

# Past the Peak of the Credit Cycle

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# Road Map

- How did we get to this point in the economic cycle?
- Overstimulation of the US economy
- Housing finance in the US
- The five great distortions of this cycle
- Recent changes to the cycle
- What next?

# How Did We Get Here?

- Failure of Communism and the “Third Way” led to an expansion of Capitalism globally
- Neo-Mercantilists in developing nations dominate their economic policy
- Slowing population growth leads to pressure on entitlement systems, and economies generally
- The US adopted economic policies designed to avoid all recessions, leading to excessive risk-taking

# Not so much the Success of Capitalism

- But the failure of the alternatives...
- Collapse of aid from alternatives
- Peace Dividend
- Tax rates
- Regulation
- Trade policy progress in the 90s – Uruguay, NAFTA, progress lacking in the 2000s – Doha

# OECD Average Tax Rates



# New Capitalist Countries

- China – 1,320 million people
- India – 1,130 million
- Russia – 140 million
- Brazil – 190 million
- 3-4x America, Canada, Europe, and Japan

# Major Effects

- Capitalist labor force grows drastically, particularly in the lower skilled areas
- New technologies like the Internet, bring down the cost of outsourcing, aids distant cooperation
- This brings down wages, and raises profit margins, for now
- Raw materials are relatively scarce compared to capital, and capital relatively scarce to labor

# Energy, Metals, and Commodity Prices



Source: Bloomberg



# Global Equity Returns



Source: Bloomberg

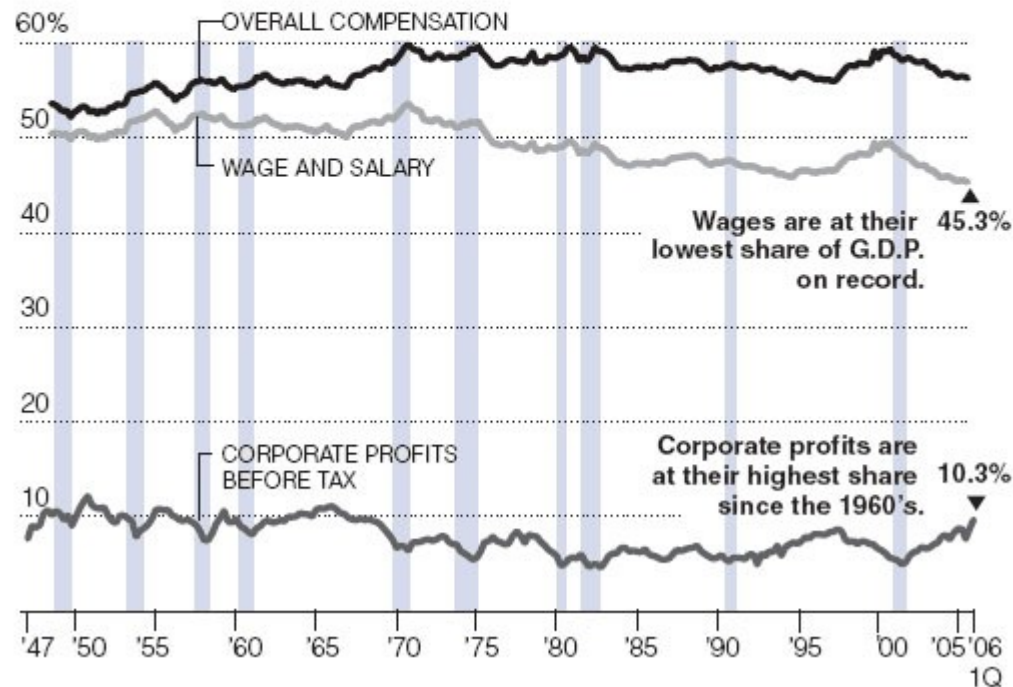
# Labor Versus Capital?

## Not Sharing in the Gains

While corporate profits have improved sharply in the last few years and the economy has become far more productive, the take-home pay of the typical worker has failed to keep up with inflation.

### Employee Compensation and Corporate Profits as Share of G.D.P.

*Quarterly figures; shaded areas show recessions*

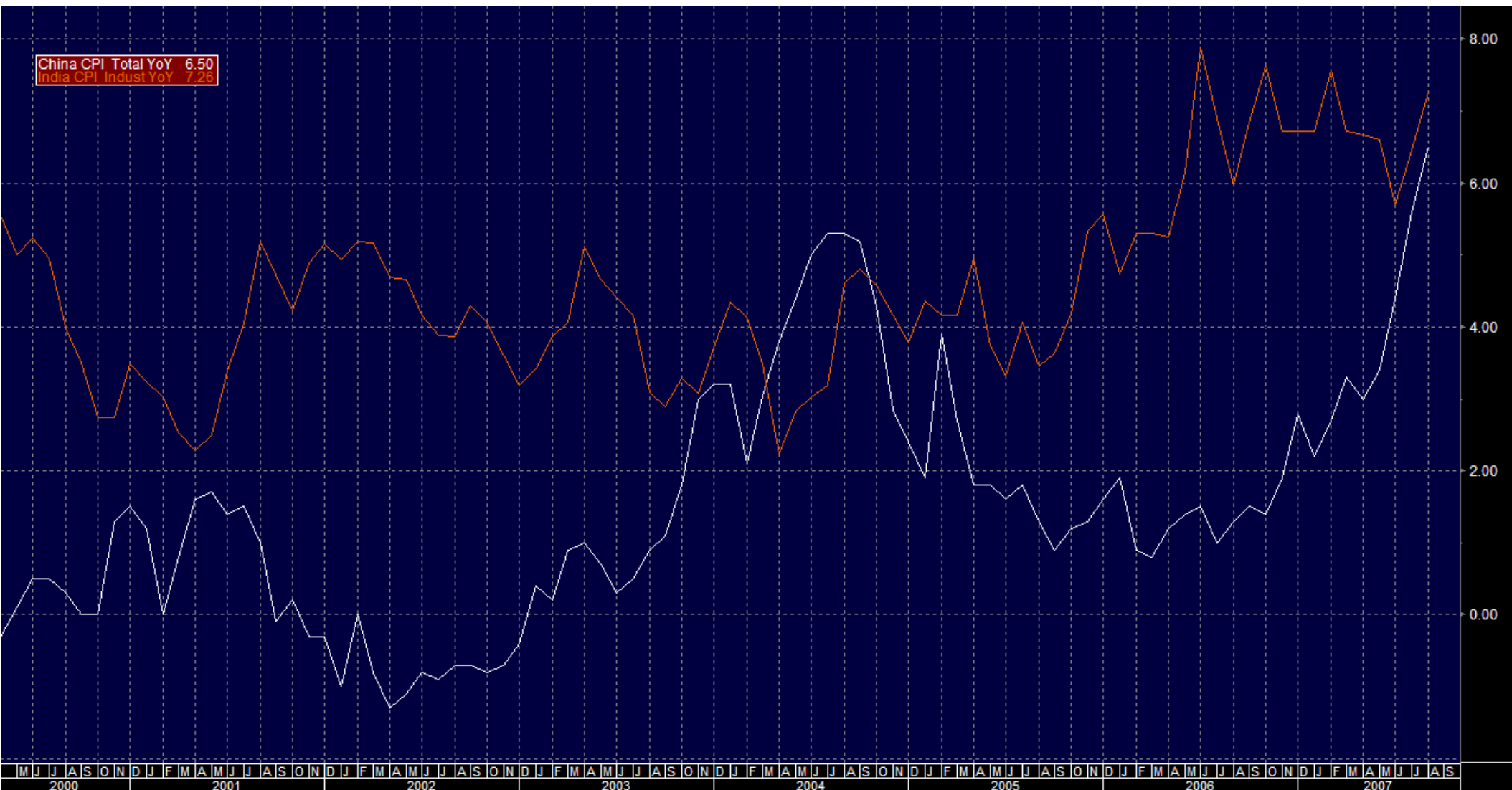


Source: Commerce Department via The New York Times

# Neo-Mercantilists Dominate Trade

- Producers in developing countries prefer a lower exchange rate than consumers would, and they have more political clout.
- Works in the short run because of a surplus of labor
- Problematic in the long run, because labor needs goods to survive, not foreign assets
- Rising inflation in developing nations could mean the end of the cycle

# Chinese & Indian Inflation



# Benefits to the United States

- Cheap consumer goods restrain inflation
- Investment in US securities keeps interest rates low and P/E multiples relatively high, which stimulates the US economy
- Neutralizes any restrictive Fed policy
- It's like the period near the end of the Bretton Woods treaty, but without the gold.

# 10 Year Swap Rates

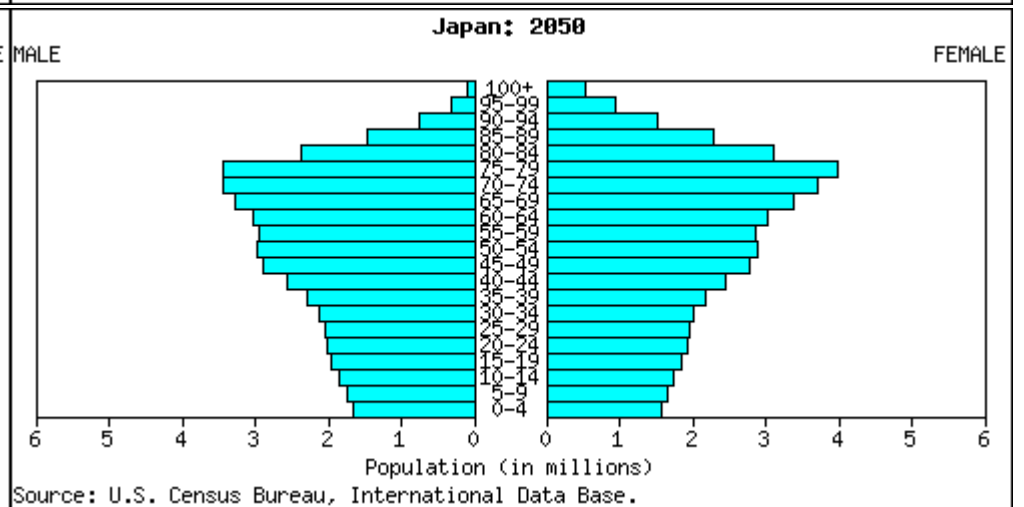
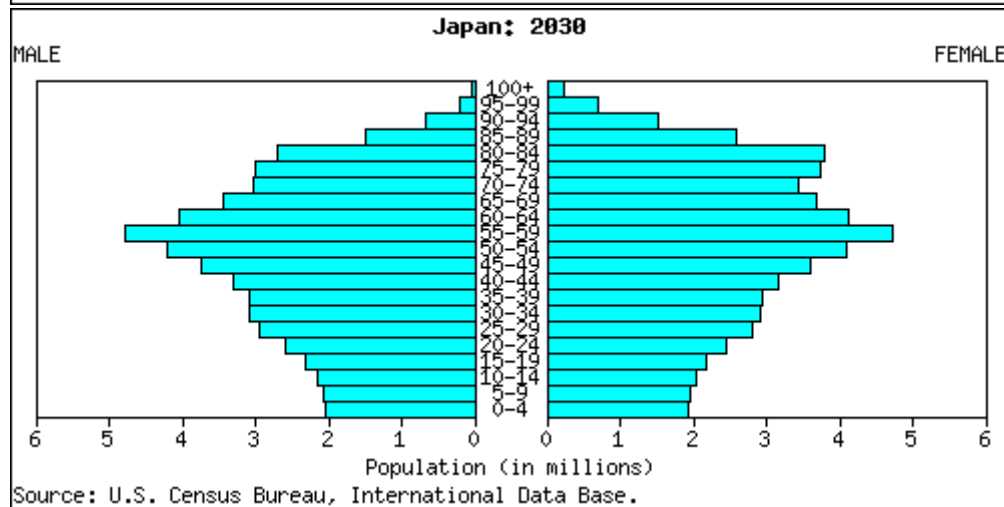
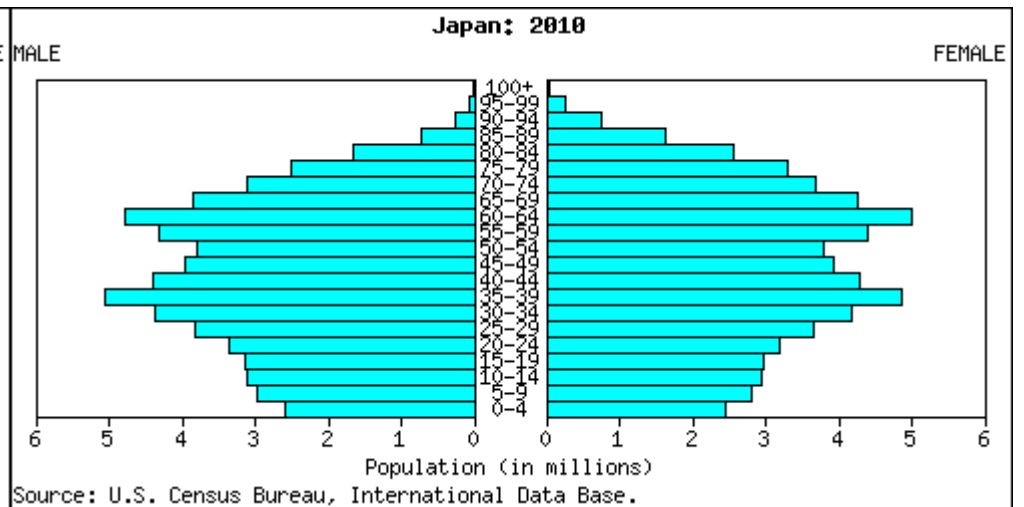
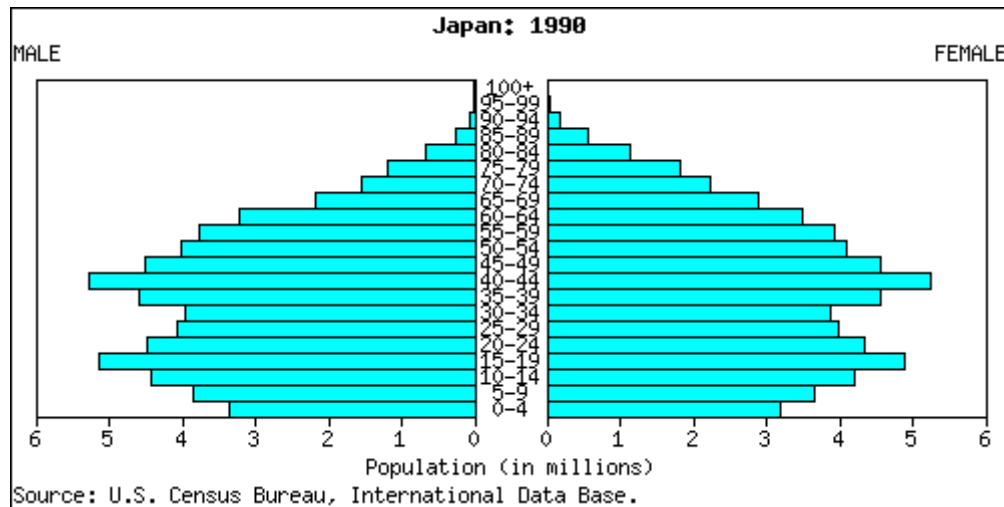


