



**MBA's Commercial Real Estate Finance/
Multifamily Housing Convention & Expo**

Second General Session: Industry Dynamics in an Evolving Market

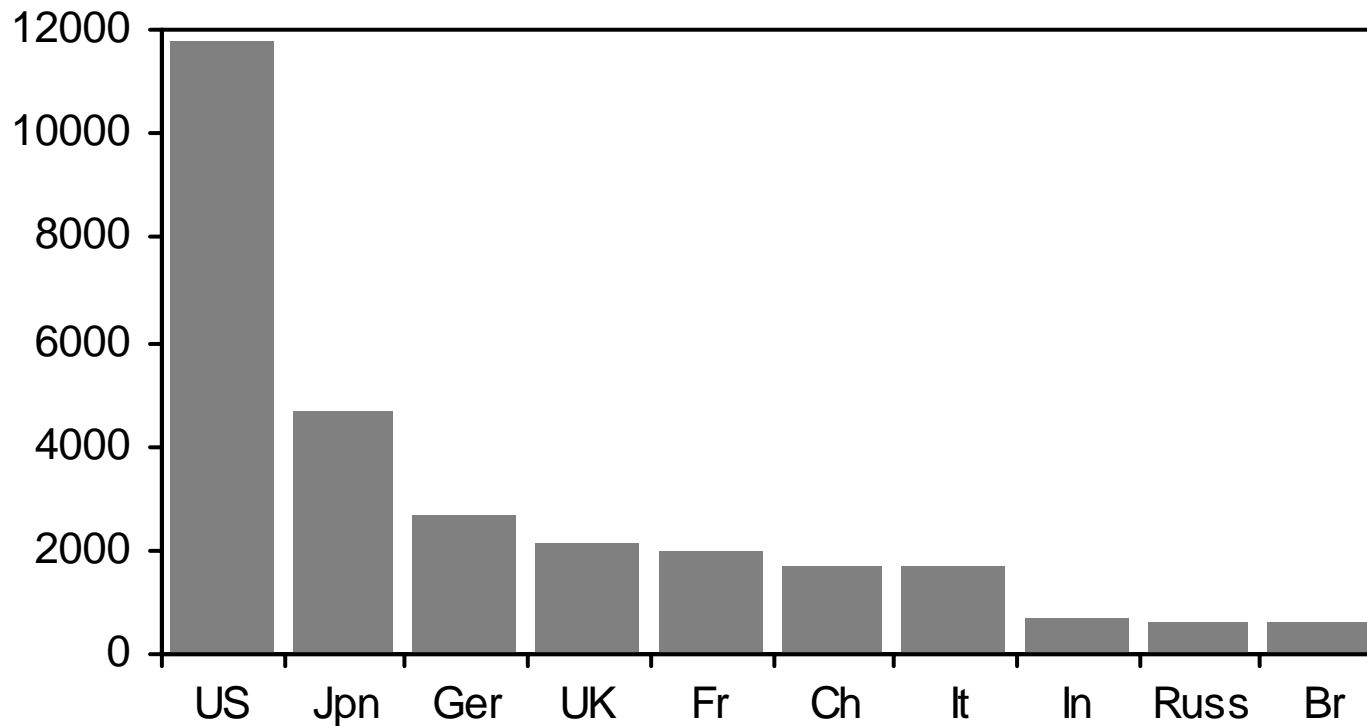
Doug Duncan, SVP & Chief Economist
Mortgage Bankers Association
February 7, 2006





Brazil, Russia, India, China - (GDP figures in US 2004 billion dollars)

Largest economies in 2004

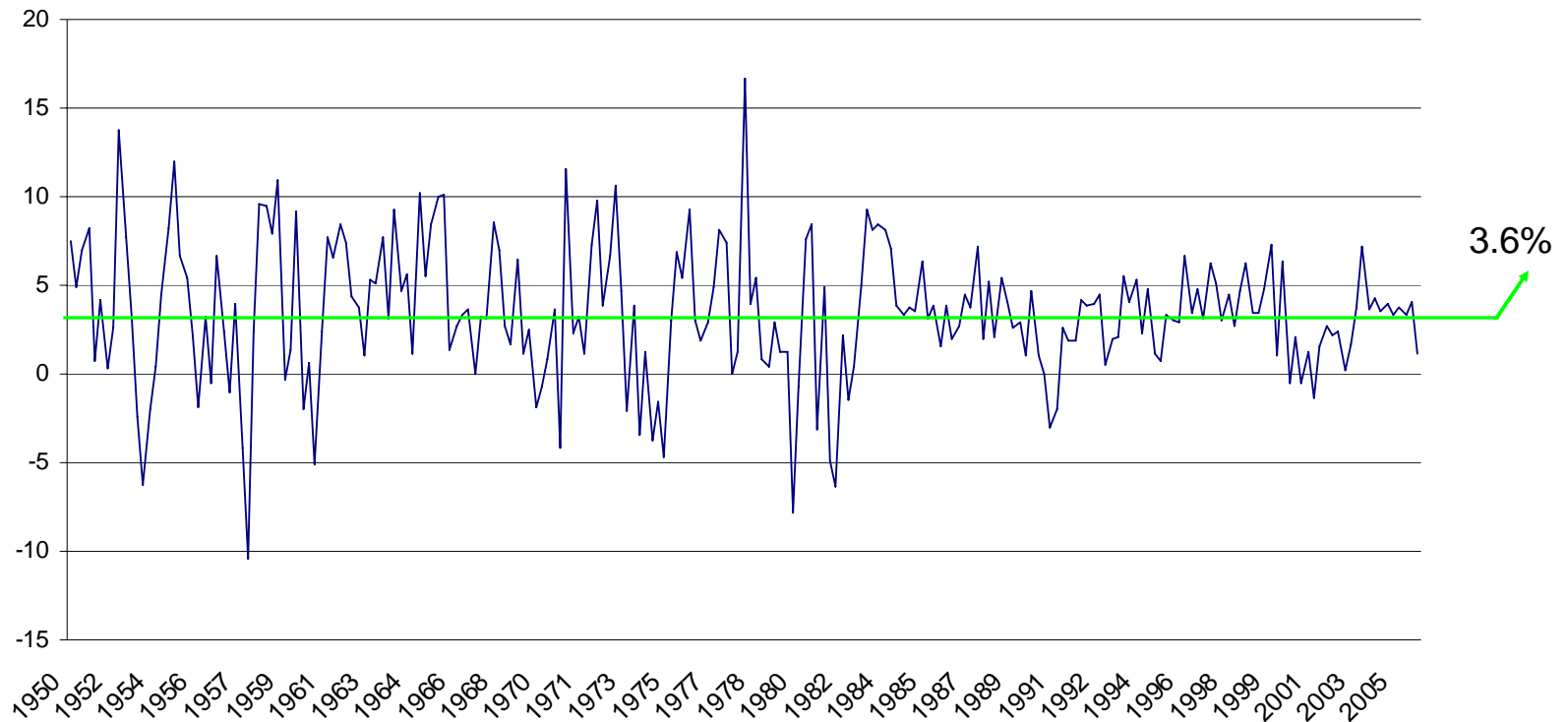


Source: Goldman Sachs BRICs Model.



Real GDP growth

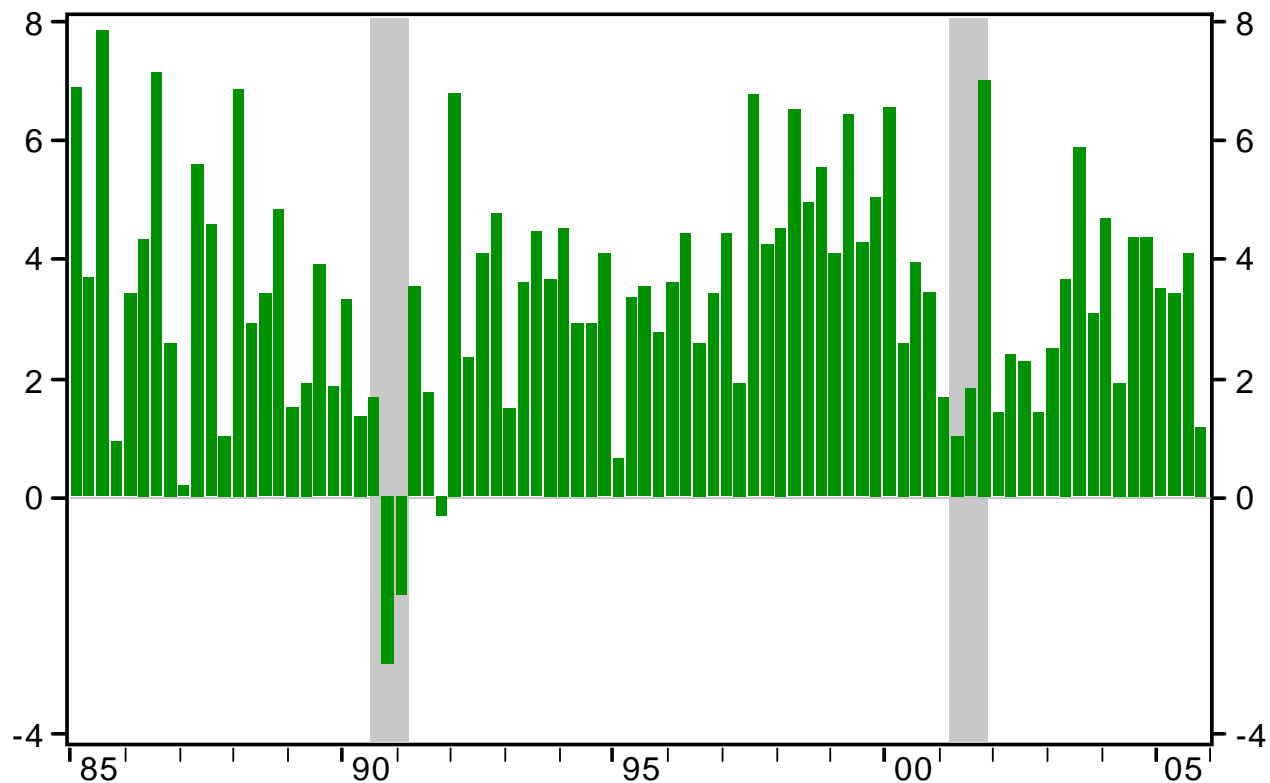
Annualized quarterly growth rates relative to trend, percent



Source: Bureau of Economic Analysis.

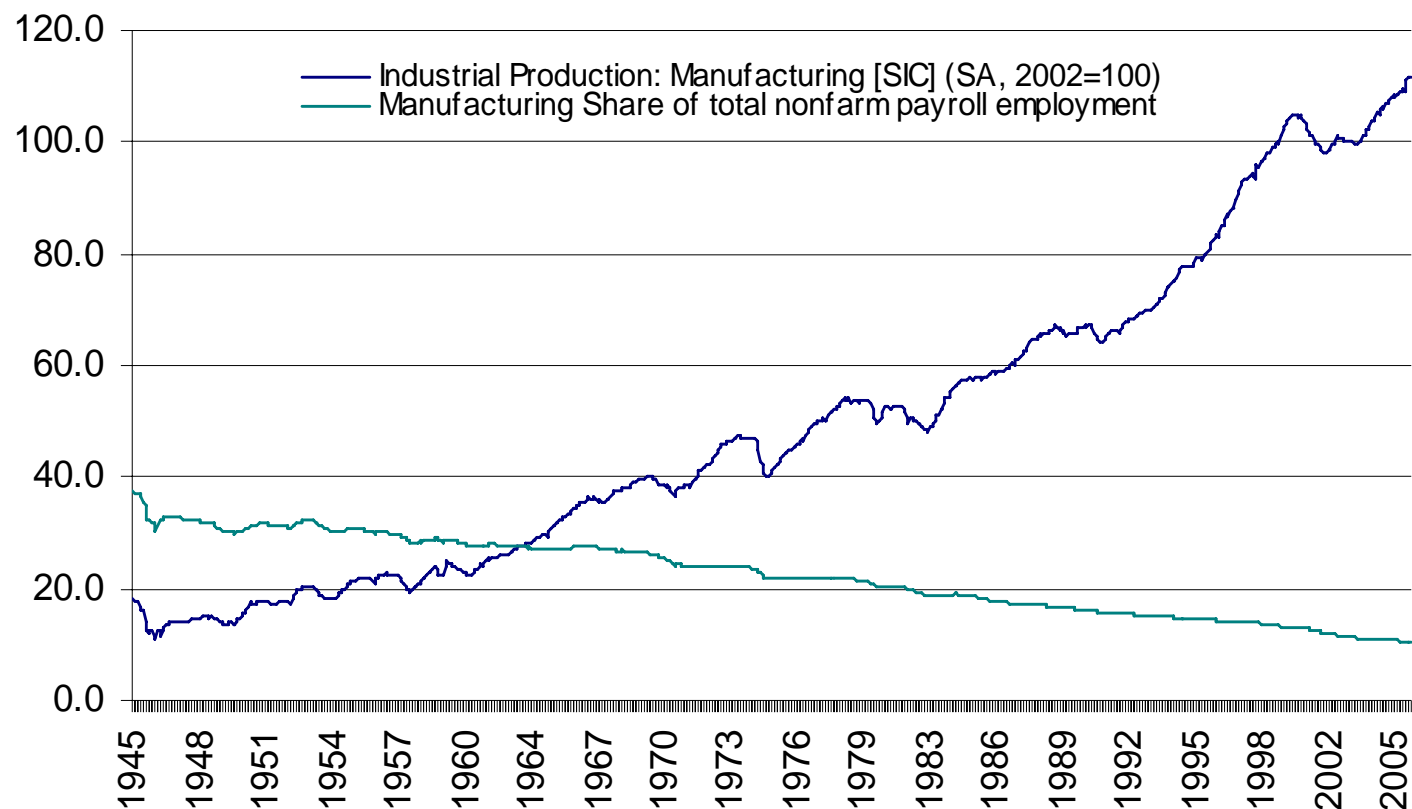
Real personal consumption expenditures

Seasonally adjusted annual rate, percent change



Source: Bureau of Economic Analysis.

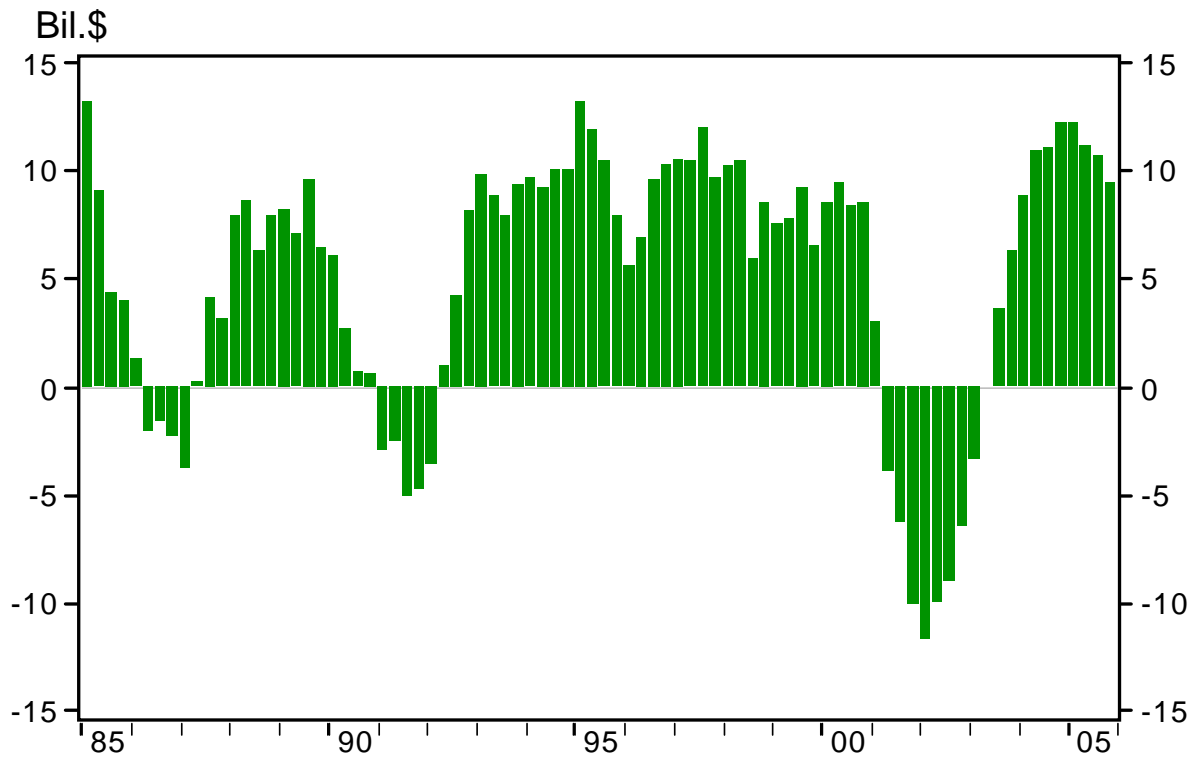
Output vs. share of employees – manufacturing sector



Source: Bureau of Labor Statistics.

Business capital expenditures

Seasonally adjusted annual rate, percent change, year to year





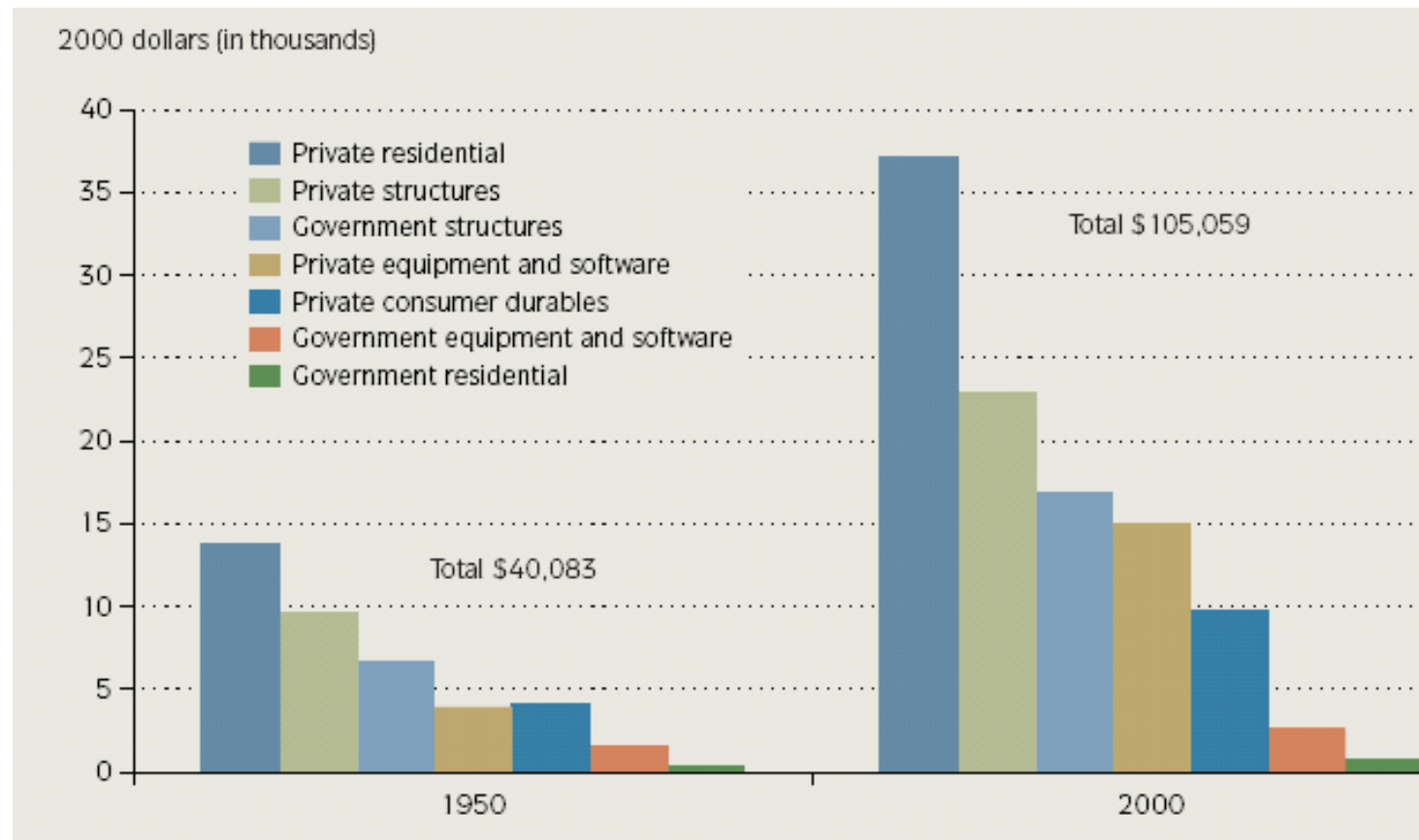
Productivity growth

	1959-2003	1959-73	1973-95	1995-2003	1995-2003 less 1973-95
Private output	3.58	4.21	3.06	3.90	0.84
Hours worked	1.37	1.36	1.57	0.85	-0.73
Average labor productivity	2.21	2.85	1.49	3.06	1.57
Contribution of capital deepening	1.21	1.41	0.89	1.75	0.86
Information technology	0.44	0.21	0.40	0.92	0.52
Non-information technology	0.78	1.19	0.49	0.83	0.34
Contribution of labor quality	0.26	0.33	0.26	0.17	-0.09
Total factor productivity	0.74	1.12	0.34	1.14	0.80
Information technology	0.25	0.09	0.24	0.53	0.28
Non-information technology	0.49	1.03	0.10	0.61	0.51

Source: Federal Reserve Bank of New York.



