

Is There a Bubble in House Prices?

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Outline

- What House Prices Have Done
- What's Next
- What Greenspan Sees, Says, and Did
- What Bernanke Will Do
- Lags, Whimpers, and Bangs

Two Definitions of a Bubble

- “Ivory Tower” definition
 - A bubble occurs when prices climb
 - Without any connection to economic fundamentals
 - Such as changes in demographics, interest rates, etc.
 - Due to for instance, irrational exuberance
- “Street” definition
 - A bubble occurs when prices climb
 - In a fashion that is unsustainable
 - Such that prices are likely to revert to lower levels
 - Either in nominal or real terms
 - For whatever the reason
 - Including temporarily low interest rates
- We will use the “Street” definition
 - i.e. Prices have gone up “too much” and are likely to come down

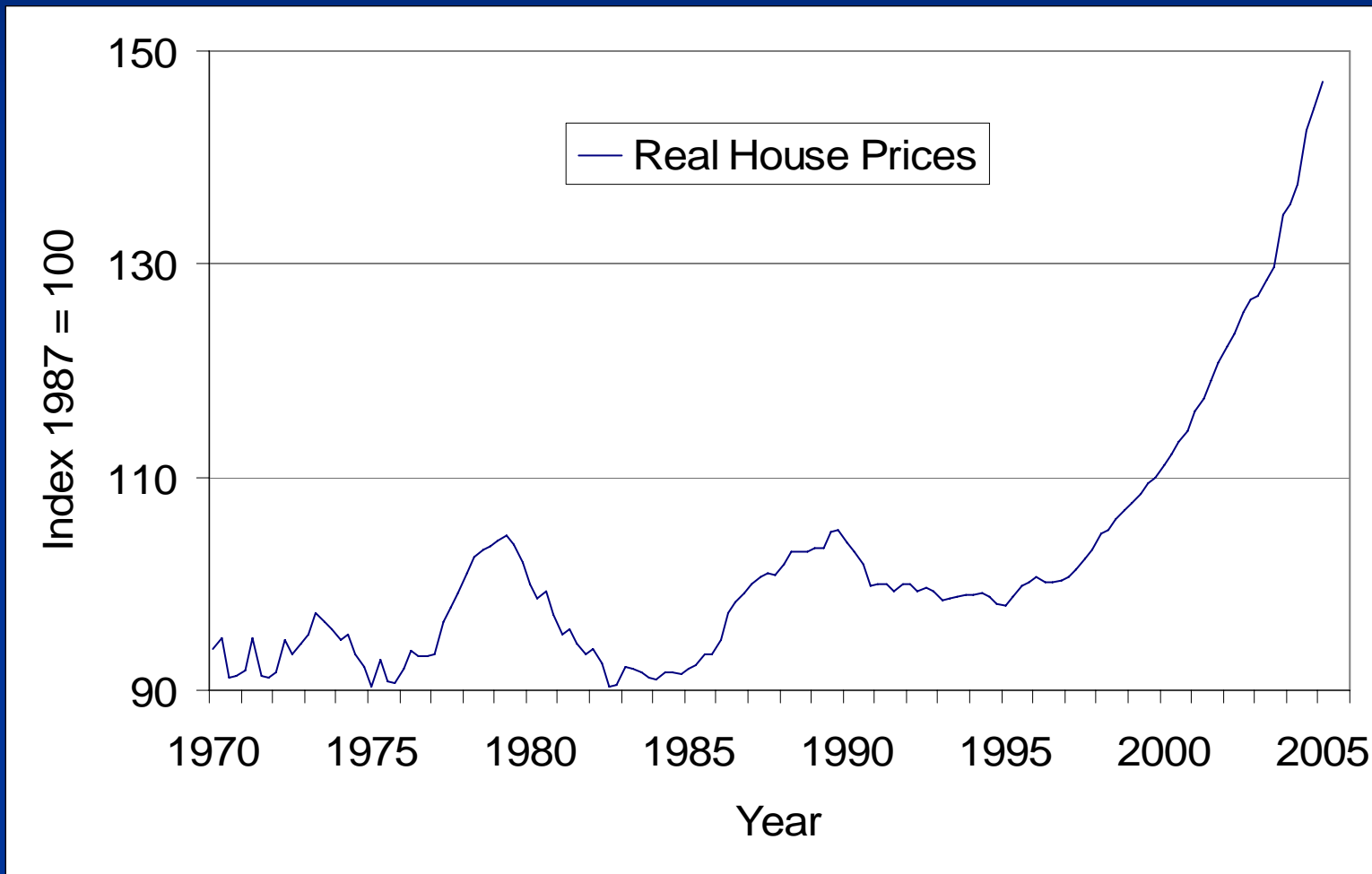
How to Measure a Bubble?

- House values have soared
 - From \$8.5 trillion in 1995
 - To \$12.1 trillion in 2000
 - To \$20.0 trillion in 2005
- “US nominal house prices have never fallen”
 - That may be completely irrelevant

How to Measure a Bubble?