Source: Bloomberg

# Slowing Global Population Growth

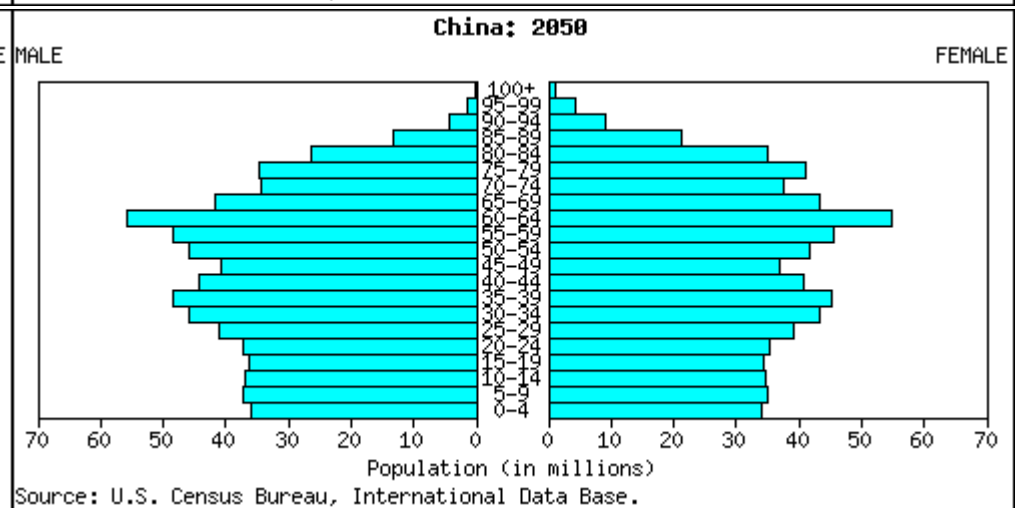
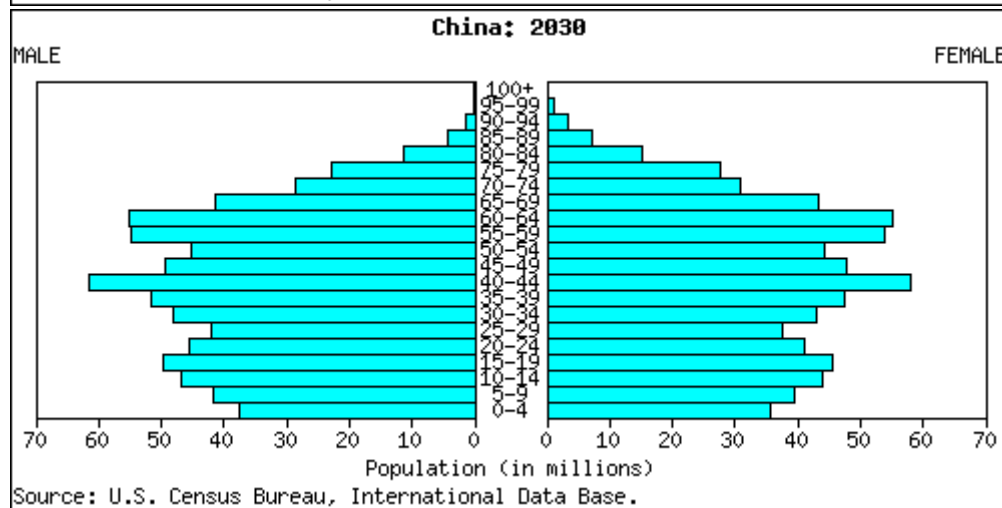
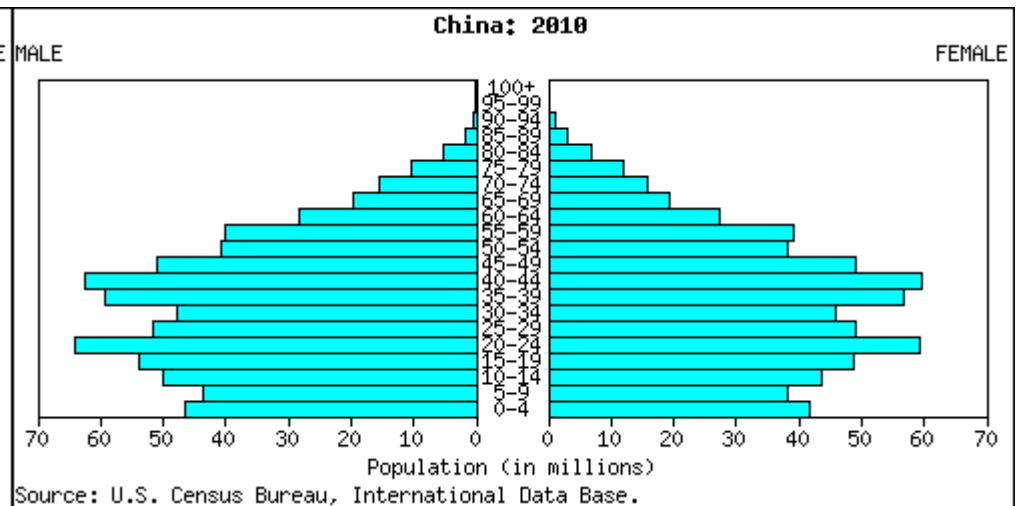
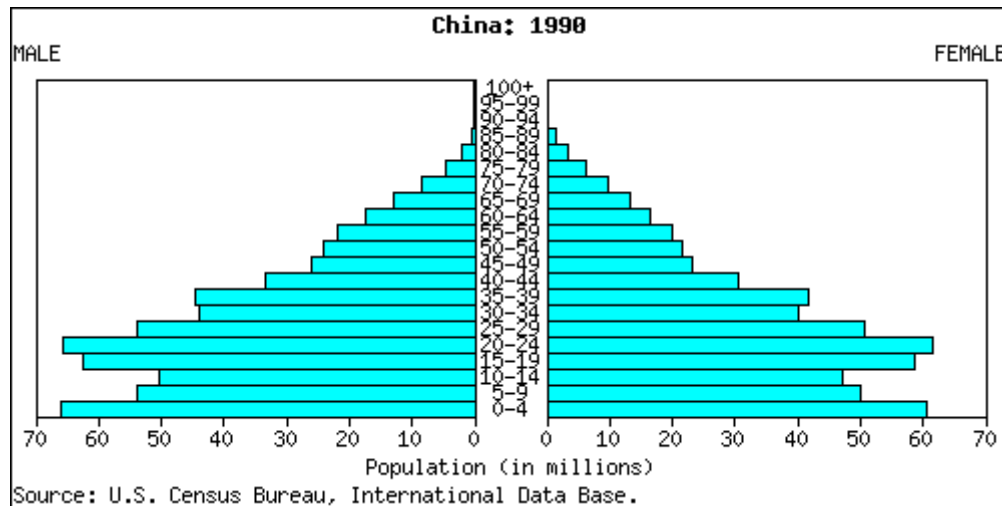
- Many nations below replacement rate
- Affects savings, consumption, productivity
- Forces immigration on slow-growing and shrinking countries that want to keep their economies growing
- How much can the working economy be taxed to support the consuming economy?

# Aging Japan

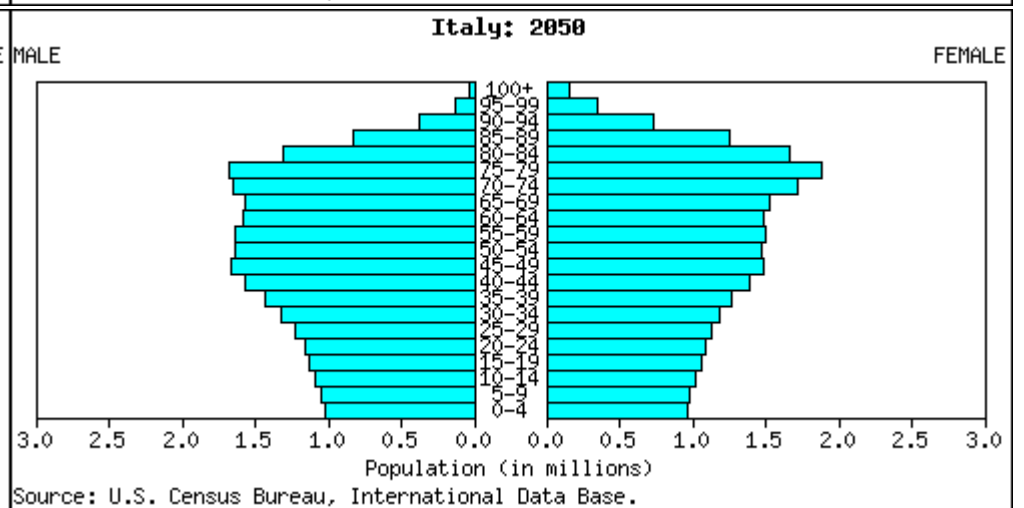
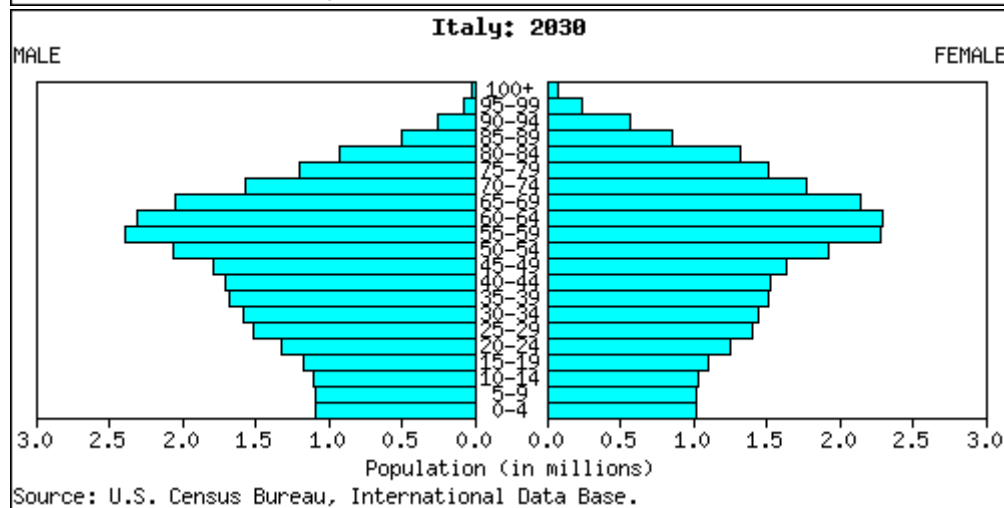
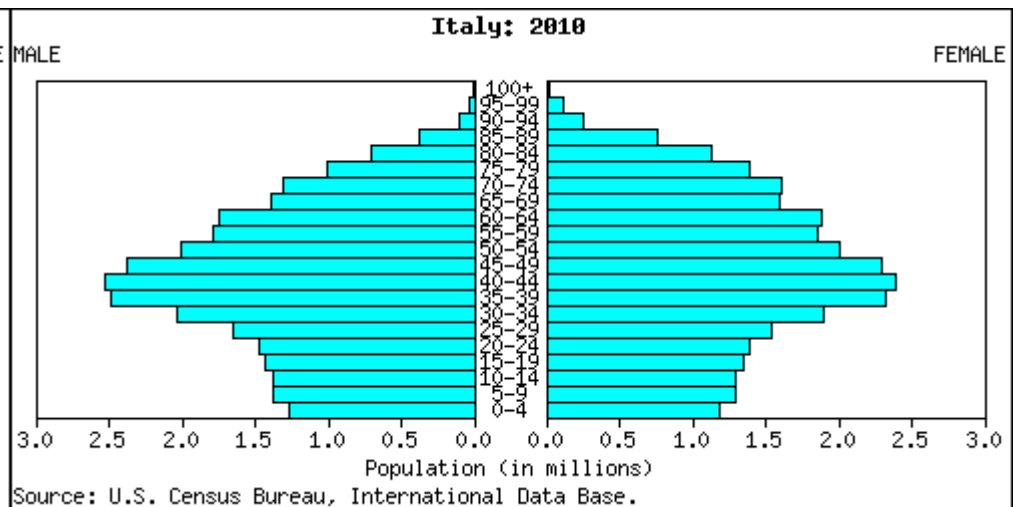
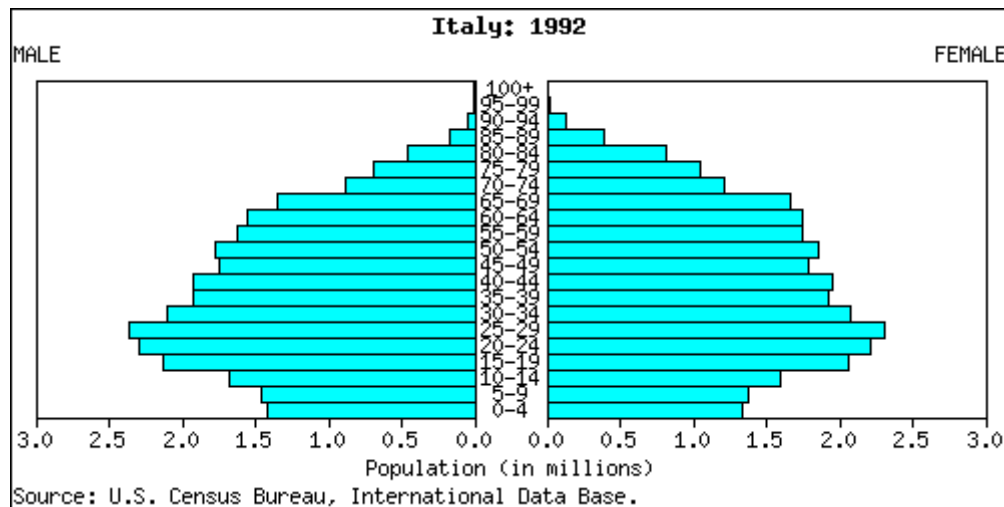




