

ECONOMIC REAL ESTATE TRENDS





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In This Issue



Economic and Real Estate Trends in the Nation's MSAs

Enhancements to the PMI U.S. Market Risk Index Model

Housing Market Recovery

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What is a Normal Housing Market?

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Over the past year, home sales have dropped by 22 percent, single-family housing starts have plummeted by almost 35 percent, and nationwide, home values have slipped by about 4.5 percent. Clearly it has been far from a normal year in the housing market, and 2006 was weak as well. On the other hand, the several years before these were just as unusual for housing, but from the opposite perspective. So, just what is a normal year for housing, and will we ever see one again?

been one of the most volatile in the U.S. economy. The reason for this is that to a large extent home sales are driven from year to year by housing affordability, which in turn usually is affected most strongly by movements in interest rates.

Whether it is because of changes in monetary policy at the Federal Reserve, adjustments in inflation expectations, movements in foreign capital flows, or just increases or decreases in economic growth, interest rates tend to be volatile—thus moving housing demand (continued on page 2)

OFHEO House Price Appreciation Rates





What is a Normal Housing Market?

(continued from page 1)

up or down, often sharply. In recent years this more normal interest rate volatility has been heightened by movements in house prices, resulting in sharp swings in affordability.

Over longer periods of time, other elements—most notably demographics—tend to have a stabilizing influence on housing demand. But even in a several-year period of time, the cyclical factors affecting housing demand can overwhelm the calming impacts of demographics.

This is exactly what we've seen over the past five years in the housing market, with strong activity from 2002–2005, and weak activity since then. A combination of high levels of affordability, low borrowing costs, less stringent underwriting characteristics, and a surge in investor demand for houses boosted housing demand and home price gains in that earlier four-year period. More recently, slower job growth, a sharp drop in affordability, tighter underwriting standards, and a wholesale movement by investors into other markets has led to the drop in housing activity over the past two years.

Given the sharp cycles that housing goes through, it may not make much sense to even talk about what a normal market looks like. If the housing market repeatedly goes from one extreme to another, is there anything normal—other than its cyclicality? We can certainly compute averages over a housing cycle and over time, but that may not represent a normal market. Similarly, we can estimate what long-term housing demand should be based on demographics and averages for interest rates and job growth, but that may not represent a normal market if actual housing activity simply cycles around it.

Perhaps the best that we can say is that there are periods when housing is strong (such as the 2002–2005 period), when we know that activity will ultimately slow from that rapid pace (although we may not be able to say with much certainty when or by how much it will slow). By the same token, there are weak periods of housing activity (such as the past couple of years) when we know that activity will ultimately rebound, although it could take time. After all, every household has to live somewhere and the number of households continues to grow. Moreover, jobs and incomes have been growing, although unemployment increased from 4.7 percent to 5 percent in January. The longer housing remains depressed, the more pent-up demand for owner-occupied housing is created.

Are we nearing the end of the current housing downturn? We don't think so, given the magnitude of the run up in housing (with no significant housing downturn since the recession of 1991–92). That doesn't mean that the level of housing activity has to fall to 1992 levels—after all there are almost 22 million more households today than there were back then, with higher income levels and lower unemployment rates. But the unsustainable surge of 2002–05 has to be worked off, and that's what's going on in the housing market today.

The famous economist Herb Stein once noted, "If something cannot go on forever, it will stop." That is probably the best way to view the housing market today. We know that given the combination of demographics, job and income growth, and the level of interest rates, housing demand can't fall without bounds. •

Economic and Real Estate Trends in the Nation's MSAs

PMI's U.S. Market Risk Index scores the likelihood of home price declines in two years for the nation's 381 metropolitan statistical areas (MSAs). It is based on economic and market factors including home price appreciation, employment, affordability, excess housing supply, and foreclosure activity. Housing supply and foreclosure activity are new factors added to the model this quarter (see model change article page 6).

ccording to PMI's risk index, 21 of the nation's 50 largest MSAs saw a movement to a higher risk rank in the third quarter of 2007, with 8 moving into the highest risk category, raising the total to 12. None of the 50 largest MSAs moved to less risky ranks. The increase in the risk of home price declines is the result of extraordinarily high levels of homes for sale, rising foreclosure activity, slowing job growth in many regions, and the continued overhang of several years of unsustainable investor home buying. The largest concentrations of risk are in California, Florida, Nevada, and Arizona, with increasing risk in the industrial Midwest and the East coast.

