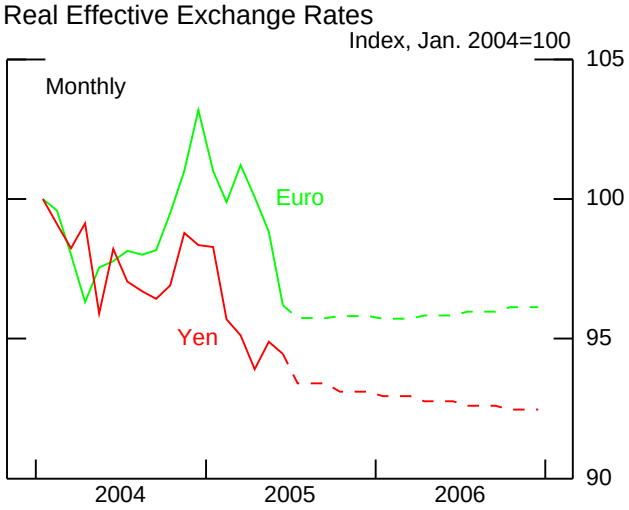


*Operating earnings per share in local currency for MSCI indexes; forecasts are from I/B/E/S surveys in mid-June 2005.

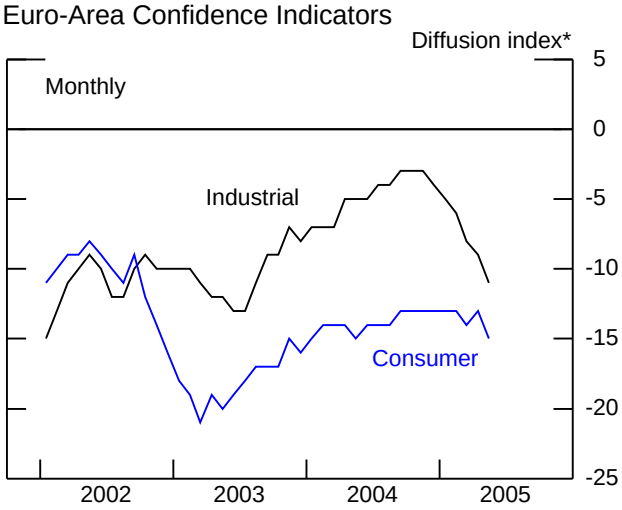
BBB Corporate Bond Spreads



Real Effective Exchange Rates

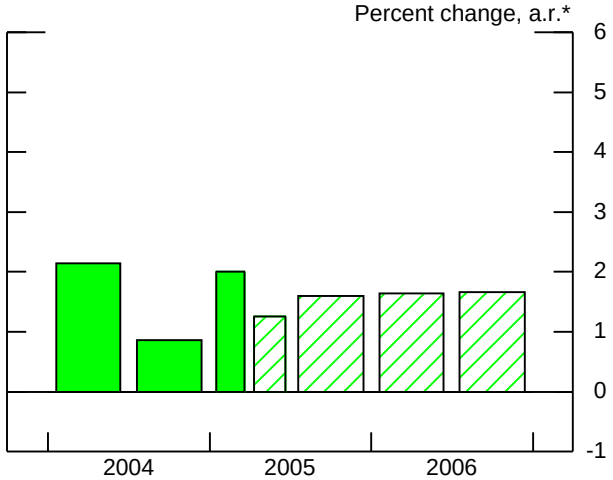


Euro-Area Confidence Indicators



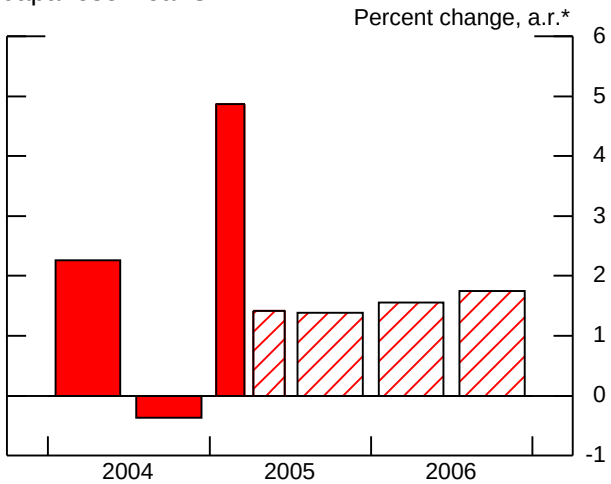
*Percent of respondents reporting an increase minus percent of respondents reporting a decrease.

Euro-Area Real GDP



*Half-years are Q2/Q4 or Q4/Q2.