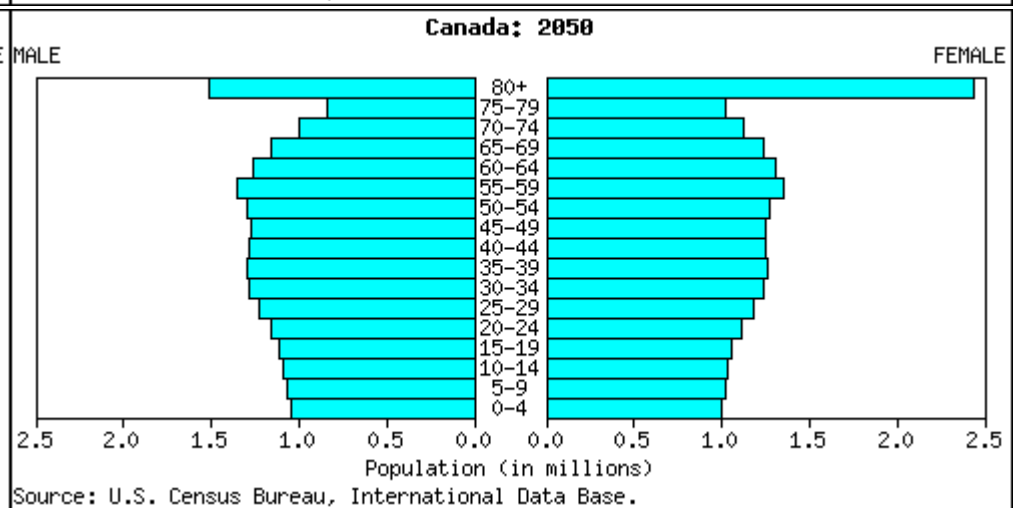
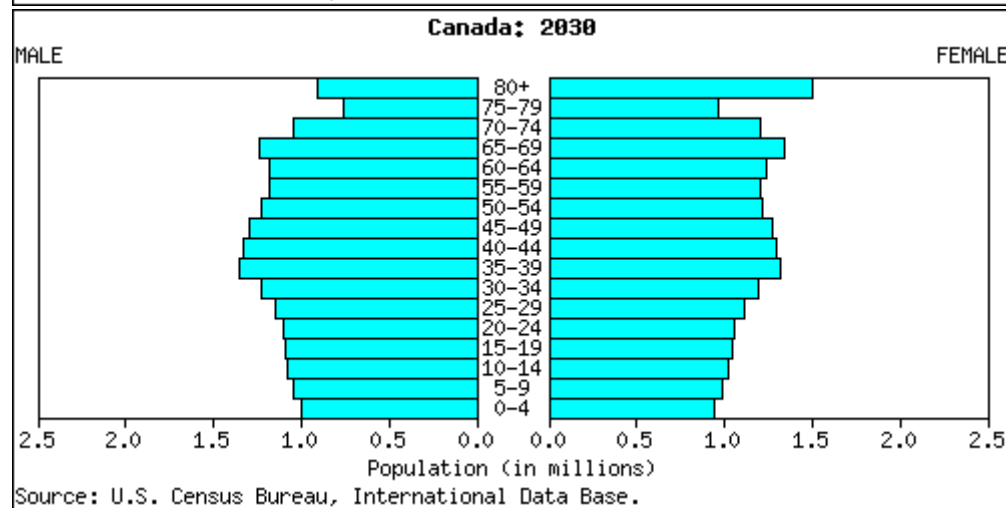
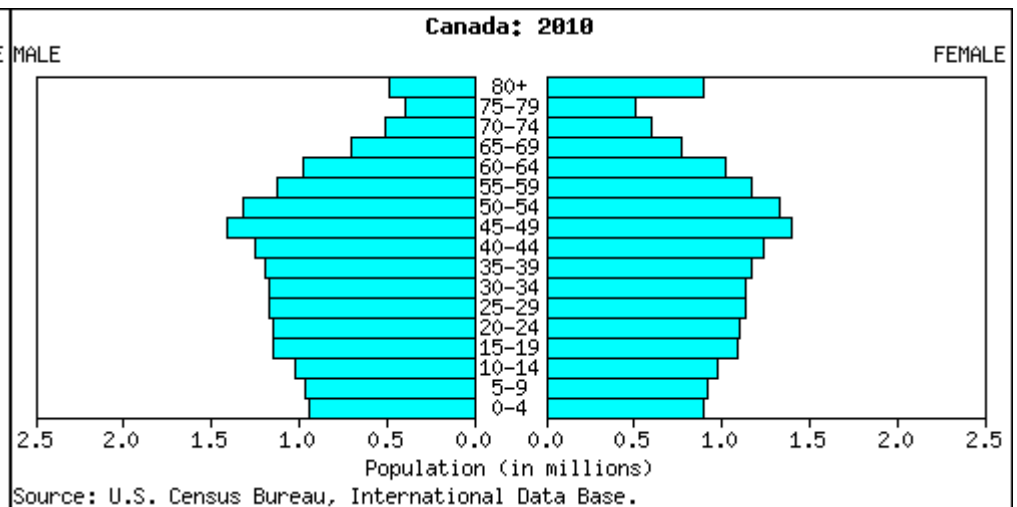
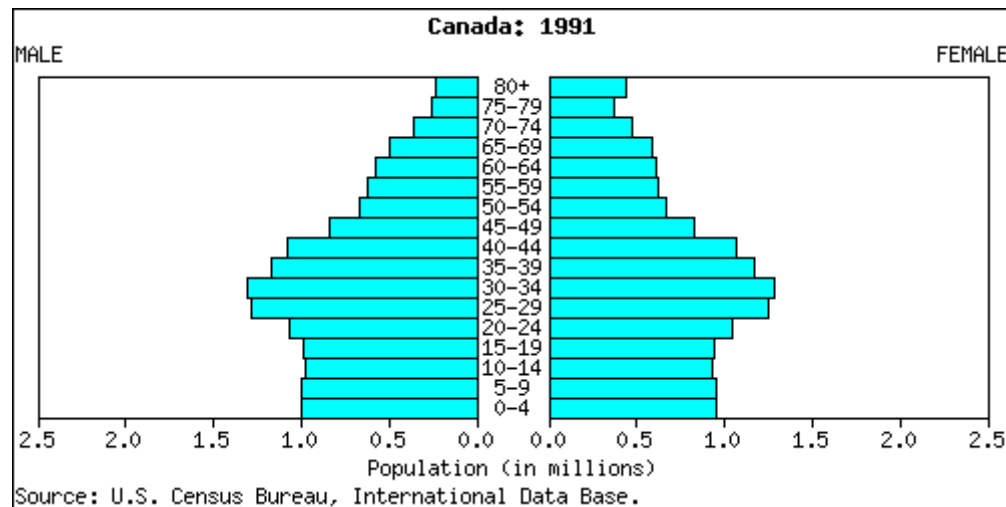
# Aging China



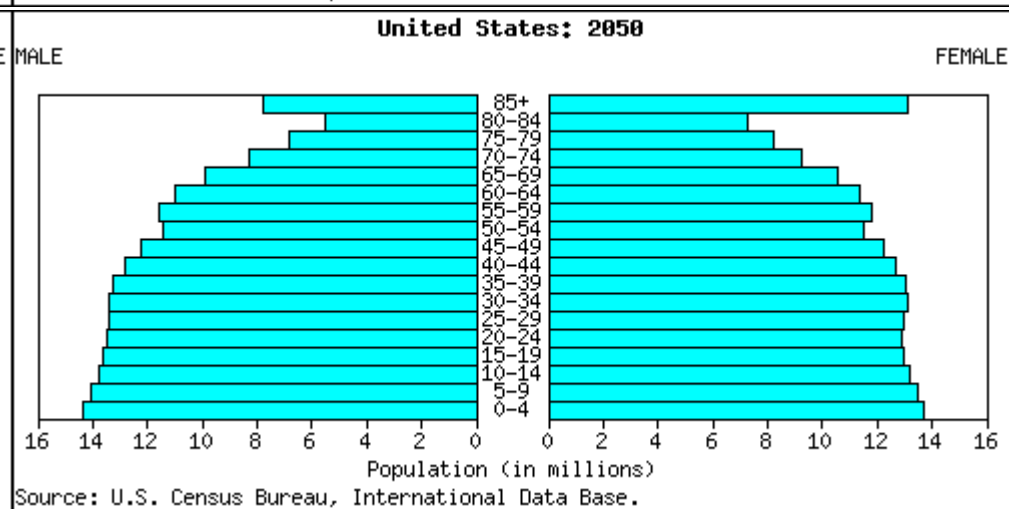
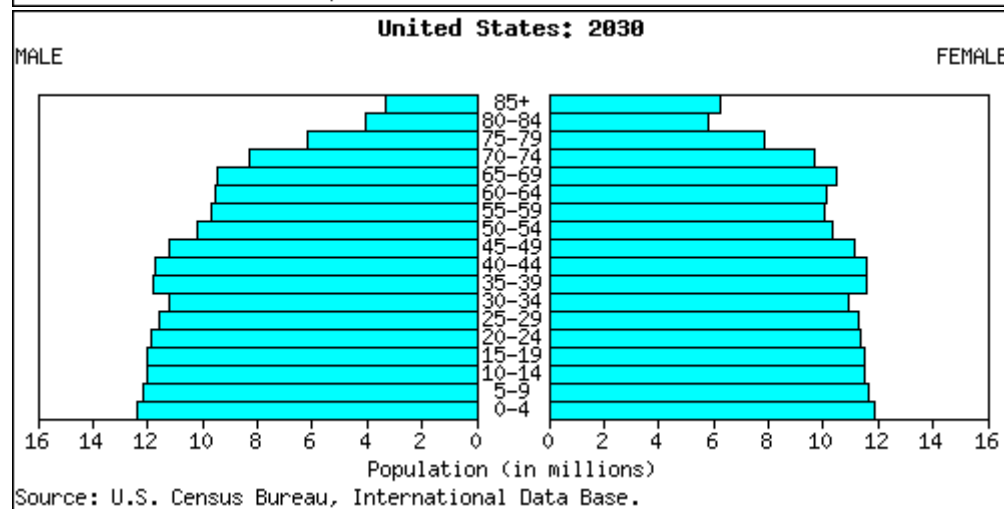
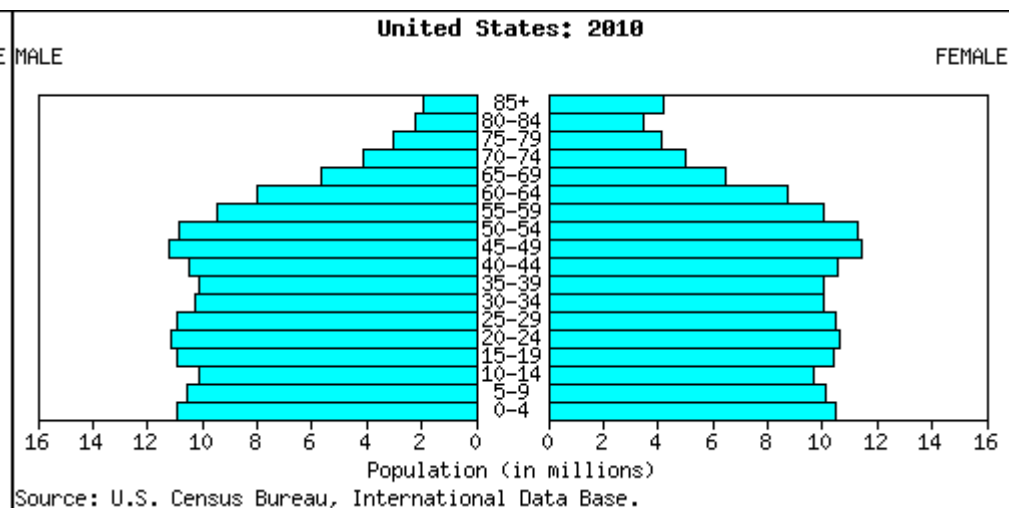
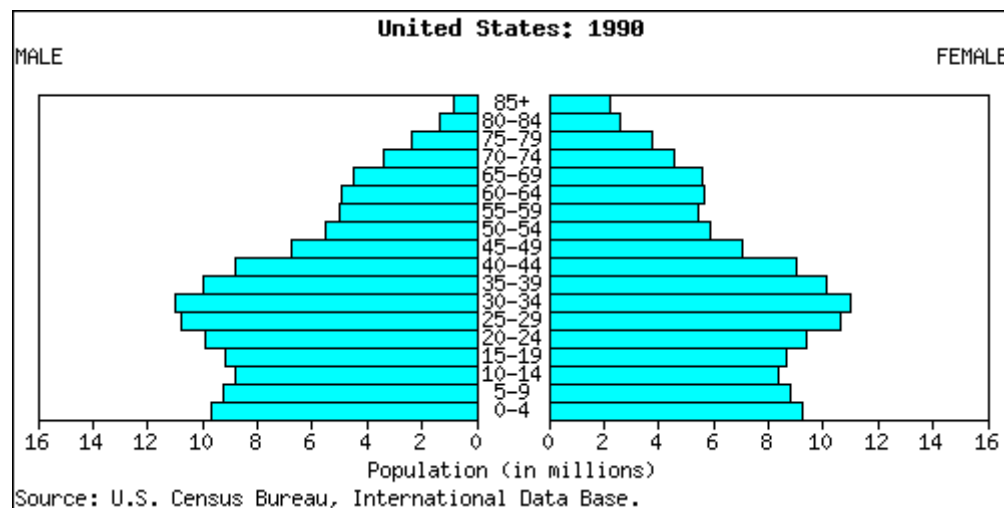
# Aging Italy



# Aging Canada?



# US: Forever Middle-Aged?



# Below Replacement Rate

- China
- Almost All of Europe
- Brazil
- Russia
- Japan
- Vietnam
- Iran
- Turkey
- Thailand
- South Korea

# Above Replacement Rate

- India
- Indonesia
- Pakistan
- Bangladesh
- Nigeria
- Mexico
- Philippines
- Egypt
- Ethiopia
- Congo