- Real house prices
 - Adjusted for inflation
 - Ideally also adjusted for size, quality
- Real house prices were quite stable over the long-term in 1970-95 (and 1890-1970)
 - Rising on average by only 0.4 percent between 1890 and 2004
 - and that is including the current spike
- In real terms, US house prices have quite often fallen
 - Periods of rising real house prices
 - Followed by periods of falling real house prices

Let's Appreciate How Much House Prices Have Appreciated



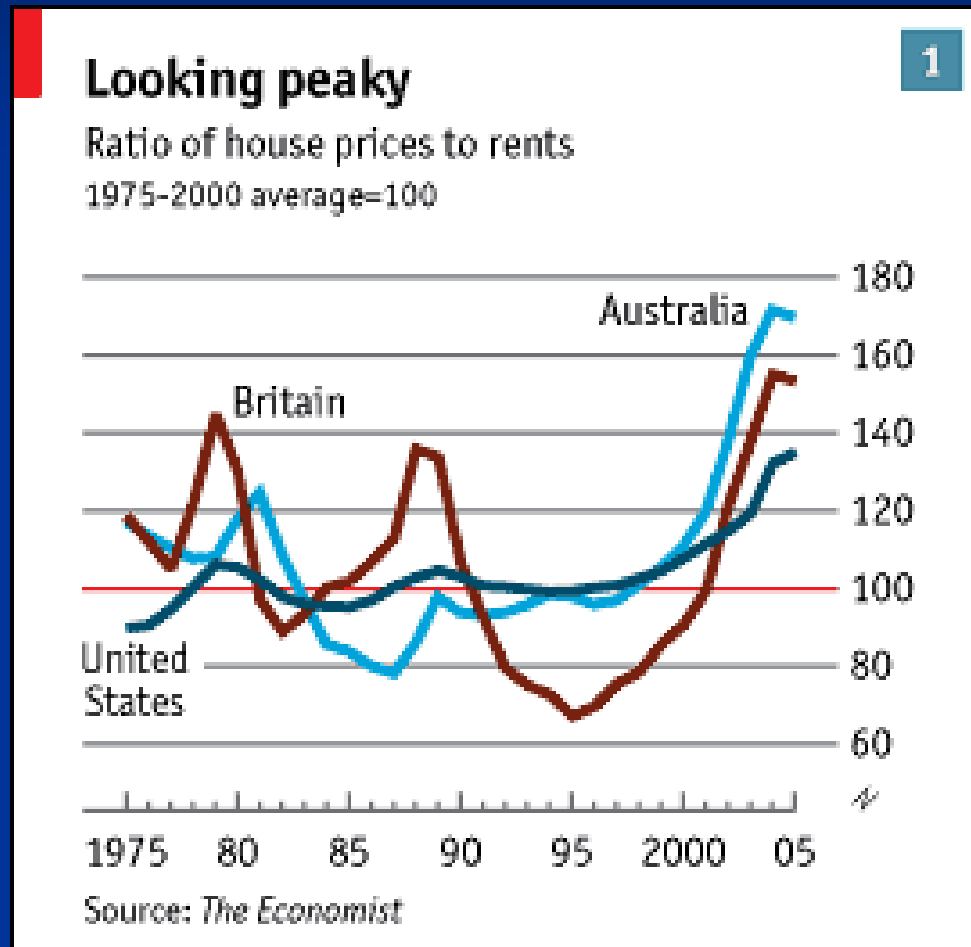
How to Measure a Bubble?

- Real house prices have soared since 1995
 - Will the increase in real house prices go on forever?
 - Will prices plateau at a high level?
 - Will this period of rising real house prices be followed by falling real prices?
 - Like every other previous spike?
- Burdens of proof
 - Not to show that this is a bubble
 - i.e., things continue on as usual with price increases and declines
 - But that it is not
 - What has changed to ensure things will be different this time?

How to Measure a Bubble?

- Price to rent ratio
 - If owning is more expensive, why do it?
 - There are limits to how high (relative to rents) house prices can go
- Rising house prices may encourage some to buy ahead
 - But eventually some first-time buyers are priced out of owning
- Stable, but high, prices may get some to put off buying
 - While getting higher incomes and accumulating downpayments
- Falling (nominal and real) prices may delay even more buying
 - To bring forward selling (specially investors)
 - To put off building single-family homes
- How likely are rents to climb substantially in a market with 23 percent of homes owned by investors?

