LEADING DISCUSSION

IS THERE A BUBBLE IN THE HOUSING MARKET?

BY CASE & SHILLER

OUTLINE

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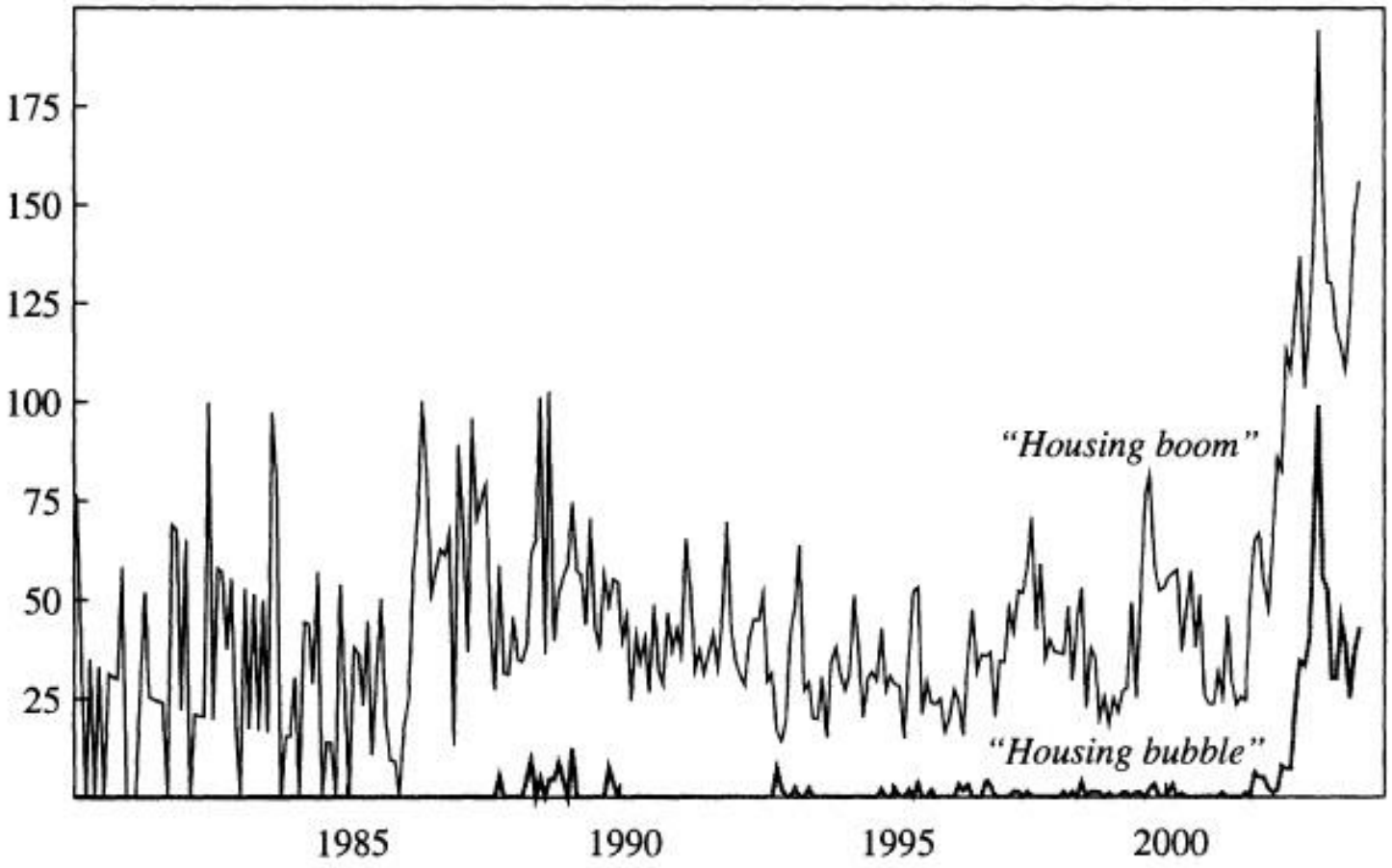
INTRODUCTION

- Bubble?
  - Situation that excessive public expectations of future price increases cause prices to be elevated and not likely to fall
- Happened in all over the world
- Fundamentals can explain increase in price
- Boom or Not
  - Fundamental Data
  - Questionnaire Survey in Comparison aspect
- Researcher did ask people what they are thinking

BOOM VS BUBBLE TERM

Figure 1. Appearances of "Housing Bubble" and "Housing Boom" in U.S. Newspapers and Wire Services, 1980–2003[a]



Source: Lexis-Nexis.

a. Data cover January 1980 through July 2003. They are rescaled for changes in the size of the database.

PREVIOUS HOUSING BUBBLE

- Around 1980s to 1990s
- Peak around 1990 and followed by decline in price
- Demand-Supply model failed to explain
- Since 1995, price has increased
- Question : Such run-up in price will be followed by a similar or even worse decline than the last time?

HOME PRICES AND THE FUNDAMENTALS

- Data from 1985 – 2002
- Measures of Home Prices
- Measures of Fundamentals

MEASURE OF HOME PRICE

- Repeat-Sale Price indexes (OFHEO)
- Case-Shiller indexes

The panel on home prices was constructed as follows for each state:

(1) $$V_i^t = V_i^{1999:1} I_i^t,$$

where

V_i^t = adjusted median home value in state i at time t
$V_i^{1999:1}$ = median value of owner-occupied homes in state i in 1999:1
I_i^t = weighted repeat-sales price index for state i at time t, 1999:1 = 1.0.