Global Total Fertility Rate: 2.9 children per woman of childbearing age

Source: CIA Factbook 2007

# Economic Effects

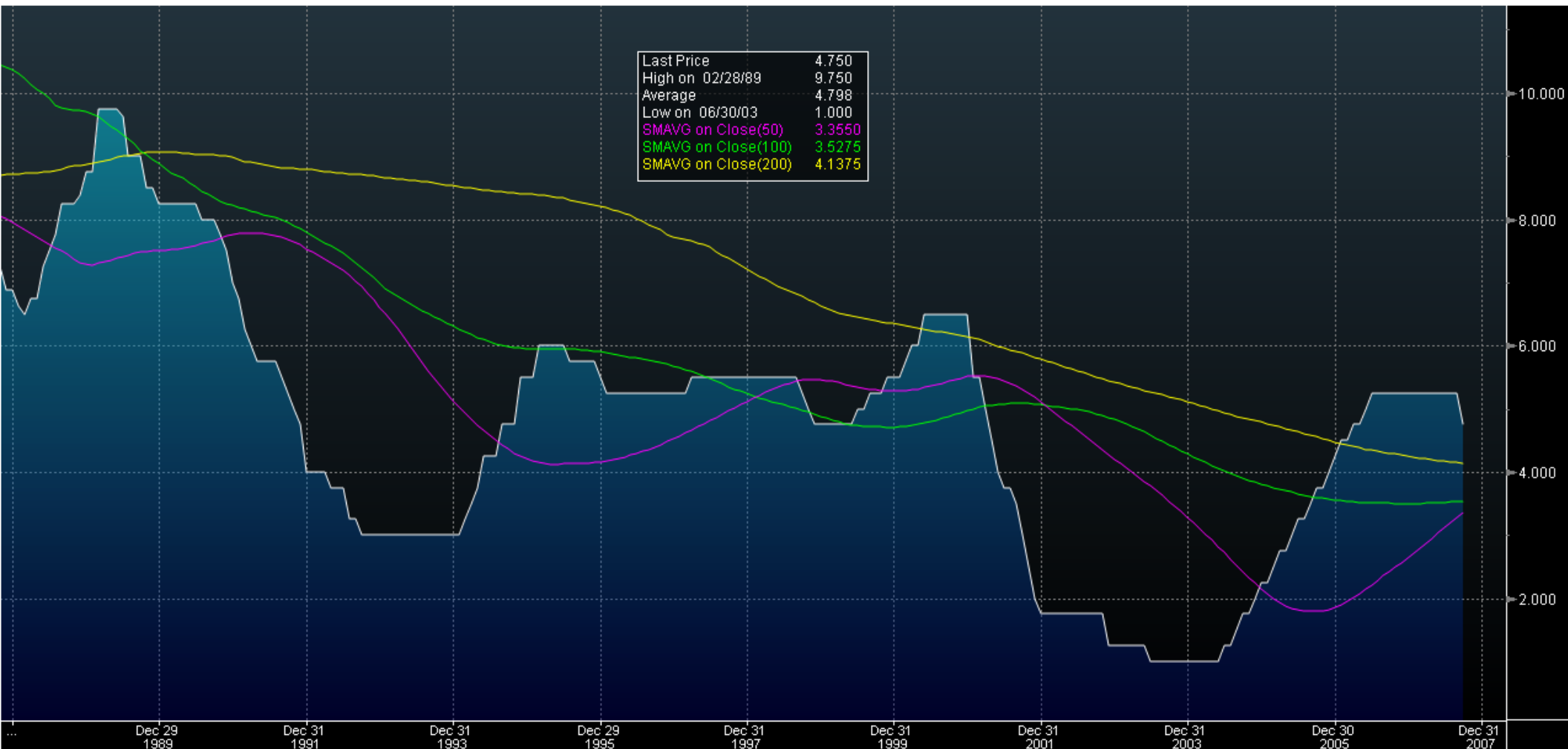
- Middle-aged people tend to be the most productive and the biggest savers (Excluding Baby Boomers in the US)
- Pension and Social Insurance systems will come under pressure – fewer workers supporting each retiree
- Immigration will continue to be a “hot potato”
- Prosperity will partially depend on increasing global economic integration, with older nations providing capital, and younger ones, labor

# Stimulation Everywhere for the US

- Monetary Policy
- Fiscal Policy
- Recycling the current account deficit
- Mortgage Refinance
- Loose oversight over lending

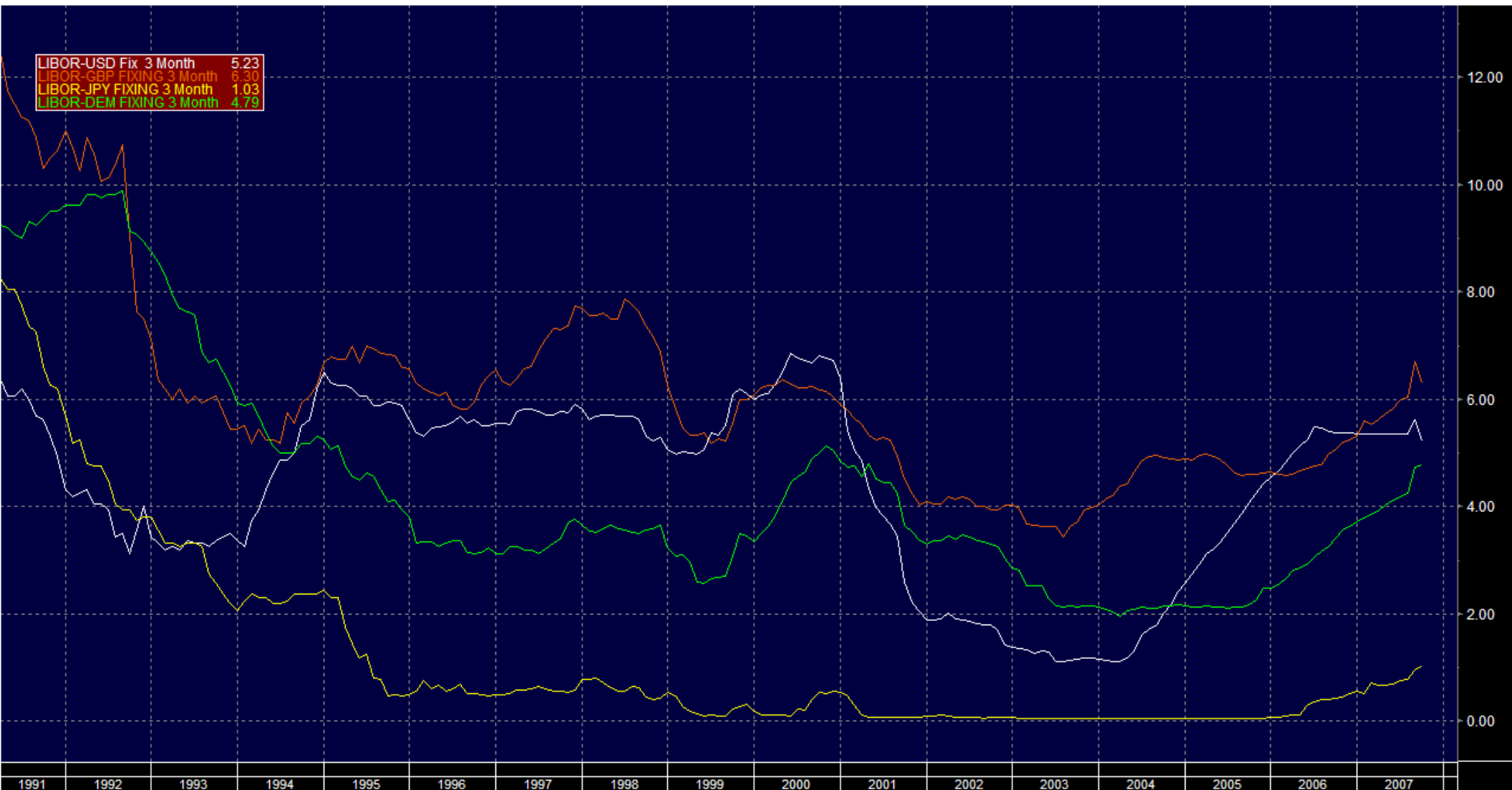


# Monetary Policy - Fed Funds Target



Source: Bloomberg

# Global Short Rates



Source: Bloomberg

# Global Short Rates (2)



Source: Bloomberg

# Global Broad Money



Source: Bloomberg

# Global Broad Money (2)



Source: Bloomberg

# Fiscal Policy

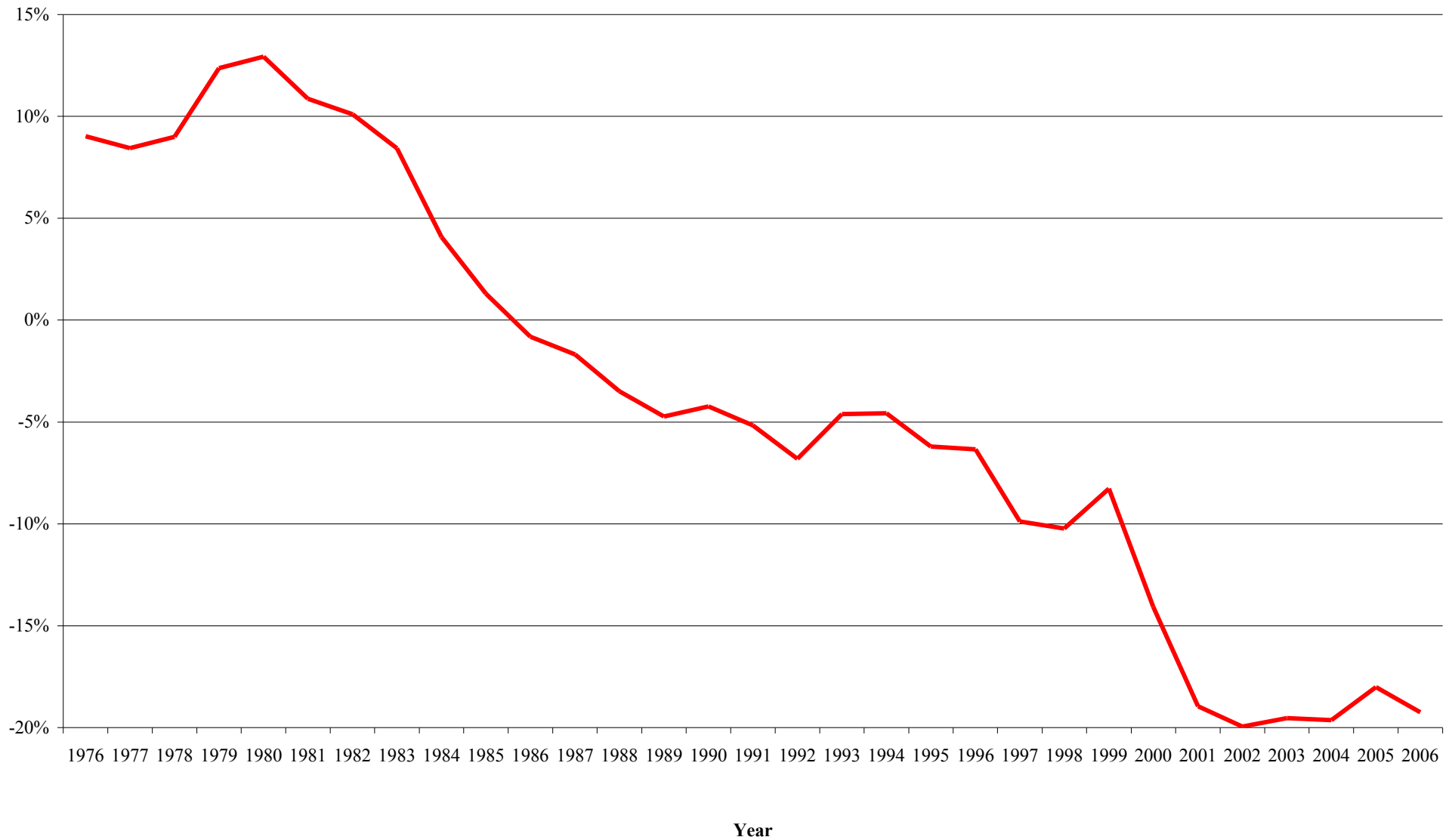
- Deficit is coming down, as officially calculated (\$318-->\$248B), and on an accrual basis as well (\$760-->\$450B)
- Much doesn't make it into the official figure
- Debt/GDP ratio is still low – 37% if you don't count what is held by other areas of the government, and 67% if you do
- Net liabilities on an accrual basis as a ratio to GDP are quite high – 360% of GDP

# The Current Account Deficit is a high percentage of GDP



Source: Bloomberg

# Net Foreign Assets / GDP



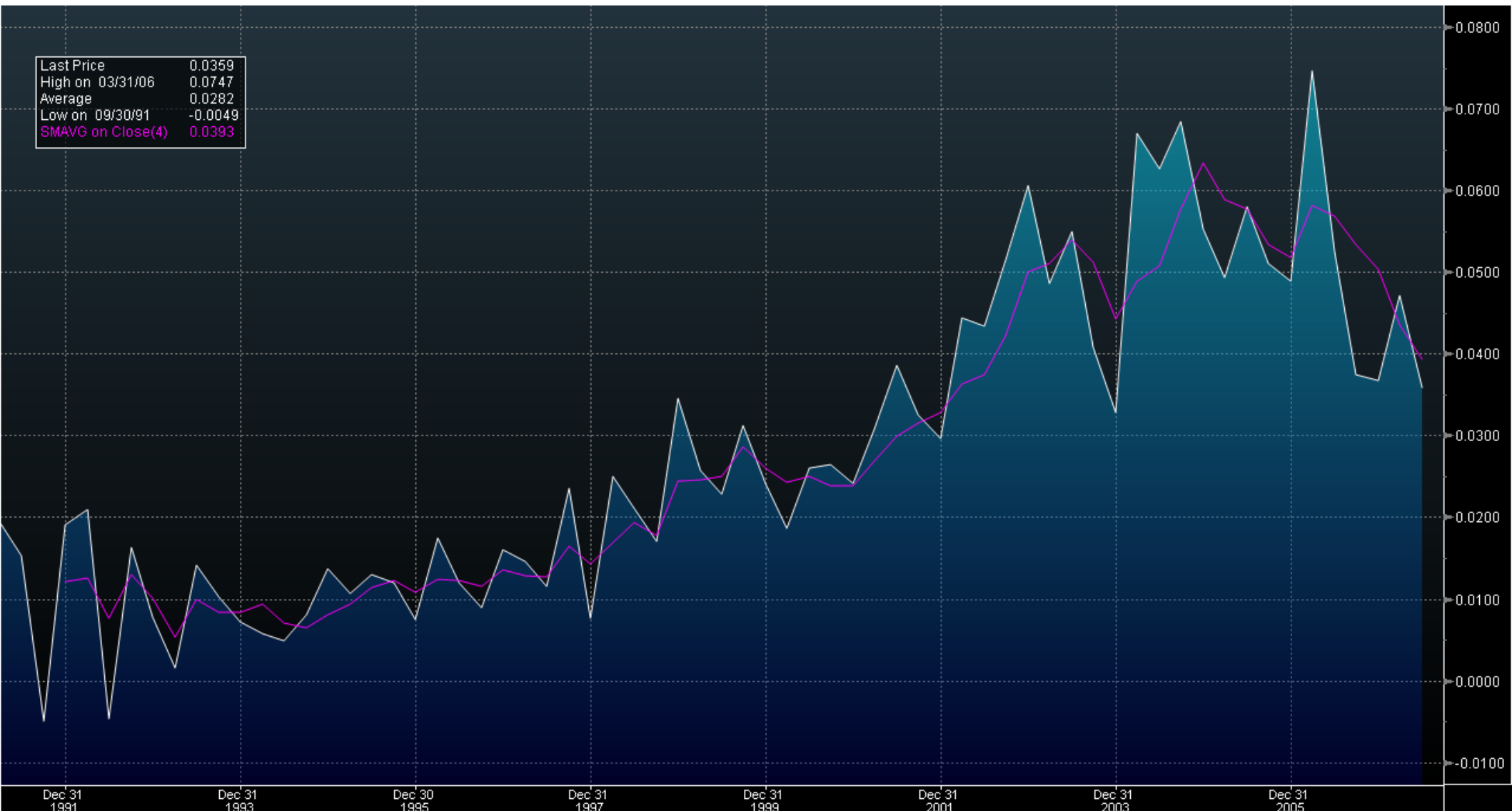
Sources: Commerce Department and FRED



# Mortgage Refinancing

- Refinancing was a huge source of stimulus
- Mortgage equity withdrawal became a large fraction of GDP
- No longer so, because mortgage rates have risen, and terms have stiffened