House Prices and Rents Are “Somewhat” Linked



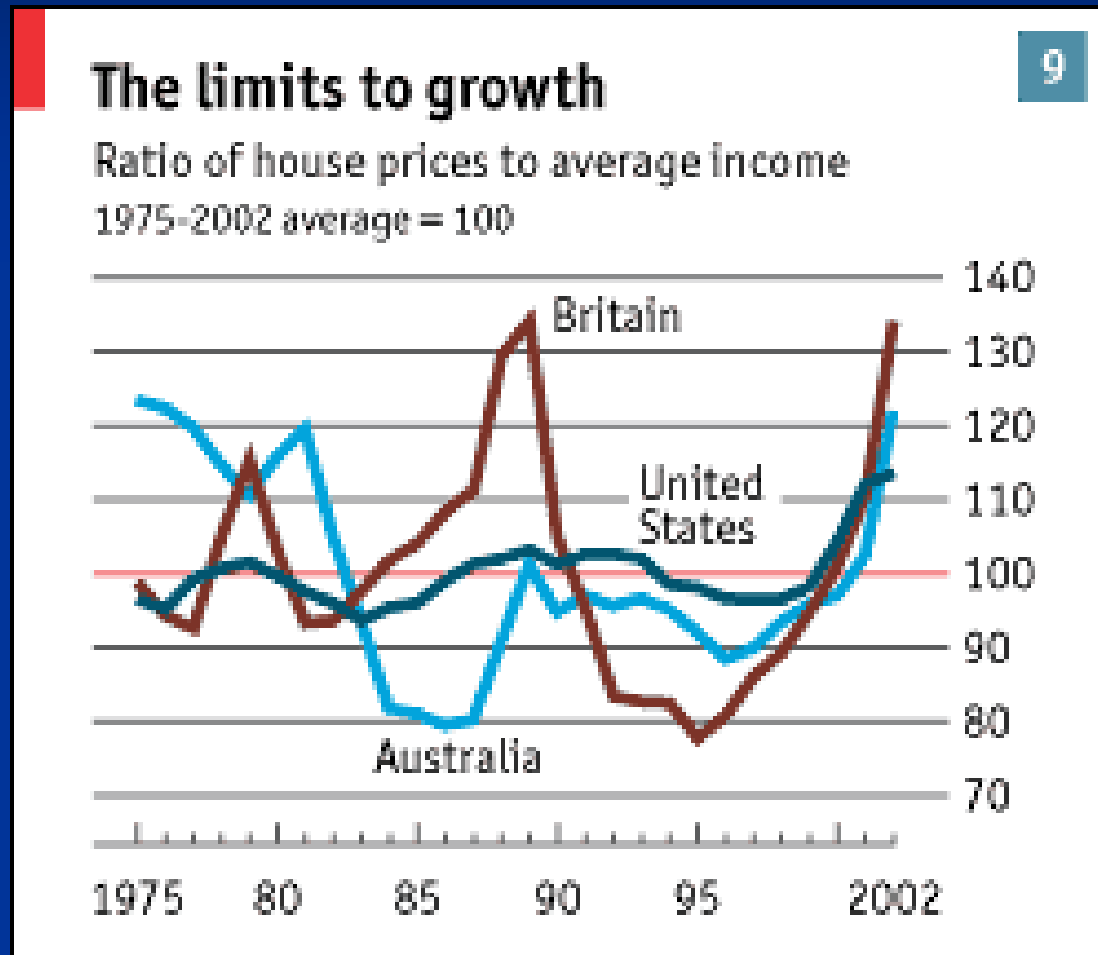
What the Federal Reserve Has Said

- Price to rent ratios in the US have fluctuated but tend to revert toward their long run average
- In 2005, highest US ratio since first data in 1970
 - About 38 percent above its long run national average
 - In LA and SF, about 75 percent higher than (US?) average
 - In Cleveland, it is about at (US) average
- My reading of those remarks
 - Interest rates, demographics, tax laws, easier financing, etc., together, still don't completely explain the high ratio

How to Measure a Bubble?

- Price to income ratio soared
 - Ratio of value of total stock of houses to GDP
 - From 116 percent of GDP in 1995
 - To 123 percent of GDP in 2000
 - To 162 percent of GDP in 2005
 - Eventually, some first-time buyers are priced out
 - Can't even make minimum monthly payment

How to Measure a Bubble?



Is the End Nigh?

- Maybe not
 - House prices elsewhere have risen more and for longer before dropping
 - Past imploders
 - Japan and Germany
 - Current imploders
 - Australia and Britain
 - Future imploders?
 - Spain, Ireland and USA?
- Maybe yes
 - The Fed is beginning to show concerns about “spillover” effects from housing to rest of the economy

The Economist's house-price indices

% change:

	on a year earlier		
	Q2 2005*	Q2 2004	1997-2005
Hong Kong	22.1	29.1	-44
South Africa	21.4	38.2	263
France	14.5	14.9	56
New Zealand	14.2	22.3	74
Spain	13.7	17.4	171
United States	13.4	10.0	79
Denmark	12.2	7.9	63
Belgium	9.4	9.9	71
Italy	8.5	10.8	76
Sweden	8.3	9.7	38
China	8.0	10.4	na
Ireland	6.2	11.9	196
Canada	4.3	7.0	48
Netherlands	4.2	3.9	82
Singapore	2.4	-0.8	na
Britain	2.3	19.4	155
Switzerland	0.5	2.1	11
Australia	-0.1	12.7	113
Germany	-1.3 [†]	-0.8 [†]	nil
Japan	-5.4	-6.4	-28

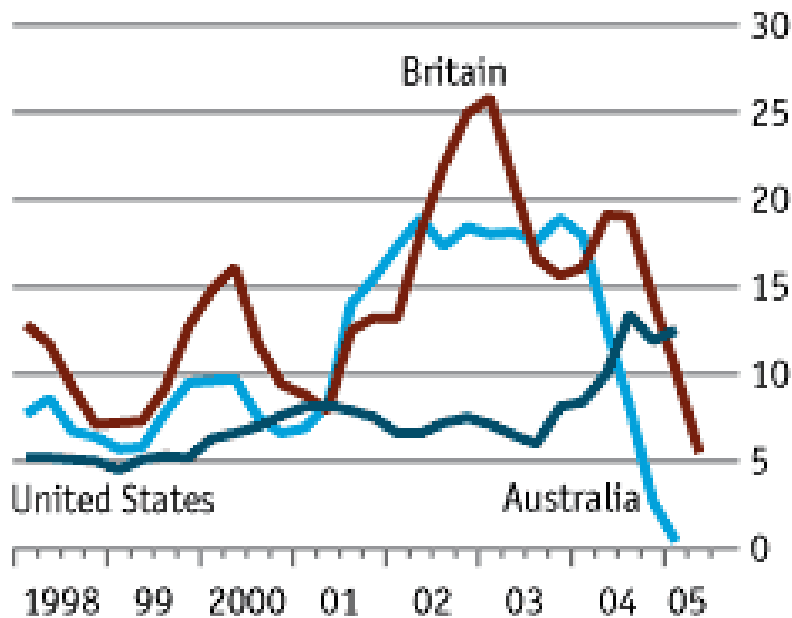
*Or latest †2004 average ‡2003 average

Sources: ABSA; Bulwien; ESRI; Japan Real Estate Institute; Nationwide; Nomisma; NVM; OFHED; Quotable Value; Stadim; Swiss National Bank; government offices

Is the End Nigh? And How Soon?