Trends in Risk

As a result of deteriorating market conditions and the enhancements to the risk index model, the risk of home price declines increased in all of the Top 50 MSAs during the third quarter. California's MSAs accounted for 7 of the 15 MSAs in the highest risk categories.

There is also a growing distinction in California between the performance of house prices in the northern parts of the state (dominated by the San Francisco Bay area), southern parts of the state (dominated by Los Angeles and San Diego), and the Central Valley (Bakersfield, Fresno, Modesto, etc). Housing markets in the Central Valley and Southern California MSAs are much weaker than those in the Northern California MSAs, where employment continues to be strong. The MSAs in Florida account for 5 of the 15 highest ranked MSAs in the largest 50. Rounding out the group are Las Vegas, Phoenix, and Providence, which all experienced significant increases in their risk scores.

Risk scores also continued to increase for many MSAs in the industrial Midwest and along the east coast. These MSAs were mainly in the moderate to elevated risk categories: Rank 2 and 3. Risk scores increased in the Michigan MSAs of Detroit and Warren. Along the east coast the largest increases in risk were

in Edison, New Jersey, Providence, Nassau-Suffolk counties in New York, and New York City-White Plains.

The risk of house price declines remained low in many areas of the South, Midwest, and Northwest. In general, among the 50 largest MSAs, Texas MSAs remained the lowest and most stable in risk outlook during the third quarter. Among these, the Dallas-Ft. Worth metroplex and Houston had only small increases in risk.

Trends in Home Price Appreciation

Since peaking in the second quarter of 2005, home price appreciation has decelerated for eight of the last nine quarters, according to OFHEO. At the end of the third quarter, national home values were only 1.8 percent higher than their year-ago levels (down from 3.4 percent in the prior quarter). Moreover, prices fell in the third quarter (at a 1.5 percent annualized rate)—the first quarterly decline since 1994.

The number of MSAs experiencing negative appreciation also increased in the third quarter. Of the 381 MSAs tracked by OFHEO, 89 MSAs had negative year-over-year price appreciation, compared with 67 in the previous quarter. Of those that declined, the average drop was 3.9 percent, compared with 2.9 percent in the previous quarter. Among the 50 largest MSAs, 22 had negative year-over-year appreciation rates, with an average decline of 3.0 percent. Broader measures of house prices showed a larger decline in house prices than the OFHEO index nationally.

Trends in Housing Affordability

Housing affordability was largely unchanged during the third quarter. PMI's proprietary affordability index measures how affordable homes are today in a given MSA relative to a baseline of 1995. An Affordability Index score exceeding 100 indicates that homes have become more affordable; a score below 100 means they are less affordable.

Nationally, the weighted average affordability index reading was 95.53 in the third quarter, compared with the second quarter reading of 95.96. Fewer MSAs showed higher affordability than those that showed a drop, with 161 MSAs up and 220 down.

Affordability remains challenged in the 15 MSAs with risk scores in the two highest risk ranks. Affordability among this group averaged 70.2, slightly improved from 69.0 in the second quarter. However, affordability is still poor relative to historical averages. Home prices will need to continue to come in line with incomes before we can expect to see meaningful reductions in risk scores. (continued on page 10)

Enhancements to the PMI U.S. Market Risk Index Model

The PMI U.S. Market Risk Index estimates the probability that home prices in a selected Metropolitan Statistical Area (MSA) will be lower two years from the date of the data used. To achieve this we have designed a model that uses a variety of economic, housing, and mortgage market variables and how they interact to predict the probability of future house price movement.

In this edition of PMI's Economic & Real Estate Trends (ERET) report we have modified the U.S. Market Risk Index model to make foreclosure rates and excess housing supply more explicit components of the model, which better reflect the important changes taking place in the credit behavior of the mortgage market, as well as movements in the supply of homes for sale.

This revision to the model provides more insight into current and future conditions in the U.S. housing market.