Japanese Real GDP

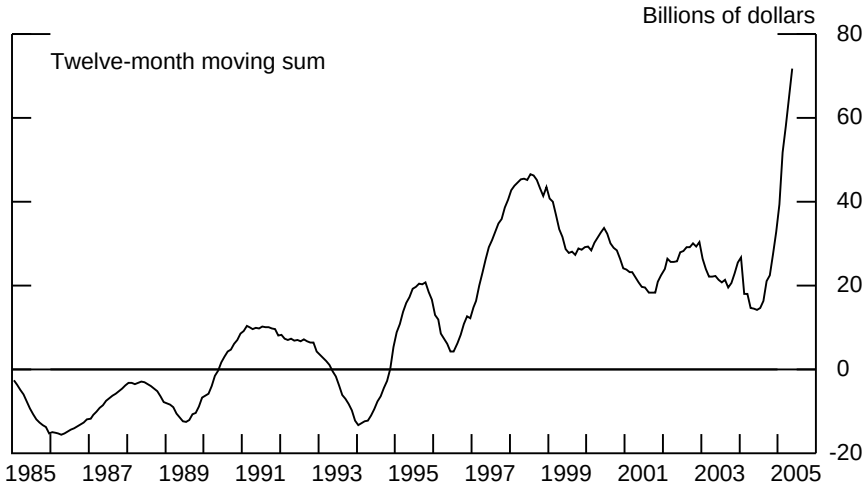


*Half-years are Q2/Q4 or Q4/Q2.

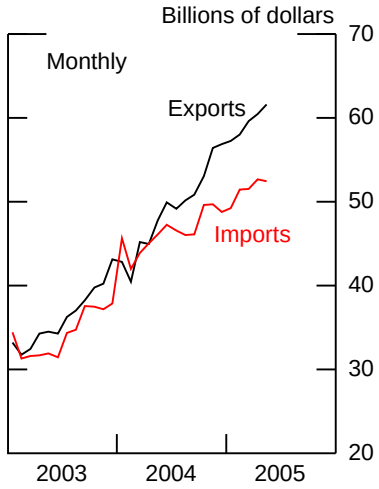
Exhibit 14

China: Why is Import Growth Slowing?