MEASURES OF THE FUNDAMENTALS

- Personal income per capita
- Population
- Employment & Unemployment
- Housing Starts
- Average Mortgage interest rates
- Ratio of income to mortgage payment per $1,000 borrowed

HOME PRICES AND INCOME

Table 1. Ratio of Average Home Price to Personal Income per Capita and Results of Regressions Explaining Home Prices, Selected States, 1985–2002

State	Ratio					R^2 of regression of home price on[a]	
	Trough	Peak	Standard deviation	In 2002:3	Quarter of peak	Income per capita	Other fundamental variables[b]
States with most volatile home prices							
Hawaii	7.8	12.5	1.34	10.1	1992:3	0.83	0.89
Connecticut	4.5	7.8	1.06	5.4	1988:1	0.45	0.69
New Hampshire	4.0	6.6	0.84	5.3	1987:2	0.49	0.78
California	6.0	8.6	0.80	8.3	1989:4	0.78	0.89
Rhode Island	4.6	7.1	0.75	6.1	1988:1	0.65	0.79
Massachusetts	4.3	6.6	0.72	5.9	1987:3	0.70	0.88
New Jersey	4.5	6.8	0.68	5.6	1987:3	0.73	0.90
New York	3.8	5.6	0.52	4.9	1987:3	0.77	0.86
States with least volatile home prices							
Nebraska	1.8	2.1	0.09	1.9	1985:2	0.96	0.99
Wisconsin	2.1	2.4	0.08	2.4	2002:3	0.99	0.99
Illinois	2.6	2.9	0.08	2.9	2002:3	0.98	0.99
Kentucky	2.1	2.4	0.08	2.2	1985:1	0.99	0.99
Indiana	2.0	2.3	0.06	2.1	1986:4	0.99	0.99
Iowa	1.7	1.9	0.06	1.8	2002:3	0.98	0.99
Ohio	2.3	2.5	0.04	2.5	2002:3	0.99	0.99

Sources: Fiserv CSW Inc., OFHEO, and Bureau of Economic Analysis data.

a. Observations are for the seventy-one quarters from 1985:1 through 2002:3.

b. Regressions use as additional explanatory variables the following fundamental variables: population, nonfarm payroll

Table 2. Ratio of Home Price to Personal Income per Capita, All States, 1985–2002[a]

State	*Median*	*Trough*	*Peak*	*Standard deviation*	*Mean*
Hawaii	9.79	7.83	12.50	1.34	10.03
Connecticut	5.41	4.47	7.84	1.06	5.67
New Hampshire	4.68	3.98	6.63	0.84	4.94
California	6.76	5.96	8.57	0.80	7.07
Rhode Island	5.49	4.58	7.12	0.75	5.62
Massachusetts	4.97	4.34	6.60	0.72	5.20
New Jersey	5.25	4.48	6.77	0.68	5.34
New York	4.54	3.83	5.60	0.52	4.55
Texas	2.48	2.20	3.59	0.41	2.61
Maine	3.98	3.44	4.77	0.40	3.98
District of Columbia	3.61	3.10	4.52	0.37	3.66
Vermont	4.11	3.64	4.85	0.37	4.19
Louisiana	2.56	2.42	3.53	0.33	2.70
Alaska	3.26	2.48	4.07	0.33	3.29
Oregon	2.25	1.49	2.69	0.32	2.23
Utah	2.87	2.29	3.21	0.31	2.81
Mississippi	2.28	2.21	3.15	0.29	2.43
Maryland	4.01	3.62	4.69	0.29	4.05
Oklahoma	2.13	2.05	3.04	0.28	2.25
Washington	3.12	2.28	3.36	0.26	3.00
Delaware	3.62	3.33	4.14	0.26	3.69
Colorado	2.60	2.19	3.18	0.25	2.57
Virginia	3.47	3.04	3.87	0.24	3.44
Georgia	2.76	2.58	3.25	0.23	2.83
Arizona	3.53	3.38	4.17	0.22	3.63
North Dakota	2.24	2.05	2.98	0.22	2.32
Arkansas	2.22	2.13	2.84	0.22	2.33

(*continued*)