Implications of Excess Housing Supply

A basic tenet of economics is that when there is excess supply of something, there is downward pressure on its price. In the housing market, if the supply of homes for sale rises relative to the number of buyers, unsold inventories increase and prices fall (or price appreciation slows). The greater the degree of excess supply, the greater the downward pressure on prices. To better estimate the future impact of excess supply in the U.S. Market Risk Index model, PMI has constructed a proprietary index that measures the relationship between the stock of single family housing in a given MSA and the number of households in that MSA, relative to the historical values of the two variables.

When the supply of new housing expands more rapidly than the households in an MSA can absorb it, excess supply is created. The probability of future home price declines increases as the volume of excess supply on the market increases and persists over time. The opposite effect occurs in areas where housing supply is declining relative to the number of new households.

Implications of Foreclosure Rates

To ensure that foreclosures rates are a leading indicator in the model, PMI now uses data on single-family foreclosure rates provided by the Mortgage Bankers Association in its quarterly National Delinquency Survey. Homes in foreclosure typically sell at discounted prices relative to other houses for sale, often because the condition of a foreclosed home deteriorates over time relative to other houses for sale. In today's housing market changes in foreclosure rates are a leading indicator of changes in housing supply and provide additional insight into the direction of house price movements. We would expect that house prices would be negatively affected by a rise in foreclosed properties in an area.

Measuring Risk in the Revised PMI U.S. Market Risk Index

PMI has changed how it measures and reports risk in its U.S. Market Risk Index. Risk scores range from 0-100, with lower values suggesting a smaller probability that home prices will be lower in two years and larger values suggesting a greater chance. However, because of the cumulative effect of the changes to the model, these scores are not directly comparable to previously reported scores.

To assess the historical accuracy of the new model, PMI back-tested it for all 381 MSAs beginning in the 4th quarter 1986 through the 3rd quarter 2005. This totaled 21,394 observations.

We grouped instances of a projected price decline in increments of 5 percentage points (95 to 100 percent chance, 90 to 95 percent chance, etc.). We then assessed what percent of the time prices in an area in that group had actually declined. The results of that analysis are shown in the following chart. As an example, in areas where the prediction of price declines was between 95 and 100 percent, prices subsequently dropped 95 percent of the time.

Given this new measurement scale, the Risk Ranks have been revised to reflect the following definitions.

■ Risk Rank 1:

Probability of decline ranges between 60 and <= 100%

■ Risk Rank 2:

Probability of decline ranges between 40 and < 60%

■ Risk Rank 3:

Probability of decline ranges between 20 and < 40%

■ Risk Rank 4:

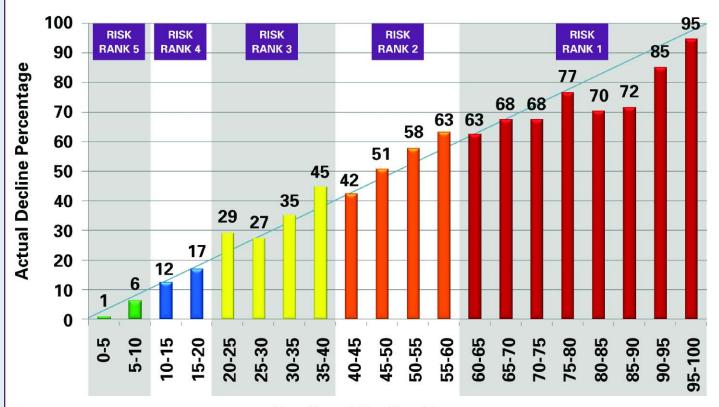
Probability of decline ranges between 10 and < 20%

■ Risk Rank 5:

Probability of decline ranges between 0 and < 10% (continued on page 5)