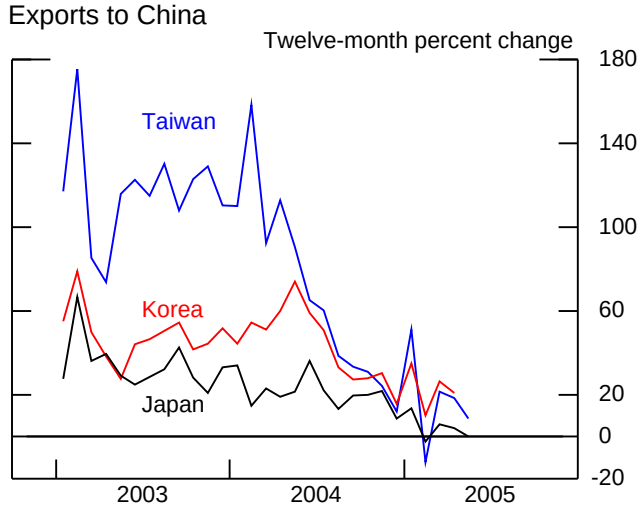
Merchandise Trade Balance



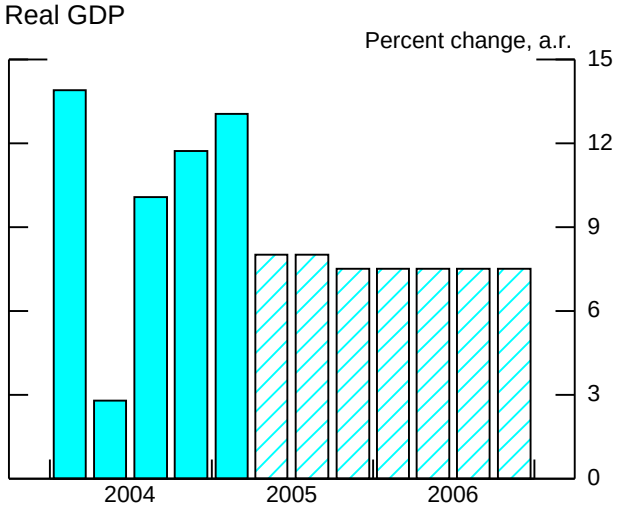
Merchandise Trade



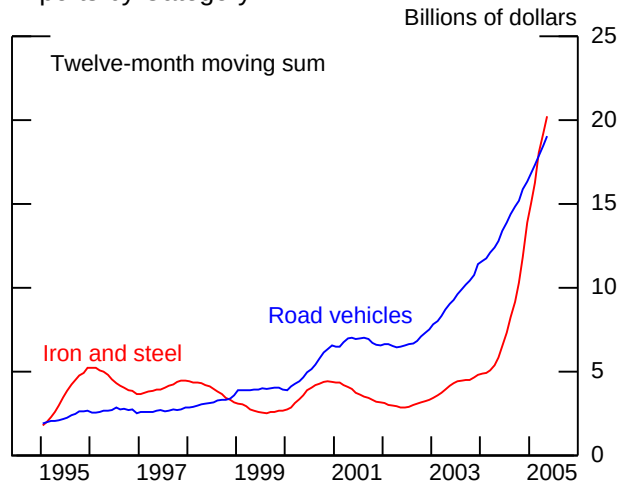
Exports to China



Real GDP



Exports by Category



Consumer Prices

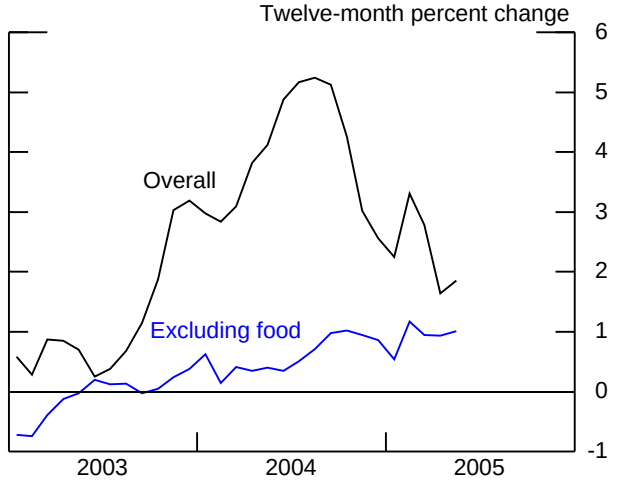
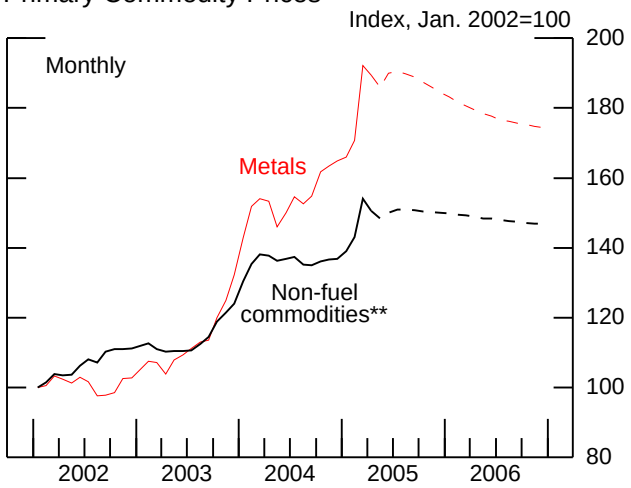