2 What goes up...

House prices, % increase on a year earlier

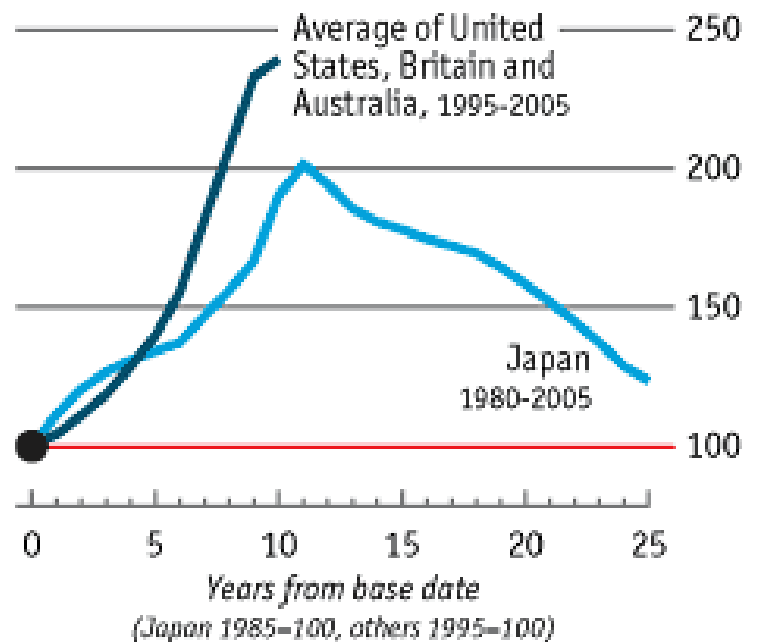


Sources: ABS; Nationwide; OFHEO

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3 Feeling home-sick?

House prices



Sources: Japan Real Estate Institute; OFHEO; Nationwide; ABS

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What Greenspan Sees

- Little slack in labor or business markets
- Inflation rising
 - Nearly 5 percent over last 12 months
- Large federal deficits
- Record low household saving
- Higher interest rates through much of 2006
- The end of an era--his

The Bubble

According To Greenspan

- Bubbles are hard to spot
 - Do we see a bubble in prices or just plain justifiably high values?
 - Tech stocks
 - Condos in Scottsdale and So. Florida, houses in Tahoe and Turlock
- Bubbles are hard to pop
 - How high would interest rates have to go?
 - Would irrational exuberance keep the bubble going?
 - Will popping bubbles cause unneeded recessions?
 - Does the Fed have a legal mandate to target asset prices?
 - After all, the Fed does not cause the bubbles...
- Bubbles are best dealt with after they burst on their own
 - Fed can then, if called for, reduce rates to help economy

Chapter and Verse: From East Asia To Silicon Valley?

- The East Asia crisis (according to Greenspan)
 - Fed lowered interest rates in 1998 to insulate the US
- The stock price bubble (according to Greenspan)
 - Lowered interest rates did not cause the stock price bubble
- Interest rates were increased in 1999-2000
 - To prevent inflation
 - Not to pop the stock price bubble
- Higher interest rates did not pop the stock price bubble
 - The bubble burst on its own in 2000
- Causes of the 2001 recession (according to Greenspan)
 - Not higher interest rates
 - Bursting of the stock price bubble and other natural forces
- Fed lowered interest rates in 2001-2003 to ease the pain

And, Then On To Scottsdale and South Florida, Tahoe and Turlock?

- Froth in house prices (according to Greenspan)
 - It is not clear that there is a bubble in house prices
 - There may be some localized froth
 - But, you say, froth is made up of lots of little bubbles
 - And, froth flattens on its own...as little bubbles pop
 - Confirmed by tests on beer!
- Froth not caused by low rates since 2001
- Interest rates are being increased since 2004
 - To prevent inflation
 - Not to pop any house price bubble, if there is one