Actual Decline Percent vs. Predicted Percent

4th Quarter 1986 to 3rd Quarter 2005



Predicted Decline Percentage



3RD QUARTER

	RISK	PMI U.S. MARKET RISK INDEX ¹		PRICE APPRECIATION ²			
MSA	RANK	3Q '07	2Q '07	Volatility	3Q '07	3Q '06	Acceleration ⁴
Riverside-San Bernardino-Ontario, CA	1	94	79	14.48	-2.37	14.08	-16.45
Las Vegas-Paradise, NV	1	89	75	20.69	-2.51	9.76	-12.26
Phoenix-Mesa-Scottdale, AZ	1	83	63	21.70	-0.74	16.81	-17.55
Santa Ana-Anaheim-Irvine, CA (MSAD)	1	81	63	12.41	-3.49	11.05	-14.54
Los Angeles-Long Beach-Glendale, CA (MSAD)	1	79	52	12.39	-0.07	16.15	-16.22
Fort Lauderdale-Pompano Beach-Deerfield Beach, FL (M	1	78	47	12.09	-4.74	15.46	-20.20
Orlando-Kissimmee, FL	1	74	55	16.56	0.14	18.31	-18.17
Sacramento-Arden-Arcade-Roseville, CA	1	73	49	14.02	-8.40	0.72	-9.12
Tampa-St. Petersburg-Clearwater, FL	1	72	38	11.53	-1.99	16.05	-18.05
West Palm Beach-Boca Raton-Boynton Beach, FL (MSAD)	1	71	51	14.15	-6.87	11.74	-18.61
San Diego-Carlsbad-San Marcos, CA	1 1	69	45	14.29	-5.07	2.63	-7.70
Oakland-Fremont-Hayward, CA (MSAD)	1 1	65	45	11.66	-5.04	6.03	-11.07
Miami-Miami Beach-Kendall, FL (MSAD)	2	58	38	10.51	3.44	21.19	-17.75
Providence-New Bedford-Fall River, RI-MA	2	46	28	9.43	-2.19	2.83	-5.02
San Jose-Sunnyvale-Santa Clara, CA	2	44	25	13.49	0.64	8.32	-7.68
Jacksonville, FL	3	40	21	8.87	1.92	14.62	-12.70
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSAD)	3	37	19	11.18	-0.33	10.62	-12.70
Nassau-Suffolk, NY (MSAD)	3	33	12	6.31	-0.53	6.50	-7.13
San Francisco-San Mateo-Redwood City, CA (MSAD)	3	25	18	10.19	0.93	7.01	-6.09
	3	23	8	6.05	-0.82	7.69	-8.51
Edison, NJ (MSAD)	3	23	17	8.42		0.14	
Boston-Quincy, MA (MSAD)	4	19	15	13.31	-3.60 4.42	12.99	-3.74 -8.57
Virginia Beach-Norfolk-Newport News, VA-NC							
Minneapolis-St. Paul-Bloomington, MN-WI	4	19	7	4.63	-0.91	2.40	-3.31
Detroit-Livonia-Dearborn, MI (MSAD)	4	17	12	4.45	-6.12	-2.92	-3.20
Baltimore-Towson, MD	4	12	9	9.55	3.41	12.13	-8.72
Warren-Troy-Farmington Hills, MI (MSAD)	4	11	9	3.63	-5.68	-2.14	-3.54
Cambridge-Newton-Framingham, MA (MSAD)	4	11	7	6.42	-1.82	-1.31	-0.51
Portland-Vancouver-Beaverton, OR-WA	4	10	6	11.98	6.06	16.63	-10.57
New York-White Plains-Wayne, NY-NJ (MSAD)	5	10	4	5.36	1.72	9.43	-7.71
Seattle-Bellevue-Everett, WA (MSAD)	5	7	5	10.59	7.79	17.30	-9.51
Newark-Union, NJ-PA (MSAD)	5	6	4	5.11	0.82	8.57	-7.75
Atlanta-Sandy Springs-Marietta, GA	5	3	2	1.41	2.61	3.36	-0.75
Philadelphia, PA (MSAD)	5	3	2	5.41	3.18	8.57	-5.39
Chicago-Naperville-Joliet, IL (MSAD)	5	3	1	3.35	2.17	7.86	-5.69
Milwaukee-Waukesha-West Allis, WI	5	2	1	4.05	1.96	4.12	-2.16
Nashville-DavidsonMurfreesboroFranklin, TN	5	2	1	4.89	6.60	9.40	-2.81
St. Louis, MO-IL	5	2	Less than 1	2.14	2.30	5.18	-2.88
Denver-Aurora, CO	5	1	Less than 1	2.78	-0.32	1.31	-1.63
Cleveland-Elyria-Mentor, OH	5	1	Less than 1	2.20	-1.78	0.03	-1.81
Charlotte-Gastonia-Concord, NC-SC	5	Less than 1	Less than 1	3.79	8.10	8.01	0.09
Kansas City, MO-KS	5	Less than 1	Less than 1	1.43	2.41	2.27	0.14
Austin-Round Rock, TX	5	Less than 1	Less than 1	6.31	9.66	9.07	0.59
Columbus, OH	5	Less than 1	Less than 1	1.79	0.45	0.63	-0.19
Cincinnati-Middletown, OH-KY-IN	5	Less than 1	Less than 1	1.24	1.11	2.07	-0.96
Indianapolis-Carmel, IN	5	Less than 1	Less than 1	1.20	1.35	1.14	0.20
San Antonio, TX	5	Less than 1	Less than 1	4.13	8.41	9.15	-0.74
Houston-Sugar Land-Baytown, TX	5	Less than 1	Less than 1	1.88	4.70	6.45	-1.76
Pittsburgh, PA	5	Less than 1	Less than 1	1.29	4.65	2.33	2.32
Dallas-Plano-Irving, TX (MSAD)	5	Less than 1	Less than 1	1.73	4.03	3.53	0.50
Fort Worth-Arlington, TX (MSAD)	5	Less than 1	Less than 1	1.33	4.75	3.41	1.34
Weighted Average Values by Risk Rank:8	1	78	56	14.40	-2.51	12.69	-15.19
	2	50	31	11.12	1.04	12.22	-11.18
	3	31	16	8.68	-0.54	7.89	-8.43
	4	14	9	7.40	-0.15	5.41	-5.56
	5	3	2	3.46	3.09	6.29	-3.20