Exhibit 15

Outlook for Commodity Prices and U.S. External Accounts

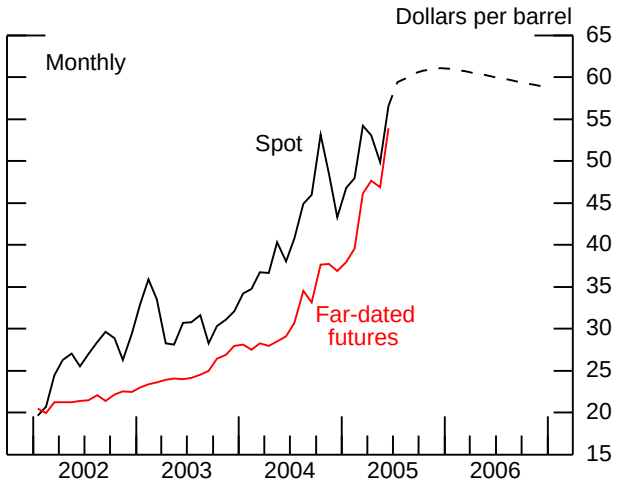
Primary Commodity Prices*



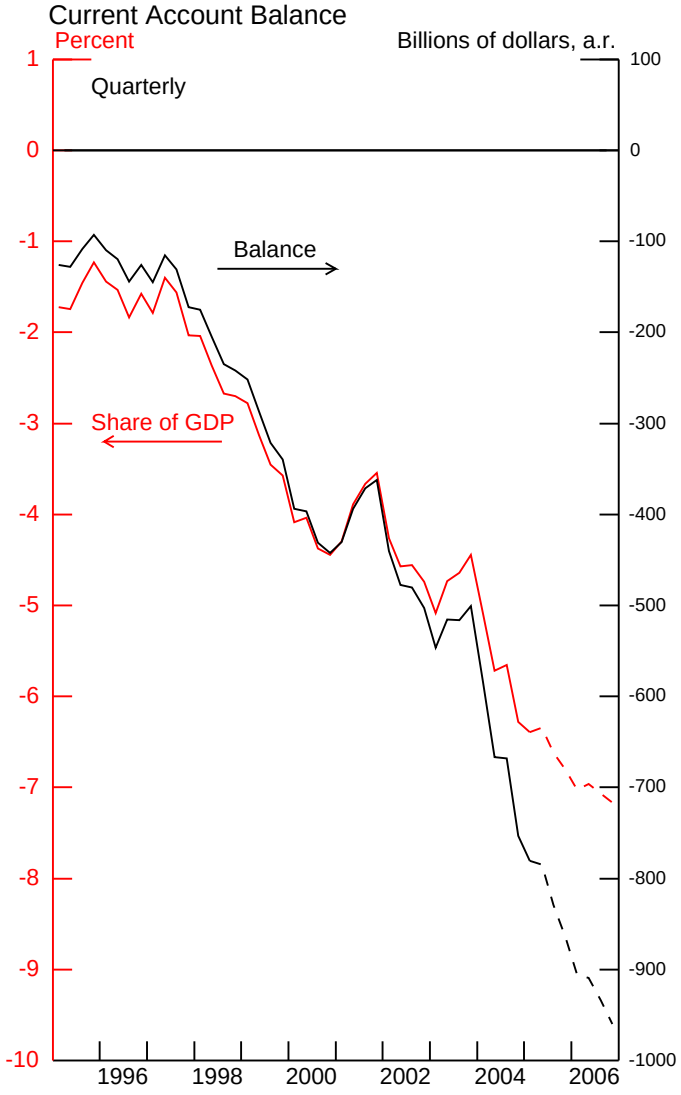
*IMF indexes.
**Weighted by U.S. import shares.

Broad Real Dollar

WTI



Current Account Balance



Balance of Payments

Billions of dollars, a.r.

	Trade Balance	Net Invest. Income	Current Account
2005 Q1	-687	21	-780
Q2	-701	18	-785
H2	-747	5	-847
2006 H1	-776	-20	-907
Q3	-783	-42	-934
Q4	-800	-58	-960
Change from 2005Q1 to 2006Q4	-113	-79	-180

Exhibit 16

ECONOMIC PROJECTIONS FOR 2005

	FOMC		
	Range	Central Tendency	Staff
	----------Percentage change, Q4 to Q4----------		
Nominal GDP	5 to 6¼	5½ to 5¾	5.9
February 2005	(5 to 6)	(5½ to 5¾)	(5.4)
Real GDP	3 to 3¾	3½	3.6
February 2005	(3½ to 4)	(3¾ to 4)	(3.9)
Core PCE Prices	1½ to 2¼	1¾ to 2	2.1
February 2005	(1½ to 2)	(1½ to 1¾)	(1.6)
	----------Average level, Q4, percent----------		
Unemployment rate	5 to 5¼	5	5.1
February 2005	(5 to 5½)	(5¼)	(5.3)

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

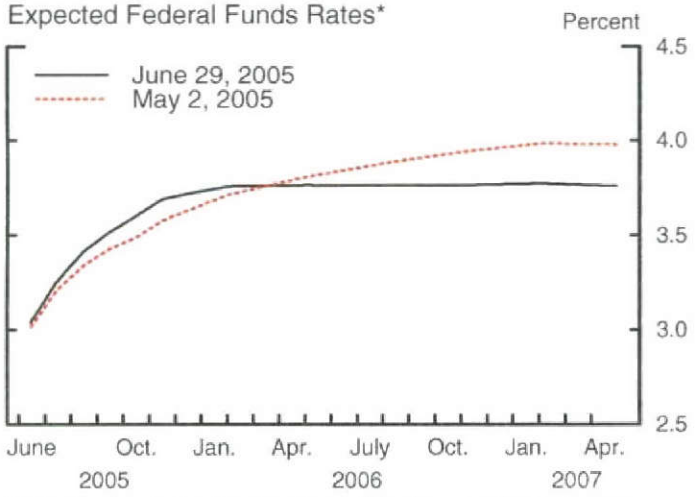
ECONOMIC PROJECTIONS FOR 2006

	FOMC		
	Range	Central Tendency	Staff
	----------Percentage change, Q4 to Q4----------		
Nominal GDP	5 to 6	5¼ to 5½	5.4
February 2005	(5 to 5¾)	(5 to 5½)	(5.3)
Real GDP	3¼ to 3¾	3¼ to 3½	3.4
February 2005	(3¼ to 3¾)	(3½)	(3.6)
Core PCE Prices	1½ to 2½	1¾ to 2	1.9
February 2005	(1½ to 2)	(1½ to 1¾)	(1.4)
	----------Average level, Q4, percent----------		
Unemployment rate	5	5	5.1
February 2005	(5 to 5¼)	(5 to 5¼)	(5.1)