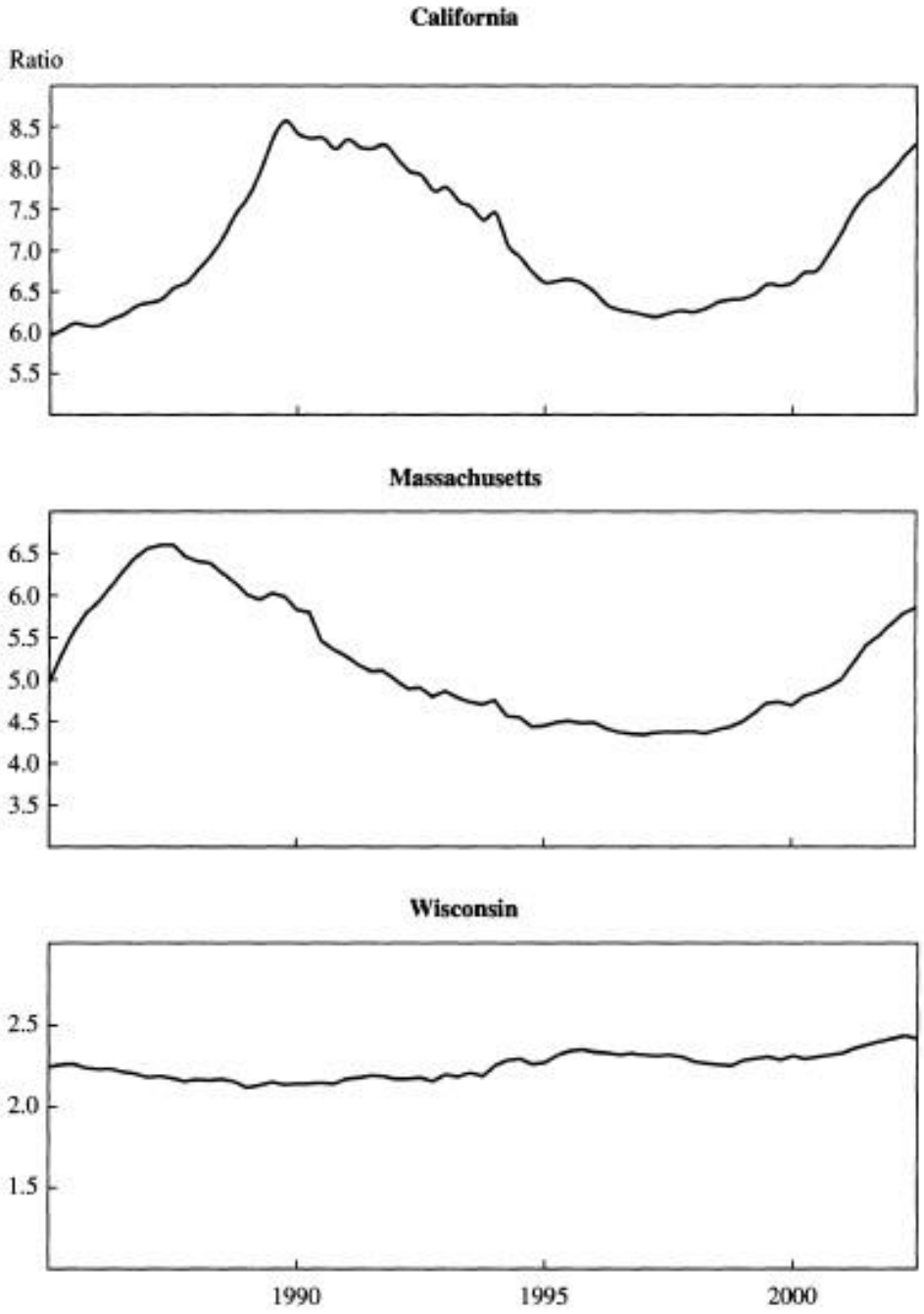
Table 2. Ratio of Home Price to Personal Income per Capita, All States, 1985–2002[a] (*continued*)

State	*Median*	*Trough*	*Peak*	*Standard deviation*	*Mean*
Montana	2.55	2.02	2.71	0.22	2.44
Florida	3.04	2.80	3.51	0.21	3.08
Missouri	2.32	1.18	2.71	0.21	2.38
Pennsylvania	2.70	2.43	3.14	0.21	2.73
Wyoming	2.12	1.82	2.65	0.21	2.15
New Mexico	3.38	3.12	3.85	0.20	3.40
Tennessee	2.35	2.23	2.80	0.19	2.43
Nevada	3.56	3.32	3.97	0.18	3.59
Alabama	2.38	2.31	2.84	0.17	2.47
Michigan	1.93	1.69	2.37	0.17	1.98
Minnesota	2.40	2.27	2.92	0.16	2.47
North Carolina	2.60	2.50	2.98	0.16	2.67
Idaho	2.58	2.27	2.91	0.15	2.58
West Virginia	2.32	2.22	2.79	0.15	2.38
South Carolina	2.69	2.57	3.06	0.15	2.74
Kansas	1.97	1.84	2.30	0.14	2.02
South Dakota	1.87	1.73	2.20	0.11	1.89
Nebraska	1.88	1.76	2.12	0.09	1.89
Illinois	2.74	2.57	2.87	0.08	2.73
Wisconsin	2.26	2.12	2.44	0.08	2.25
Kentucky	2.21	2.11	2.41	0.08	2.23
Iowa	1.78	1.68	1.92	0.06	1.79
Indiana	2.12	2.03	2.25	0.06	2.13
Ohio	2.34	2.27	2.46	0.04	2.34

Source: Fiserv CSW Inc., OFHEO, and Bureau of Economic Analysis data.

a. States are listed in descending order according to their standard deviation of home prices.

Figure 2. Ratio of Home Prices to Personal Income per Capita in Selected States, 1985–2002



HOME PRICE AND OTHER FUNDAMENTALS

Table 3. Regressions of Home Prices on Fundamentals in the Most Price-Volatile States[a]