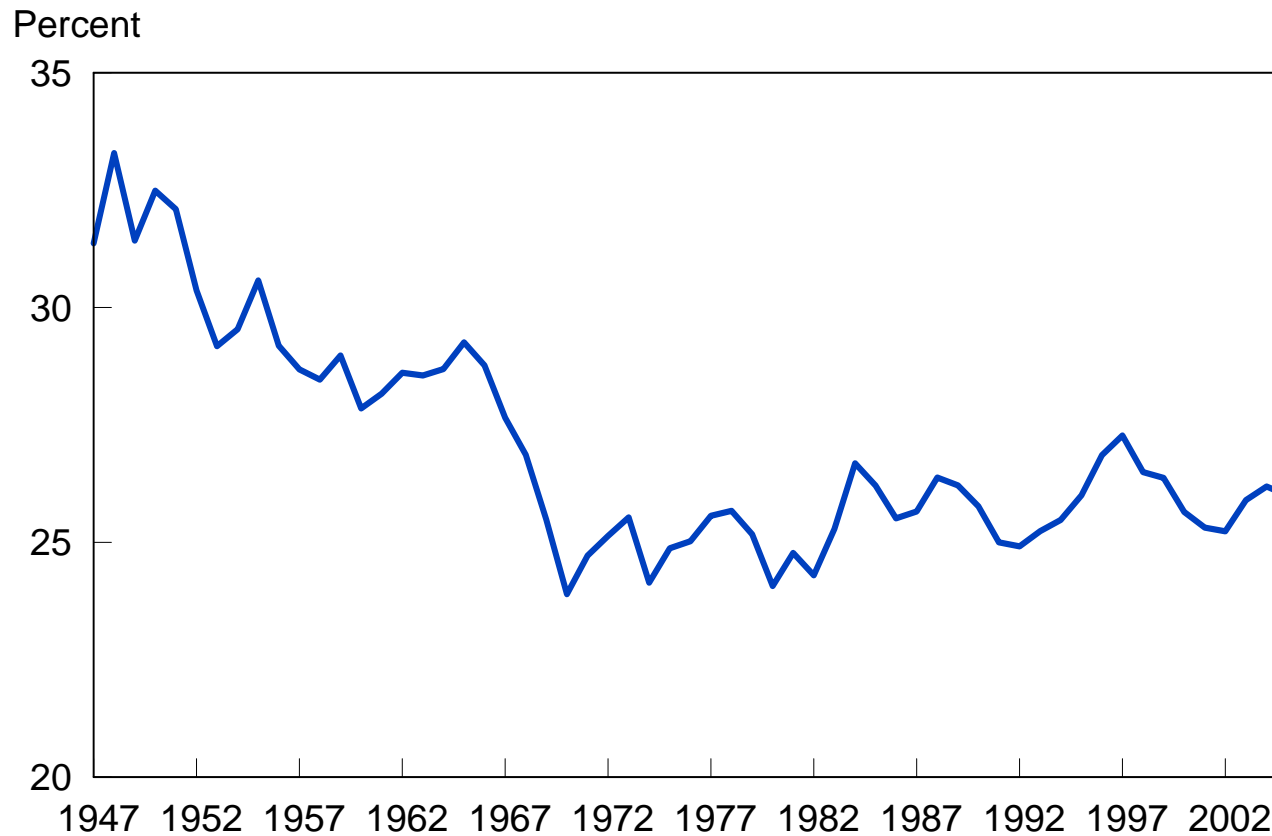
Capital stock per person



Source: Federal Reserve Bank Dallas.



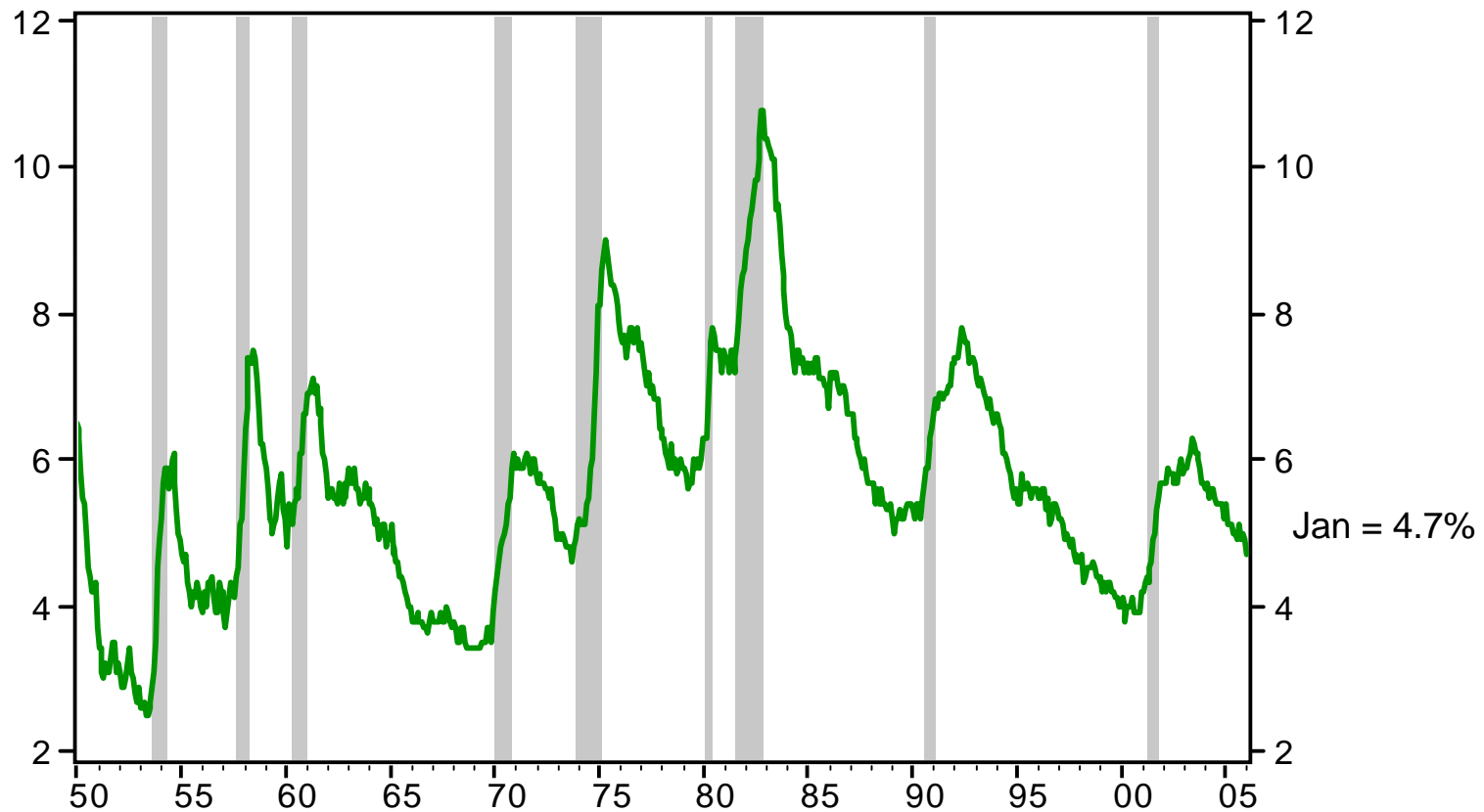
Return to capital – share of national income



Source: MBA Calculations.

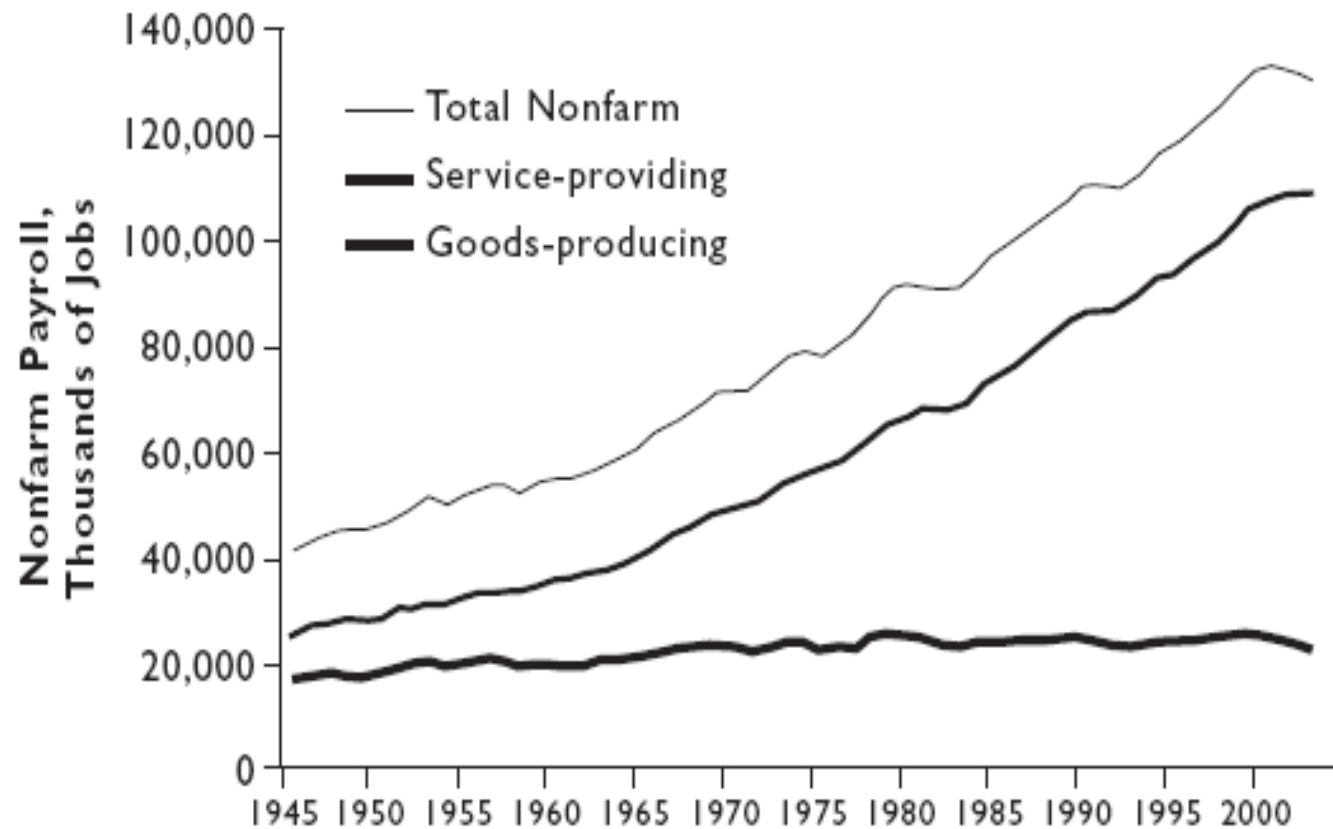
Unemployment rate

Percent



Source: Bureau of Labor Statistics.

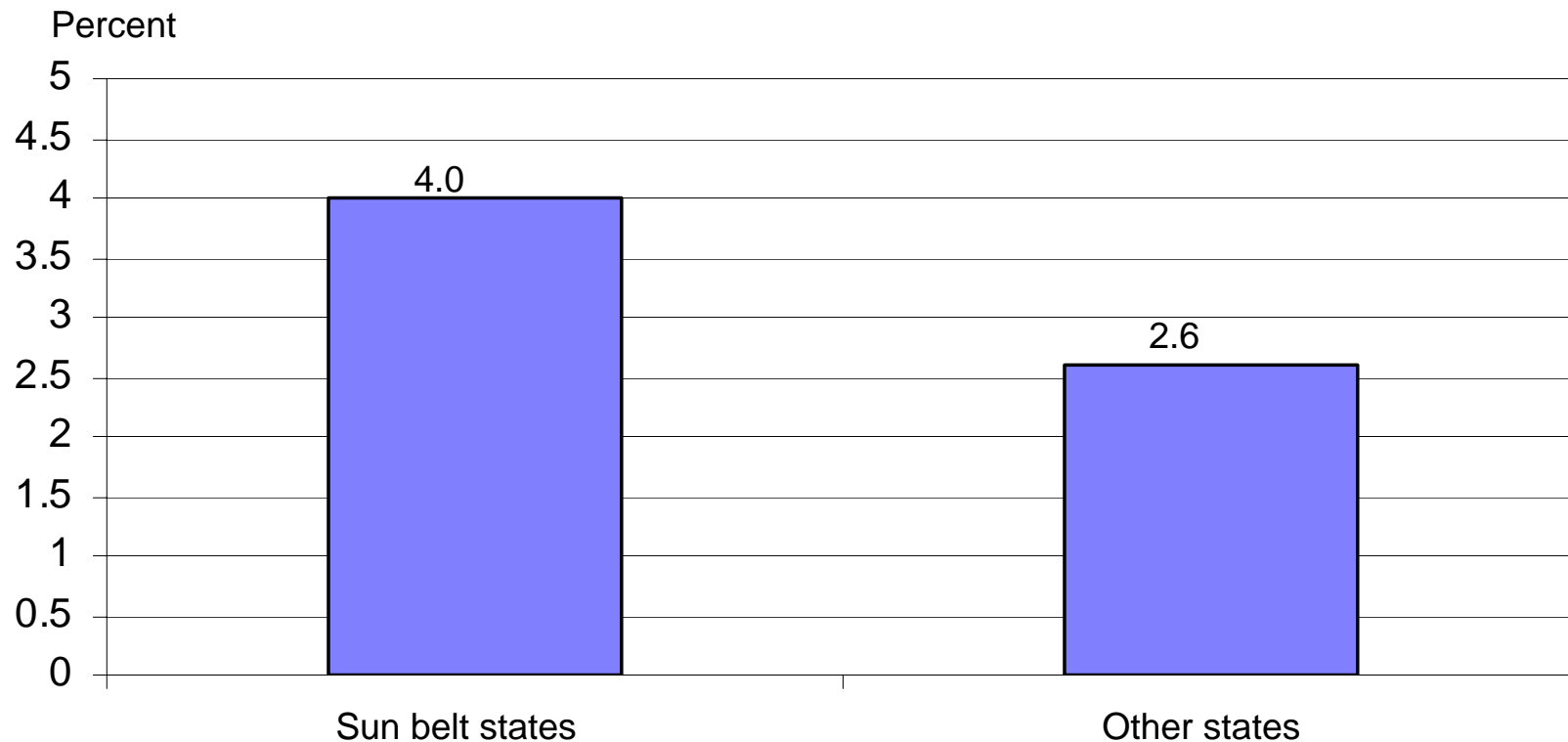
Employment/Shares in employment



Source: Bureau of Labor Statistics.



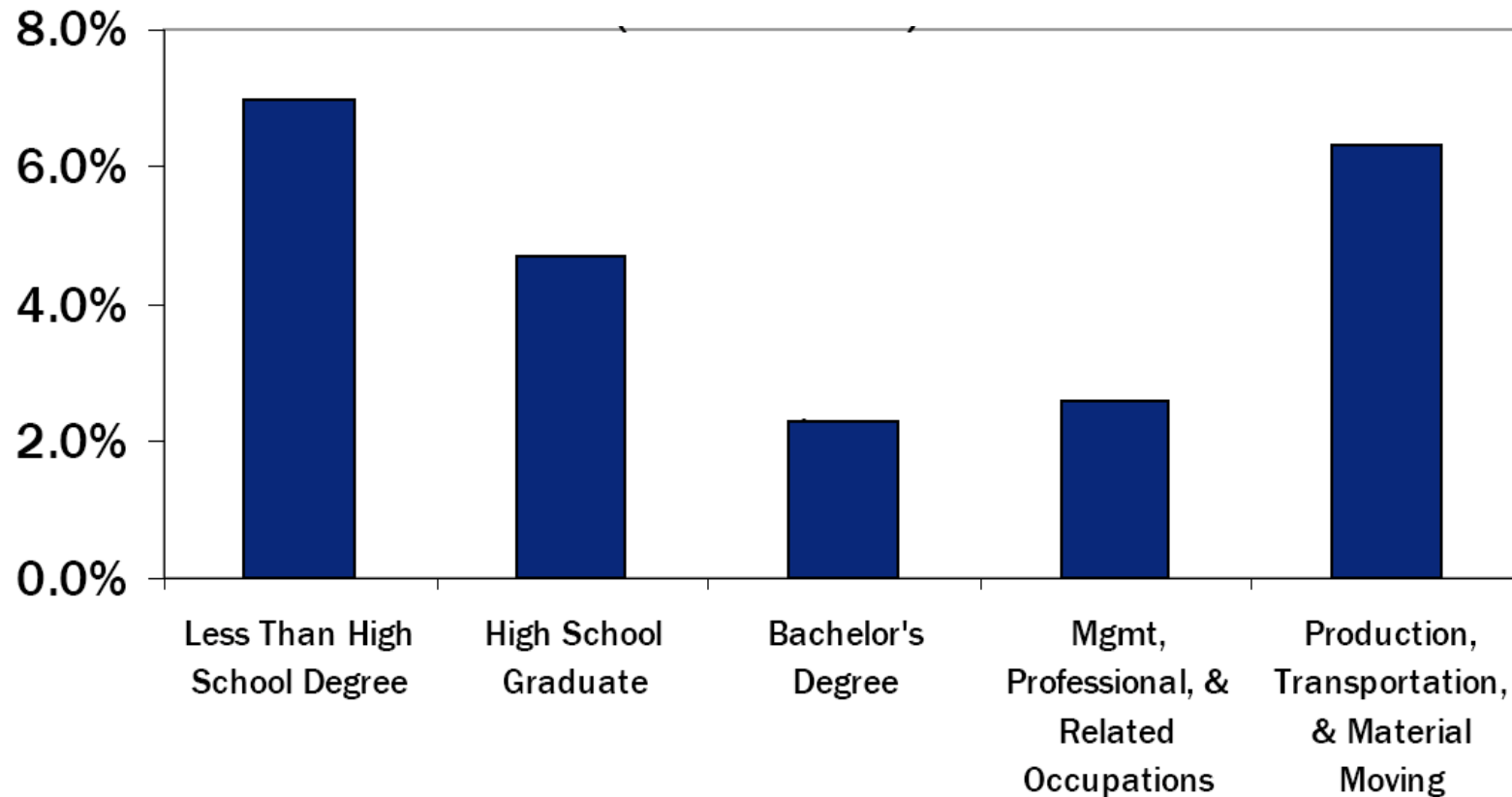
Employment growth: January 2003 – December 2005



*Sun belt states: Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Mississippi, Louisiana, Texas, New Mexico, Colorado, Arizona, Utah, Nevada, California

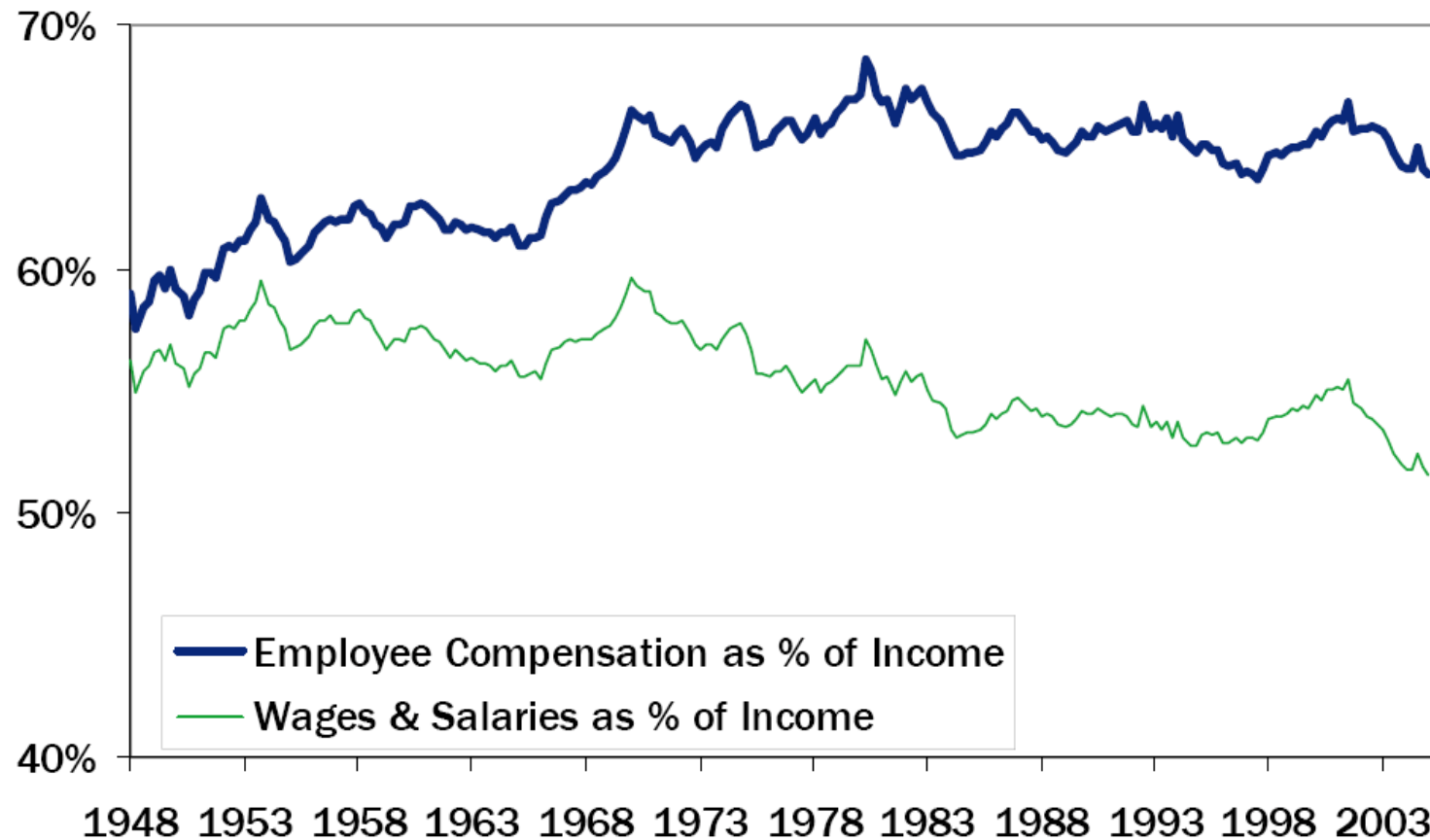


Structural unemployment – June 2005



Source: Bureau of Labor Statistics.