2007

AFFORDABILITY INDEX ⁵		UNEMPLOYMENT RATE			
Allo	ATTORDADIETTY INDEX		Rate ⁶	Demeaned ⁷	
3Q '07	2Q '07	Difference	3Q '07	3Q '07	2Q '07
60.33	59.38	0.95	6.10	-0.10	-0.44
80.29	77.06	3.23	5.10	-0.21	-0.77
69.25	68.74	0.51	3.13	-1.70	-1.56
65.25	65.09	0.16	4.17	-0.29	-0.63
59.48	59.72	-0.25	5.27	-1.33	-1.40
62.60	60.27	2.33	3.80	-1.17	-1.68
73.24	71.75	1.49	4.00	-0.70	-1.28
78.67	76.83	1.84	5.40	0.26	-0.12
71.92	69.53	2.39	4.30	-0.49	-1.17
71.39	67.16	4.23	4.77	-1.02	-1.61
77.61	76.45	1.15	4.80	-0.01	-0.31
71.17 59.12	70.32 58.74	0.85 0.38	4.97 4.00	-0.68 -2.01	-0.89 -2.41
82.36	83.16	-0.80	5.27	0.16	0.04
69.66	70.33	-0.67	5.00	-1.69	-1.90
76.87	75.85	1.02	4.07	-0.65	-1.21
75.22	74.65	0.57	3.13	-0.68	-0.66
72.77	73.41	-0.64	3.93	-0.44	-0.67
78.32	80.20	-1.89	4.27	-1.07	-1.18
76.86	78.61	-1.75	4.00	-0.67	-0.67
86.70	86.48	0.22	4.60	-0.23	0.13
82.14	83.22	-1.08	3.20	-0.68	-0.51
88.42	87.44	0.98	4.33	0.42	0.28
106.01	102.45	3.56	9.37	1.53	1.18
82.58 109.48	85.17 106.26	-2.59 3.22	4.13 7.07	-0.65 1.45	-0.63 1.33
92.69	91.84	0.85	3.86	-0.55	-0.19
77.29	79.66	-2.37	4.93	-1.93	-2.14
75.35	78.32	-2.97	5.23	-1.27	-1.68
80.94	79.49	1.45	3.77	-1.74	-1.60
84.42	86.81	-2.40	4.43	-0.77	-0.76
99.28	98.74	0.53	4.50	-0.12	-0.11
93.72	95.66	-1.94	4.53	-0.66	-0.92
94.18	96.35	-2.17	5.17	-1.04	-1.31
104.61	107.46	-2.86	5.40	0.18	-0.08
103.37	107.12	-3.76	3.53	-0.76	-0.72
102.77 106.11	104.37 105.68	-1.60 0.43	5.33 3.87	-0.09	-0.31
126.69	125.48	1.22	6.03	-1.34 0.77	-1.46 0.52
109.85	113.98	-4.13	4.87	-0.72	-0.68
109.07	110.20	-1.14	5.17	-0.26	-0.31
110.38	108.89	1.49	3.73	-1.46	-1.60
124.25	124.19	0.06	4.83	0.15	0.32
124.57	124.52	0.06	5.00	0.19	0.33
131.15	132.82	-1.67	3.97	-0.16	-0.02
119.41	118.63	0.78	4.23	-1.26	-1.43
125.00	124.65	0.35	4.33	-1.52	-1.66
127.45	131.29	-3.83	4.33	-0.93	-1.21
126.25	124.15	2.10	4.30	-1.52	-1.68
130.15	128.58	1.57	4.27	-1.11	-1.36