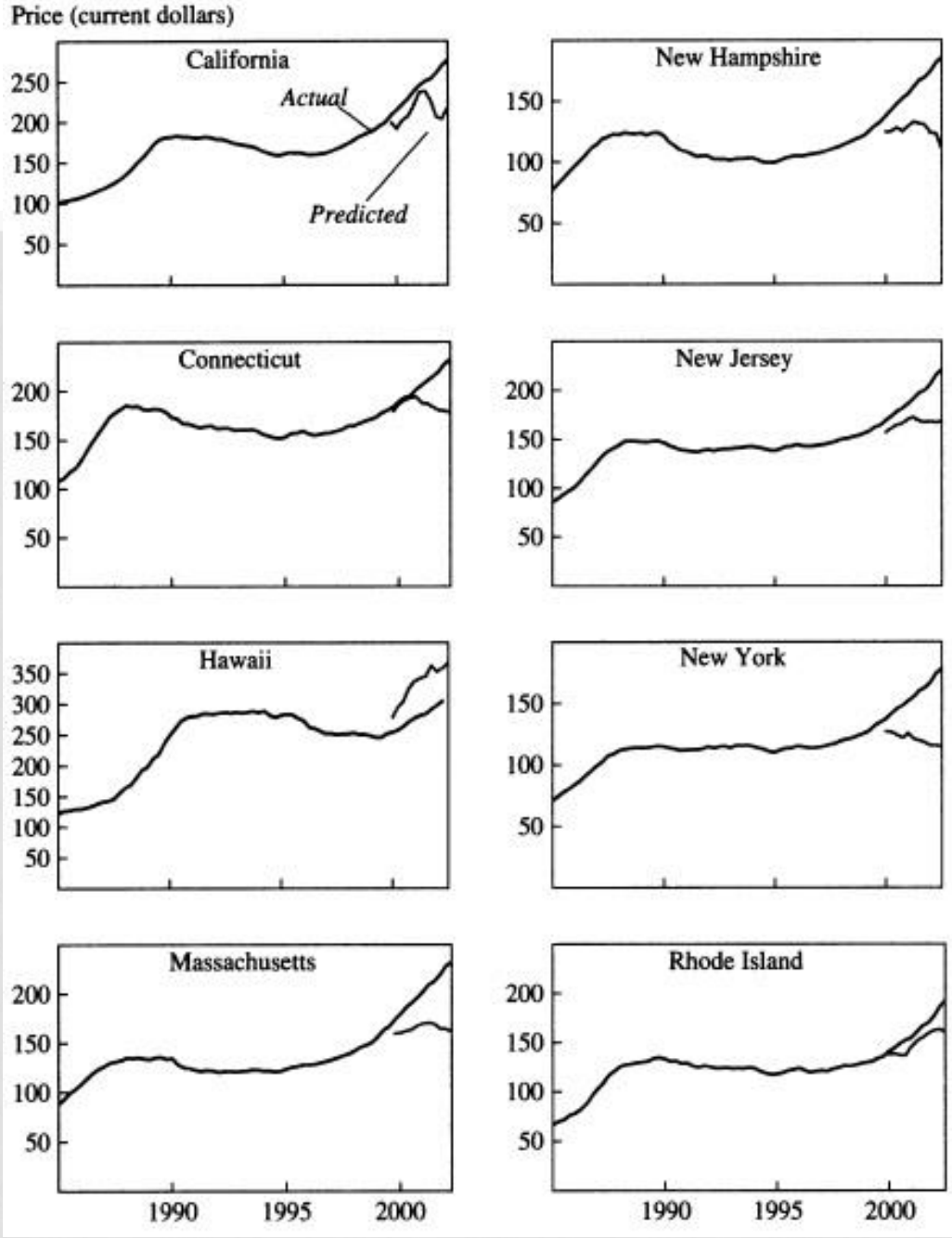
Independent variable[b]	*Hawaii*	*Connecticut*	*New Hampshire*	*California*	*Rhode Island*	*Massa-chusetts*	*New Jersey*	*New York*
Dependent variable: quarterly change in home prices, 1985:1–2002:3								
Change in population (percent)				+	+	–		
Change in employment (percent)		–					–	
Mortgage rate (percent a year)								
Unemployment rate (percent)	–	+					+	+
Housing starts		+	+	+	+	+	+	+
Income per capita		+	+	+	+	+	+	+
Adjusted R^2	0.54	0.69	0.71	0.75	0.63	0.57	0.72	0.56
Dependent variable: quarterly level of home prices 1985:1–1999:4								
Change in population (percent)	+	–	+	–	–		–	+
Change in employment (percent)	–	–	–		–	–		
Mortgage rate (percent a year)							–	
Unemployment rate (percent)	+	–		–		–	–	–
Housing starts	+	–	–	–	+		–	–
Income per capita	+			+	+	+	+	
Adjusted R^2	0.97	0.49	0.48	0.82	0.66	0.66	0.82	0.78
Dependent variable: quarterly level of home prices 1985:1–1999:4								
One-year change in population (percent)	+		+				–	+
One-year change in employment (percent)	–	–	–	–	–	–		–
Ratio of income per capita to annual mortgage payment					–			
Unemployment rate (percent)	–	–				–		–
Income per capita	+	+	+	+	+	+	+	+
Adjusted R^2	0.97	0.48	0.73	0.86	0.48	0.76	0.73	0.83

Source: Authors' regressions.

a. A plus sign indicates that the coefficient on the variable is positive and statistically significant at the 5 percent level, and a minus sign indicates that it is negative and significant at the 5 percent level.

b. Independent variables use quarterly data except where stated otherwise.

Figure 3. Actual and Predicted Housing Prices, Selected States, 1985–2003



1988 SURVEY

- LA, SF, Boston, Milwaukee
- Hot, Cooling, Steady
- Strong Evidence for Housing Bubble in 1988
- Want to compare with 2003 Case

HOMEBUYER BEHAVIOR IN FOUR METROPOLITAN AREAS

Table 4. Change in Average Home Price in Survey Cities during Boom and Bust, 1982–2003[a]

Percent

Period	*Los Angeles*	*San Francisco*	*Boston*	*Milwaukee*
1982-peak	+128	+126	+143	…[b]
Peak quarter	1990:2	1990:2	1988:3	
Peak to trough	–29	–14	–16	…
Trough quarter	1996:1	1993:1	1991:1	
Trough to peak	+94	+129	+126	…
Peak quarter	2003:1	2002:3	2003:1	
Whole period	+214	+325	+419	+213
At annual rate	5.6	7.1	8.2	5.6

Source: Fiserv CSW Inc. repeat-sales indexes.

a. Data cover the period 1982:1–2003:1.

b. Home prices displayed no clear peak or trough during the period.