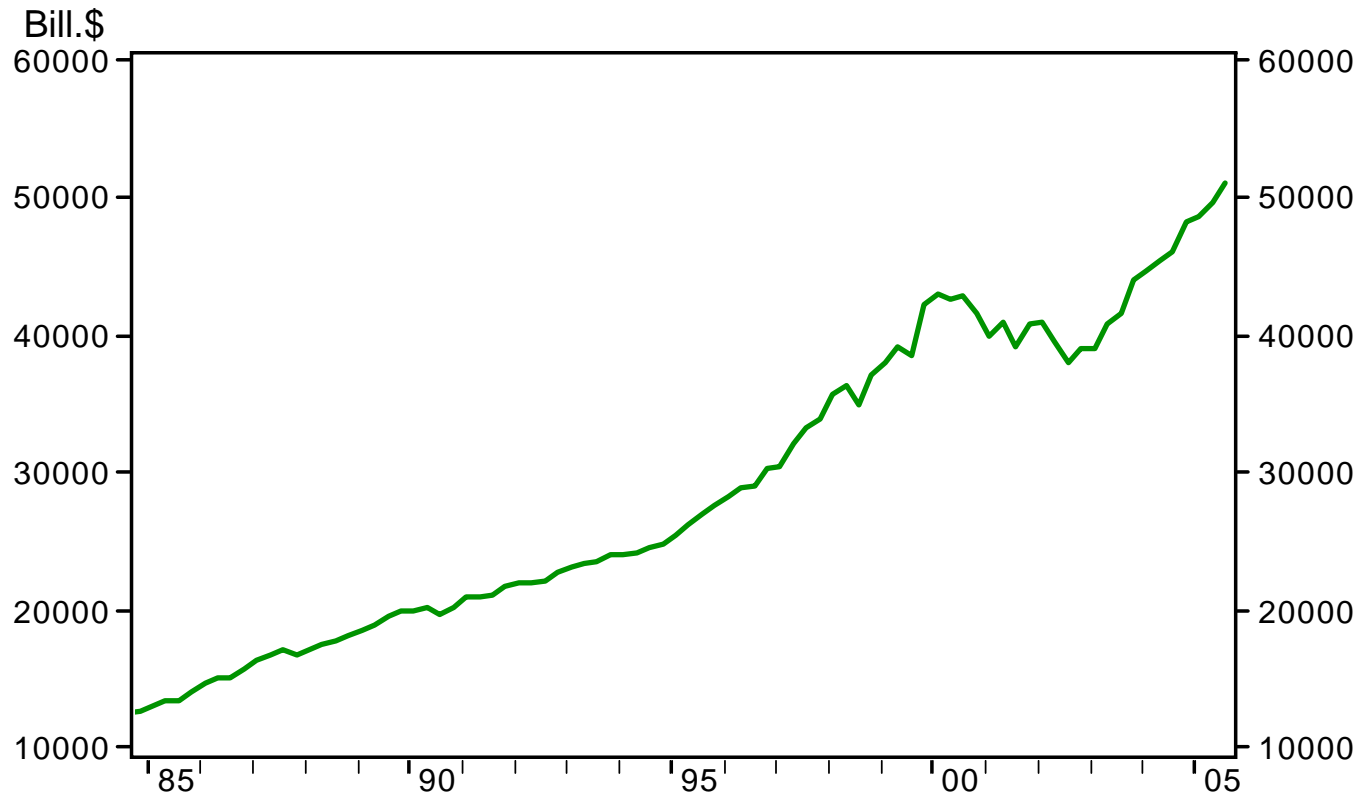
Shares of national income



Source: Bureau of Economic Analysis.



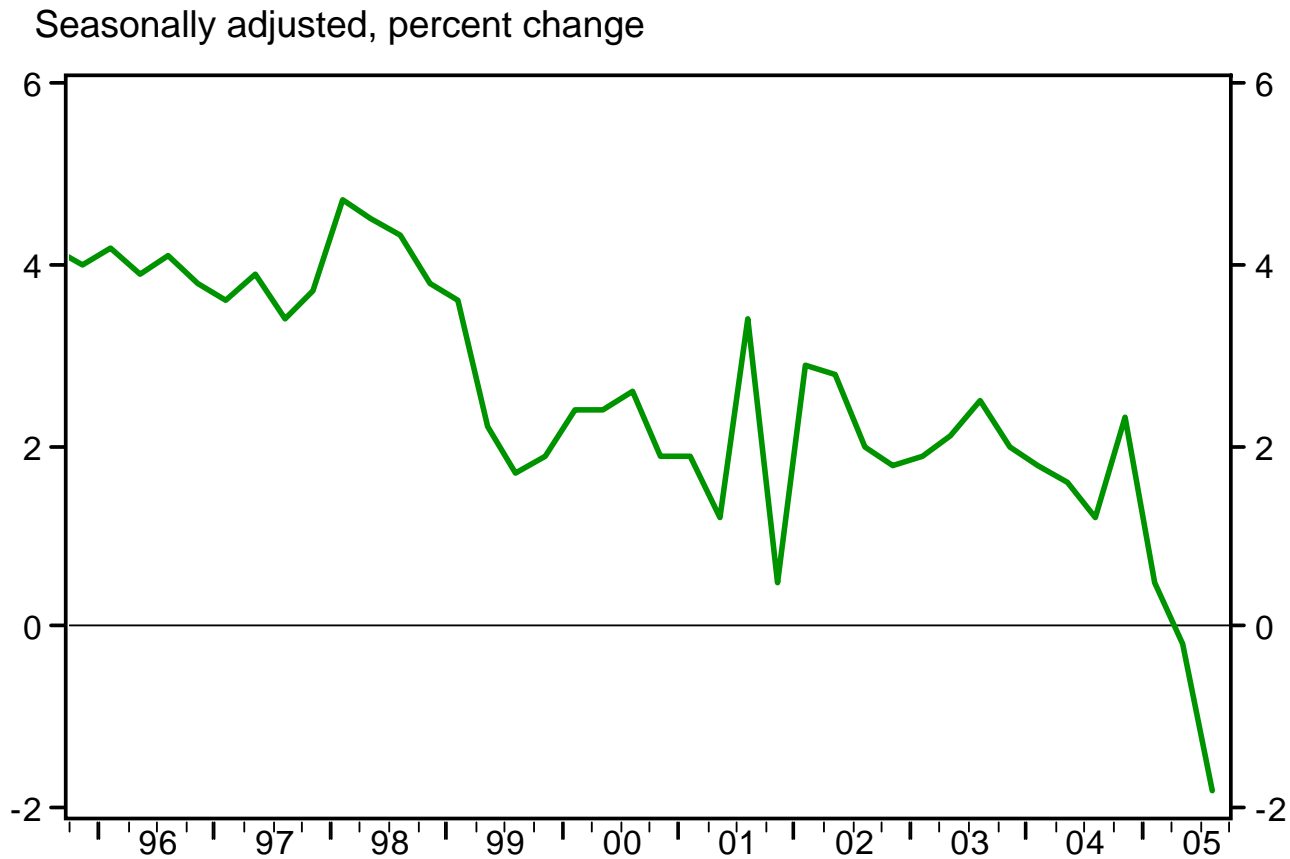
Household net worth



Source: Federal Reserve System, Flow of Funds Accounts of the United States.



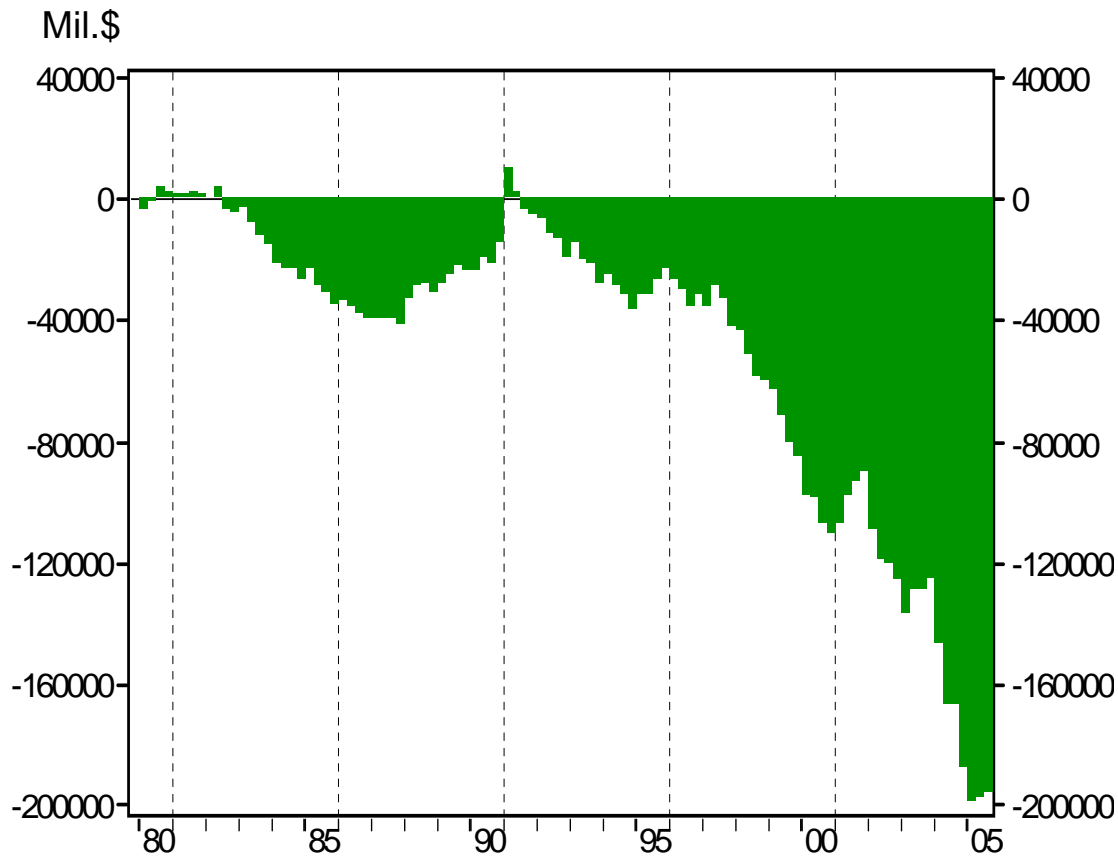
Personal saving rate



Source: Bureau of Economic Analysis.



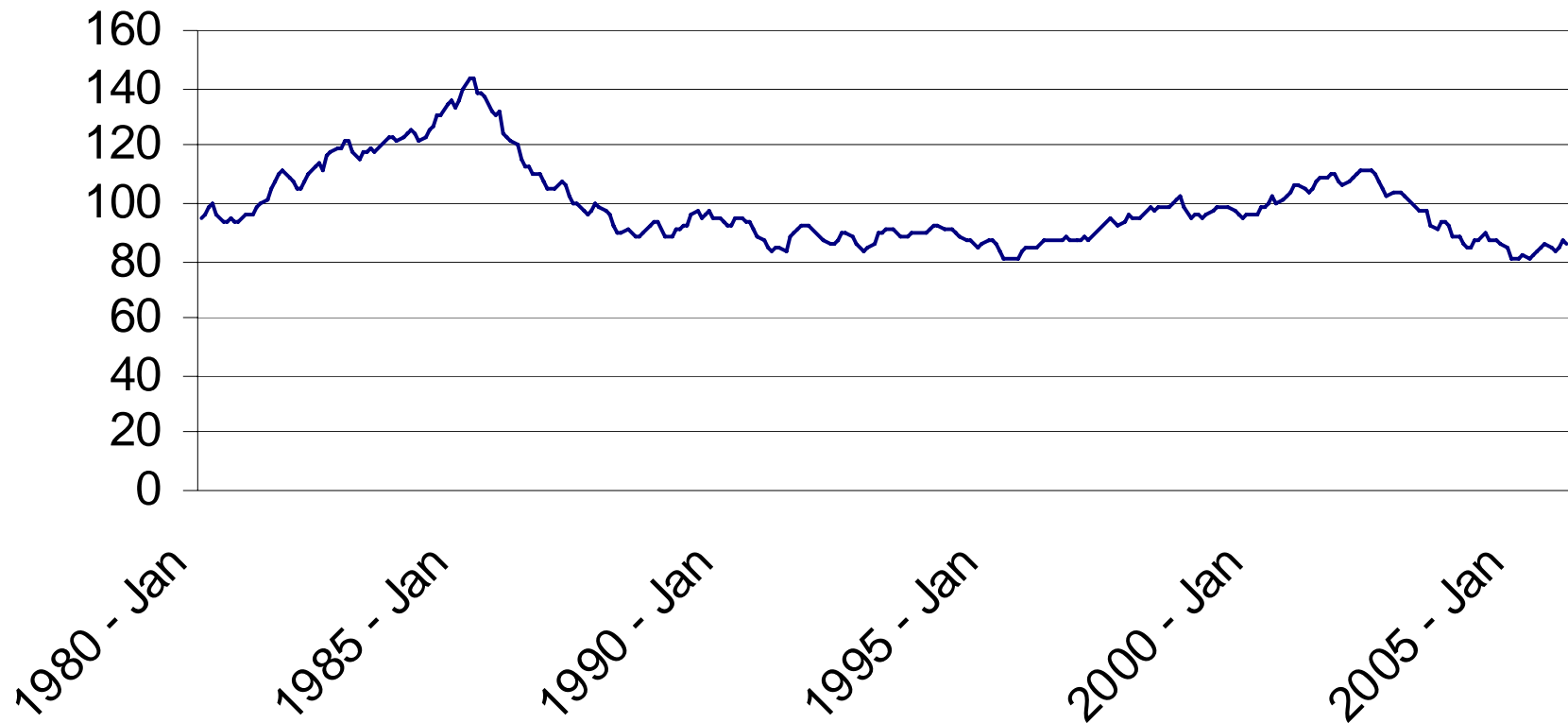
Current account balance



Source: Bureau of Economic Analysis.



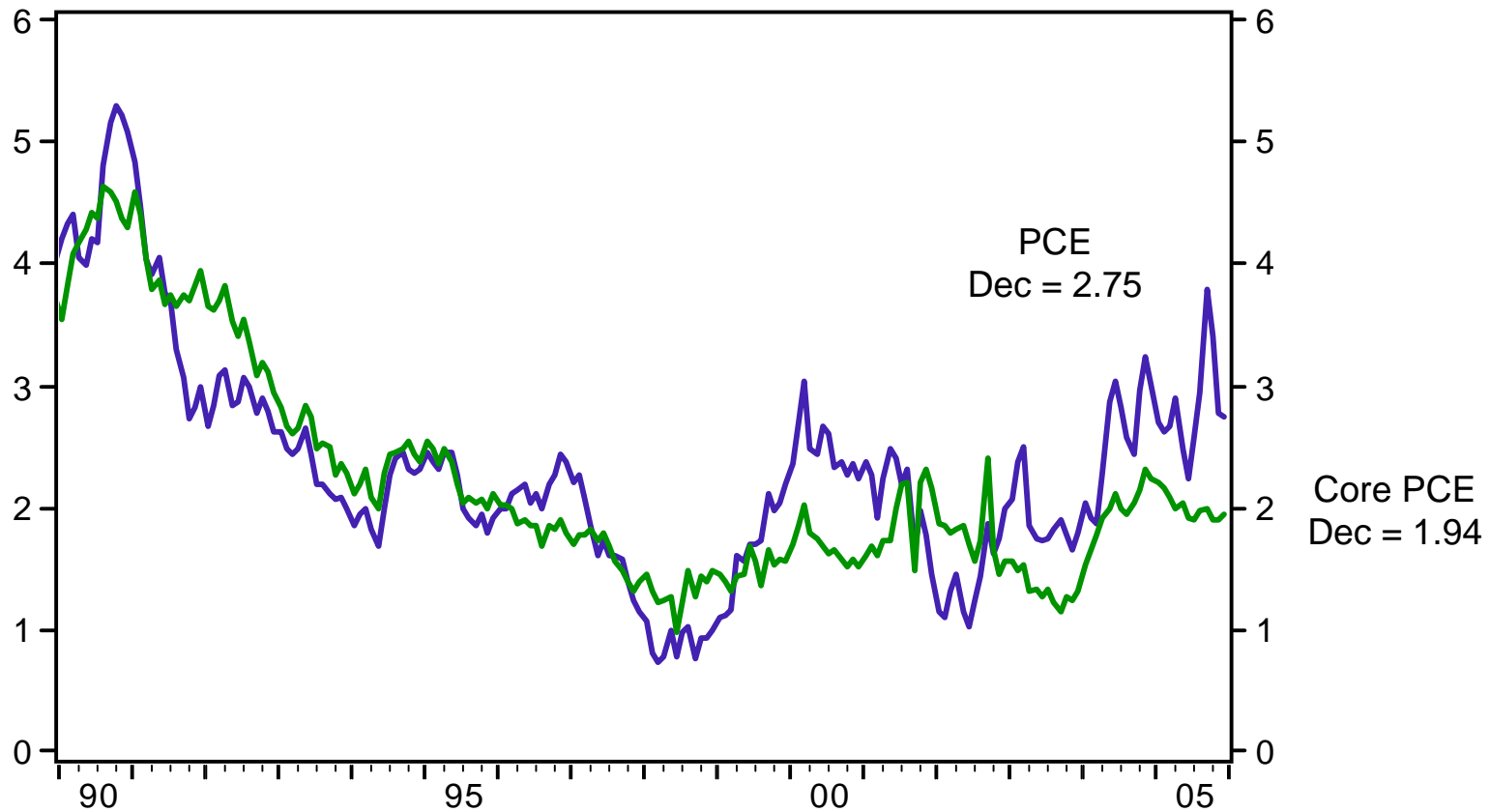
Trade weighted exchange value of the U.S. dollar



Source: Federal Reserve Board.

Inflation - PCE

Seasonally adjusted, percent change, year over year

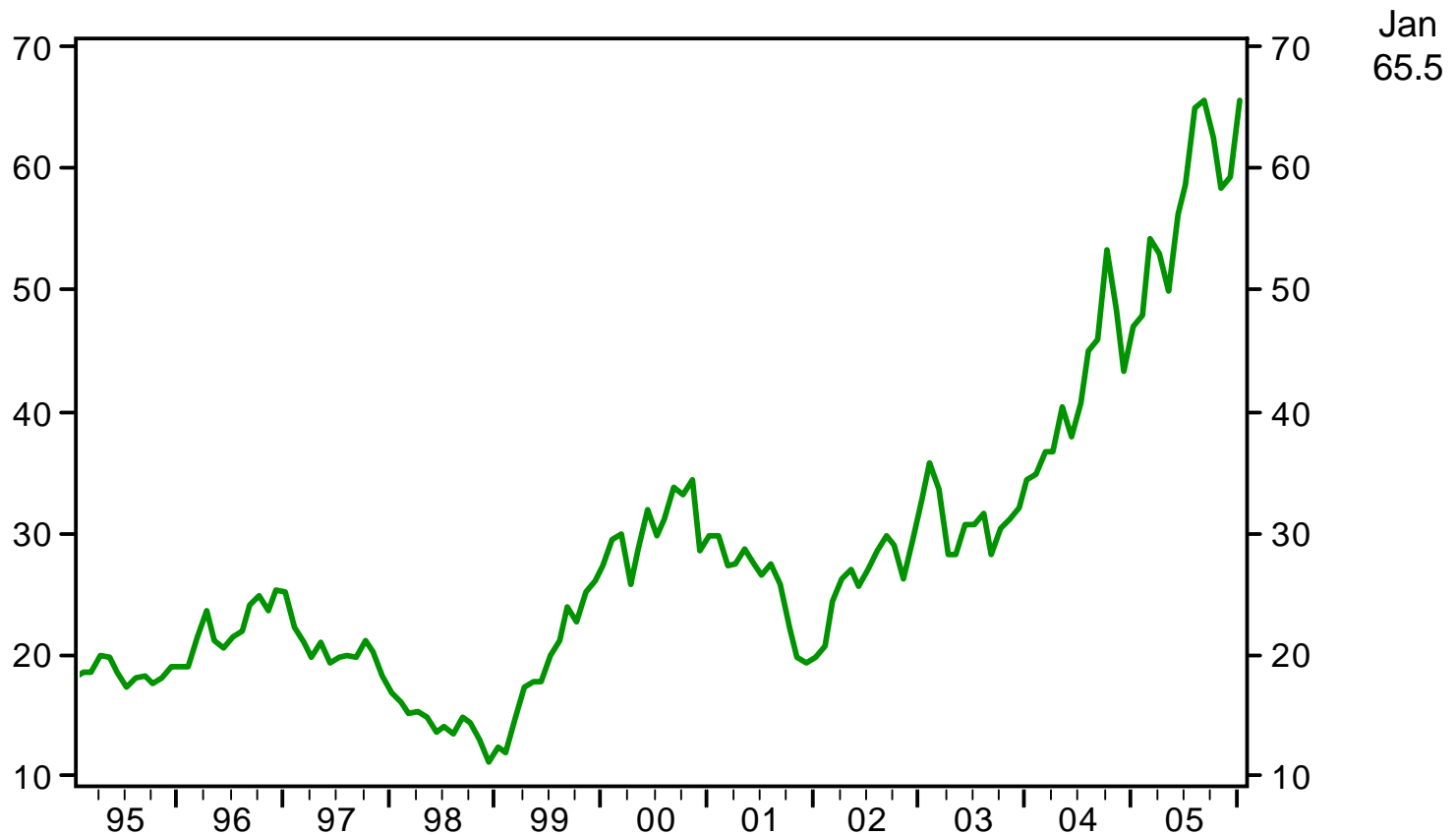


Source: Bureau of Economic Analysis.