Appendix 4: Materials used by Mr. Reinhart

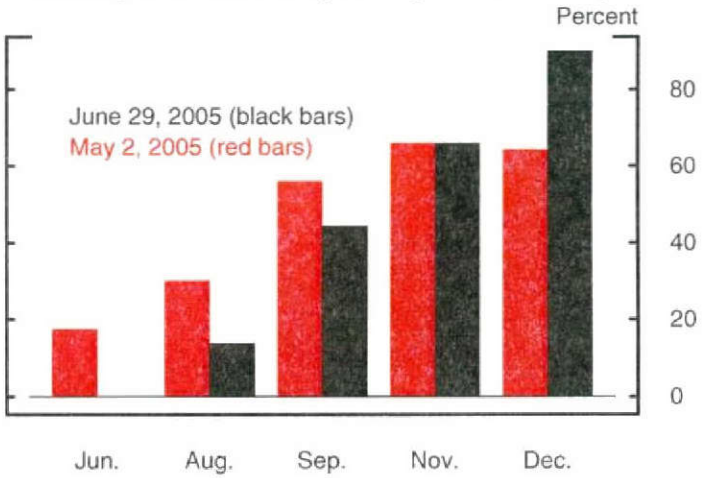
Exhibit 1

Expected Federal Funds Rates*

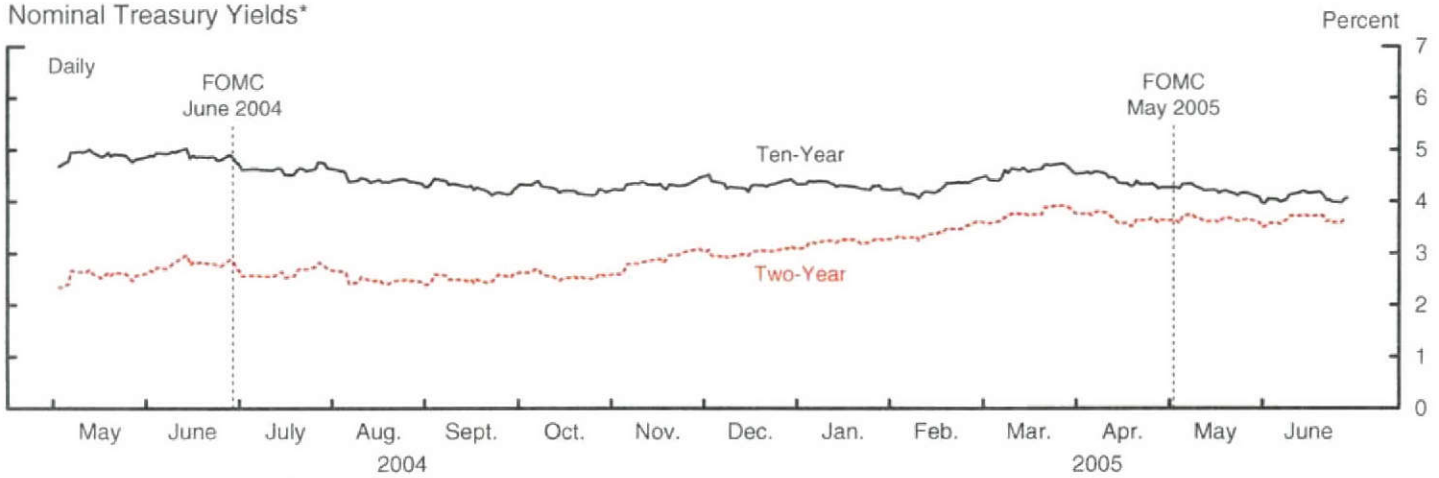


*Estimates from federal funds and eurodollar futures, with an allowance for term premia and other adjustments.

Probability of a Pause at Upcoming FOMC Meetings



Nominal Treasury Yields*



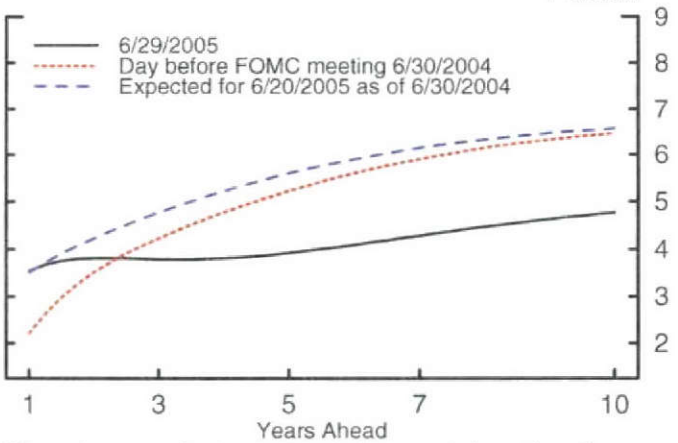
*Par yields from an estimated off-the-run Treasury yield curve.