Figure 4. Case-Shiller Home Price Index, Selected Metropolitan Areas, 1982–2003[a]

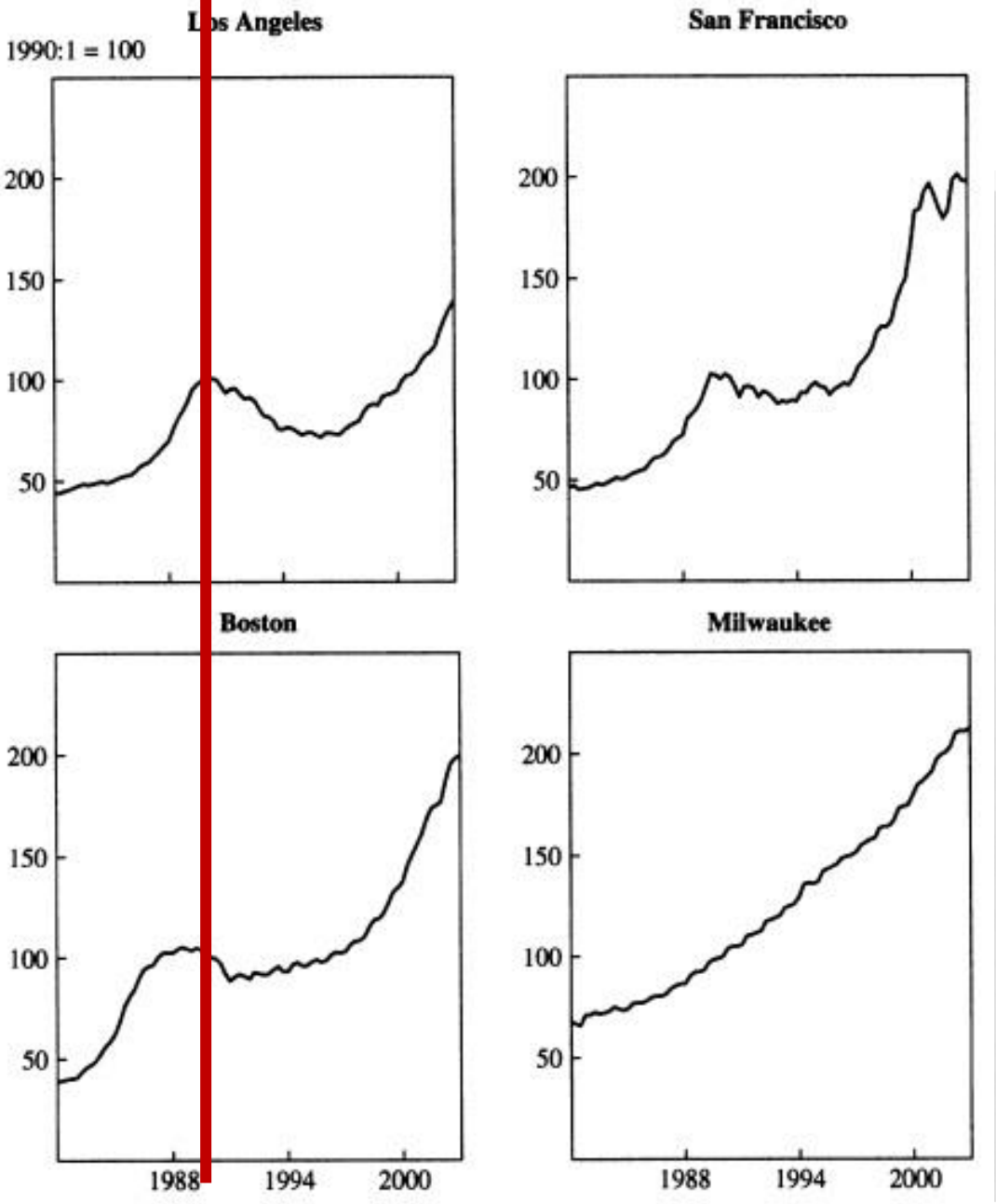


Table 5. Home Prices, Personal Income, and Mortgage Payments, Selected States, 1995 and 2002

Current dollars except where stated otherwise

Measure	*California*	*Massachusetts*	*Wisconsin*
Home prices			
1995:1	158,954	121,091	50,557
2002:3	276,695	231,994	73,071
Total change (percent)	+74	+92	+45
At annual rate (percent)	7.7	9.1	5.1
Personal income per capita			
1995:1	24,044	27,224	22,203
2002:3	33,362	39,605	30,138
Total change (percent)	+39	+45	+35
At annual rate (percent)	4.5	5.1	4.1
Ratio of home price to income per capita			
1995:1	6.61	4.45	2.28
2002:3	8.29	5.86	2.42
Annual mortgage payment[a]			
1995:1	12,145	9,253	3,862
2002:3	15,908	13,338	4,201
Ratio of mortgage payment to income per capita			
1995:1	0.51	0.34	0.17
2002:3	0.47	0.34	0.14

Sources: Bureau of Economic Analysis, Economy.com, Fannie Mae, U.S. Bureau of the Census data adjusted using CSW or blended repeat-sales indexes.

a. Assumes thirty-year fixed rate mortgage at 80 percent loan to value at annual interest rate of 8.8 percent (February 1995) or 6.0 percent (August 2002).