67.41	66.41	1.00
68.72	68.98	-0.26
77.02	77.37	-0.35
91.20	90.84	0.36
103.66	104.68	-1.02

4.76	-0.76	-1.04
4.65	-1.32	-1.58
3.85	-0.62	-0.67
5.29	0.01	-0.06
4.70	-0.85	-1.02

EXPLANATORY NOTES

- 1. The U.S. Market Risk IndexSM score translates to a percentage that predicts the probability that house prices will be lower in two years. For example, a Risk Index score of 100 means there is a 100 percent chance that the OFHEO All Transactions House Price Index for that MSA will be lower two years from the date of the data
- Past price appreciation is a key predictor of future price appreciation potential. In general, rapid and continued increases in the rate of price appreciation lead to increases in the risk of future price declines.
- Price volatility is calculated as the standard deviation of quarterly two-year house price appreciation rates for the previous five years. In general, higher price volatility indicates a greater risk of future home price declines.
- 4. Using previous and current year appreciation, acceleration measures the change in the rate of house price appreciation. For example, consider a metropolitan area where the property value of a typical house was \$100,000 at the end of 2000, \$110,000 in 2001, and \$111,100 in 2002. House price appreciation for this area is 10 percent for the year 2001 and 1 percent for the year 2002. Because the appreciation rate dropped by 9 percentage points from the year 2000 to the year 2001, house price acceleration is -9 percentage points at the end of 2002.
- 5. Using per capita income, OFHEO house price appreciation rates, and a blended interest rate based on the mix of 30-year fixed rate and 1-year adjustable rate mortgages (as reported by the Mortgage Bankers Association), PMI's proprietary Affordability IndexSM measures how affordable homes are today relative to a baseline of 1995. An Affordability Index score exceeding 100 indicates that homes have become more affordable; a score below 100 means they are less affordable. The value of this index is generally inversely related to the value of the Risk Index as affordability increases, the Risk Index score declines. By using a blended rate, the index factors in the use of adjustable rate mortgage products, which can increase affordability.
- The local unemployment rate is calculated with Bureau of Labor Statistics MSA-wide quarterly averages, not seasonally adjusted.
- 7. The demeaned unemployment rate is the current unemployment rate minus the five-year average unemployment rate. A negative number means that the current unemployment rate is lower than the five-year average, indicating that labor markets are strong by the area's historical standards. High employment levels are generally associated with strong housing demand.
- 8. All averages are population weighted.

Housing Market Recovery: **A Peak-to-Trough Analysis**

As U.S. house prices fall at the fastest pace in years, a common question is, "How long will this last?" One way to address this question is to analyze the quarterly home price data from the Office of Federal Housing Enterprise Oversight (OFHEO, the financial regulator for Fannie Mae and Freddie Mac). Although the national house price data from OFHEO have not declined (beyond an occasional modest one-quarter fall), there have been a number of previous episodes when regional prices fell significantly—as they have today in many places.

An analysis of the OFHEO data for the 50 largest MSAs shows the following results*:

- Over a 30-year period (beginning in 1975) 123 peak-to-trough transition periods were identified.
- The average period of time between an MSA's price peak and its trough was 5.3 quarters (1.25 years).
- The most common period of time between an MSA's price peak and its trough was 2 quarters. This accounted for 54% of all observations.
- The maximum period of time between an MSA's price peak and its trough was 22 quarters (5+ years). This occurred in Riverside, California in the 1991–1996 period.
- The length of time that an MSA took to reach its trough and move toward a period of recovery was usually associated with local unemployment rates, mortgage rates, and income growth.

There were also three distinct recovery patterns among the MSAs: Rapid, Steady, and Inconsistent.