Oil price

\$ per barrel

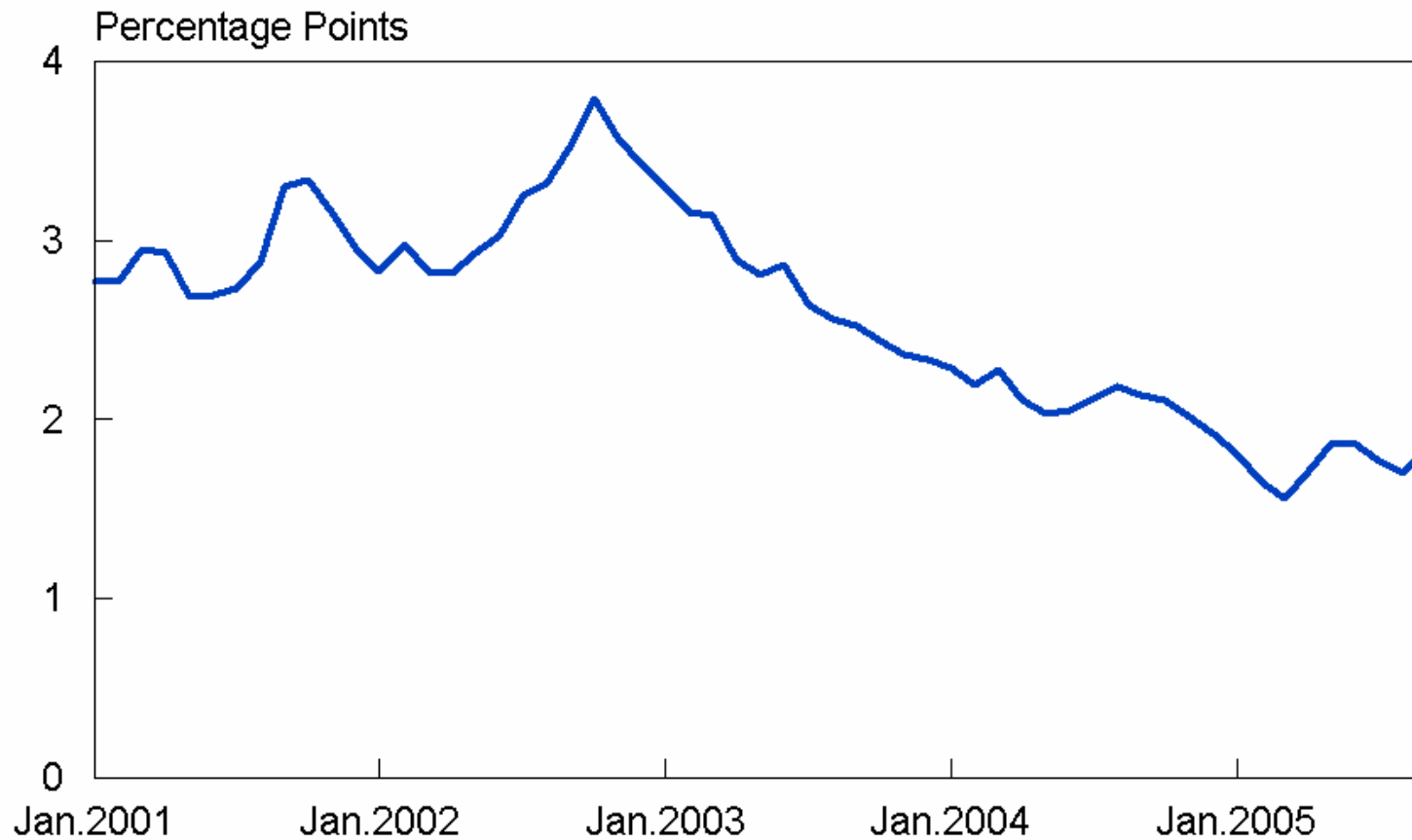


Source: Wall Street Journal.





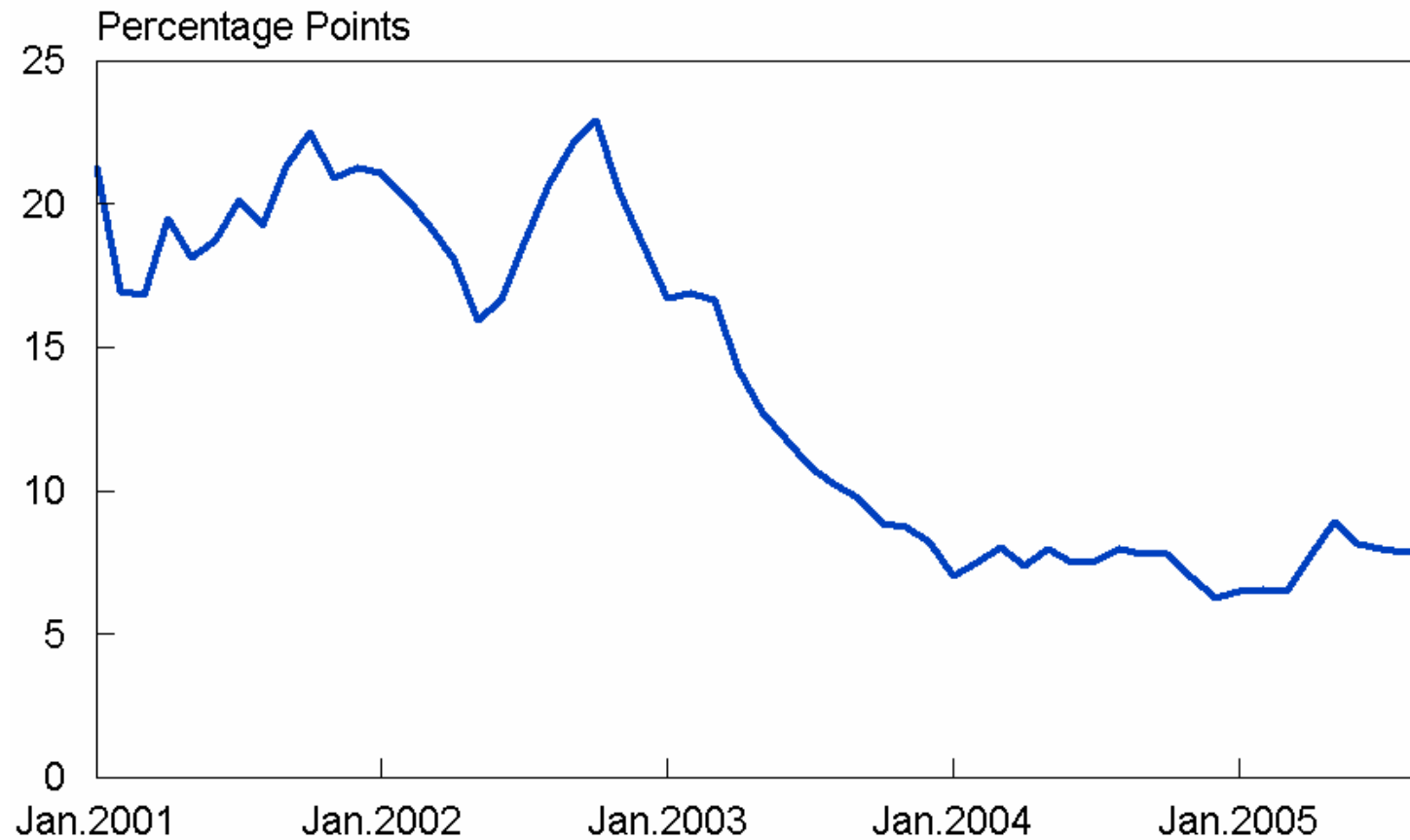
Corporate Baa minus 10-year treasury



Source: U.S. Department of the Treasury.



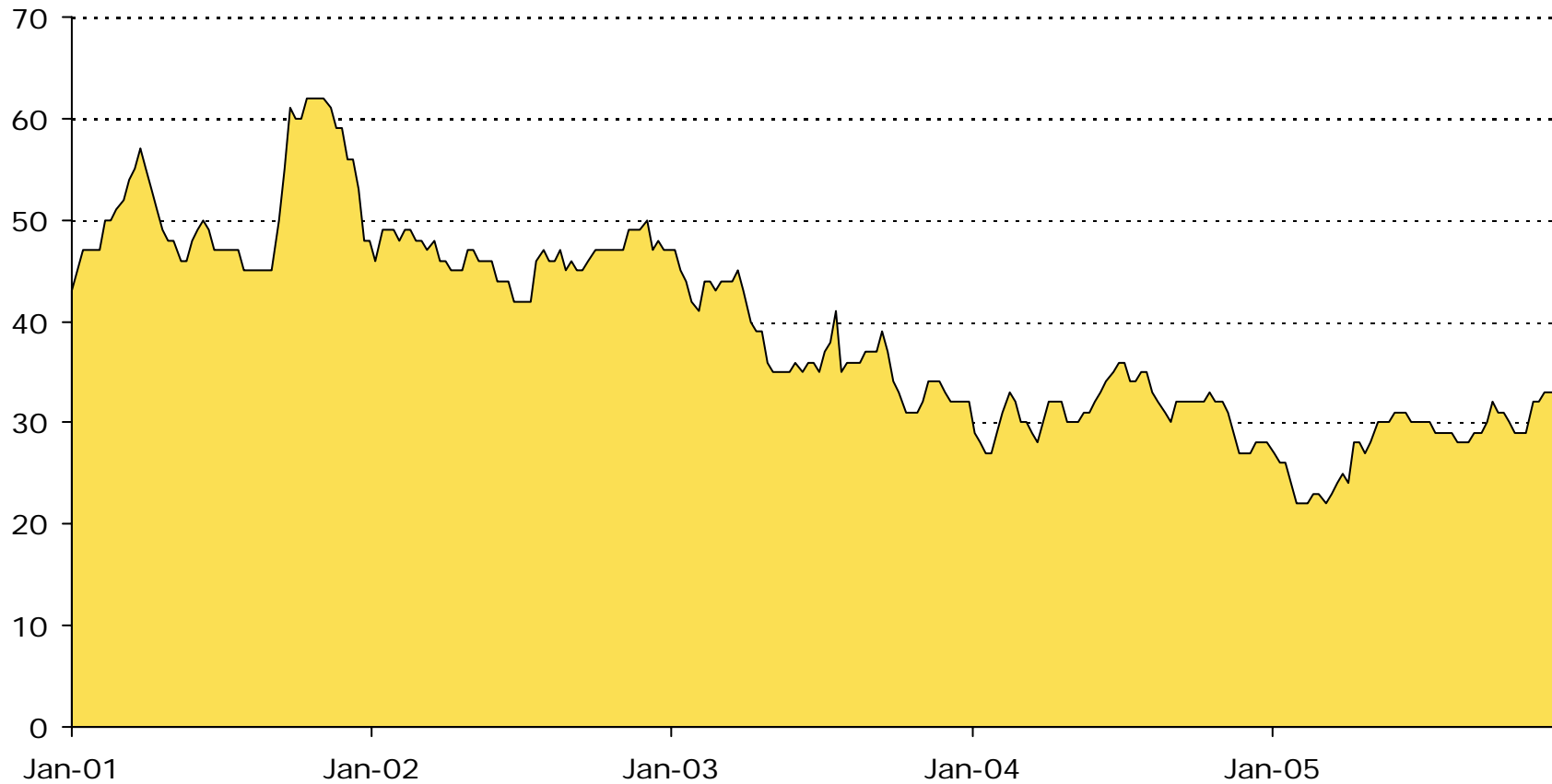
Low grade bonds minus 10-year treasury



Source: U.S. Department of the Treasury.



Ten-year AAA CMBS spreads to swaps



Basis Points

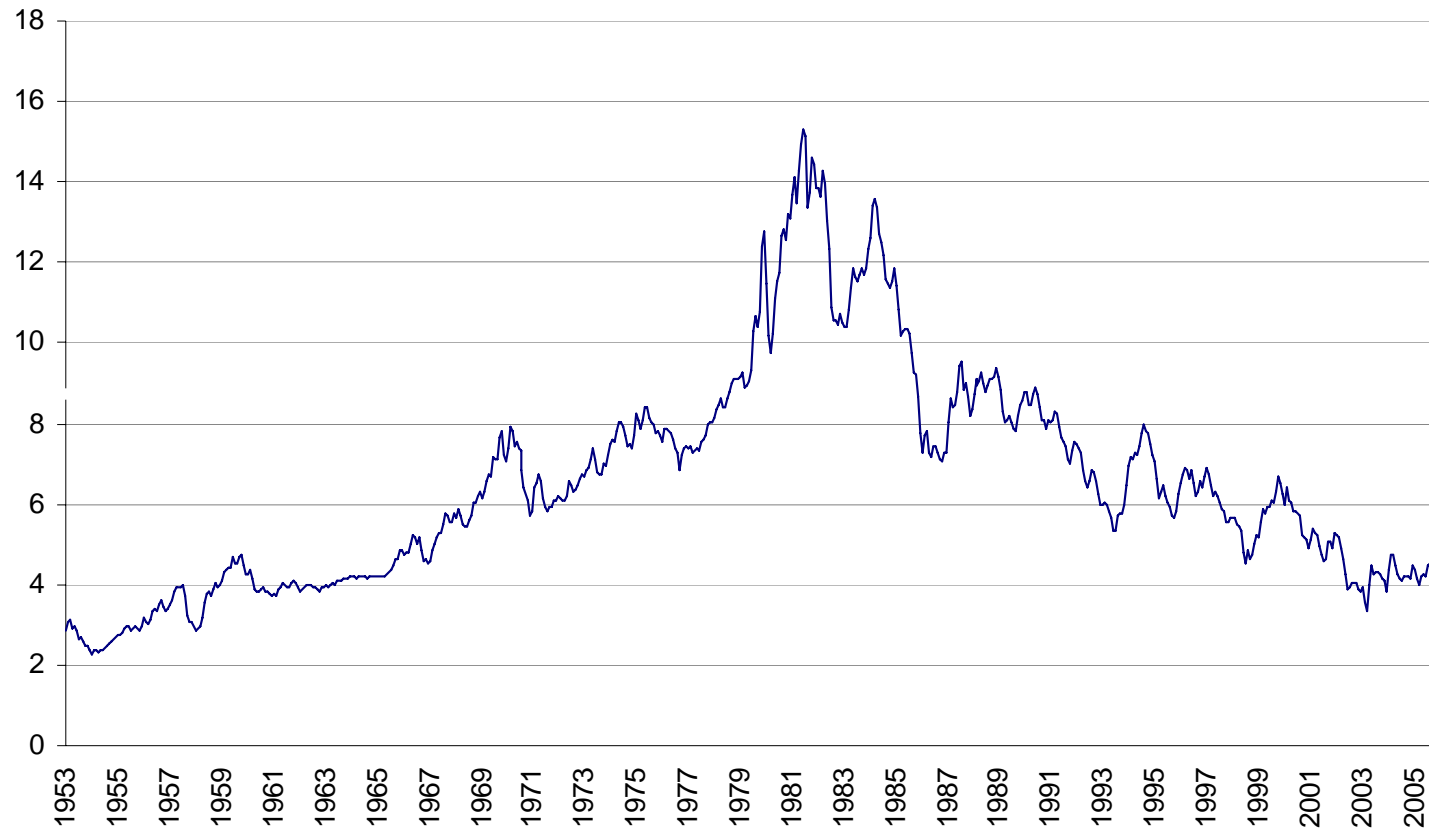
Source: Commercial Mortgage Alert.





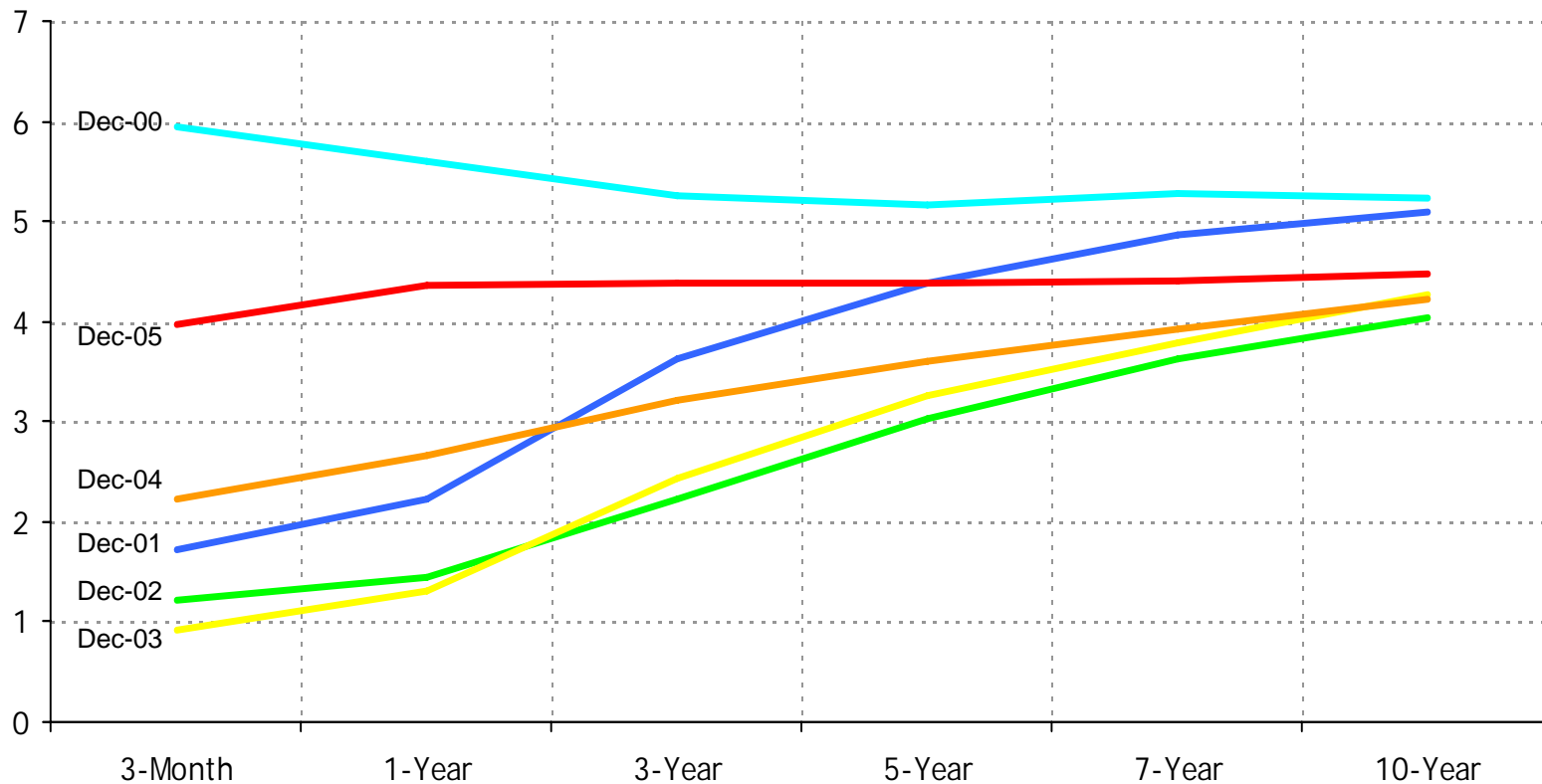
10 year treasury at constant maturity

Percent, by quarter



Source: Federal Reserve Board.

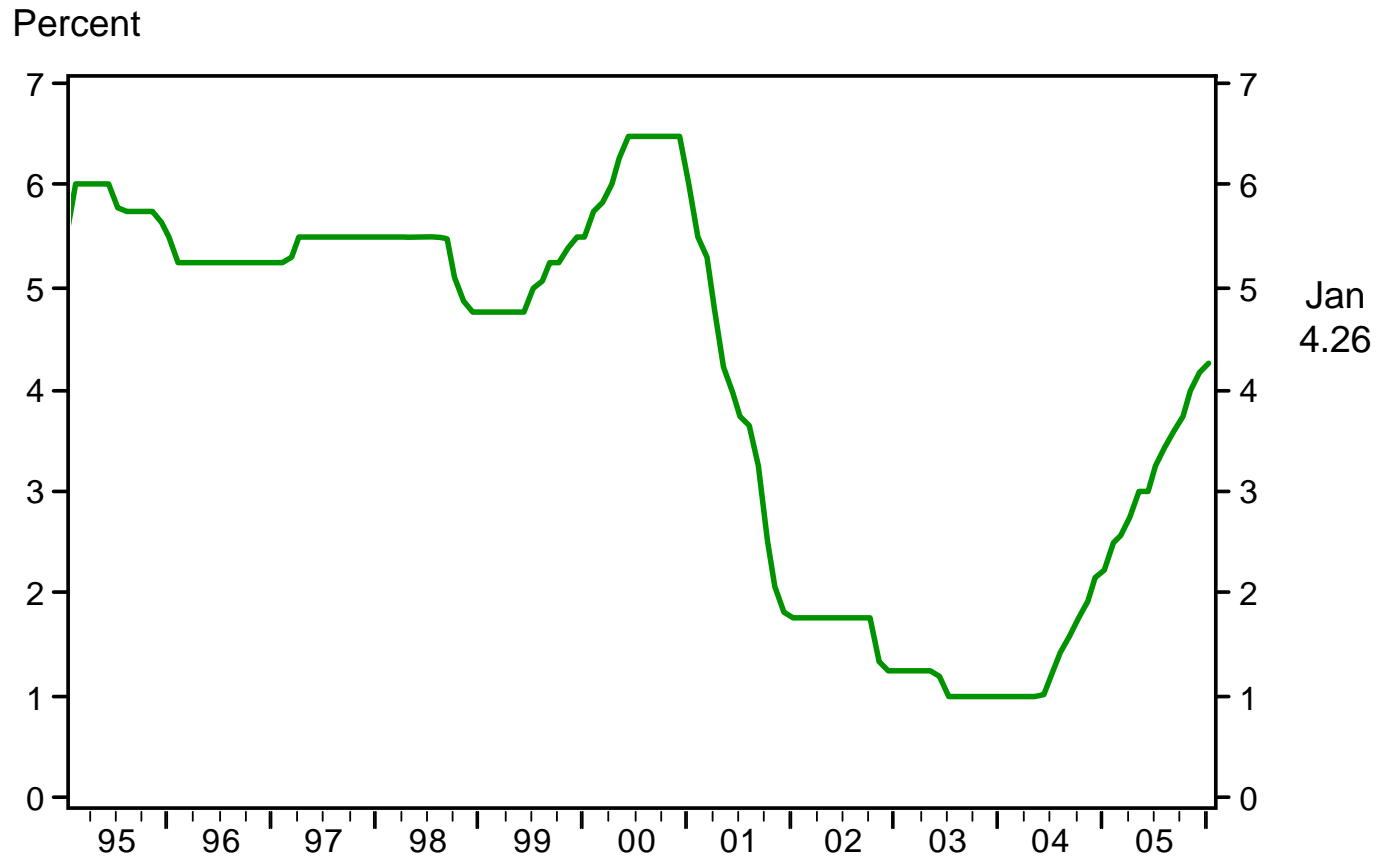
Treasury yield curve



Source: Federal Reserve Board.