SURVEY METHOD

- Very same questionnaire as in 1988 survey
- Adding some new questions
- Ordinary mail

Table 6. Survey Sample Sizes and Response Rates in 1988 and 2003

	Sample size		*Returns tabulated*		*Response rate (percent)*	
Metropolitan area	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
Los Angeles	500	500	241	143	48.2	28.6
San Francisco	530	500	199	164	37.5	32.8
Boston	500	500	200	203	40.0	40.6
Milwaukee	500	500	246	187	49.2	37.4
Total	2,030	2,000	886	697	43.9	34.9

Source: Authors' survey described in the text.

SURVEY RESULTS

- Homebuying behavior aspect
  - Survey Responses on Housing as an investment
  - Survey Responses on Price Expectation, Sense of Excitement, and Talk
  - Survey Responses on Homebuyers' Agreement with Simple Theories of Housing Prices
  - Survey Responses on Factors for housing price change
  - Survey Responses on Real Estate and Stock Market Investment
  - Survey Responses on Excess Demand and Upward Rigidity
  - Survey Responses on Excess Supply and Downward Rigidity

Table 8. Survey Responses on Housing as an Investment, 1988 and 2003

Percent of responses except where stated otherwise

	Los Angeles		*San Francisco*		*Boston*		*Milwaukee*	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
In deciding to buy your property, did you think of the purchase as an investment?								
It was a major consideration	56.3	46.8	63.8	51.8	48.0	33.9	44.0	50.3
In part	40.3	46.2	31.7	34.4	45.0	56.2	45.7	42.2
Not at all	4.2	7.0	4.5	9.8	7.0	9.9	10.3	7.5
No. of responses	238	143	199	164	200	203	243	187
Why did you buy the home that you did?								
Strictly for investment purposes	19.8	7.5	37.2	10.6	15.6	8.2	18.7	13.8
No. of responses	238	142	199	164	199	203	246	187
Buying a home in [city] today involves								
A great deal of risk	3.4	7.9	4.2	14.8	5.1	7.8	5.9	4.3
Some risk	33.3	47.5	40.1	51.9	57.9	62.5	64.6	57.3
Little or no risk	63.3	44.6	55.7	33.3	37.1	29.6	29.5	38.4
No. of responses	237	143	192	164	197	203	237	187

Source: Authors' survey described in the text.

Table 9. Survey Responses on Price Expectations, Sense of Excitement, and Talk, 1988 and 2003

Percent of responses except where stated otherwise

	Los Angeles		*San Francisco*		*Boston*		*Milwaukee*	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
Do you think that housing prices in the [city] area will increase or decrease over the next several years?								
Increase	98.3	89.7	99.0	90.5	90.2	83.1	87.1	95.2
Decrease	1.7	10.3	1.0	9.5	9.8	16.9	12.9	4.8
No. of responses	240	145	199	158	194	201	233	187
How much of a change do you expect there to be in the value of your home over the next 12 months?								
Mean response (percent)	15.3	10.5	13.5	9.8	7.4	7.2	6.1	8.9
Standard error	0.8	0.6	0.6	0.6	0.6	0.4	0.5	1.0
No. of responses	217	139	185	147	176	179	217	160
On average over the next 10 years, how much do you expect the value of your property to change each year?								
Mean response (percent)	14.3	13.1	14.8	15.7	8.7	14.6	7.3	11.7
Standard error	1.2	1.2	1.4	1.8	0.6	1.8	0.5	1.3
No. of responses	208	137	181	152	177	186	211	169
Which of the following best describes the trend in home prices in the [city] area since January 1988?								
Rising rapidly	90.8	76.2	83.7	28.6	3.0	29.6	8.7	33.0
Rising slowly	8.8	22.4	12.8	51.0	34.3	49.2	53.0	57.3
Not changing	0.4	1.4	3.1	14.3	37.4	12.6	23.9	8.6
Falling slowly	0.0	0.0	0.5	6.2	22.2	8.5	11.7	1.1
Falling rapidly	0.0	0.0	0.0	0.0	3.0	0.0	2.6	0.0
No. of responses	239	143	196	161	198	199	230	185
It's a good time to buy because housing prices are likely to rise in the future.								
Agree	93.2	77.0	95.0	82.1	77.8	66.1	84.8	87.0
Disagree	6.8	23.0	5.0	17.9	22.2	33.9	15.2	13.0
No. of responses	206	126	180	145	171	174	210	161
Housing prices are booming. Unless I buy now, I won't be able to afford a home later.								
Agree	79.5	48.8	68.9	59.7	40.8	37.1	27.8	36.4
Disagree	20.5	51.2	31.1	40.3	59.2	62.9	72.2	63.6
No. of responses	200	124	167	134	169	175	194	154

(continued)

Table 9. Survey Responses on Price Expectations, Sense of Excitement, and Talk, 1988 and 2003 (*continued*)

Percent of responses except where stated otherwise

	Los Angeles		*San Francisco*		*Boston*		*Milwaukee*	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
There has been a good deal of excitement surrounding recent housing price changes. I sometimes think that I may have been influenced by it.								
Yes	54.3	46.1	56.5	38.5	45.3	29.6	21.5	34.8
No	45.7	53.9	43.5	61.5	54.7	70.4	78.5	65.2
No. of responses	230	141	191	156	181	199	233	184
In conversations with friends and associates over the last few months, conditions in the housing market were discussed…								
Frequently	52.9	32.9	49.7	37.4	30.3	31.0	20.0	27.6
Sometimes	38.2	50.3	39.0	43.6	55.1	53.7	50.2	40.5
Seldom	8.0	14.7	9.7	17.2	12.1	14.3	25.1	28.1
Never	0.8	2.1	1.5	1.8	2.5	1.0	4.7	3.8
No. of responses	238	143	195	163	198	203	235	185

Source: Authors' survey described in the text.