Change In Ten-Year Yields Since June 29, 2004

	-basis points-
1. Nominal Treasury	-79
2. TIPS	-52
3. Inflation Compensation	-26
4. One-Year Forward*	-170
5. AA Corporate	-78
6. Euro Swap Rate	-120

*One-year nominal forward rate maturing ten years ahead.

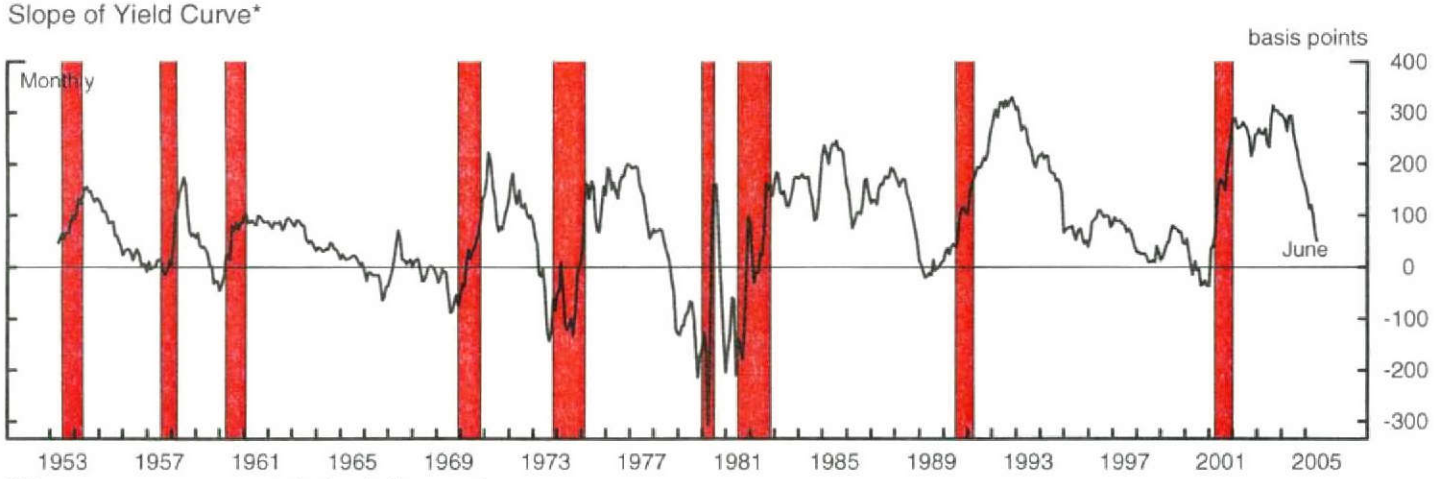
Actual and Expected Treasury One-year Forward Rates*



*Forward rates are the one-year nominal rates maturing at the end of the year shown on the horizontal axis that are implied by the smoothed Treasury yield curve.

Exhibit 2

Slope of Yield Curve*



* Ten-year over one-year constant maturity spread.
Note. Shaded areas represent NBER contractions.

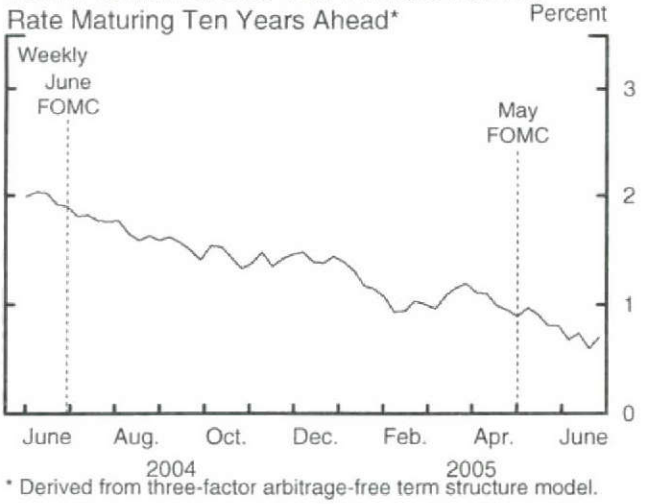
Factors Encouraging the Demand for Relative to the Supply of Long Duration Securities

- Reduced macro volatility
- Increased demand for duration
- Reduced supply of duration
- Increased global saving

Factors Damping Growth Prospects

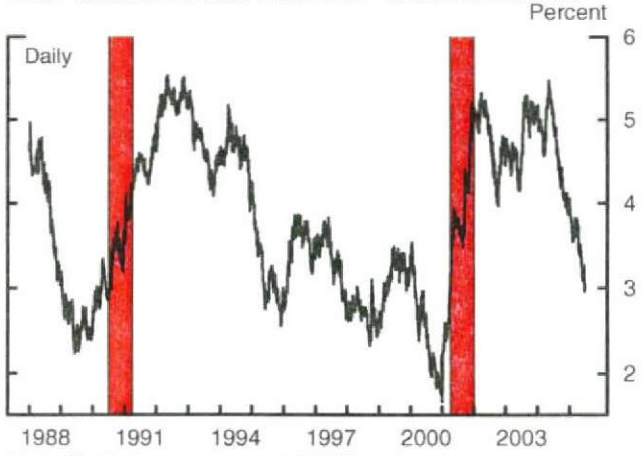
- Higher oil prices
- Potential increase in domestic saving rate
- Large and sustained trade deficits

Term Premium of One-Year Forward Nominal Rate Maturing Ten Years Ahead*



* Derived from three-factor arbitrage-free term structure model.