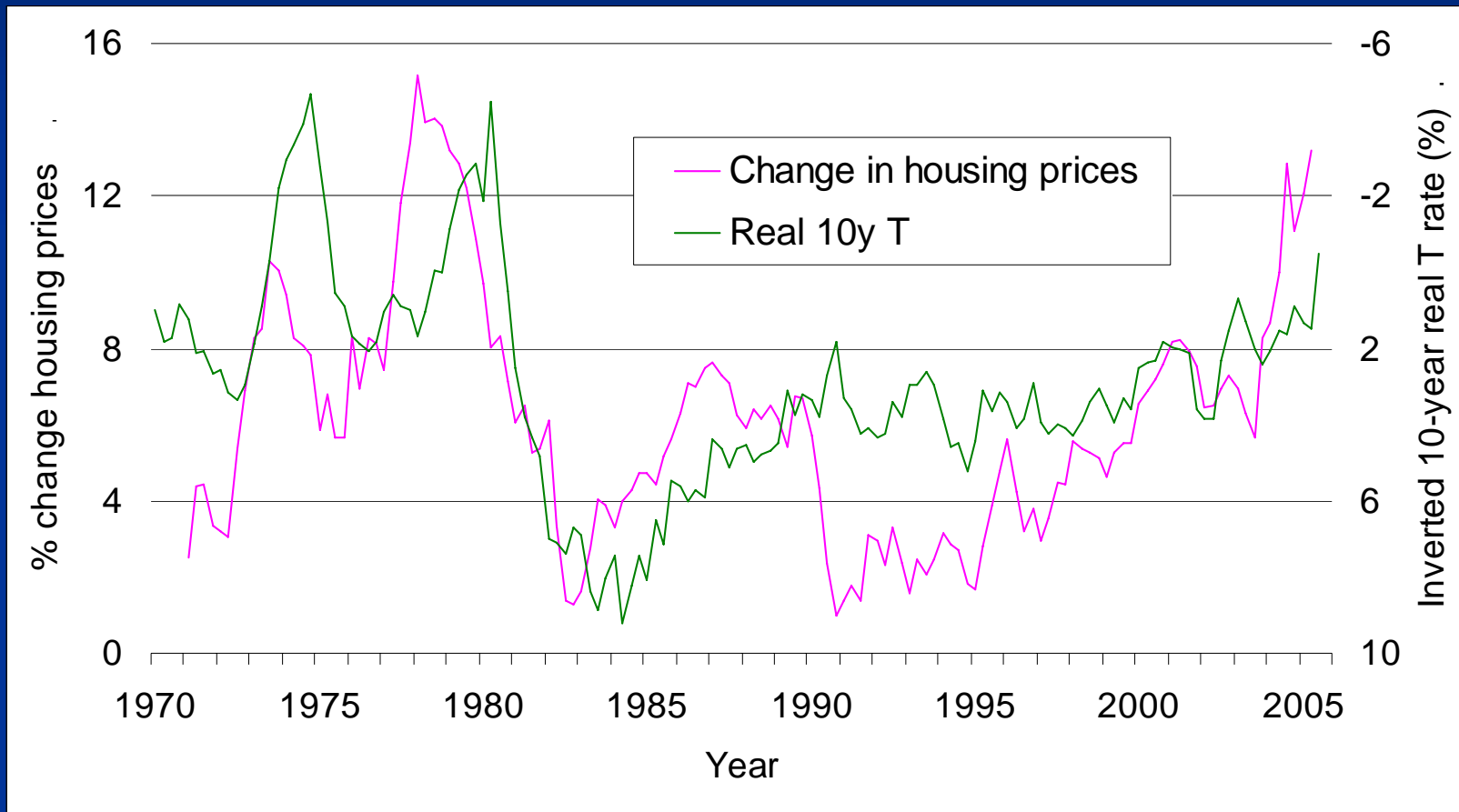
Our Actual Questions, Greenspan's Potential Answers

- Will the house froth burst?
 - If so, it probably won't be due to higher interest rates
- Will there be a recession?
 - If so, it probably won't be due to higher interest rates
 - If so, it might be due to house's froth flattening
- Will interest rates be lowered to ease the pain?
 - Yes, if the pain is deep and broad enough
- Will lowered interest rates cause another bubble?
 - Ask Ben!
 - My term ends in a few months