Table 10. Survey Responses on Homebuyers' Agreement with Simple Theories of Housing Prices, 1988 and 2003

Percent of responses except where stated otherwise

	Los Angeles		*San Francisco*		*Boston*		*Milwaukee*	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
Housing prices have boomed in [city] because lots of people want to live here.								
Agree	98.6	93.8	93.3	89.1	69.6	77.8	16.1	23.0
Disagree	1.4	6.2	6.7	10.9	30.4	22.2	83.9	77.0
No. of responses	210	128	178	147	181	176	193	148
The real problem in [city] is that there is just not enough land available.								
Agree	52.8	60.3	83.9	59.6	54.2	72.9	17.2	35.4
Disagree	47.2	39.7	16.1	40.4	45.8	27.1	82.8	64.6
No. of responses	197	121	174	141	168	177	192	158
When there is simply not enough housing available, price becomes unimportant.								
Agree	34.0	31.9	40.6	32.6	26.9	32	20.7	25.2
Disagree	66.0	68.1	59.4	67.4	73.1	68	79.3	74.8
No. of responses	197	116	165	141	171	172	193	151
In a hot real estate market, sellers often get more than one offer on the day they list the property. Some are even over the asking price. There are also stories about people waiting in line to make offers. Which is the best explanation?								
There is panic buying and price becomes irrelevant.	73.3	63.7	71.2	73.9	61.4	73.1	34.6	46.8
Asking prices have adjusted slowly or sluggishly to increasing demand.	26.7	36.2	28.8	26.1	38.6	39.9	65.4	53.2
No. of responses	210	135	177	153	176	197	211	173
Which of the following better describes your theory about recent trends in home prices in [city]?								
It is a theory about the psychology of homebuyers and sellers.	11.9	10.8	16.7	15.0	21.3	11.8	10.7	13.7
It is a theory about economic or demographic conditions such as population changes, changes in interest rates, or employment.	88.1	89.2	83.3	85.0	78.7	88.2	89.3	86.3
No. of responses	226	130	180	153	188	195	215	168

Source: Authors' survey described in the text.

Table 11. Survey Responses: Popular Themes Mentioned in Interpreting Recent Housing Price Changes, 1988 and 2003

Percent of responses[a]

	Los Angeles		San Francisco		Boston		Milwaukee	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
National factors								
Interest rate changes	32	33	40	10	25	20	27	39
Stock market crash	2	4	2	11	25	13	2	8
September 11, 2001		6		9		16		7
Iraq war 2003		2		4		2		3
Dot-com bust		2		21		4		0
Corporate scandals, loss of confidence		0		1		0		0
Poor or slow economy		5		24		34		15
Regional factors								
Region is a good place to live	17	13	18	8	6	5	2	3
Immigration or population change	20	8	8	7	11	5	2	8
Asian investors	3	0	27	0	0	0	0	0
Asian immigrants	2	0	14	0	1	0	0	0
Income growth	3	1	2	4	2	2	1	2
Anti-growth legislation	11	0	3	0	0	1	0	0
Not enough land	8	5	19	2	2	3	0	0
Local taxes	3	0	0	0	4	0	10	4
Increasing black population	0	0	0	0	0	0	7	0
Rental rates and vacancies	0	1	3	0	7	3	2	0
Traffic congestion	4	0	7	1	0	0	0	0
Local economy—general	25	3	5	6	30	6	18	5
Other								
Psychology of the housing markets[b]	5	2	7	2	18	1	1	1
Quantitative evidence[c]	0	0	0	0	0	0	0	0

Table 12. Survey Responses on Real Estate versus Stock Market Investment, 2003

Percent of responses except where stated otherwise

Question	*Los Angeles*	*San Francisco*	*Boston*	*Milwaukee*
Do you agree with the following statement: "Real estate is the best investment for long-term holders, who can just buy and hold through the ups and downs of the market"?				
Strongly agree	53.7	50.6	36.7	31.3
Somewhat agree	33.1	39.5	48.5	45.9
Neutral	10.3	6.7	9.3	11.3
Somewhat disagree	2.7	2.4	4.9	9.1
Strongly disagree	0.0	0.6	0.4	2.1
No. of responses	145	162	204	185
Do you agree with the following statement: "The stock market is the best investment for long-term holders, who can just buy and hold through the ups and downs of the market"?				
Strongly agree	8.2	8.0	14.7	14.9
Somewhat agree	32.4	38.2	44.3	33.6
Neutral	32.4	27.7	17.7	25.6
Somewhat disagree	20.0	16.0	15.2	20.3
Strongly disagree	6.8	9.8	7.8	5.3
No. of responses	145	162	203	187
The experience with the stock market in the past few years…				
Much encouraged me to buy my house	13.9	15.5	14.3	9.1
Somewhat encouraged me to buy my house	11.1	16.7	13.8	13.9
Had no effect on my decision to buy my house	74.1	64.5	70.7	74.7
Somewhat discouraged me from buying my house	0.0	2.4	0.9	2.1
Much discouraged me from buying my house	0.6	0.6	0.0	0.0
No. of responses	143	161	202	186