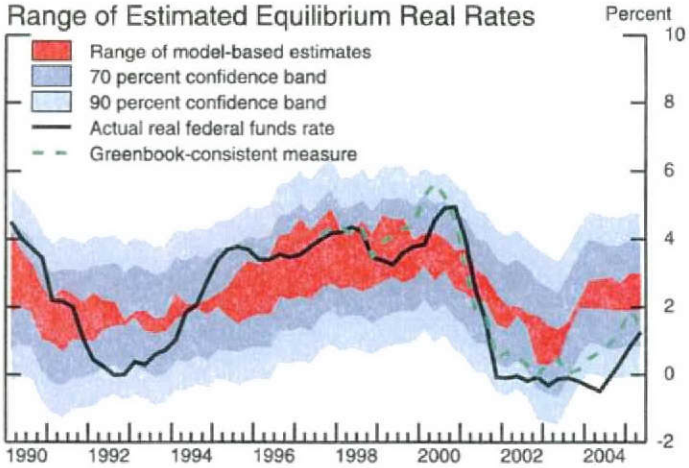
Four-Quarter-Ahead Real GDP Growth Forecast



Note. Shaded areas represent NBER contractions.

Exhibit 3

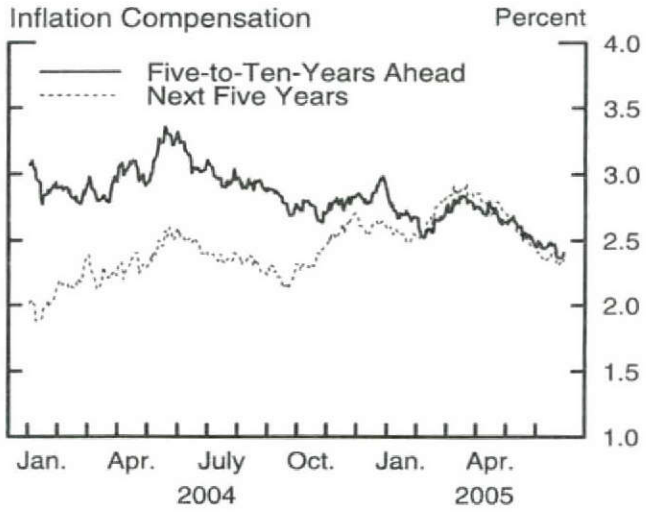
See explanatory note in Chart 8 of the Bluebook.

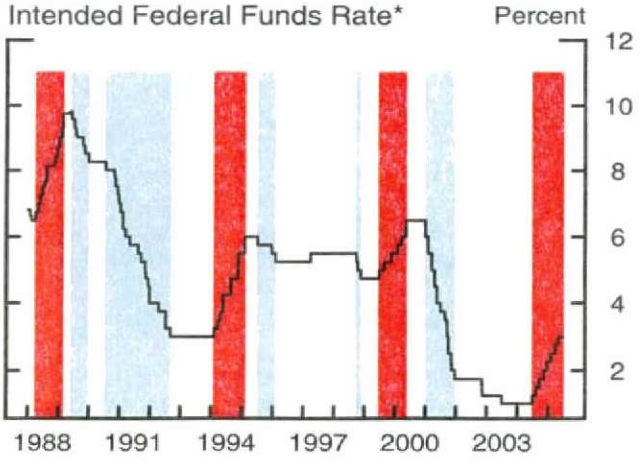


See explanatory note in Chart 7 of the Bluebook.

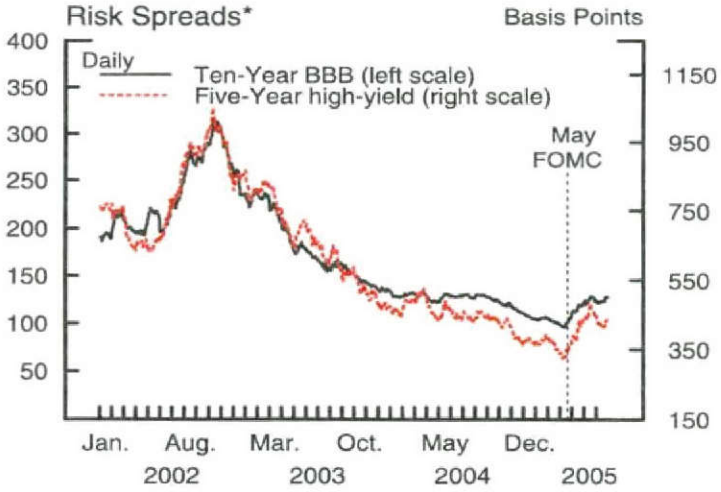
What can go wrong?