- Rapid recoveries occurred when home prices appreciated at rates above the historical norm of 4.5 percent for two years following the trough. These rapid recoveries occurred 27 percent of the time and were most often associated with strongly declining rates of unemployment, low interest rates, and superior income growth. Such a recovery occurred in Newark, NJ following the 1980–1982 downturn.
- Steady recoveries occurred when home prices appreciated at a moderate rate of 3.0–4.5 percent. Steady recoveries occurred 24 percent of the time and were usually associated with moderately declining or flat rates of unemployment, low interest rates, and moderate income growth. Such a recovery occurred in Los Angeles, CA following the 1981 downturn.
- Weak recoveries occurred when home prices appreciated intermittently—going both positive and negative—during the two years following the trough. These inconsistent recoveries occurred 49 percent of the time and were typically associated with erratic employment growth, high interest rates, and/or minor or flat increases in income. Such a recovery occurred in Boston, MA following the 1990–1992 downturn.

Historical data suggests that the average length of time for recoveries is 6 to 18 months when all of the economic indicators are in place for a steady recovery: moderate declines or flat rates of unemployment, low interest rates, and moderate income growth. In January, however, the national unemployment rate climbed to 5.0 percent, which suggests that the job market is slowing. If the job market continues to weaken it could slow the recovery or alter the pattern.

The current cycle we're in may differ from past market cycles for two reasons. The first reason is that we're facing very unusual conditions in the housing market, and the second reason is that all real estate is local.

Unusual Conditions in the U.S. Housing Market

The current decline is different from those we've seen in the past because it was not sparked by a downturn in the job market. In this cycle, foreclosures and delinquencies are mounting despite continued job growth. This is occurring, in many cases, because credit was extended to borrowers who did not have the capacity to repay their loans. This has added to the supply of homes for sale and put downward pressure on house prices.

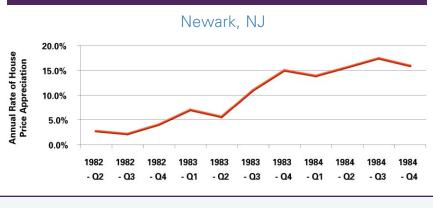
All Real Estate is Local

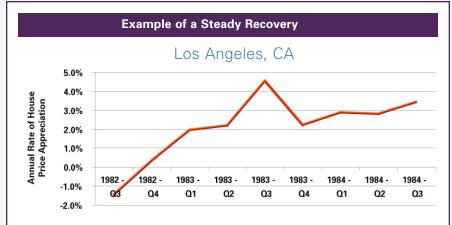
While the overall decline in house prices is broad, it is not universal. In the third quarter of 2007, 77 percent (292 of the 381) of the MSAs tracked by OFHEO had prices that were above year-ago levels. (This is down from the second quarter, however, when 82 percent of MSAs had prices that were up from a year earlier.) The 23 percent of MSAs with lower prices in the third quarter (from a year earlier) showed an average decline of 3.9 percent and represented 35 percent of the population.

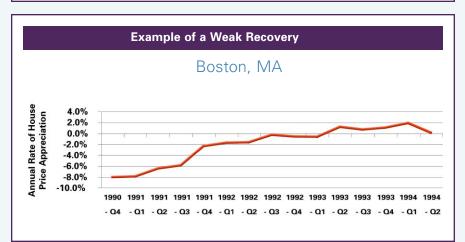
What does this tell us about the timeline for a recovery?

Historically, the economic drivers associated with price recoveries have been stronger job growth/lower unemployment rates, falling mortgage rates, and a pickup in personal income growth. Despite lower mortgage rates and continued increases in income growth, the job market is weakening and overall credit conditions in mortgage markets have tightened. This makes it difficult to estimate when home price conditions will improve, but we think it is unlikely that house prices will turn around in 2008.









Housing Market Recovery: A Peak-to-Trough Analysis

(continued from page 8)

- *The rules applied in determining these points were:
- We defined a "peak-to-trough" transition period as the first quarter following a peak in absolute prices, and ending at the last successive period of negative price appreciation.
- 2. A successive period of negative price appreciation had to last at least two quarters to be included in the analysis.
- 3. Non-successive movements in price (i.e., if prices rose and fell inconsistently over a three-quarter period), were counted as peak-to-trough transition periods if positive price movement for three quarters punctuated two or more successive quarters of negative price appreciation.