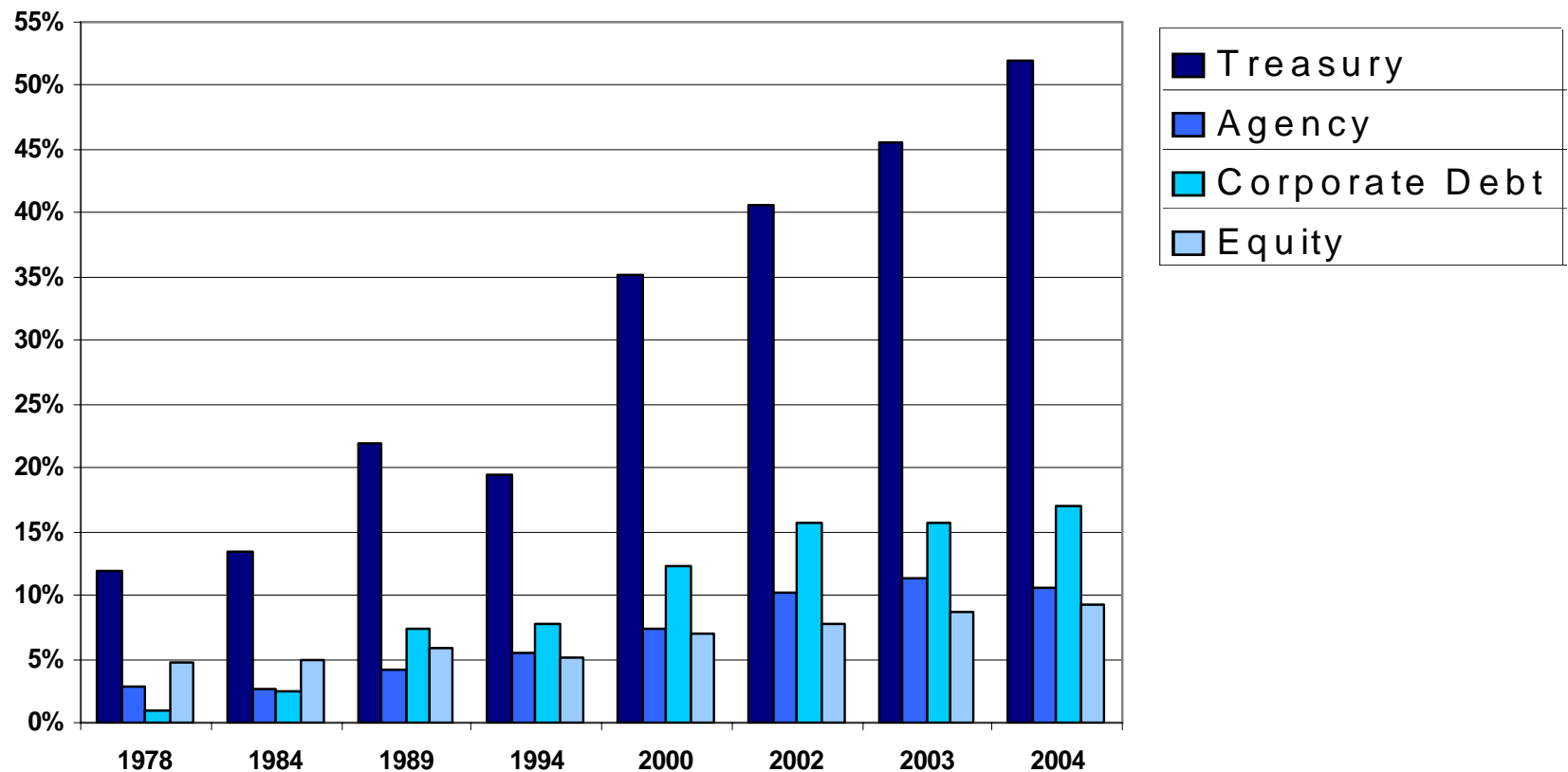


Federal funds target rate



Source: Federal Reserve Board.

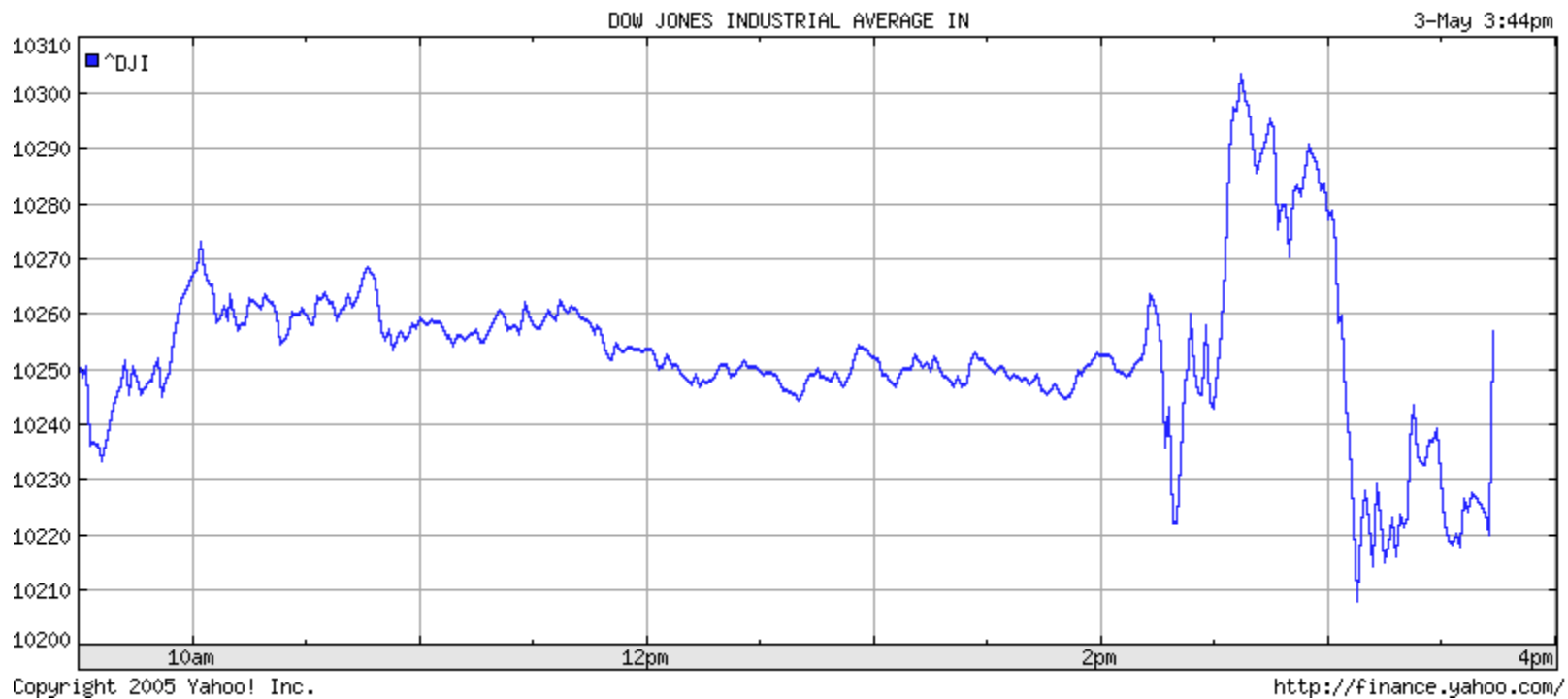
Foreign holdings of long-term securities



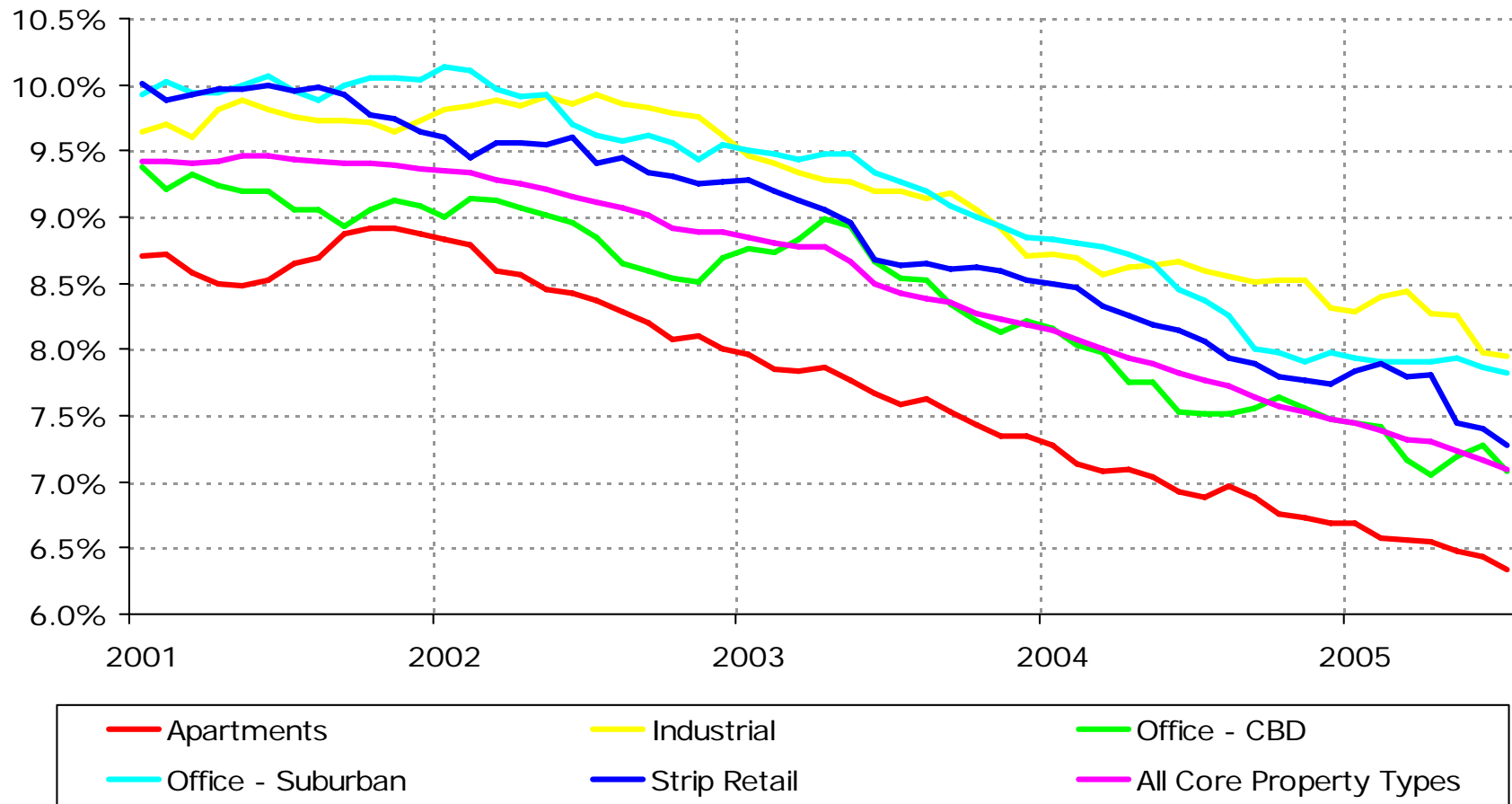
Source: U.S. Department of Treasury.



Dow Jones Industrials – May 3, 2005



Commercial/Multifamily capitalization rates



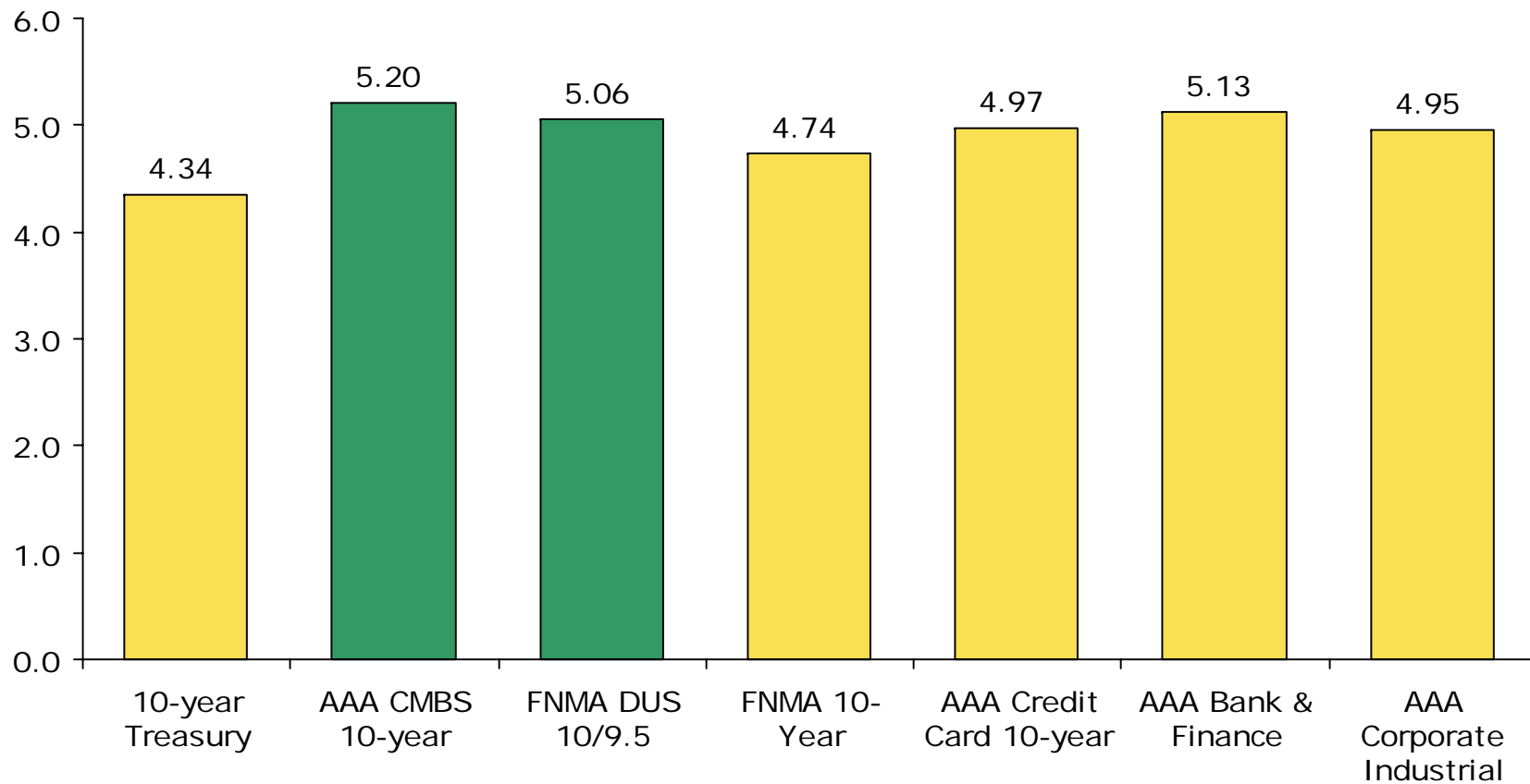
Core property types, \$5 million or greater

Source: Real Capital Analytics.



Yields on selected fixed income assets

Percent, as of 1/4/06



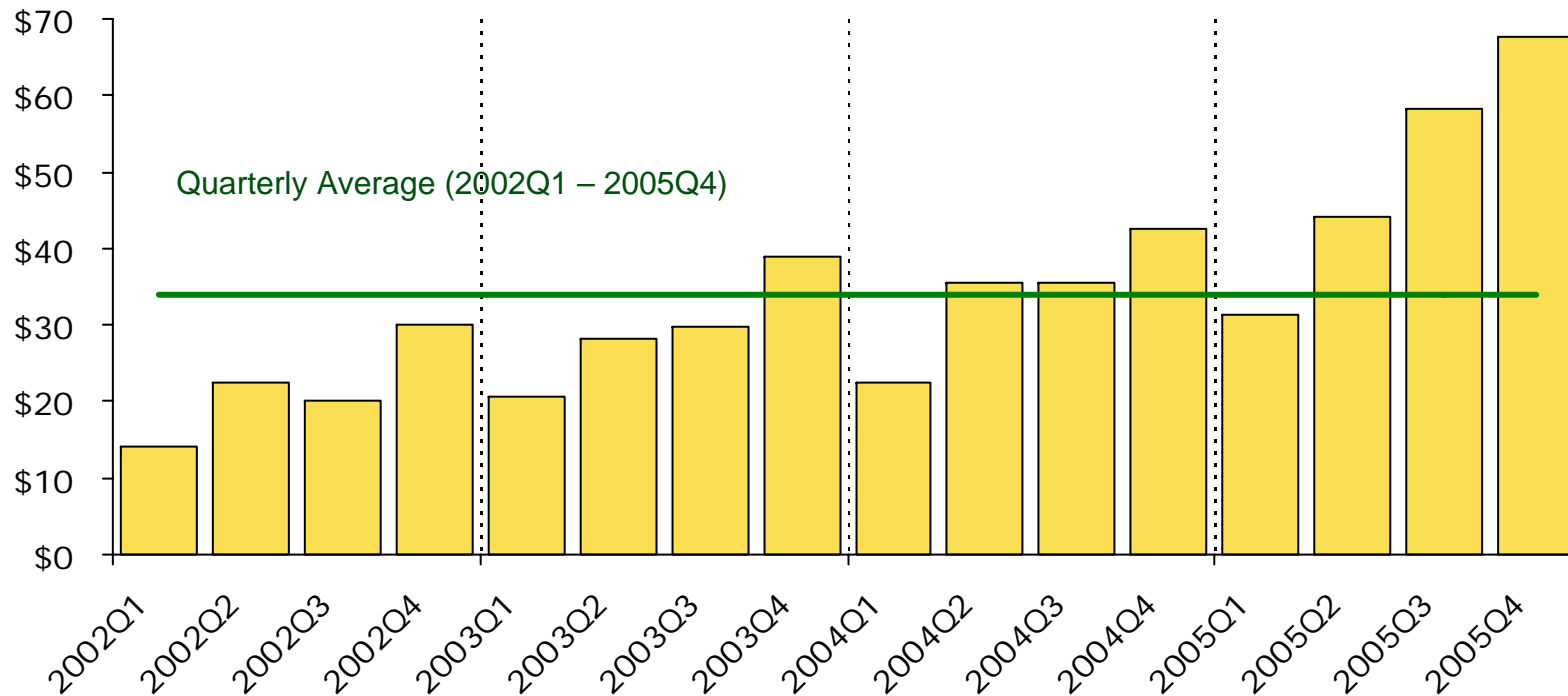
Source: Morgan Stanley.





Commercial/Multifamily mortgage bankers originations

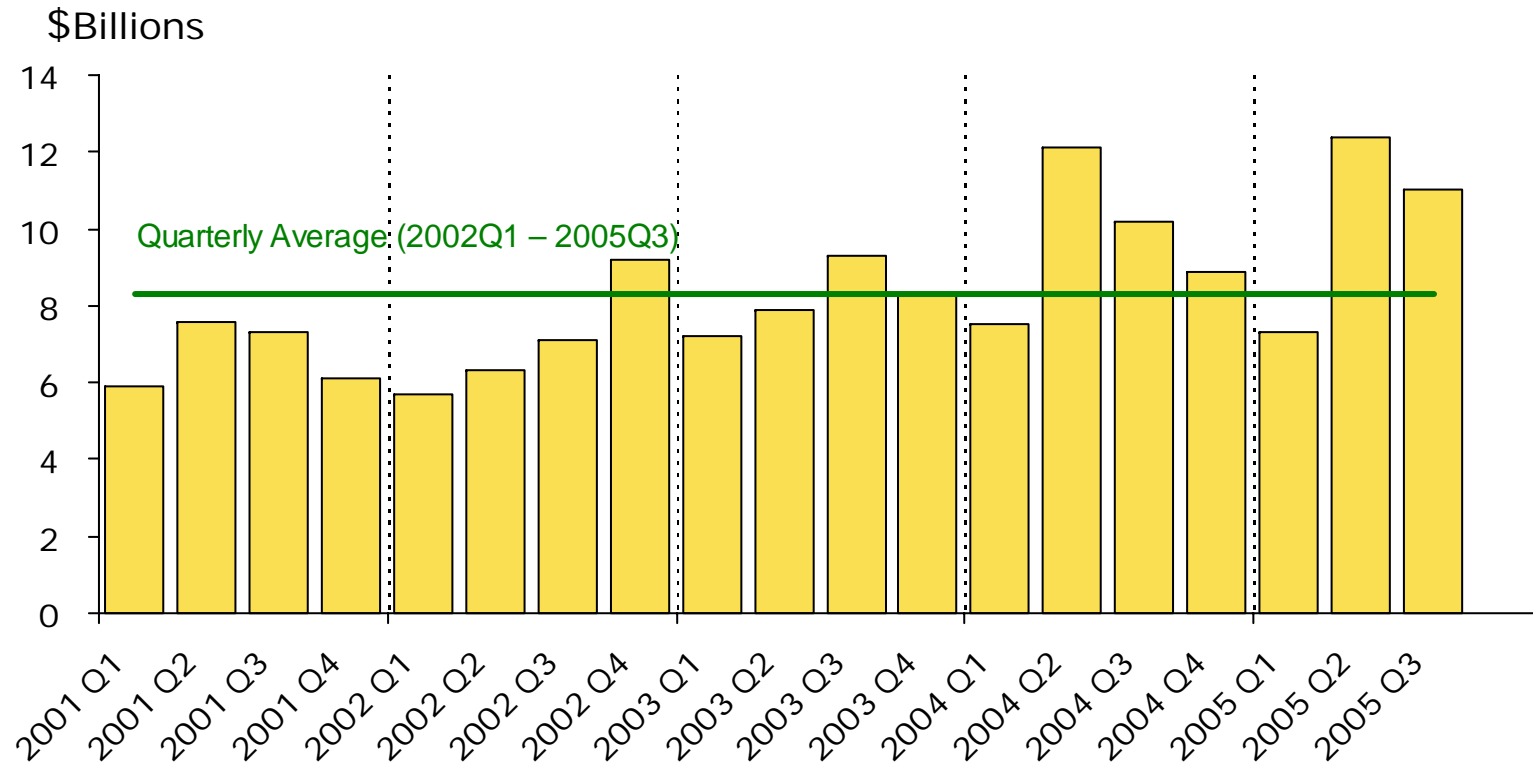
\$ Billions, By quarter



Source: Mortgage Bankers Association.