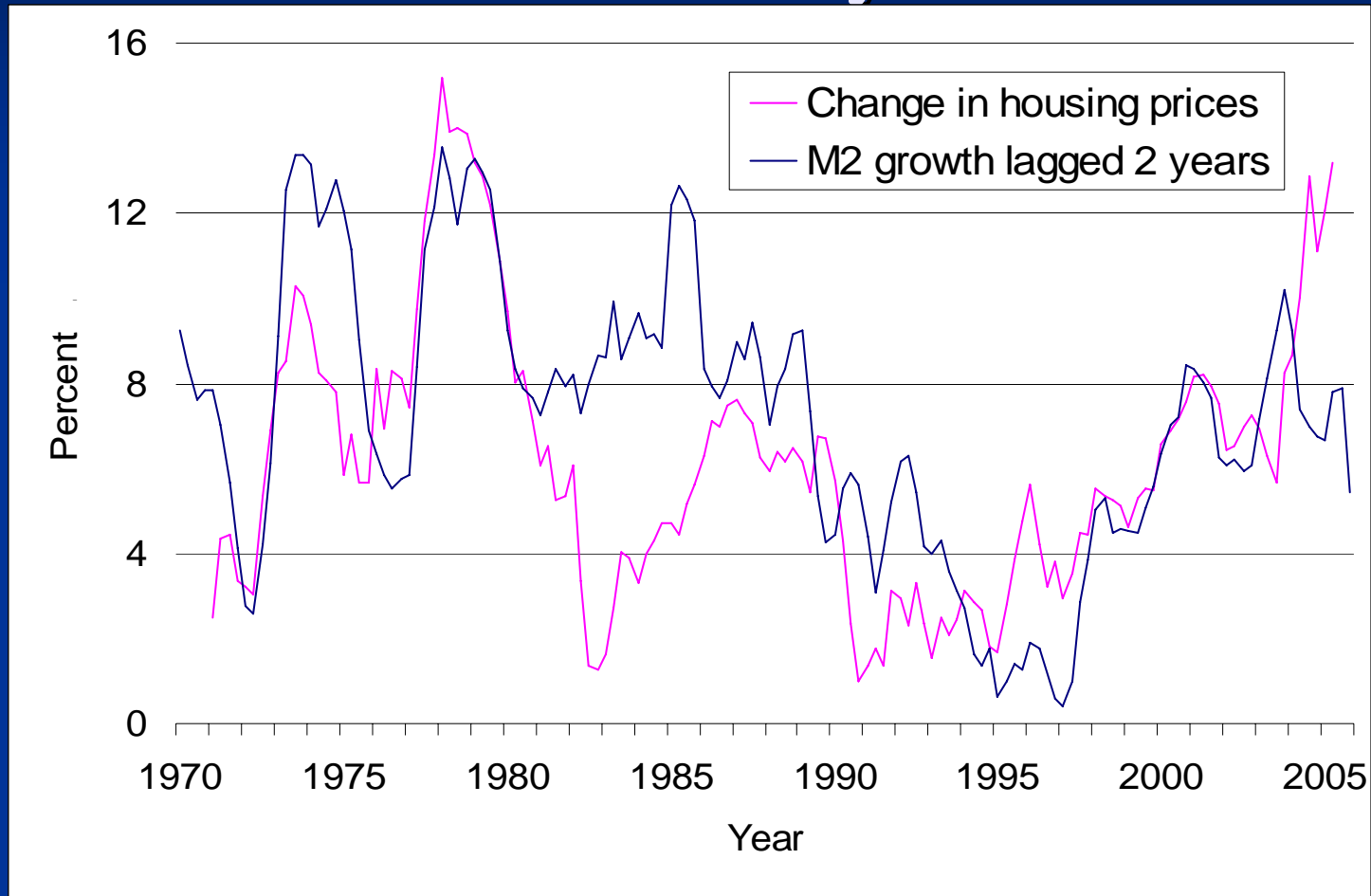
Greenspan and Bernanke

- What Greenspan says now
 - “... Such an increase in market value is too often viewed by market participants as structural and permanent...”
 - Prices in some areas have risen to “...unsustainable levels...”
- If this is not a warning shot across the bow of housing, what is?
- What will Bernanke do next?
 - Raise rates
 - At least keep them positive in real terms
 - Keep raising them until inflationary expectations subside
 - To prevent wage inflation from taking off
 - To prevent the economy from hitting capacity constraints
 - To cool housing and shift workers to other sectors
 - Or until it hurts (which recessions do)
 - Then lower rates?