Table 13. Survey Responses on Excess Demand and Upward Rigidity in Asking Prices, 1988 and 2003[a]

Percent of responses except where stated otherwise

	Los Angeles		*San Francisco*		*Boston*		*Milwaukee*	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
Did you finally settle on the price that was…								
Above the asking price?	6.3	19.9	9.8	45.8	0.5	21.3	3.3	17.5
Equal to the asking price?	38.0	50.4	26.8	27.5	23.5	59.1	22.7	52.4
Below the asking price?	55.7	29.7	63.4	26.7	76.0	28.6	74.0	31.1
No. of responses	237	141	194	153	200	203	242	183
If you had asked 5 to 10 percent more for your property, what would the likely outcome have been?[a]								
It wouldn't have been sold.	21.3	23.5	23.4	27.1	31.1	27.7	32.5	26.1
It would have sold but it would have taken much more time.	44.9	47.1	46.9	40.7	54.1	38.6	37.2	39.3
If buyers had to pay that much they might not be able to obtain financing (a buyer cannot obtain financing unless an appraiser confirms the worth of the property).	7.9	4.1	9.4	6.8	0.0	4.8	9.3	8.7
It probably would have sold almost as quickly.	24.7	23.5	17.2	20.3	11.5	26.5	16.3	21.7
Other	1.1	1.5	3.1	5.1	3.3	2.4	4.7	4.4
No. of responses	89	68	64	59	61	83	43	46

(*continued*)

Table 13. Survey Responses on Excess Demand and Upward Rigidity in Asking Prices, 1988 and 2003[a] (*continued*)

Percent of responses except where stated otherwise

Question	Los Angeles		San Francisco		Boston		Milwaukee	
	1988	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
If you answered that it would have sold almost as quickly, which of the following (you can check more than one) explains why you didn't set the price higher?[a]								
The property simply wasn't worth that much.	32.4	25.8	27.3	23.1	38.5	13.5	25.0	13.3
It wouldn't have been fair to set it that high; given what I paid for it, I was already getting enough for it.	16.2	25.8	22.7	61.5	15.4	54.1	31.3	46.7
I simply made a mistake or got bad advice; I should have asked for more.	21.6	19.4	18.2	7.7	19.2	8.1	25.0	13.3
Other	29.7	29.0	31.8	7.7	26.9	24.3	18.8	26.7
No. of responses	37	31	22	26	26	37	16	15
In the six months prior to the time you first listed the property, did you receive any unsolicited calls from a real estate agent or anyone else about the possibility of selling your house?[a]								
Yes	71.9	69.1	59.0	55.6	38.7	53.0	43.2	. . .[b]
No	28.1	30.9	41.0	44.4	61.3	46.0	56.8	. . .
Approximate number of calls								
Mean	8.7		5.0		3.9		2.7	
Standard error	1.2		0.3		0.4		0.2	
No. of responses	89	68	61	63	62	83	48	44

Source: Authors' survey described in the text.

a. Responses from buyers surveyed who had also sold a home. The sale is assumed to have occurred in the same metropolitan area as the purchase.

b. The question was not asked.

Table 14. Survey Responses on Excess Supply and Downward Rigidity in Asking Prices, 1988 and 2003[a]

Percent of responses except where stated otherwise

	Los Angeles		*San Francisco*		*Boston*		*Milwaukee*	
Question	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*	*1988*	*2003*
Since housing prices are unlikely to drop very much, the best strategy in a slow market is to hold up until you get what you want for a property.								
Agree	69.0	64.0	69.6	69.0	57.5	51.2	50.6	61.9
Disagree	31.0	36.0	30.4	31.0	42.5	48.8	49.4	38.1
No. of responses	174	111	148	129	160	166	180	147
If you had not been able to sell your property for the price that you received, what would you have done?[a]								
Left the price the same and waited for a buyer, knowing full well that it might have taken a long time	42.0	32.3	38.7	29.5	32.8	21.7	32.6	39.5
Lowered the price step by step hoping to find a buyer	20.5	32.3	38.7	26.7	42.6	47.0	20.9	30.2
Lowered the price till I found a buyer	4.5	7.7	3.2	11.5	4.9	12.0	7.0	9.3
Taken the house off the market	18.2	21.5	17.7	27.9	11.5	15.7	27.9	16.3
Other	14.8	6.2	1.6	4.9	8.2	3.6	11.6	4.6
No. of responses	88	65	62	61	61	83	43	43
If you answered that you would have lowered your price, is there a limit to how far you would have gone if the property still hadn't sold?[a]								
Yes	81.8	85.7	78.9	81.3	93.1	87.7	87.5	90.3
No. of responses	33	35	38	32	29	57	16	32

Source: Authors' survey described in the text.

a. Responses from buyers surveyed who had also sold a home. The sale is assumed to have occurred in the same metropolitan area as the purchase.

A MODEL OF SPECULATIVE BUBBLES IN HOUSING

- Buyers and Sellers in Housing Market have a little knowledge
- Fundamentals Factor raise the price
  - Employment > Demand > Price
  - Cyclical Process > Supply > Inventory > Price
- Behaviors act as AMPLIFICATION MECHANISMS
  - Word of Mouth
- Some Restrictions affect
- No Correlation with population Density
- Reversal Effect
- Long Run Increase but Short Run Fluctuation
- Real Estate is no longer the Best Investment

IS A HOUSING BUBBLE ABOUT TO BURST

- Increase due to fundamentals
- Comparing with 1988 > No Strong evidence suggest there was bubble
- Have to see amplification mechanisms
- Drop in real housing prices is unlikely

END