# Mortgage Equity Withdrawal / GDP



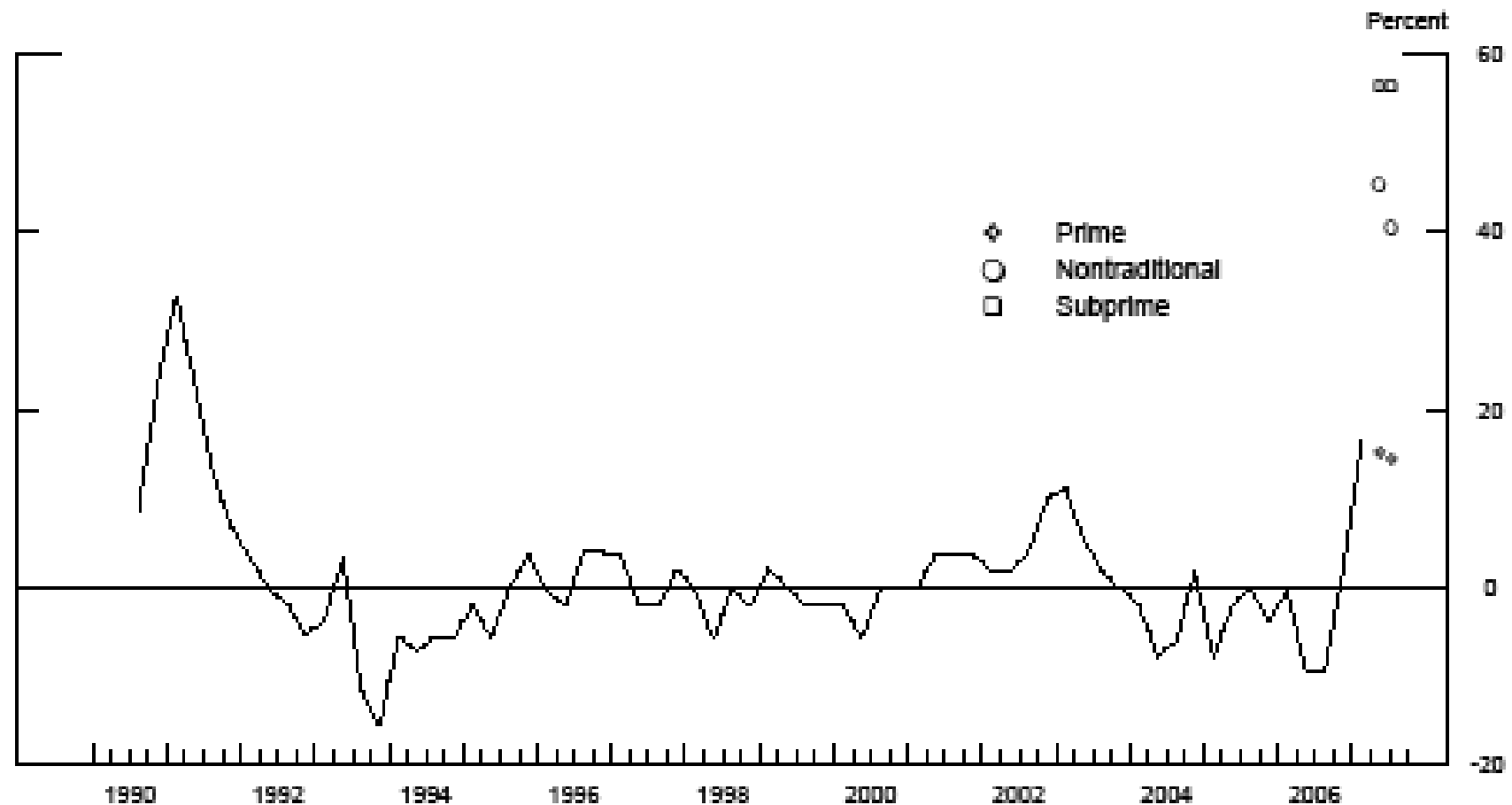
Source: Bloomberg

# Loose Oversight of Lending

- Bank exams became perfunctory
- Consumer suitability became “Caveat Emptor,” but with no sign that a change had happened
- Banks had earnings targets to hit
- Accrual items were given too much credibility
- For many banks they would not hold onto the loans long

# Loose Residential Mortgage Lending 2003-2006

Net Percentage of Domestic Respondents Tightening Standards for Mortgage Loans

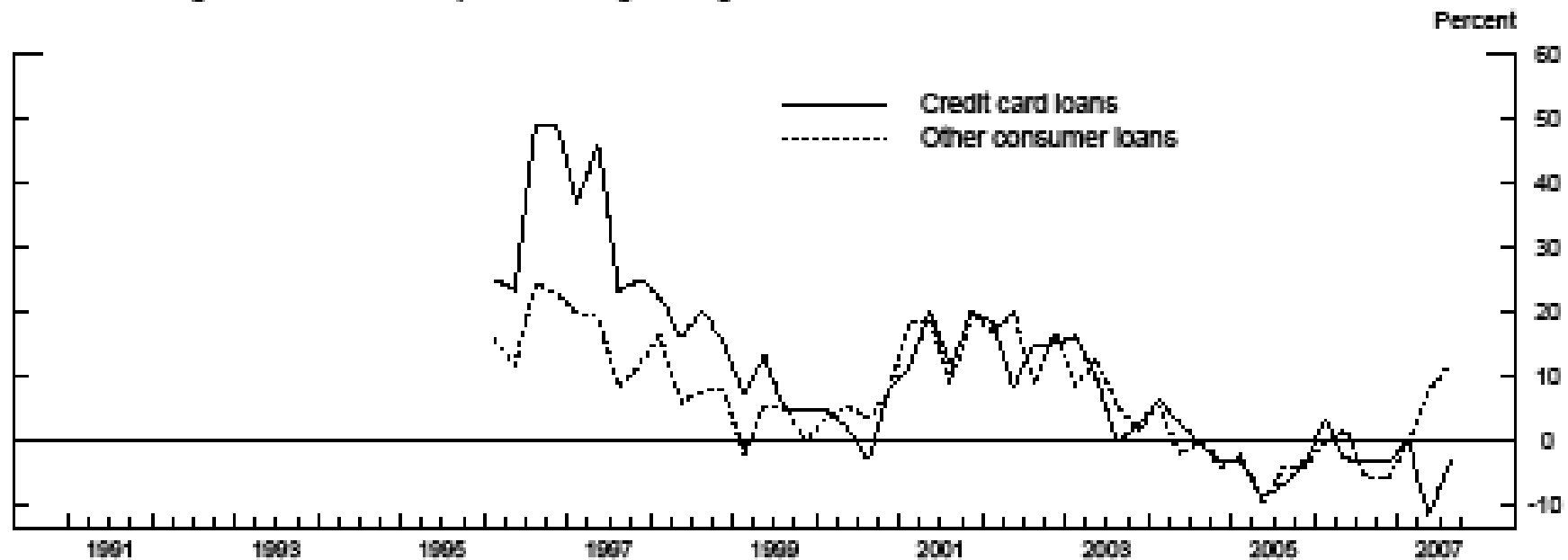


Note: Starting in 2007:Q2, changes in standards for prime, nontraditional, and subprime mortgage loans are reported separately.

Source: Federal Reserve Senior Loan Officers Survey

# Loose Consumer Lending 2004-?

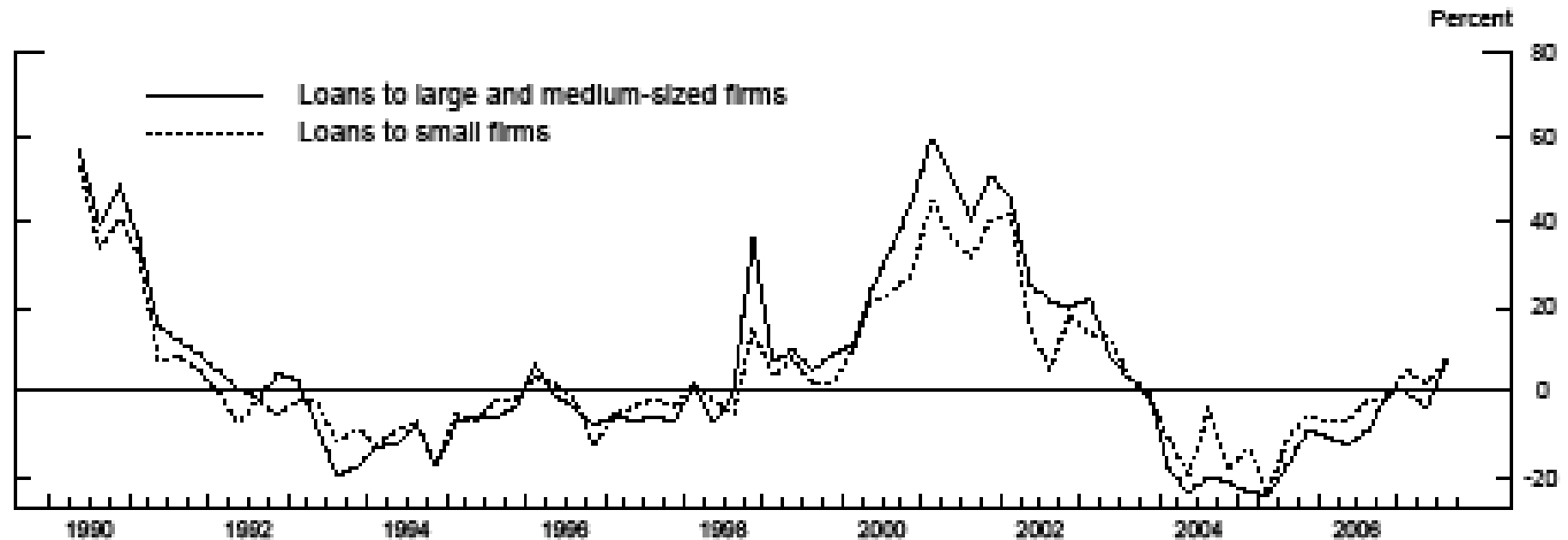
Net Percentage of Domestic Respondents Tightening Standards for Consumer Loans



Source: Federal Reserve Senior Loan Officers Survey

# Loose C&I Lending 2003-2006

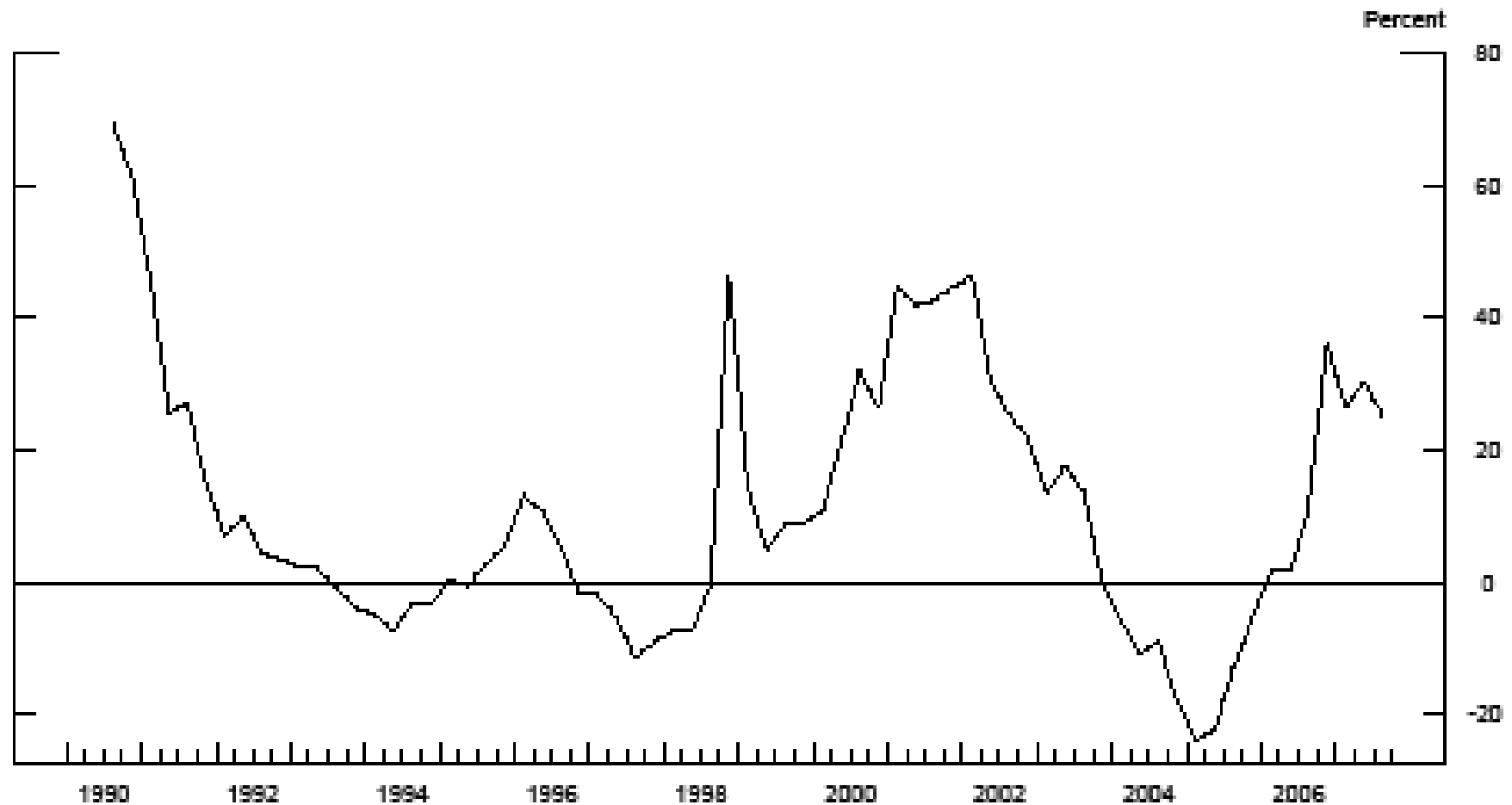
Net Percentage of Domestic Respondents Tightening Standards for C&I Loans



Source: Federal Reserve Senior Loan Officers Survey

# Loose CRE Lending 2004-2006

Net Percentage of Domestic Respondents Tightening Standards for Commercial Real Estate Loans