House Prices and (Inverted) Real Rates



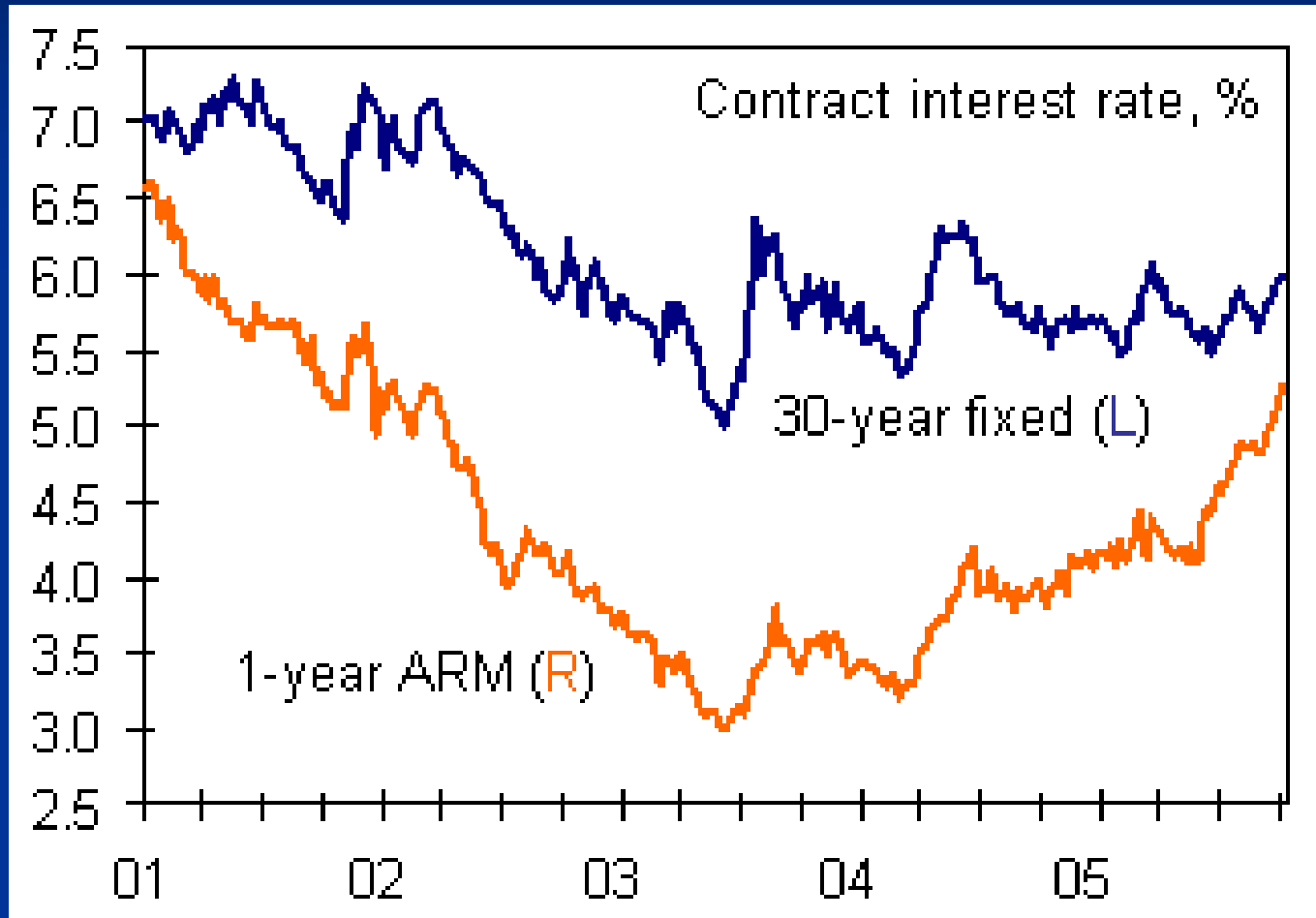
House Prices and Monetary Growth



Lags, Whimpers, and Bangs

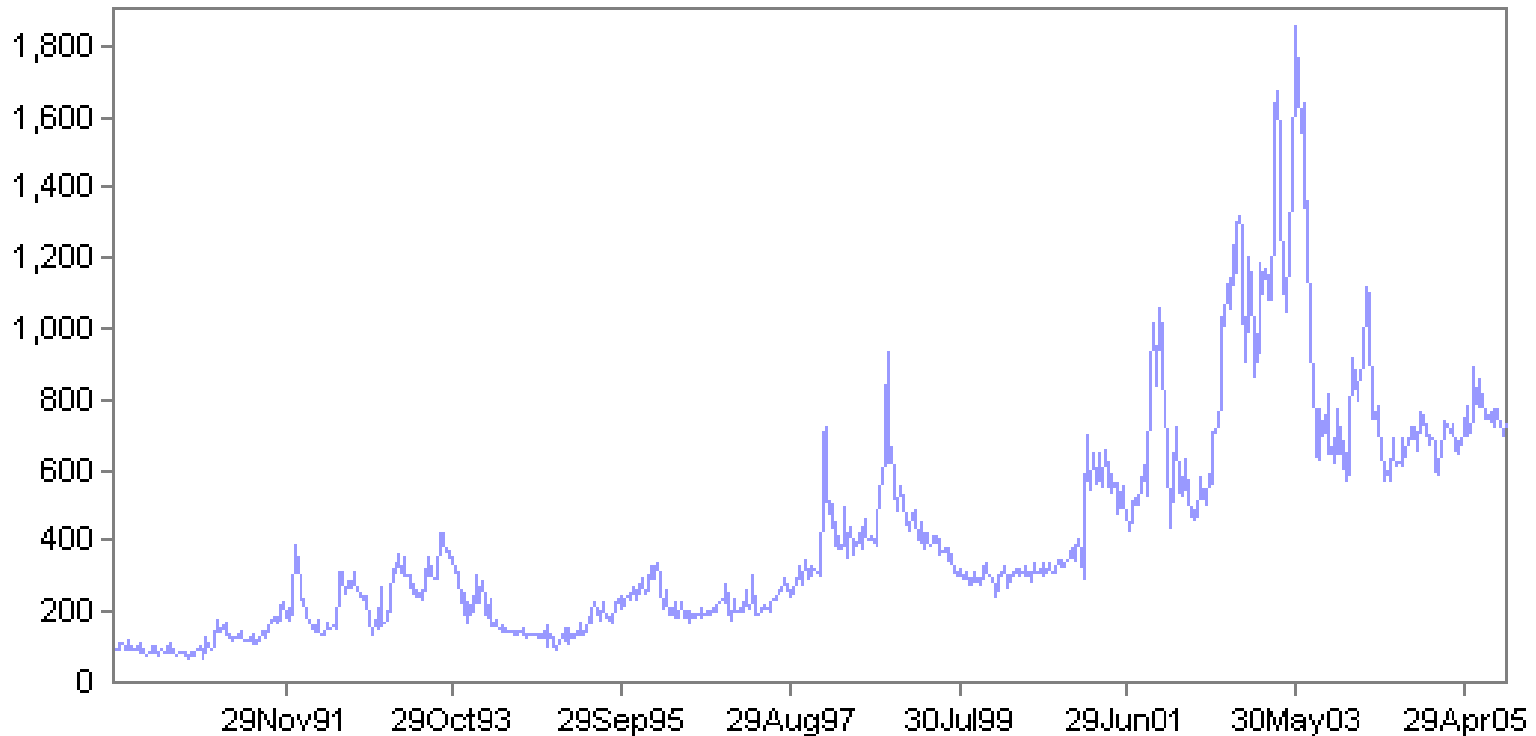
- Difficult to time a peak in a house price bubble
 - Construction lags are quite long
- Different components may peak at different times and exhibit different lags
 - House purchases, borrowing, and construction may not decline smoothly as interest rates climb.
 - They may not go out with a whimper, but with a bang bringing forward activity before rates climb even further
- Reported prices might be tough to interpret

Rising Shorts Haven't Raised Longs (Yet)