Trends in the Nation's MSAs (continued from page 3)

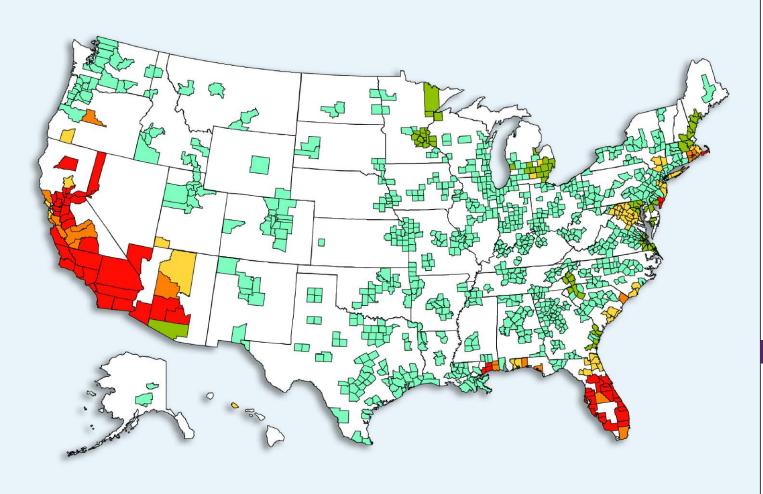
Trends in Employment

Among the Top 50 MSAs, the average change in demeaned unemployment was a rise of 0.2 for the quarter. Overall, unemployment rates remain low in most MSAs, but have started to rise slightly in some. While the areas exhibiting slightly improved employment conditions were located sporadically across the country, there was a distinct trend in the areas where employment weakened: Florida (six of the top 50 MSAs) and California (four of the top 50 MSAs). This reflects, in part, the impact that the housing downturn is having on housing-related employment. Employment has also continued to weaken in the industrial Midwest, but the weakness in employment in this area is largely related to the continued weakness in auto manufacturing and related industries.

Conclusion

There was a sharp increase in the risk of declining home prices as measured by PMI's U.S. Market Risk Index in the third quarter, especially for the largest MSAs and also for MSAs in California, Florida, Nevada, and Arizona. While some of this increase in house price risk stemmed from our enhanced model, it also reflects in many cases a significant deterioration of the housing market in the third quarter. There is a high likelihood that home prices will be lower in many of these MSAs two years from now than they are today. More optimistically, the number of MSAs with relatively low home price risk continues to outnumber those with relatively high risk—but that could change if the economy and financial markets worsen further. •

Geographic Distribution of HOUSE PRICE RISK



The above map depicts in color the geographic distribution of house price risk for all 381 MSAs and the District of Columbia . Each MSA is assigned a risk rank and corresponding color. Among the 50 largest MSAs, Riverside, CA ranks the highest on the index, with a 94 percent chance that home prices will be lower in two years. At the other end of the risk spectrum lies a group of MSAs, largely located in the central and southern part of the nation, whose risk scores are moderate to low.

The Risk Index scores for all 381 MSAs are provided in an appendix, available on the publications page of the media center at www.pmigroup.com.



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METROPOLITAN AREA ECONOMIC INDICATORS STATISTICAL MODEL OVERVIEW

The U.S. Market Risk Index is based on the results of applying a statistical model to data on local economic conditions, income, and interest rates, as well as judgmental adjustments in order to reflect information that goes beyond the Risk Index's quantitative scope. For each Metropolitan Statistical Area (MSA) or Metropolitan Statistical Area Division (MSAD), the statistical model estimates the probability that an index of metropolitan-area-wide home prices will be lower in two years, with an index value of 100 implying a 100% probability that house prices will be lower in two years.

Home prices are measured with a Repeat Sales Index provided by the Office of Federal Housing Enterprise Oversight (OFHEO). This method follows homes that are sold repeatedly over the observation period and uses the change in the purchase prices to construct a price index. The index is based on data from Fannie Mae and Freddie Mac and covers only homes financed with loans securitized by these two companies. Consequently, this index does not apply to high-end properties requiring jumbo loans.

Periodically, we may re-estimate our model to update the statistical parameters with the latest available data. We also may make adjustments from time to time to account for general macroeconomic developments that are not captured by our model.

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