Source: Federal Reserve Senior Loan Officers Survey

# Housing Finance

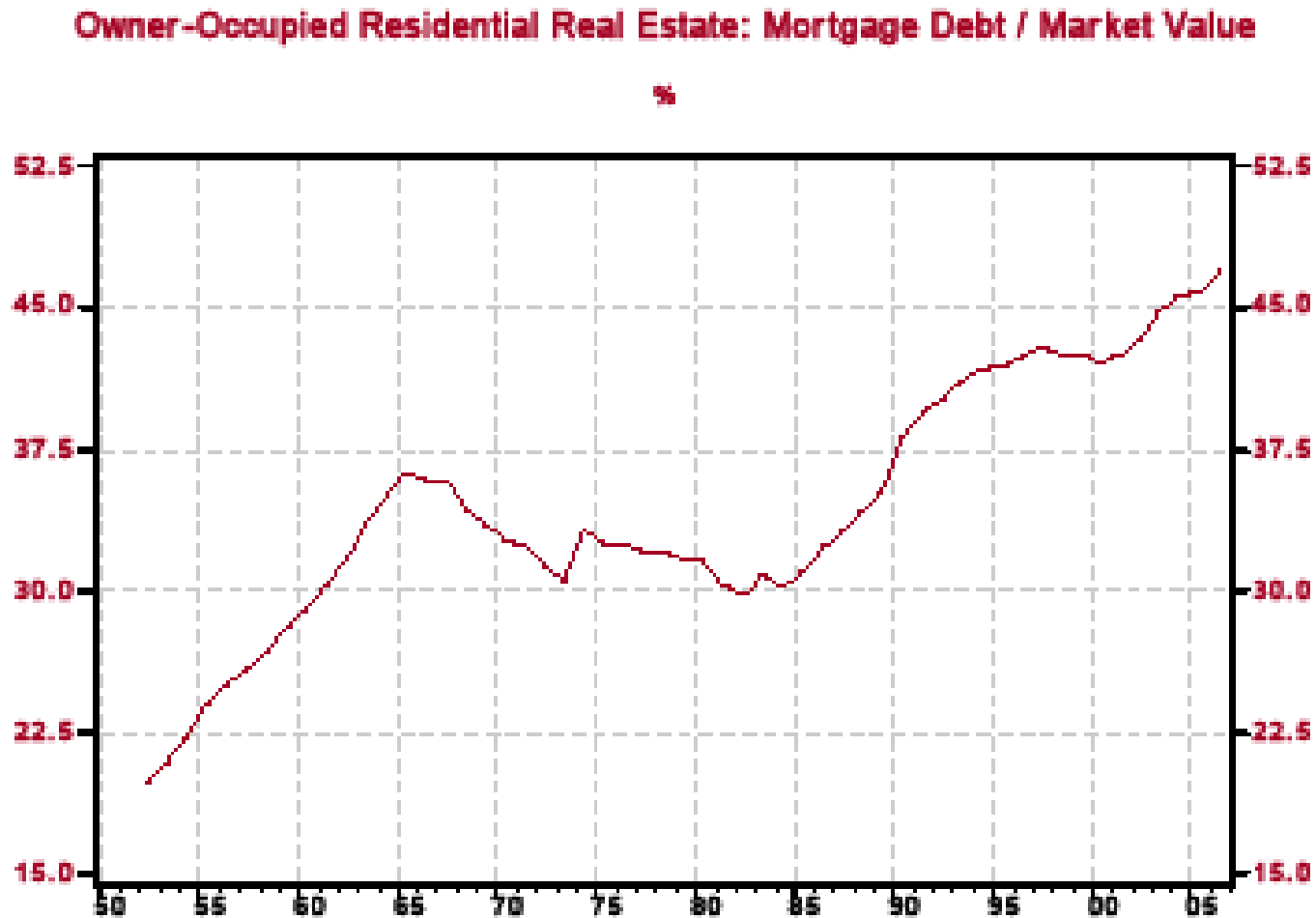
- After the tech bubble burst, the Fed forced short term interest rates low enough to over-stimulate the residential housing market. (The Fed can't stimulate dead industries, only live ones.)
- In the process, they set off a small mania, as housing prices appreciated dramatically due to the new buying power they temporarily created.
- The new mortgage loans were low in quality – less underwriting, less information, higher leverage, payment resets
- This created a culture of risk in housing finance



# A Culture of Risk in Housing Finance

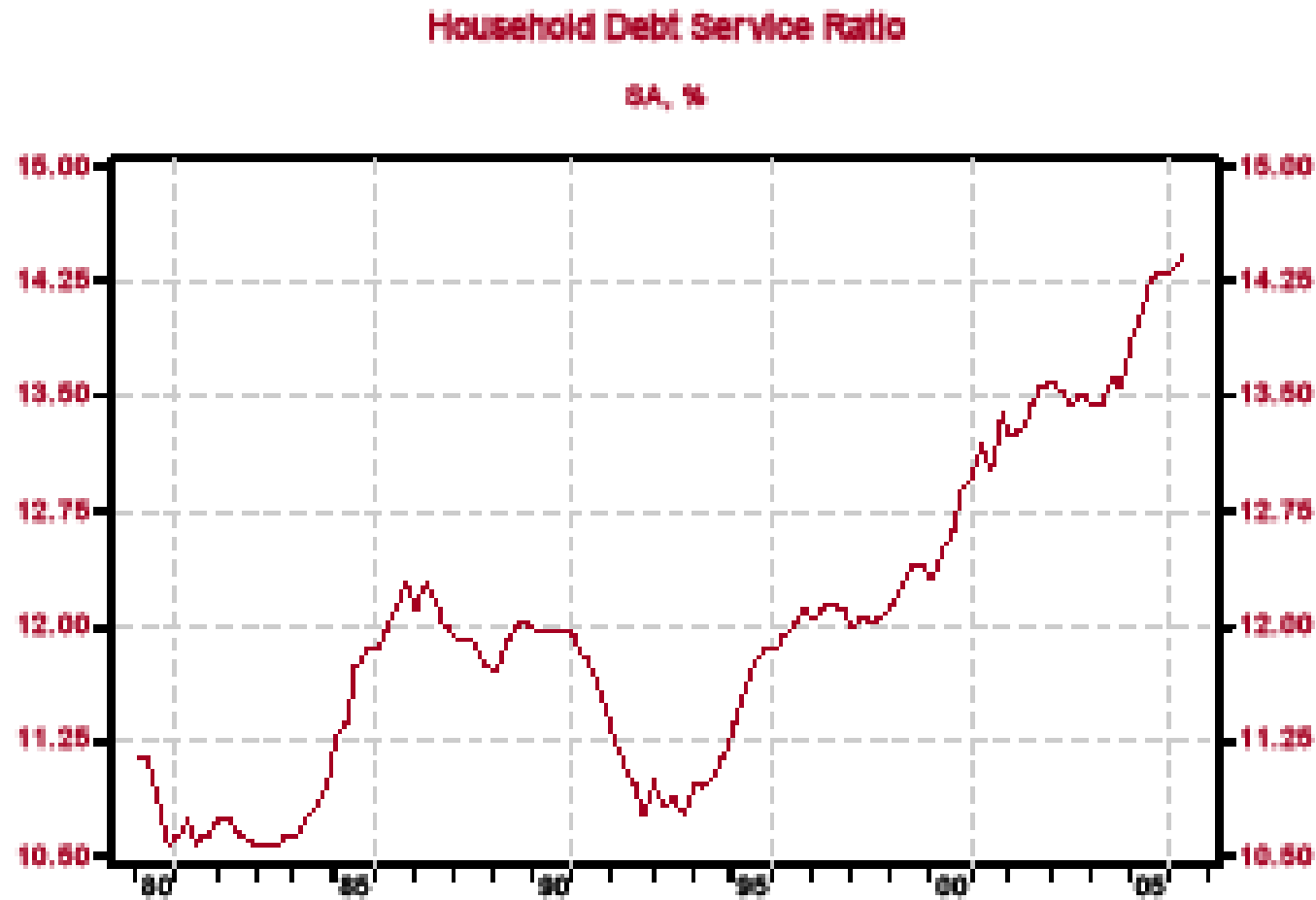
- Borrowing more as a percentage of home value
- Higher debt service as a percentage of income
- Debt-to-income levels were very high
- Many residential real estate investors had to have capital gains to stay afloat in hot markets
- Financing long term assets with short term debt, and the Federal Reserve encouraged it