Mortgage Originations Soared in Re-fi Boom and Flying High

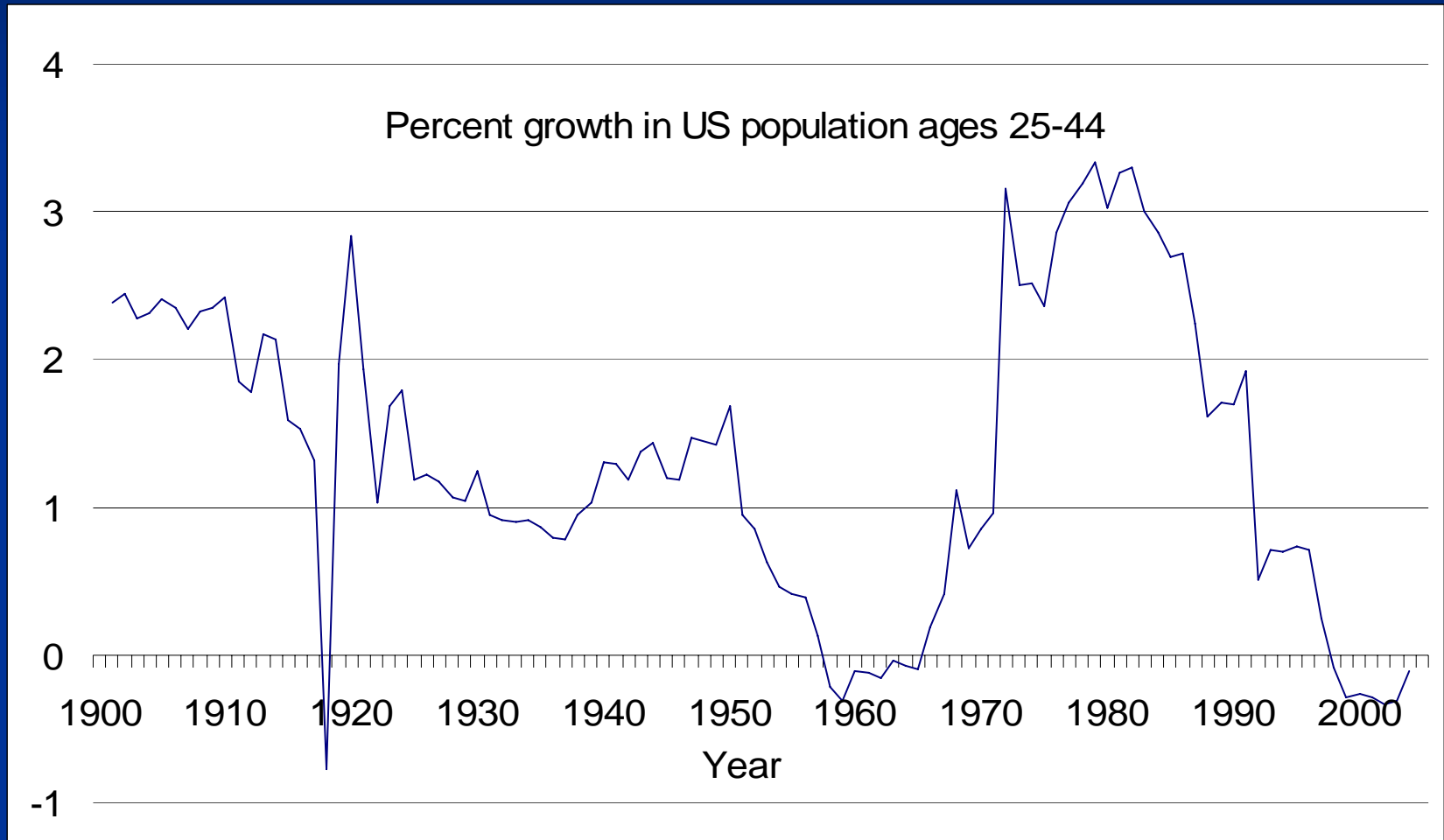
MBA: Market Composite Index, (Index 3/16/90 = 100, SA)
United States



Arguments against a Bubble

- Low interest rates explain rising house prices
 - What do higher mortgage rates portend for house prices?
- Immigration and demographics
 - Population growth of 25-45 year olds is historically low
 - Higher demand for housing would correspond to higher interest rates and tighter underwriting standards
 - Lower interest rates and looser underwriting standards suggest possibility of liquidity spilling into mortgages
- Mortgages and starts still going strong and house inventories are tight in many areas
 - Houses are still selling fast
 - Also consistent with a bubble

Demographics Unlikely to Fully Explain Higher House Prices



What Tom Barrack Says

- According to Fortune magazine, Oct 31, 2005, he is the world's best real estate investor!
- Making an analogy to playing polo: “I feel totally safe playing polo on a field full of pros...But when amateurs are all over the field, some can get killed. They have more guts than brains. They charge after every ball and don't know when to hold back.....There's too much money chasing too few good deals, with too much debt and too few brains....That's why I am getting out...”
- Barrack is getting out of condos in LA, houses in Indian Wells, condos in Miami
- Barrack is getting into hotels in Asia and Europe

What PMI Says

- Record (six?) number of cities have more than even chance of house price declines by end 2007
- Several cities are estimated to be 20-30 percent over-valued

Other Arguments for a Bubble

- Much higher share of homes purchased as investments
 - 23 percent
 - With mortgages to boot!
 - These are not buy-and-hold typical homeowners
- Much higher share of homes purchased as 2nd homes
 - 13 percent
 - Perhaps not buy-and-hold types either
- Both of these types of investors are likely attracted by low interest rates and currently climbing prices
 - An increase in interest rates or a simple pause in price appreciation could turn these buyers into sellers

House Prices May Slide after 2005

- House prices may go down, regardless of whether we call it a bubble
 - Historically, real house prices have fallen noticeably at times
 - 5-10% inflation propped up nominal prices then
 - Not so if consumer inflation is low
- Three factors that might reduce house prices after 2005
 - Mortgage rates are likely to be higher
 - Lenders are likely to tighten borrowing standards as house markets cool
 - Any bubble might pop, snap, or fizzle