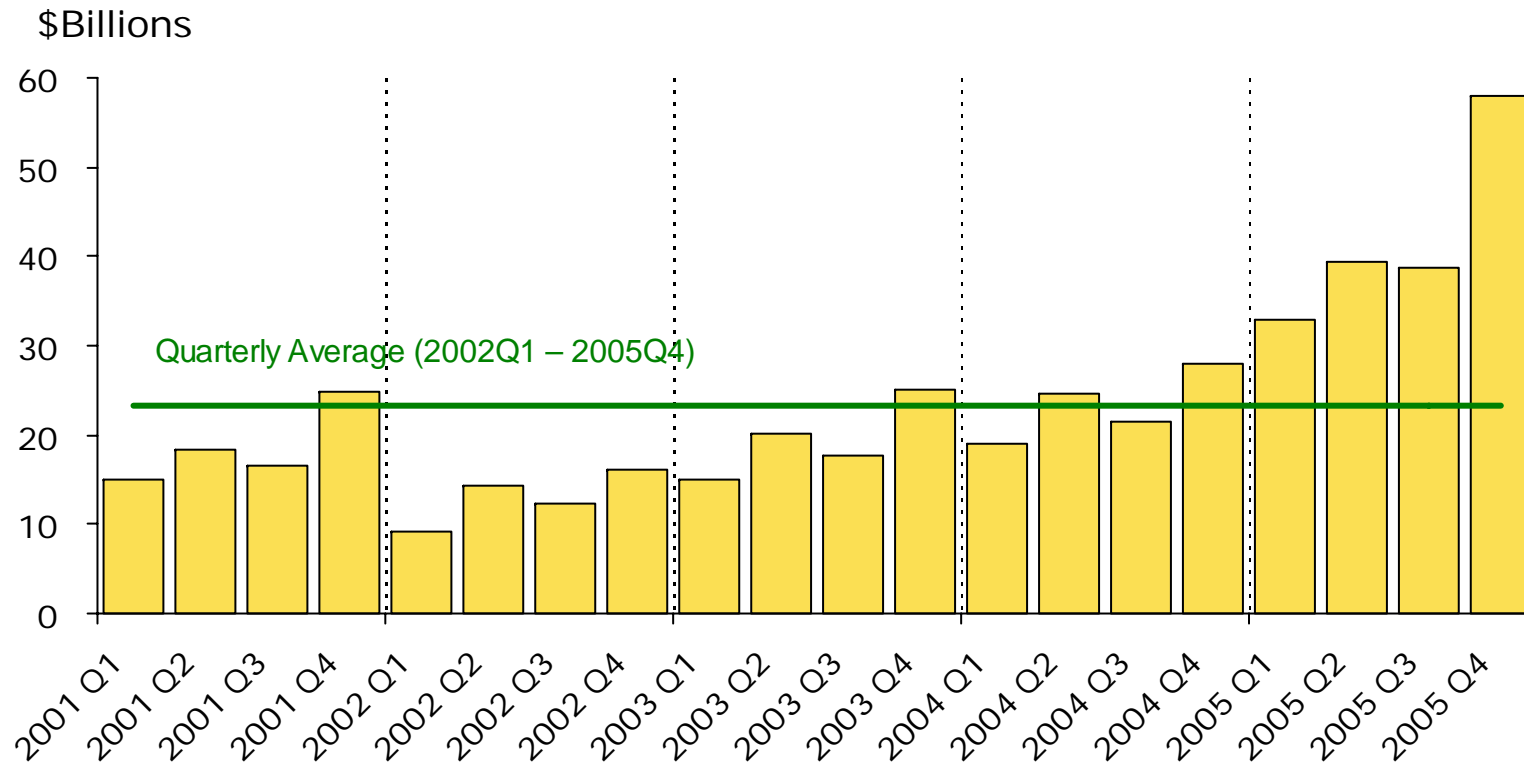


Life Company commitments, by quarter



Source: CMAAlert.com and ACLI.

CMBS issuance by quarter

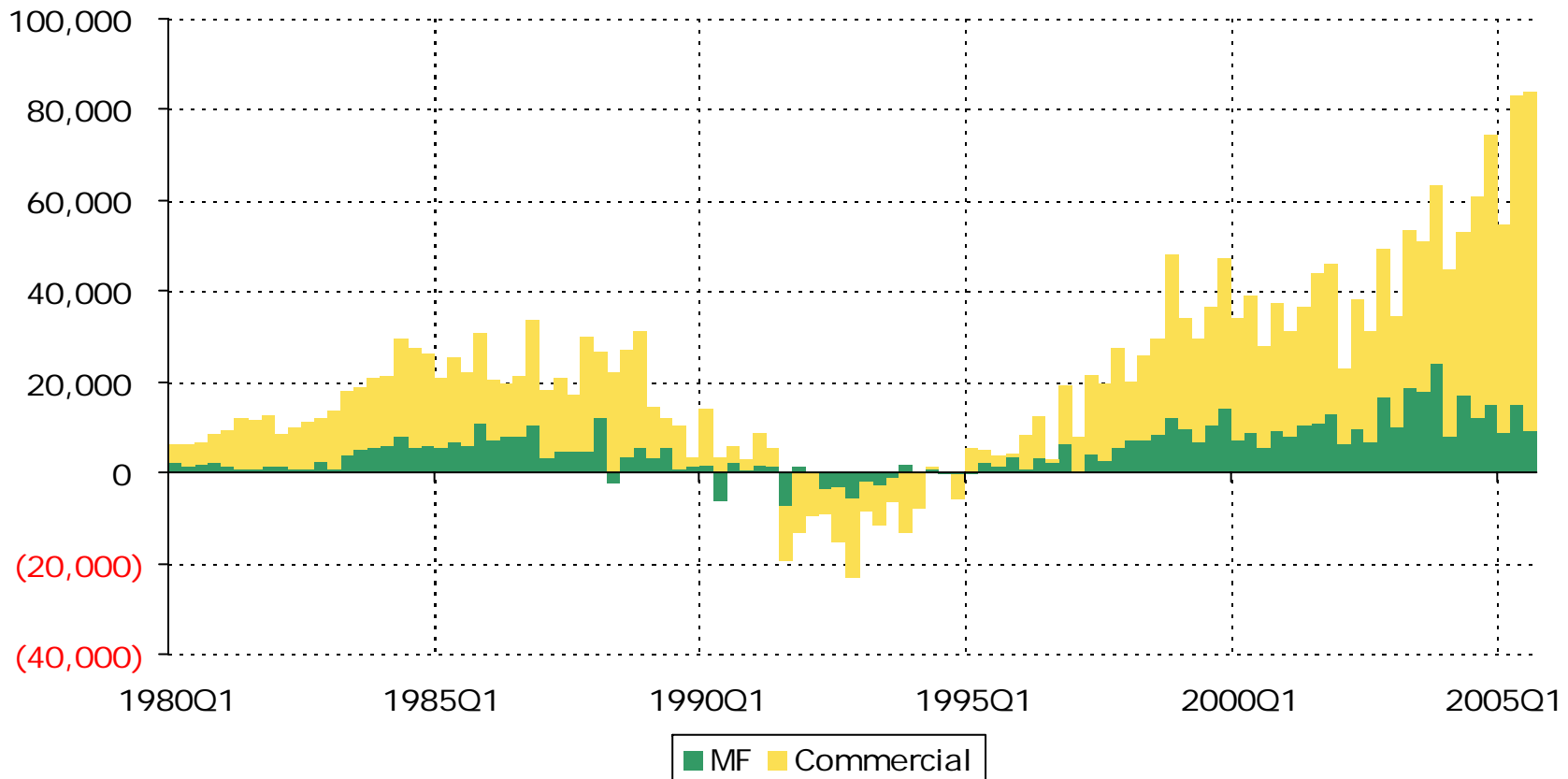


Source: CMAAlert.com and ACLI.



Net change in commercial/multifamily mortgage debt outstanding

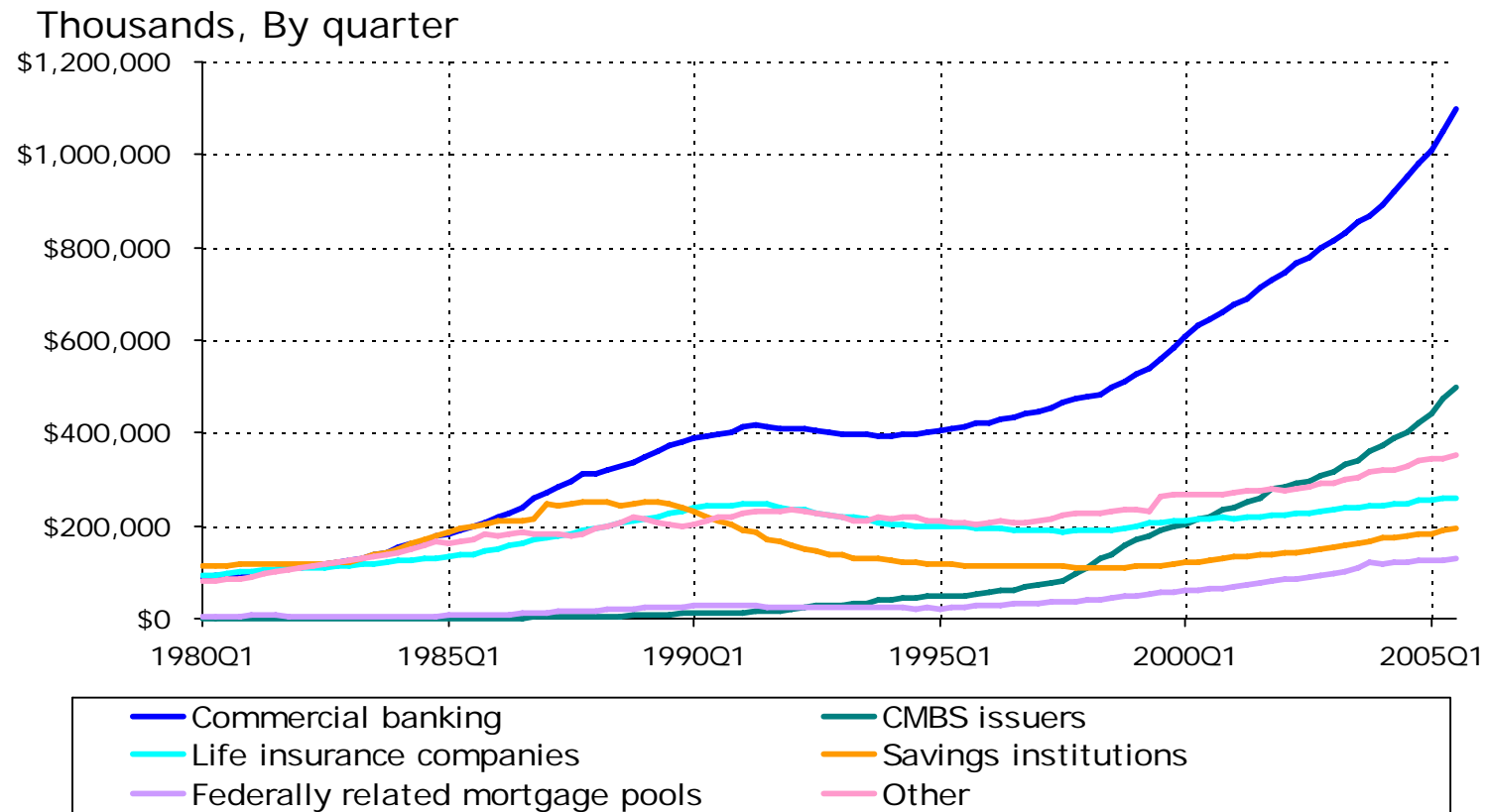
\$ Millions, By quarter



Source: Federal Reserve Board.



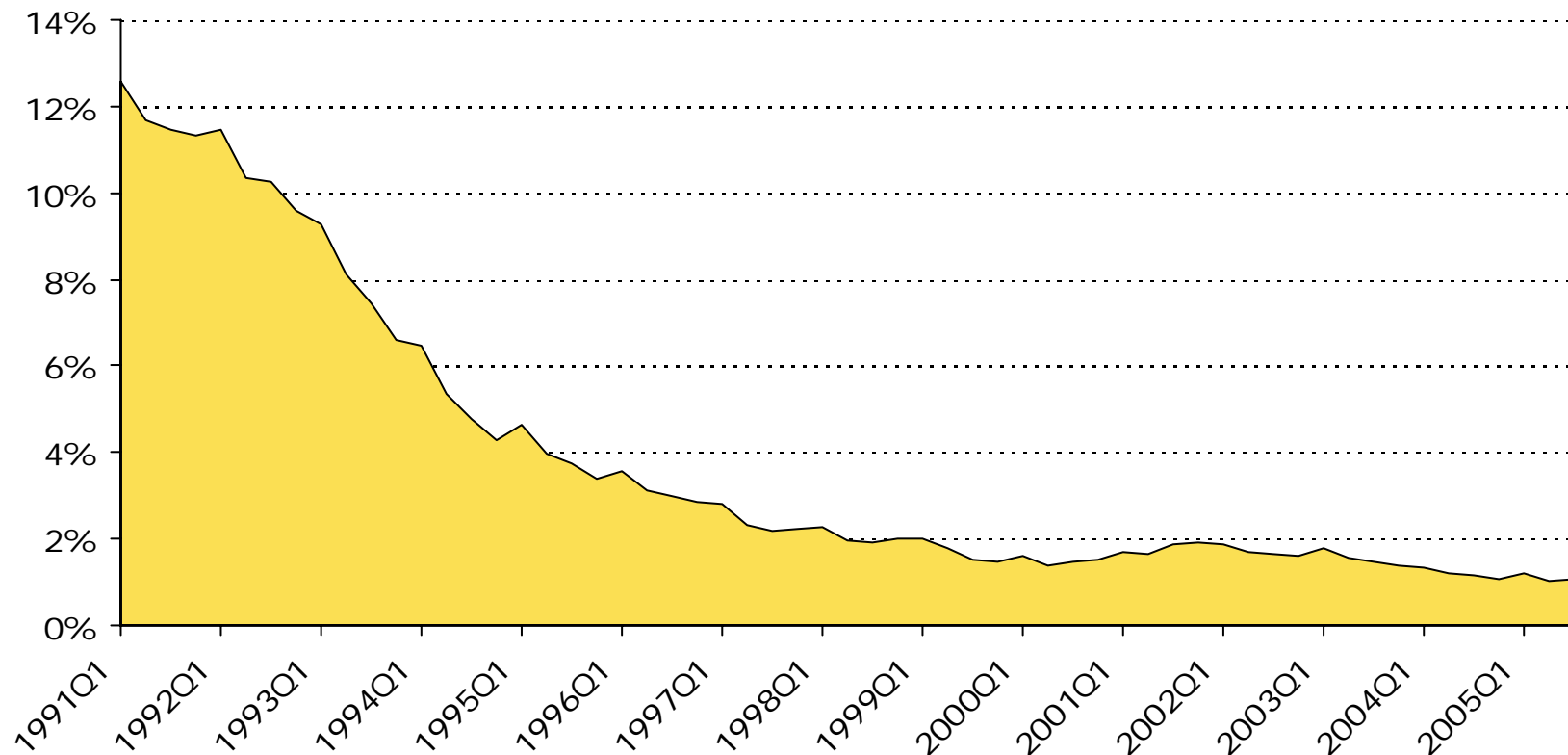
Commercial/Multifamily mortgage debt held by selected investor groups



Source: Federal Reserve Board.



Commercial/Multifamily delinquency rates at commercial banks

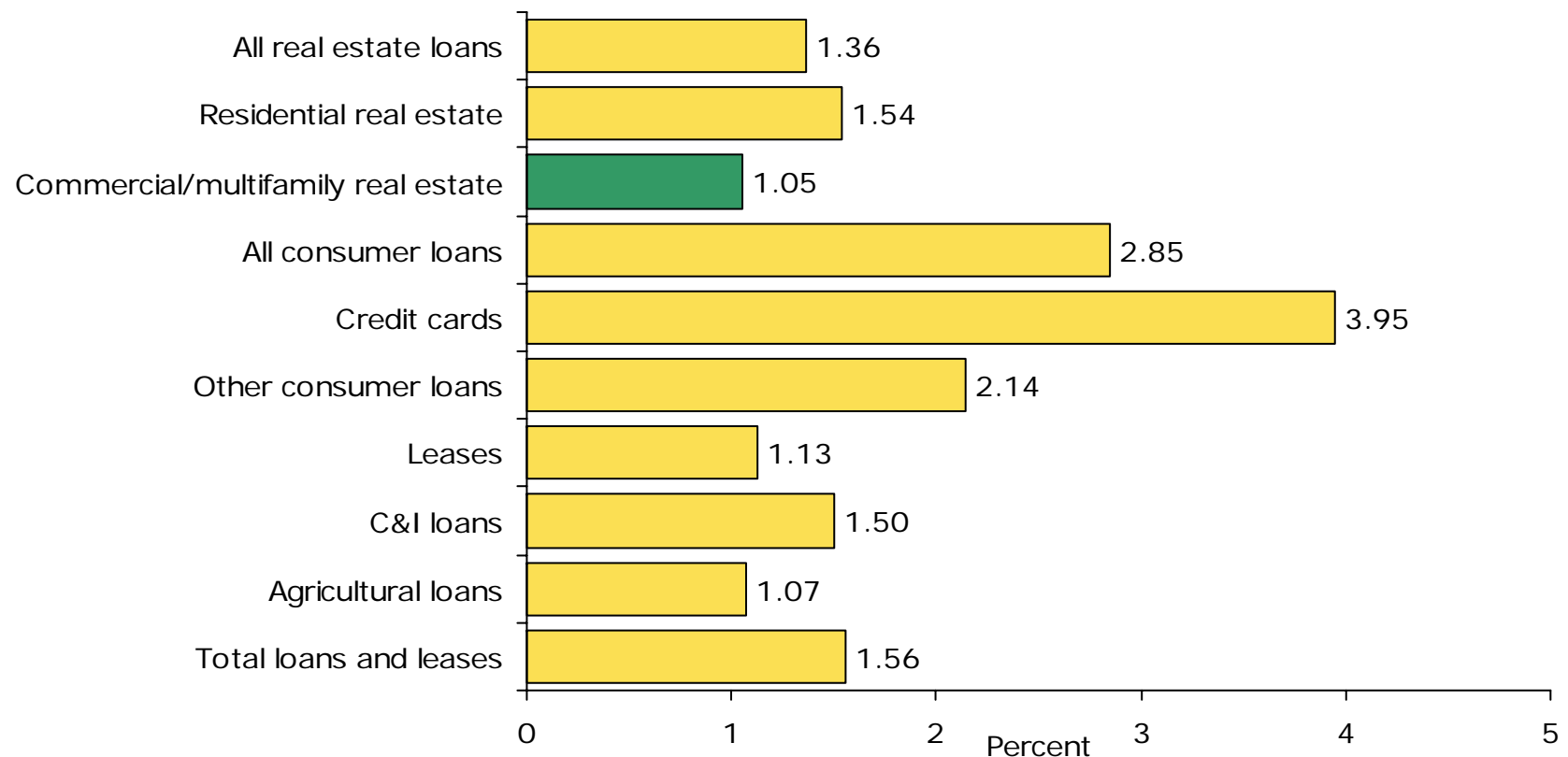


Delinquent loans are those past due thirty days or more and still accruing interest as well as those in nonaccrual status. They are measured as a percentage of end-of-period loans. Not seasonally adjusted

Source: Federal Reserve Board.