# Equity Low in Residential Housing



Source: Paul Kasriel of Northern Trust

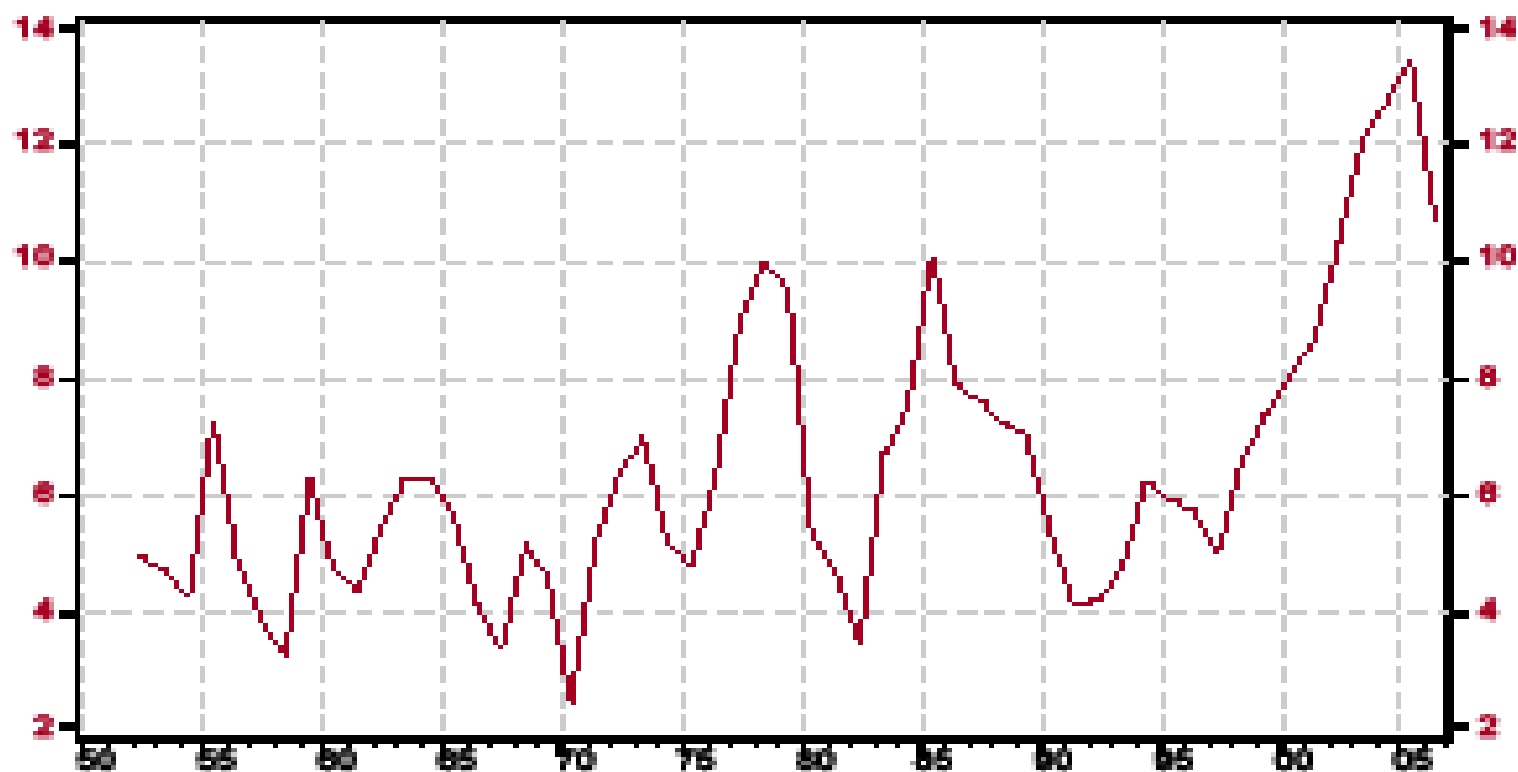
# High Debt Service Ratio



Source: Paul Kasriel of Northern Trust

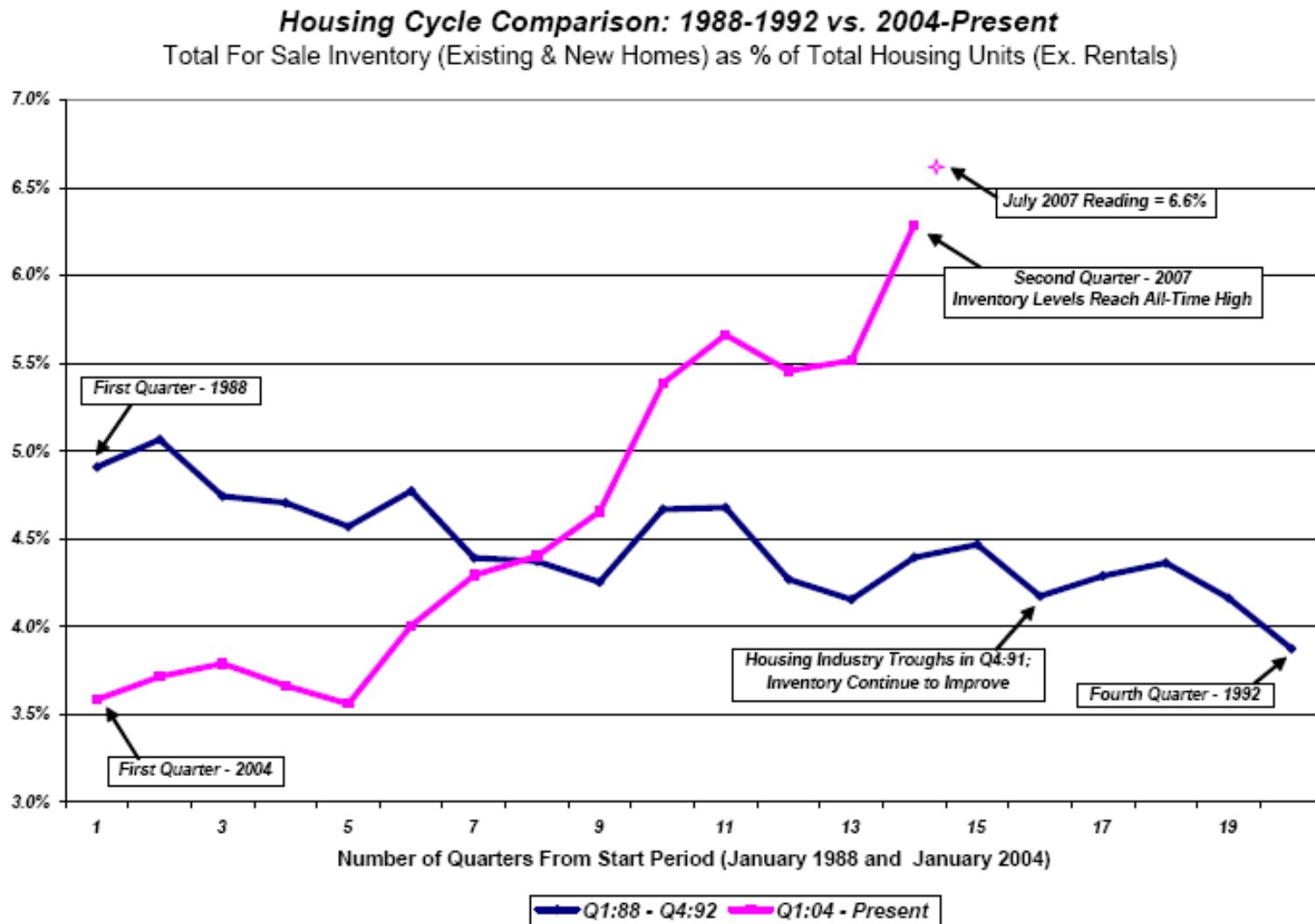
# High Consumer Borrowing Rate

Households: Total Borrowing as % of DPI



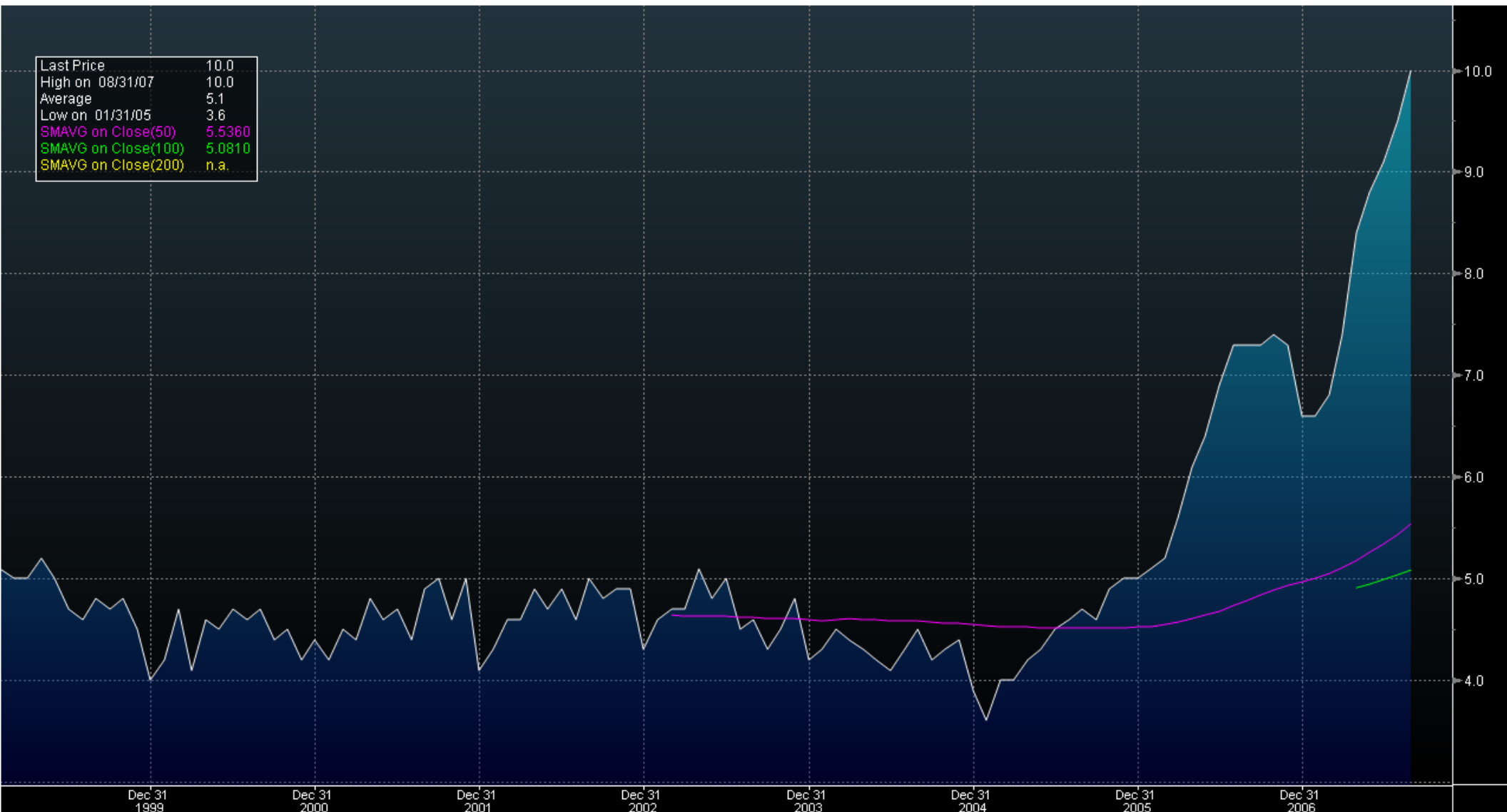
Source: Paul Kasriel of Northern Trust

# Comparing the Early 90s to Now



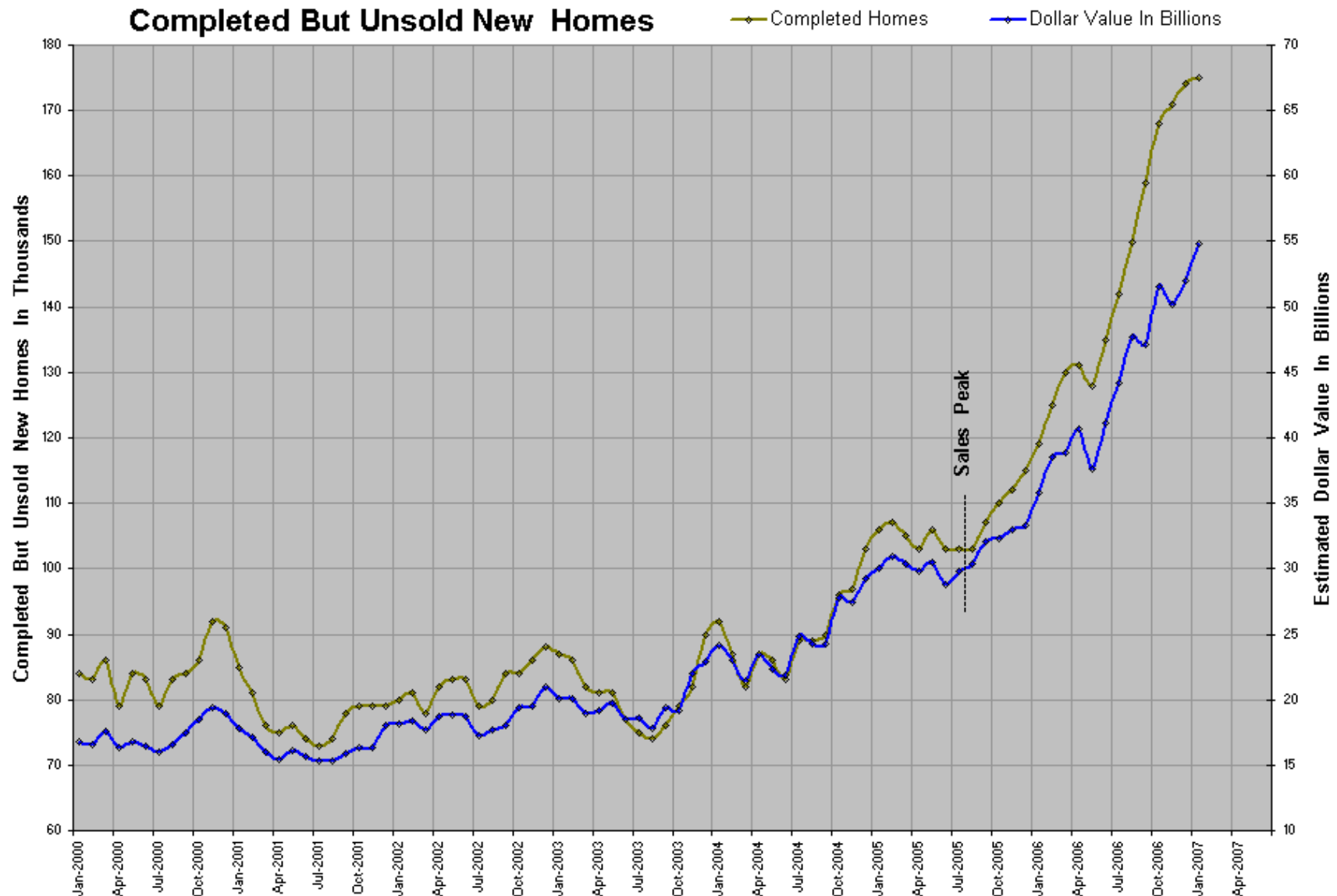
Source: Jeffrey Saut of Raymond James, via The Big Picture (blog)

# Residential Oversupply (1)

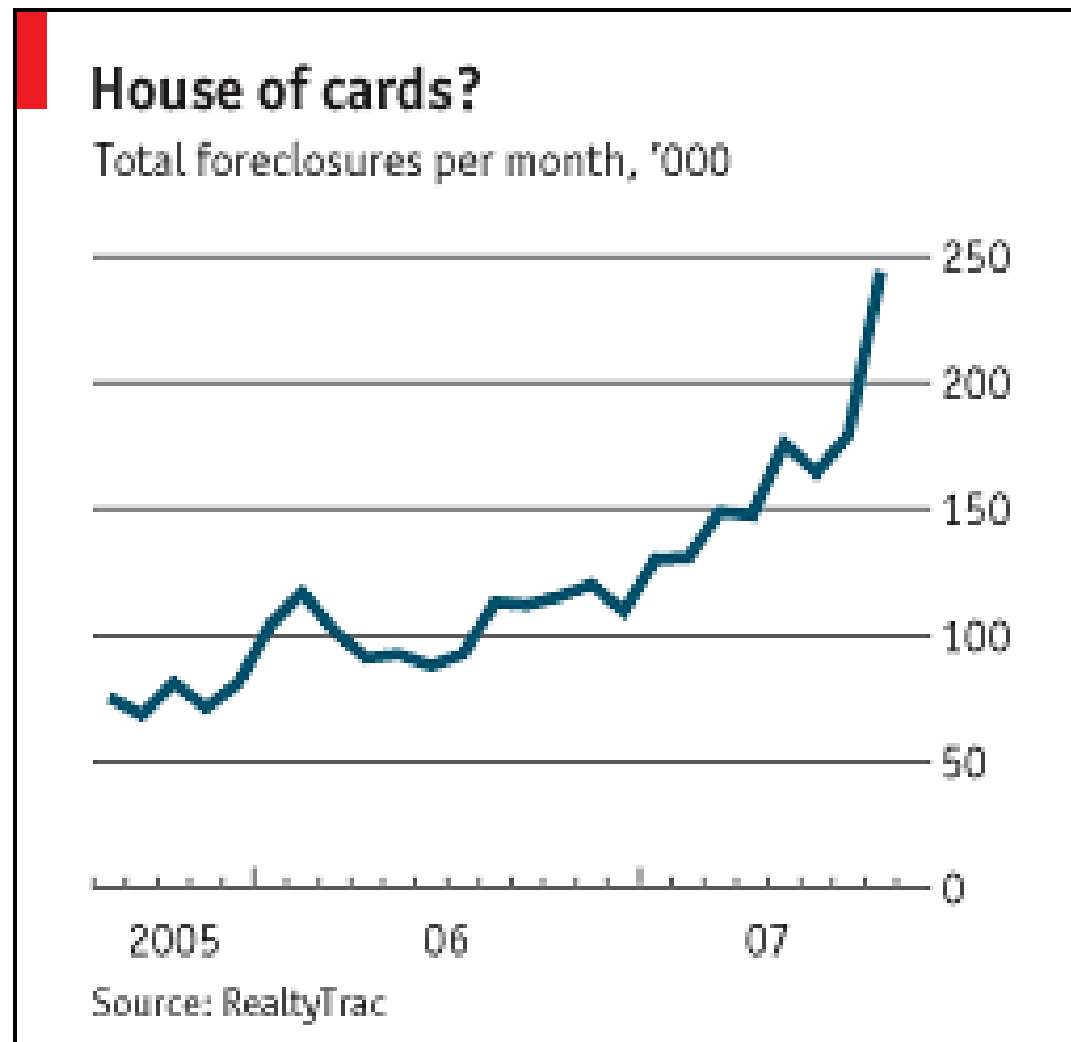


Source: Bloomberg

# Residential Oversupply (2)



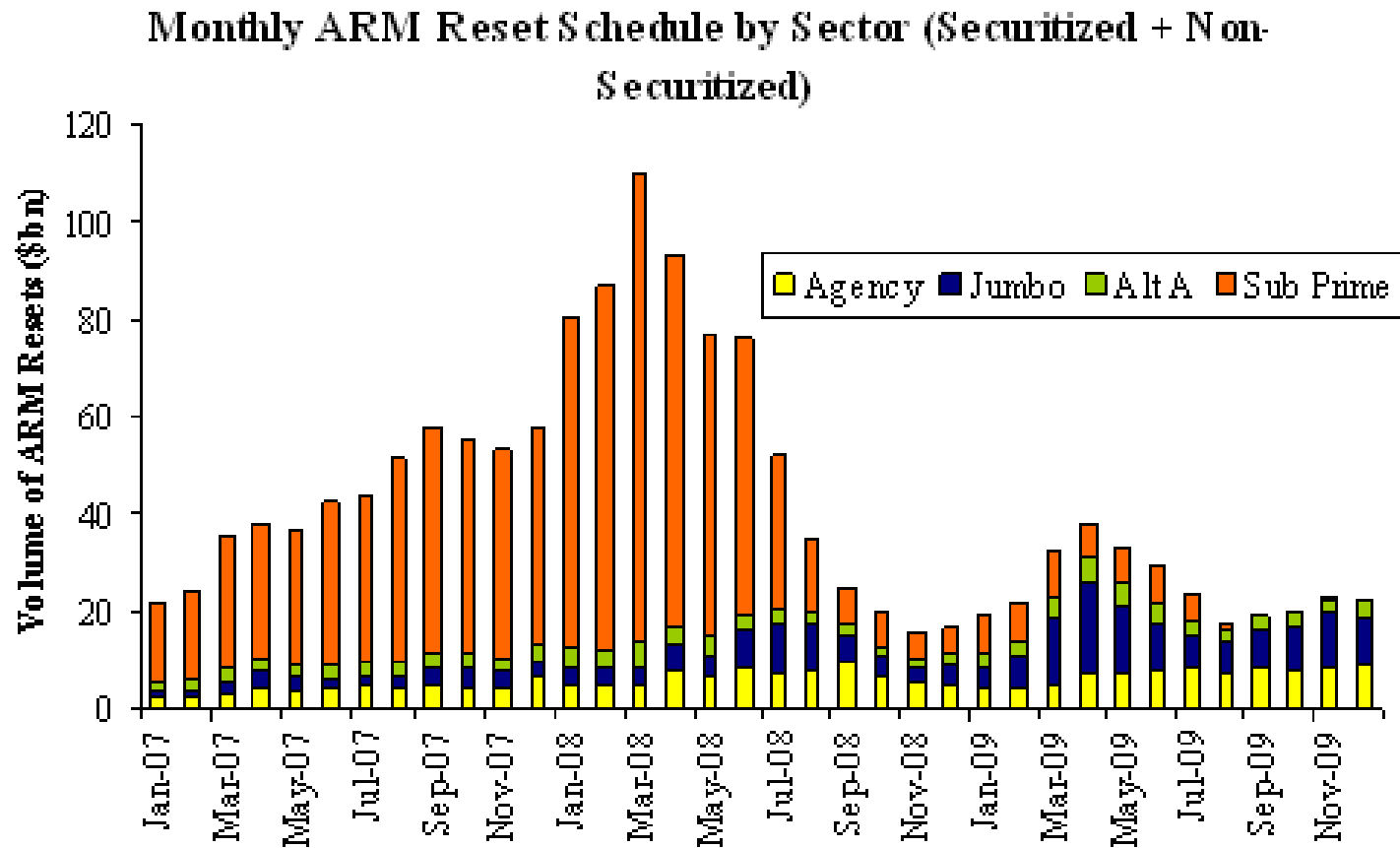
# Foreclosures Rise



Source: RealtyTrac, via The Economist



# Mortgage Resets



Source: Bank of America, via the Orange County Register

# The Five Great Distortions

- Current Account Deficit
- US Residential Housing and its financing
- Carry Trade
- Collateralized Debt Obligations [CDOs]
- Private Equity