- Stop too soon
  - -- Allowing inflation expectations to become unanchored
- Stop too late
  - -- Allowing slack to persist





*Red shading indicates periods of sustained tightening. Blue shading indicates periods of sustained easing.



*Measured relative to an estimated off-the-run Treasury yield curve.

Exhibit 4

Monetary Policy Alternatives

Yield Curve Signal / Policy Risk	Decline in Term Premium	Economic Weakness
Stopping Too Soon	C	
Stopping Too Late		A

Statement Challenges

- "...the stance of monetary policy remains accommodative"
- "...coupled with robust underlying growth in productivity"
- "...with appropriate monetary policy action, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal."
- "...that policy accommodation can be removed at a pace that is likely to be measured."

Table 1: Alternative Language for the June FOMC Announcement				
	May FOMC	**Alternative A**	**Alternative B**	**Alternative C**
Policy Decision	1. The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to 3 percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to **3-1/4** percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by 25 basis points to **3-1/4** percent.	The Federal Open Market Committee decided today to raise its target for the federal funds rate by **50** basis points to **3-1/2** percent.
Rationale	2. The Committee believes that, even after this action, the stance of monetary policy remains accommodative and, coupled with robust underlying growth in productivity, is providing ongoing support to economic activity.	The Committee believes that~~, even after this action, the stance of~~ **the degree of** monetary policy ~~remains accommodative~~ **accommodation has been substantially reduced.** ~~and, coupled with r~~ **R**obust underlying growth in productivity~~, is providing ongoing~~ **continues to provide** support to economic activity.	[no change]	The Committee believes that, even after this action, the stance of monetary policy remains accommodative and~~, coupled with robust underlying growth in productivity,~~ is providing ongoing support to economic activity.
	3. Recent data suggest that the solid pace of spending growth has slowed somewhat, partly in response to the earlier increases in energy prices. Labor market conditions, however, apparently continue to improve gradually.	~~Recent data suggest that the solid pace of spending growth has~~ **Nonetheless, growth in spending** slowed somewhat **in the spring**, partly in response to ~~the earlier increases in~~ **elevated** energy prices. Labor market conditions, however, apparently continue to improve gradually.	**Although energy prices have risen further,** ~~Recent data suggest that the solid pace of spending growth has slowed somewhat, partly in response to the earlier increases in energy prices~~ **the expansion remains firm and** ~~l~~**l**abor market conditions~~, however, apparently~~ continue to improve gradually.	~~Recent data suggest that t~~**T**he ~~solid~~ **underlying** pace of spending growth ~~has slowed somewhat, partly in response to~~ **remains solid despite elevated** ~~the earlier increases in~~ energy prices. Labor market conditions~~, however, apparently~~ continue to improve ~~gradually~~.
	4. Pressures on inflation have picked up in recent months and pricing power is more evident. Longer-term inflation expectations remain well contained.	~~Pressures~~ **Readings** on inflation have ~~picked up~~ **been subdued** in recent months**,** and ~~pricing power is more evident. L~~**l**onger-term inflation expectations ~~remain well contained~~ **have declined**.	Pressures on inflation have ~~picked up in recent months and pricing power is more evident. L~~ **stayed elevated, but** longer-term inflation expectations remain well contained.	Pressures on inflation have picked up **further** in recent months ~~and pricing power is more evident. L~~**, although measures of** longer-term inflation expectations remain well contained.
Assessment of Risk	5. The Committee perceives that, with appropriate monetary policy action, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal.	The Committee perceives that, with appropriate monetary policy ~~action~~, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal.	[no change]	~~The Committee perceives that, with appropriate monetary policy action, the upside and downside risks to the attainment of both sustainable growth and price stability should be kept roughly equal.~~
	6. With underlying inflation expected to be contained, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.	With underlying inflation expected to be contained, the Committee believes that **remaining** policy accommodation can be removed at a pace that is likely to be measured. Nonetheless, the Committee will respond to changes in economic prospects as needed to fulfill its obligation to maintain price stability.	[no change]	~~With underlying inflation expected to be contained, the Committee believes that policy accommodation can be removed at a pace that is likely to be measured. Nonetheless,~~ **T**he Committee will respond to changes in economic prospects as needed to fulfill its obligation **to foster the attainment of both sustainable economic growth and** ~~maintain~~ price stability.