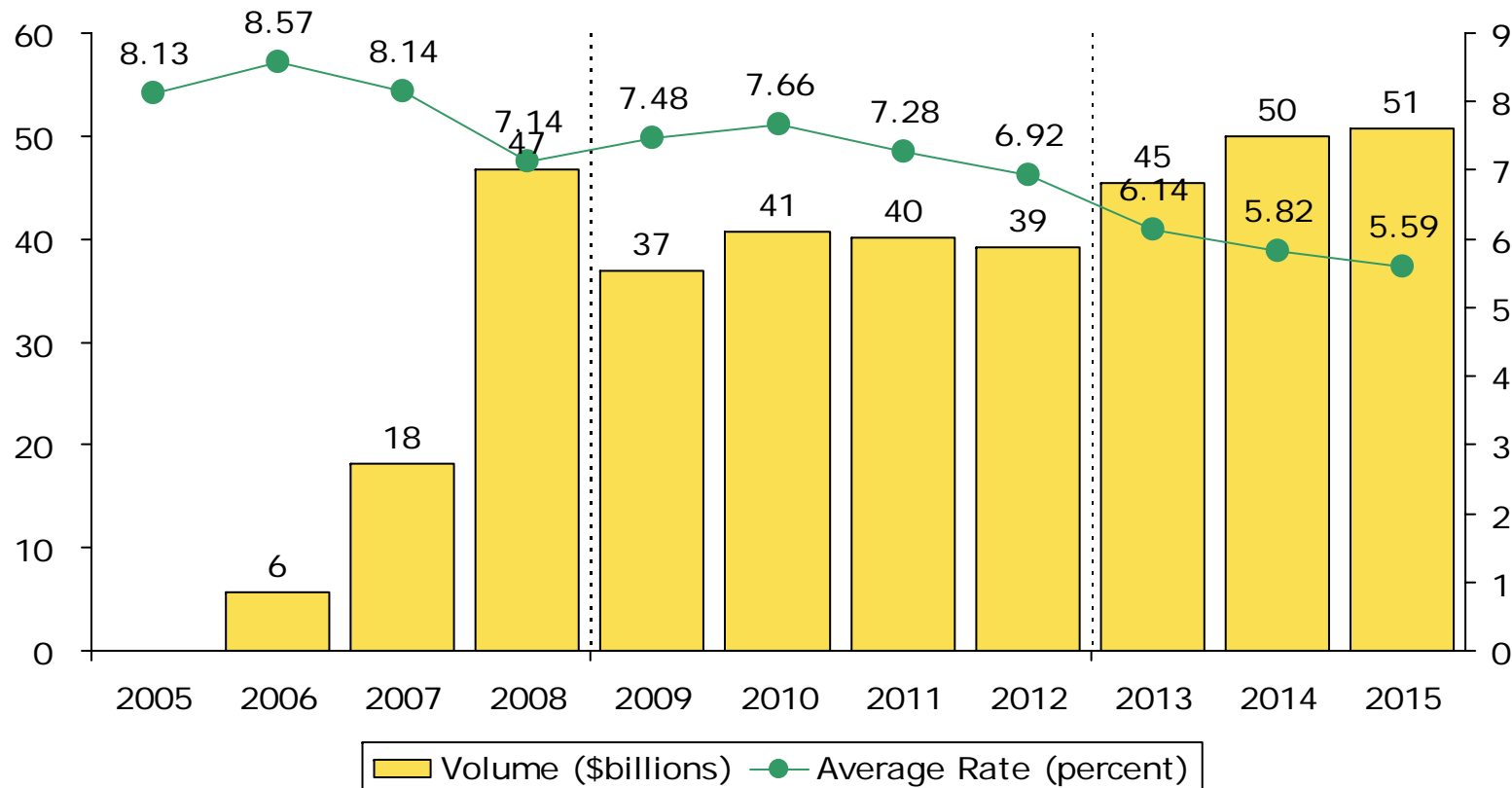
30+ Day delinquency rates at commercial banks – 2005 Q3



Delinquent loans are those past due thirty days or more and still accruing interest as well as those in nonaccrual status. They are measured as a percentage of end-of-period loans. Not seasonally adjusted.

Source: Federal Reserve Board.

Volume of maturing fixed rate CMBS loans and average gross coupon, by year of expected maturity



Source: JPMorgan and Trepp.



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MBA economic forecast – February 2006

	2005		2006				2007		Q4-over-Q4		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	2004	2005	2006
<i>Percent Change, Annual Rate</i>											
Real Gross Domestic Product	4.1	1.1	4.4	3.5	3.1	3.0	3.1	3.1	3.8	3.1	3.5
Personal Consumption Expenditures	4.1	1.1	5.0	2.7	2.4	2.5	2.8	2.7	3.8	3.0	3.2
Business Fixed Investment	8.5	2.8	10.4	6.3	7.1	7.0	6.5	7.1	10.9	6.4	7.7
Residential Investment	7.3	3.5	-3.7	-2.1	-4.2	-2.7	-2.9	-2.7	6.6	7.7	-3.2
Govt. Consumption & Investment	2.9	-2.4	3.3	1.8	2.1	2.0	1.9	1.4	2.1	1.2	2.3
Net Exports (Bil. Chain 2000\$)	-618	-650	-649	-650	-651	-643	-633	-622	-601	-632	-648
Inventory Investment (Bil. Chain 2000\$)	-13	26	10	30	46	46	44	42	52	17	33
GDP Deflator	3.3	3.0	2.0	2.3	2.1	2.1	2.4	2.2	2.9	3.0	2.1
Consumer Prices	5.1	3.2	2.0	3.1	2.7	2.6	2.6	2.7	3.4	3.7	2.6
<i>Percent</i>											
Unemployment Rate	5.0	4.9	4.9	4.9	4.9	5.0	5.0	5.1	5.5	5.1	4.9
Federal Funds Rate	3.5	4.0	4.4	4.7	4.8	4.8	4.8	4.8	1.3	3.2	4.7
10-Year Treasury Bond Rate	4.2	4.5	4.5	4.6	4.7	4.8	4.8	4.8	4.3	4.3	4.7

Notes:

Housing starts and home sales are seasonally adjusted at annual rate.

Total existing home sales include condos and co-ops.

Total 1-to-4-family originations and refinance share are MBA estimates. These exclude second mortgages and home

refinance share is percent of total dollar volume of closed loans.

ARM share is percent of total number of closed conventional purchase loans.

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Contact information/resources

Doug Duncan
dduncan@mortgagebankers.org
1919 Pennsylvania Ave - Washington, DC 20006
202-557-2825

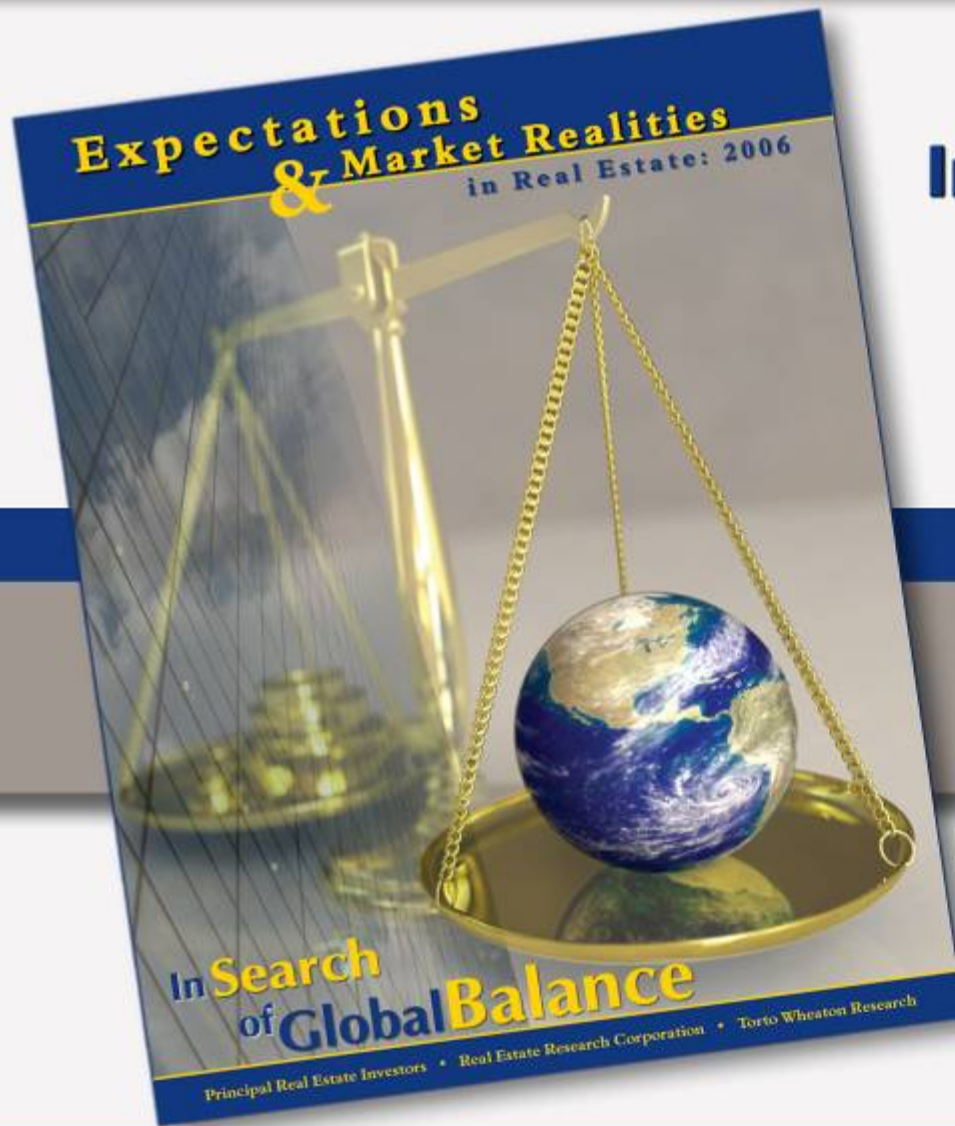
- **MBA homepage:**
www.mortgagebankers.org
- **Research and Forecasts:**
<http://www.mortgagebankers.org/ResearchandForecasts/EconomicOutlookandForecasts>
- **Research Data:**
<http://www.mortgagebankers.org/ResearchandForecasts/ProductsandSurveysmarketdata/>
- **MBA Newslink:**
<http://www.mortgagebankers.org/NewsandMedia/MBANewsLink>
- **Home Loan Learning Center:**
<http://www.homeloanlearningcenter.com/default.html>
- **RIHA:** <http://www.housingamerica.org/sitemap.html>



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Expectations and Market Realities

Expectations
& Market Realities
in Real Estate: 2006



In Search
of Global Balance

Randy Mundt, *Principal and Chief Investment Officer,*
Principal Real Estate Investors

Ken Riggs, Jr., CFA, CRE, FRICS, *CEO and Managing Principal,*
Real Estate Research Corporation

Ray Torto, Ph.D., CRE, *Principal and Chief Strategist*
CBRE/Torto Wheaton Research

Principal Real Estate Investors

Real Estate Research Corporation

Torto Wheaton Research



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Capital Markets and Pricing



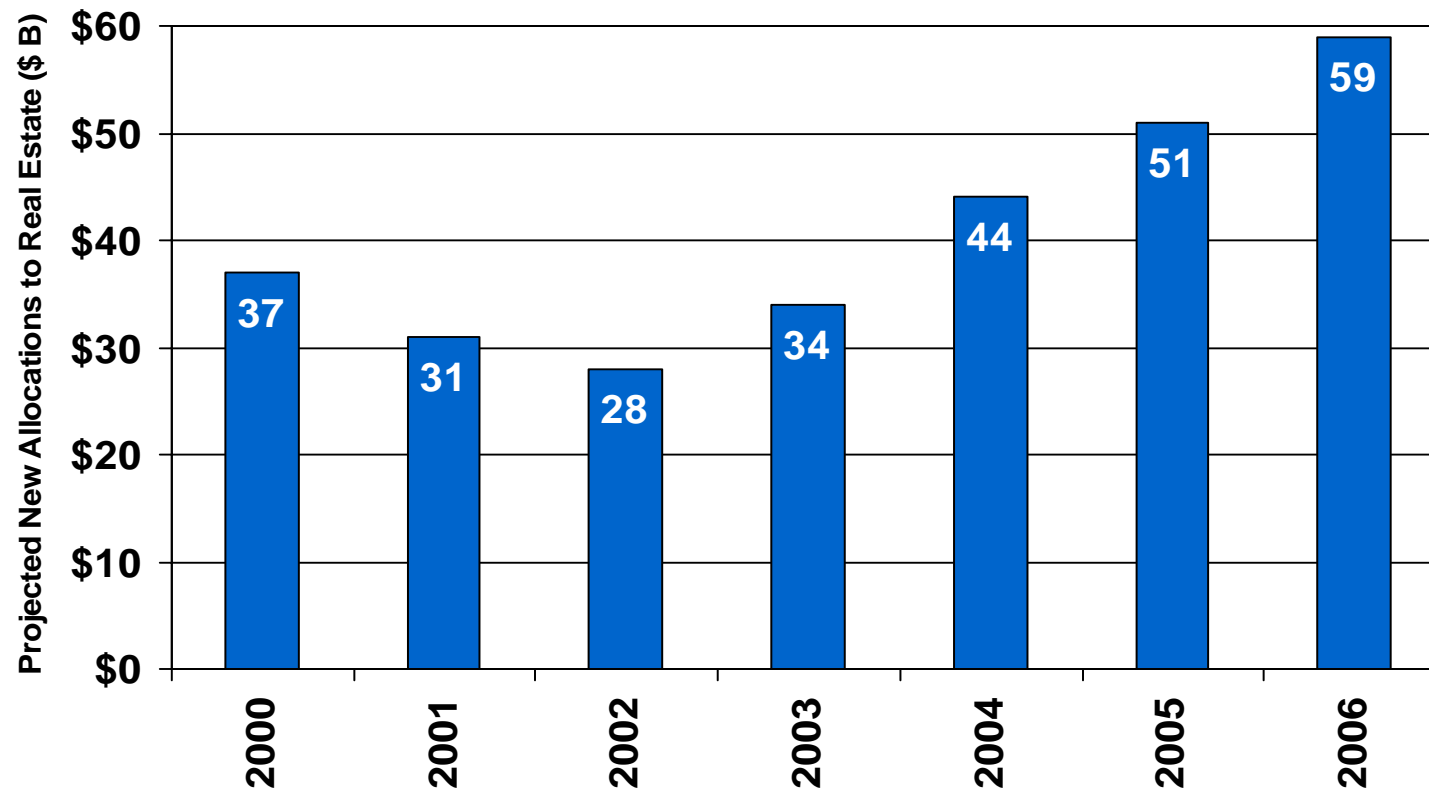
US Sales Volume Up 50% in 2005

	<u>2005</u>	<u>2004</u>	<u>% Change</u>
Office	\$100.5B	\$72.3B	39%
Retail	\$46.4B	\$38.0B	22%
Industrial	\$34.5B	\$20.1B	72%
Multi-Housing	\$86.6B	\$48.1B	80%
Total Real Estate Transactions	\$268.0B	\$178.5B	50%

Source: Real Capital Analytics

Institutional Money to Real Estate

Expected Capital Flows to Real Estate



Source: Kingsley Associates 2006 Plan Sponsor Survey



Why Real Estate?

Opportunities for:

Cash Flow

Appreciation

Diversification

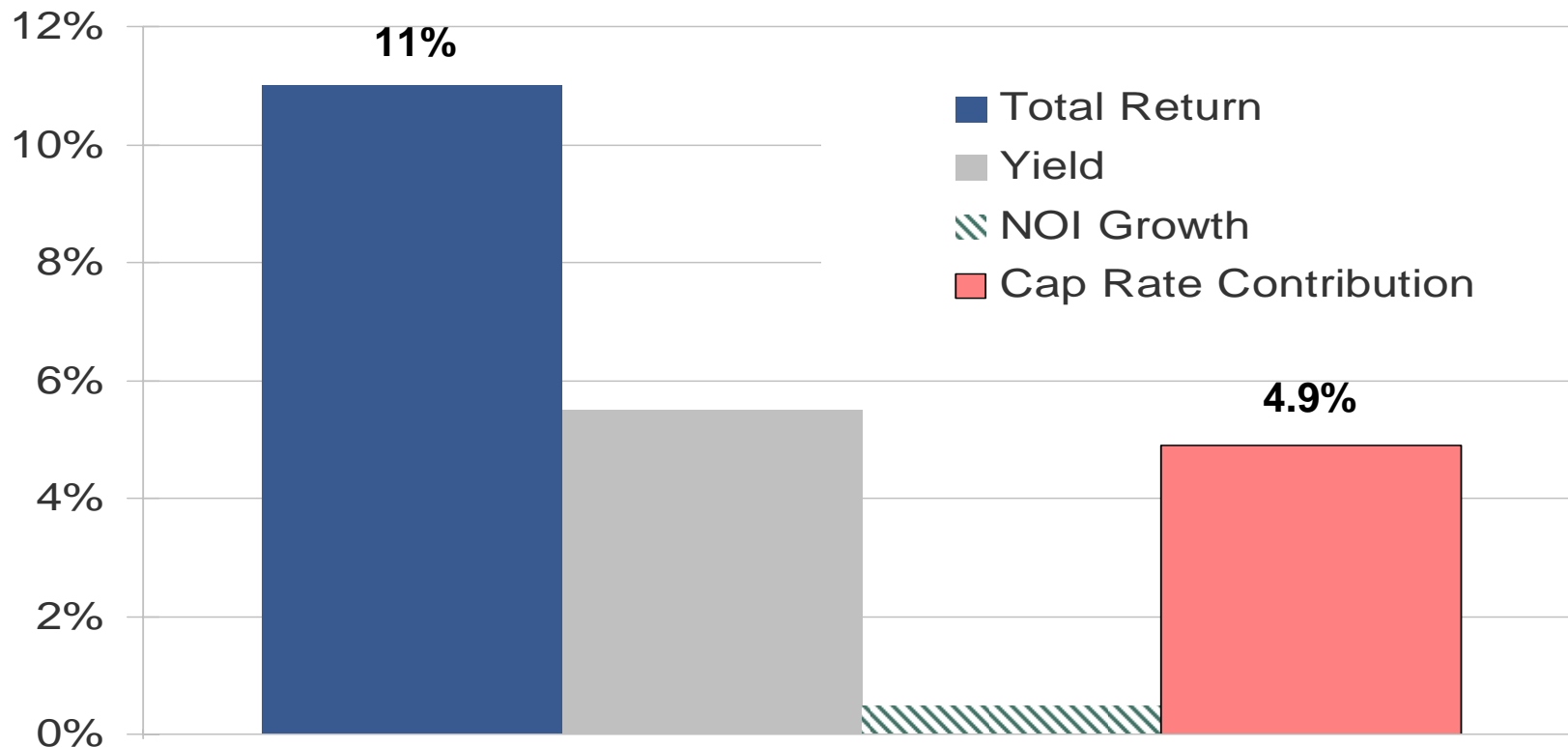
Alpha



Returns in the Cap Rate Compression Era

Components of Return (2002:2-2005:2): Core Properties

3 Year Average



*Office, Industrial, Retail, Multi-Housing; NCREIF Weighted

Source: TWR Investment Database



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The Capital Market Outlook



Cap Rate Composition

- **Cap rate is composed of:**
 - **+ Risk free rate**
 - **+ Risk premium**
 - **+ Cap X**
 - **- Expected appreciation**



Outlook for Inflation

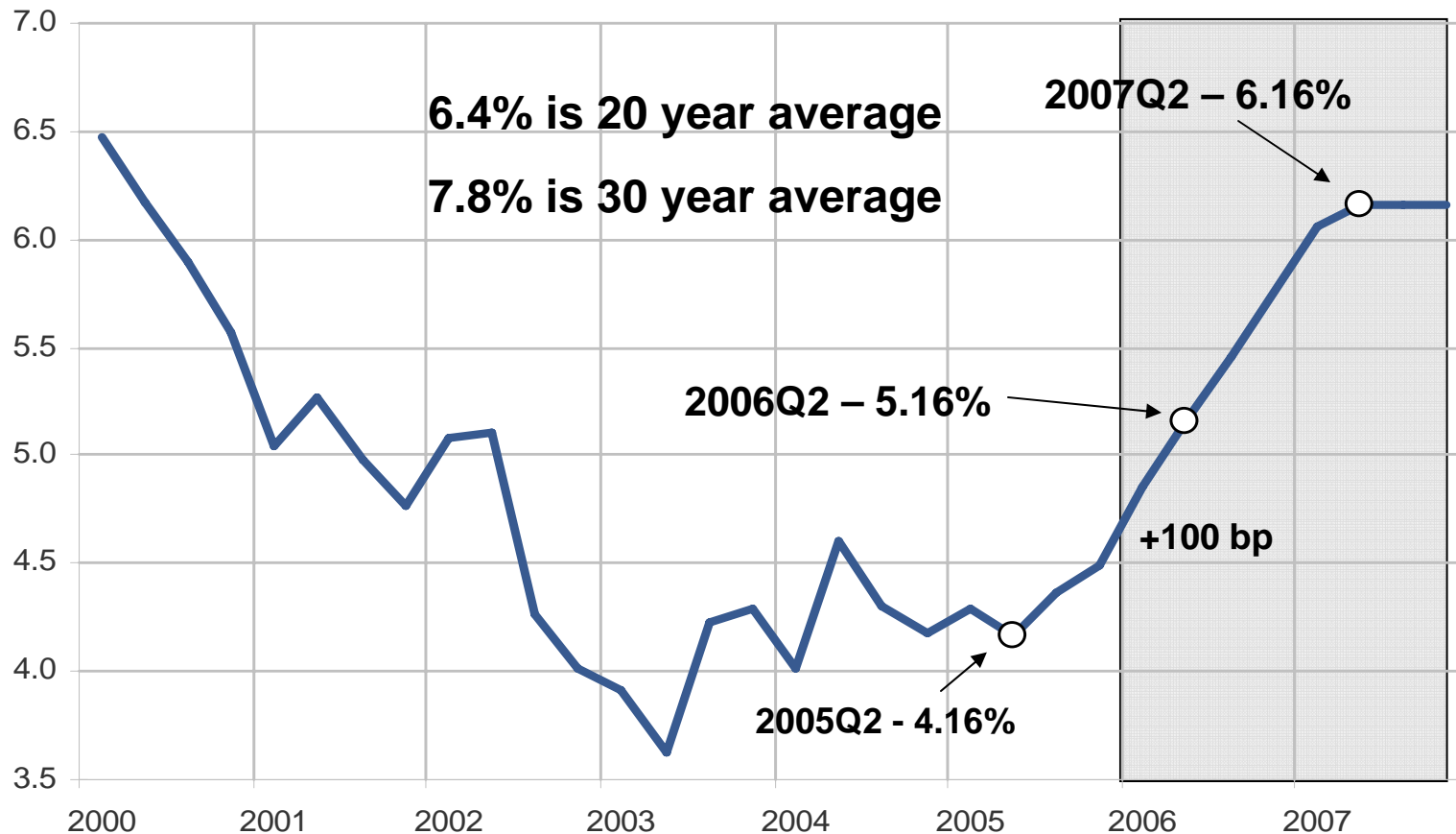
- In the Fed's own words:

"...possible increases in resource utilization as well as elevated energy prices have the potential to add to inflation pressures."