==> Yield Seeking Behavior

# Carry Trade

- Borrow in a low interest currency, invest in a high interest currency
- Borrow in Yen or Swiss Francs, and invest in NZ Dollars, Australian Dollars, British Pounds, or US Dollars (Size perhaps: \$1-2 Trillion)
- Mortgages denominated in Swiss Francs in other countries
- Japanese housewives investing money in NZ Dollars
- Hedge Funds

# NZD-JPY Cross Rate

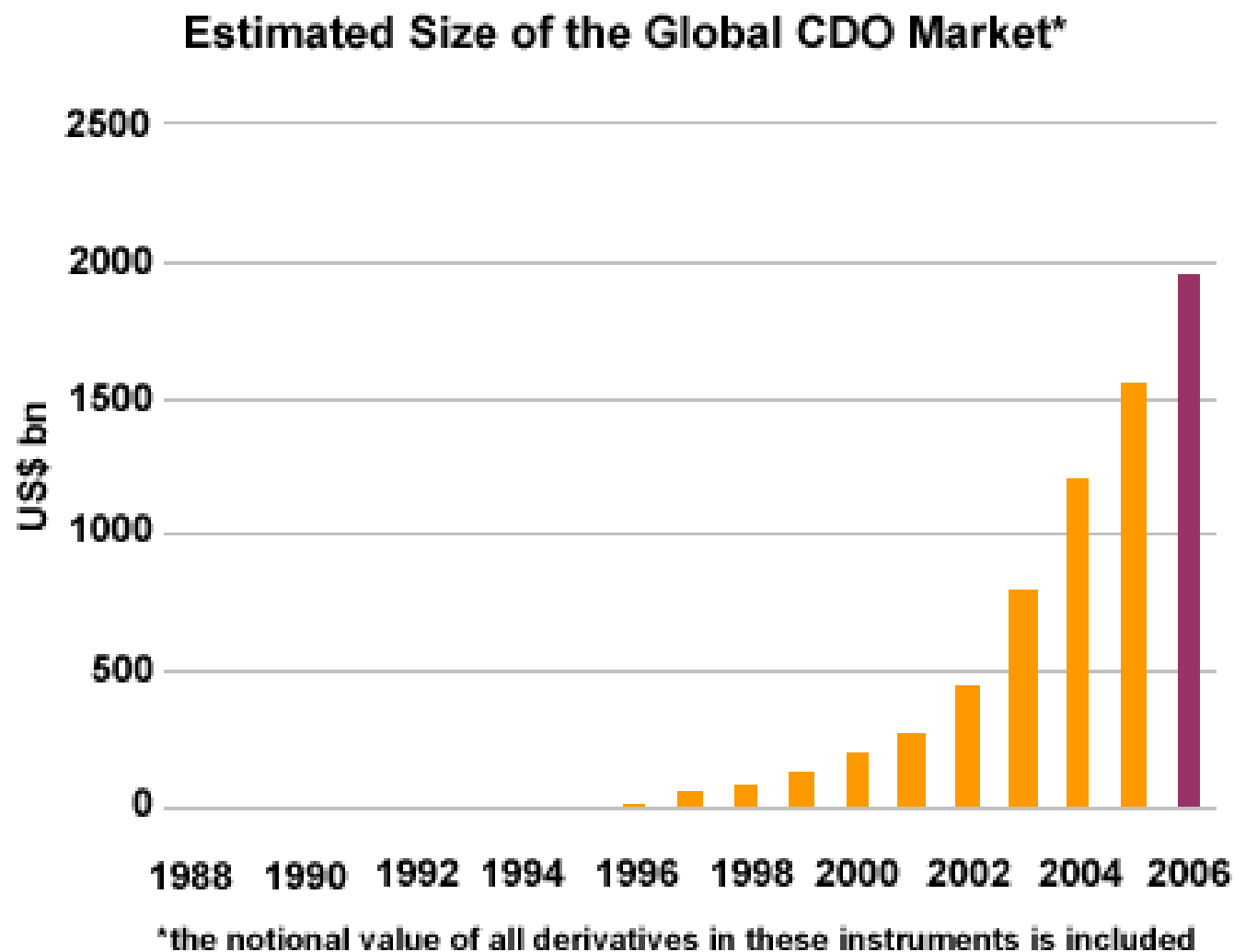


Source: Bloomberg

# Growth in CDOs

- Collateralized Debt Obligations [CDOs] are a way of leveraging up credit exposure so that risk-loving investors can shoot for equity-like returns.
- All sorts of debts can be packed in CDOs – bank loans, corporate bonds, trust preferreds, credit default swaps, CMBS, RMBS, ABS (including subprime mortgages)
- We don't know in full, yet, who the dumb money was, but some bought off of yield and rating only.

# Growth of the CDO Market



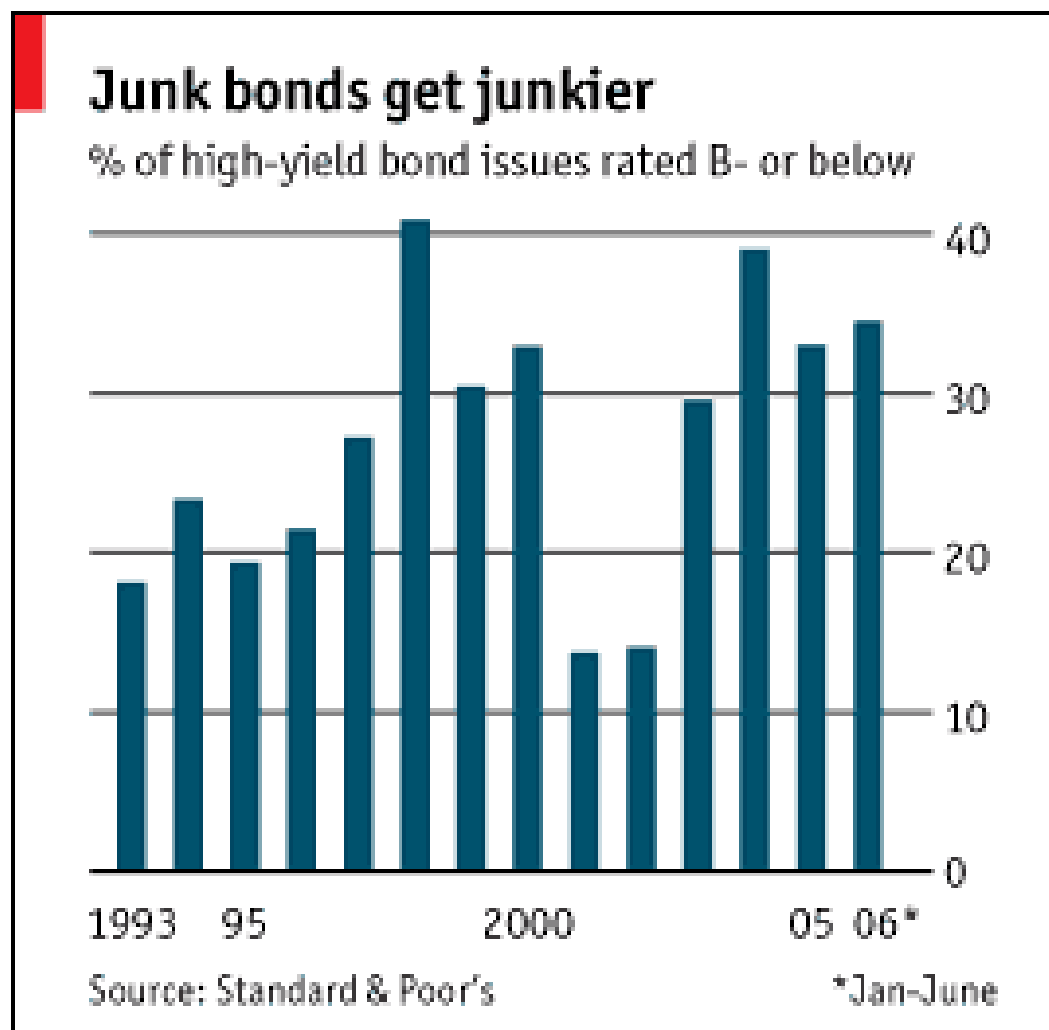
Source: Celent, LLC

# Single-B Industrial Bond Spreads



Source: Bloomberg

# Recent Issues are Low Quality



Source: S&P, via The Economist



# Private Equity

- Private equity firms buy ownership interests in private and public firms of which they want to grow the profitability, before selling them off to a new set of owners.
- This usually involves expense cuts and increased debt financing. Deal leverage was quite high in this cycle.
- The bonds or loans used to purchase the target company are usually junk grade, so they carry protective covenants... in this cycle, the lenders neglected covenants to get more deals done.

# High Multiples Paid for Recent Deals



Source: Morgan Stanley

Chart 5

# Why Yield Seeking?

- Pensions – Can't meet actuarial return targets through bonds
- Hedge Fund of Funds
- Individuals learn that they won't have enough money when they want to retire

# How Some Seek Yield

- Arbitrage Hedge Fund Strategies – Risk, Convertible, Capital Structure, etc.
- Risky loans – e.g., subprime mortgages
- High yield
- Carry Trade
- Internal Leverage
- CDOs, CPDOs
- ABCP, SIVs
- Sell Volatility

# Reflexivity

- Term coined by Soros
- Unlike Neoclassical economics, markets don't always tend toward equilibrium
- Cycles can be temporarily self-reinforcing, until something “breaks,” and the next phase of the cycle begins

# What Changed?

- Investors in subprime mortgages and their derivatives realized that the loss experience would be much worse than anticipated.
- Investors in Alt-A mortgage loans realized that it would not be much better for them.
- CDO equity buyers got skittish, as did buyers of most tranches of CDOs after that.
- Bank loan buyers finally balked at the low spreads and poor covenants for private equity [LBO] deals.

# What Changed? (2)

- Some banks and hedge funds that levered up credit exposure through ABCP and SIV conduits found that they could not easily roll over their short term debts.
- Global central banks loosened policy through temporary provision of liquidity, and through “discount window” operations, indicating that overall policy would likely loosen.
- Carry trades began to weaken as volatility rose, along with credit spreads.

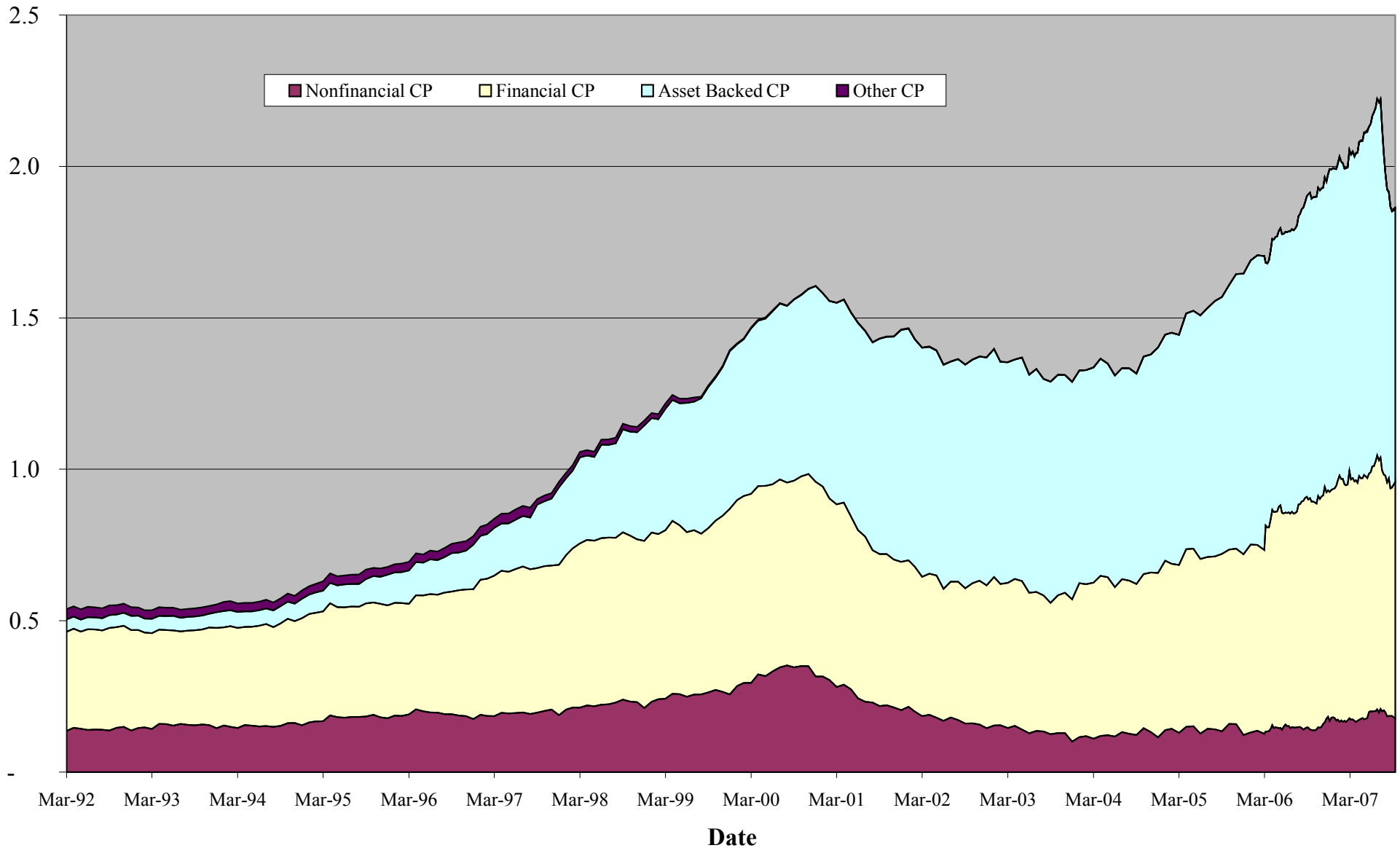
# Treasury-Eurodollar Spread



Source: Bloomberg



# Commercial Paper Outstanding (\$T)



# Where Are We Going?

- A greater unwind of the carry trade
- Weaker dollar
- Higher credit spreads
- Lower residential housing prices, more mortgage defaults
- More goods price inflation, less asset inflation
- Wider yield curve
- The developing world grows; the US slows.

# Where Are We Going? (2)

- Raw materials and real assets continue to do well
- Private equity and hedge funds slow down to grow in line with the global economy
- Re-regulation of lending
- Public and private pension systems struggle
- Rates of taxation rise in the developed world
- We are past high-water mark for US capitalism, but not capitalism globally. The US will play a proportionately smaller role in global business.

# Q&A – Thanks for Listening

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