Source: Fed FOMC Statement, January 31, 2006

Inflation Expectations Must Eventually Show Up Here

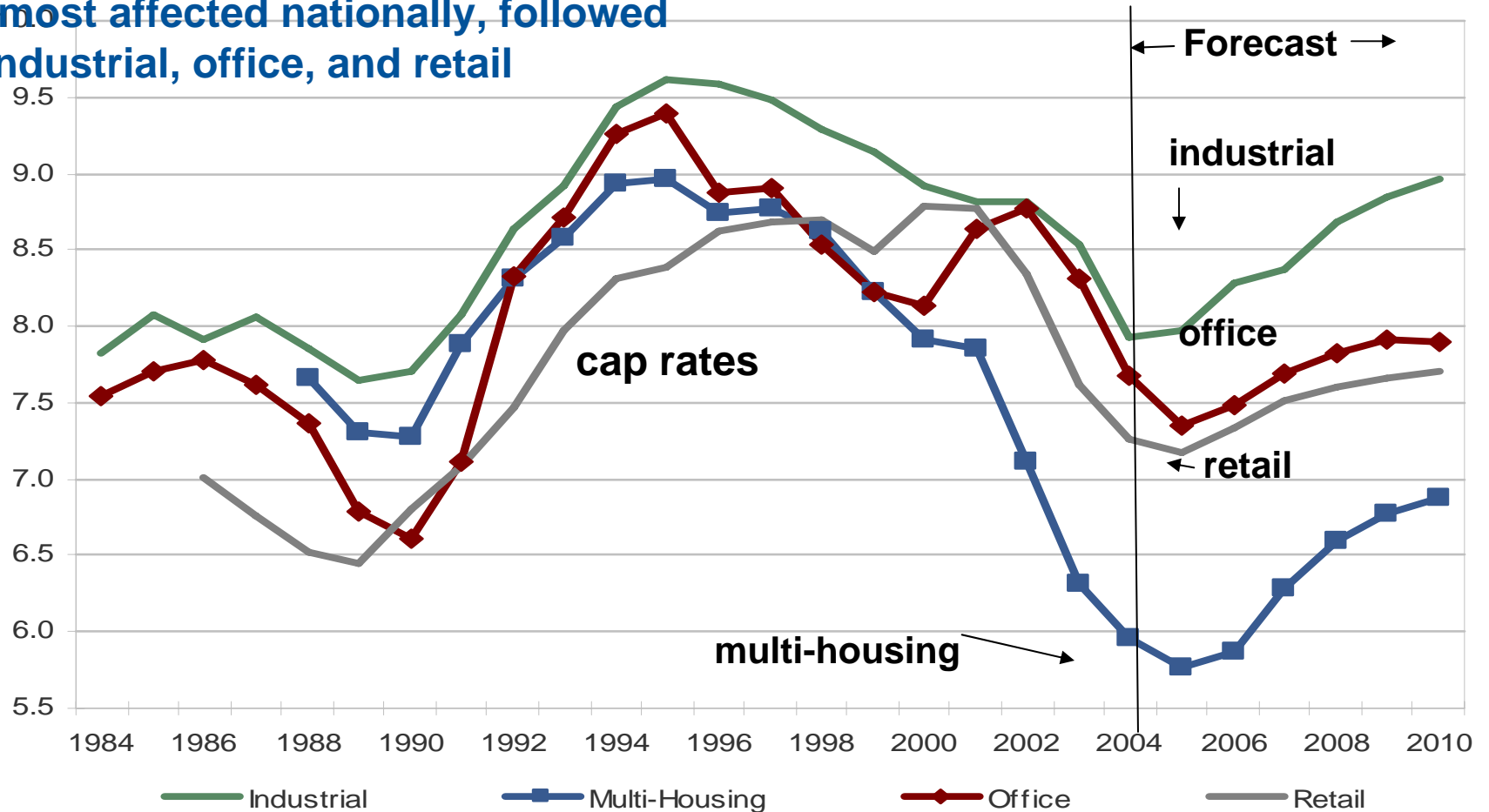
10-Year Treasury Yield, % Forecast



Sources: FRB, TWR forecast



MH most affected nationally, followed by industrial, office, and retail



Source: TWR Investment Database





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The Leasing Market



Leasing Markets Are Expanding! But Not Like the Old Days!

Percentage Increase in Rents by Property Type

	<u>2005</u>	<u>2006</u>	<u>Historical</u>
Multi-Housing	2.7%	3.1%	7.3%
Office	4.3%	4.4%	13.5%
Industrial	2.2%	2.7%	4.8%
Retail	3.7%	3.3%	5.0%
Hotel	8.7%	6.5%	11.0%

Rents are a good performance measure because they reflect the balance between supply and demand.

Source: TWR Outlooks XL



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Multifamily Housing



Apartment Construction Keeps Pace, Condominium Completions Soar

Units, Thousands



Source: TWR/Dodge Pipeline.

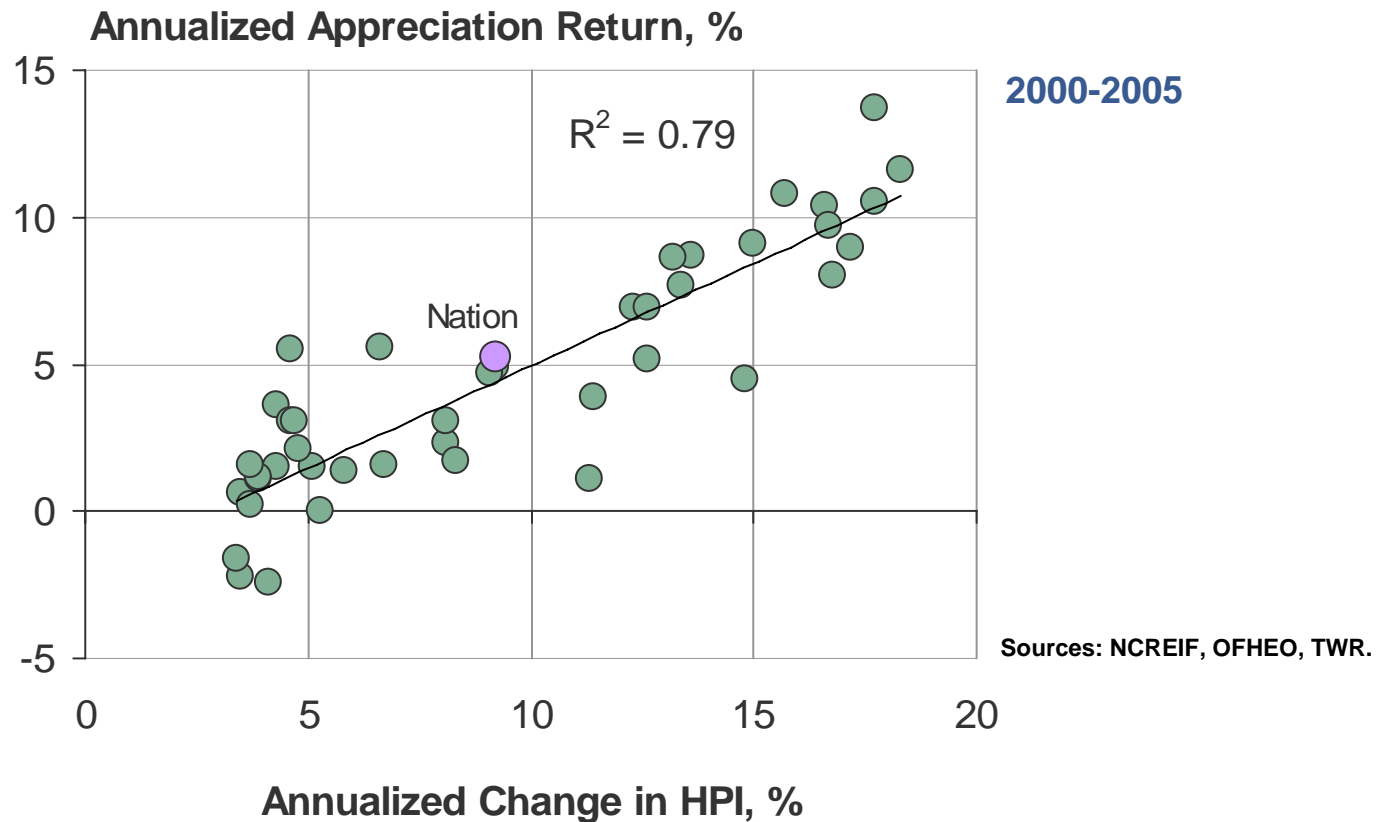


Pricing in Major Condo Markets in 2005

Market	Change in Cap Rate, %	Apartment Appreciation, %	Home Price Appreciation, %
Chicago	-1.9	6.3	9.0
Fort Lauderdale	-5.0	31.2	26.6
Orlando	-3.6	40.6	28.0
San Diego	-8.1	18.9	11.4
Tampa	-7.1	28.9	22.1
Washington	-11.3	22.2	21.3
West Palm Beach	-18.7	44.7	26.7

Sources: NCREIF, TWR.

As Home Prices Go, So Do Apartment Values?





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What Are the Implications for Lenders?



Sources of Market Risk for Lenders

- **With improving leasing markets, the systematic risk to lenders will come from declining values driven by rising interest rates and, therefore, cap rates.**

Examples:

- » **Floating rate loans**
- » **Re-finance risk, not term loan risk**
- » **Loosened Standards**



How Might This Portfolio Perform?

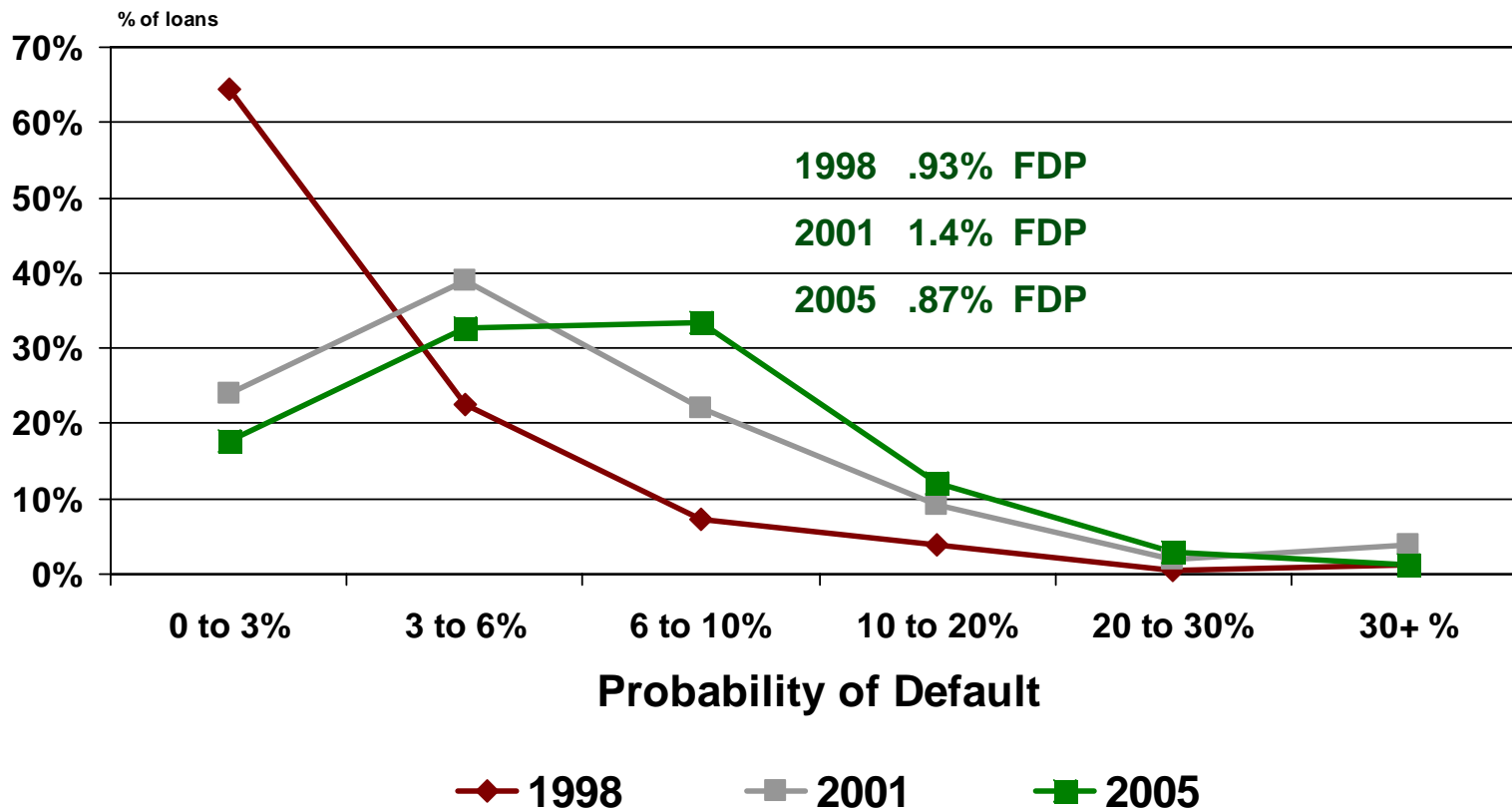
- **Goal: To risk rate all conduit loans in TREPP CMBS database Moody's Commercial Mortgage Metrics.**
- **Analysis incorporates different**
 - » **Starting and current DSCR**
 - » **Updated LTV**
 - » **Tenant roll**
 - » **Property vacancy**
 - » **Reserves**
- **How might this portfolio perform under different scenarios?**



Probabilities of Default

- Today CMBS reported delinquency is .3%
- Historically, Synderman has annual average defaults of 1.5% with highs of around 4% in early '90s
- Using Moody's CMM we estimate a FPD of .83% for the CMBS portfolio for the major "food groups".

Some Differences in Vintage



Source: Moody's CMM on Trepp



What Can Go Wrong? FPD Under Two Scenarios

	<u>Base Outlook</u>		<u>Inflation Outlook</u>
Multi-housing	.96%	—————>	3.1%
Office	1.6%	—————>	3.4%

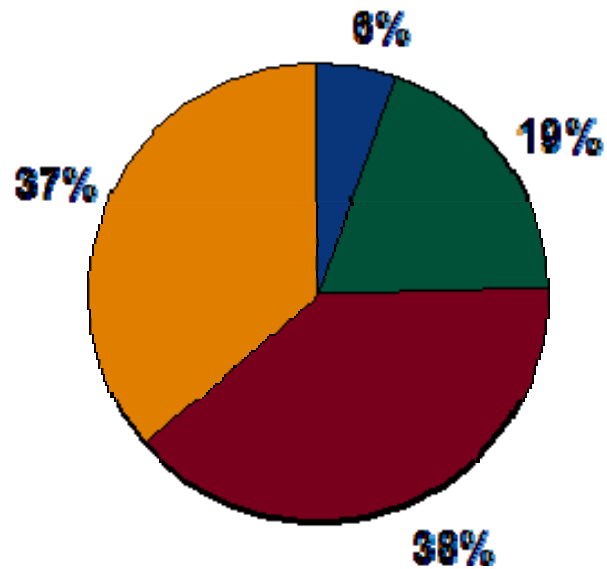


“Fooled by Randomness: the Hidden Role of Chance in Life and in the Markets” by Nassim N. Taleb

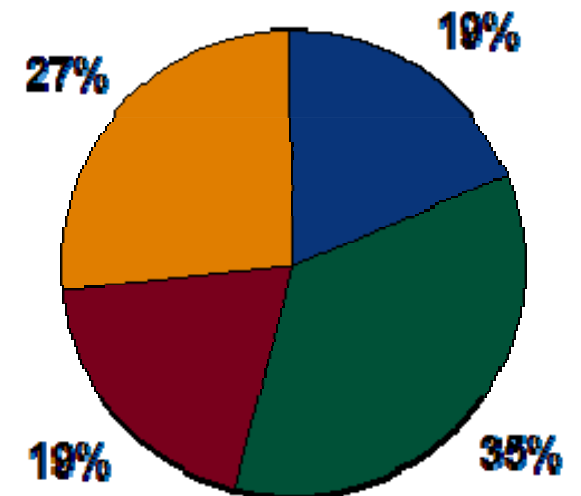
- **Book's Thesis:**
 - It's plain dumb luck, or randomness, not skills, hard work, etc, etc,
- **Book's Implication:**
 - Forecast don't work: Big events not known
 - e.g., 9/11. Long Term Capital, 1987 market crash
 - “Even a broken clock right twice a day”
- **Book's Shortcoming**
 - If didn't anticipate future, how can we function?
 - Role of econometrics:
 - › Determine what is explainable vs. what is unexplainable or random!

Percentage of Treasury Debt, By Owner

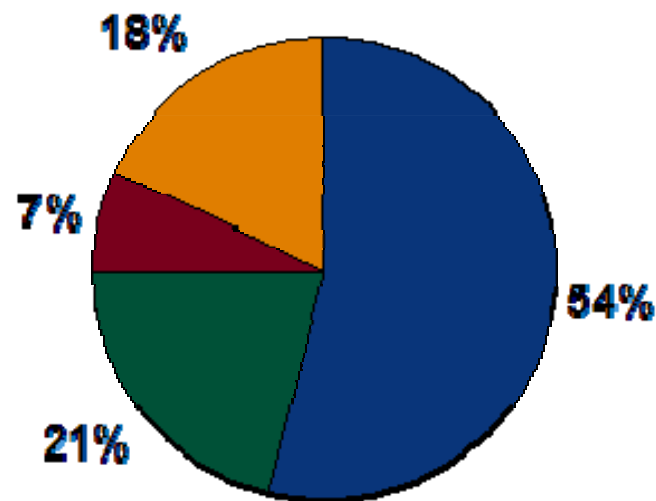
Dec. 1968



Dec. 1988



June 2005



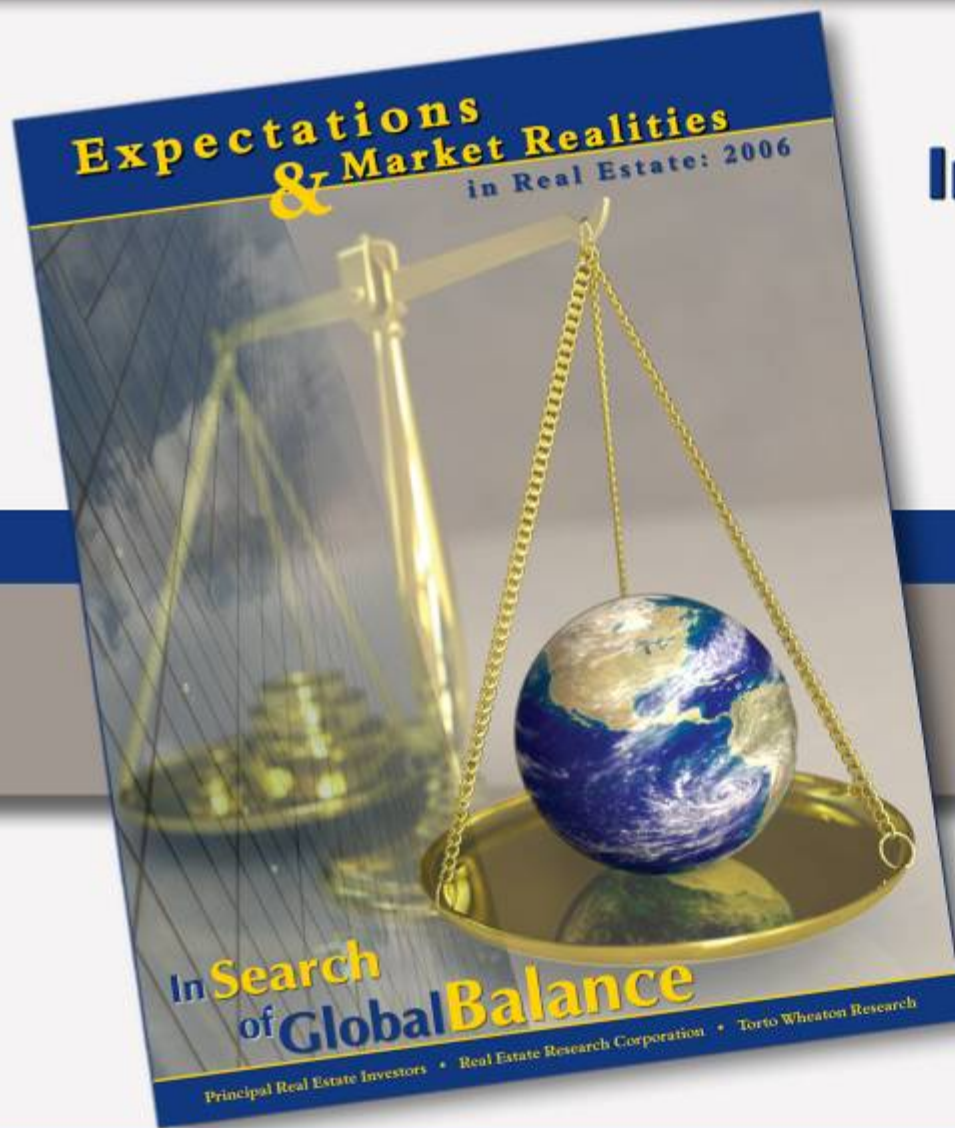
Foreign

Other Domestic

Banks and Insurance
Companies

U.S. Households and
Mutual Funds

Expectations
& Market Realities
in Real Estate: 2006



In Search
of Global Balance

Randy Mundt, *Principal and Chief Investment Officer,*
Principal Real Estate Investors

Ken Riggs, Jr., CFA, CRE, FRICS, *CEO and Managing Principal,*
Real Estate Research Corporation

Ray Torto, Ph.D., CRE, *Principal and Chief Strategist*
CBRE/Torto Wheaton Research

Principal Real Estate Investors

Real Estate Research Corporation

Torto Wheaton Research



**MBA's Commercial Real Estate Finance/
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Questions?