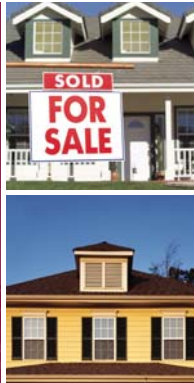


ECONOMIC REAL ESTATE TRENDSSM

SUMMER 2006



PMI MORTGAGE INSURANCE CO.

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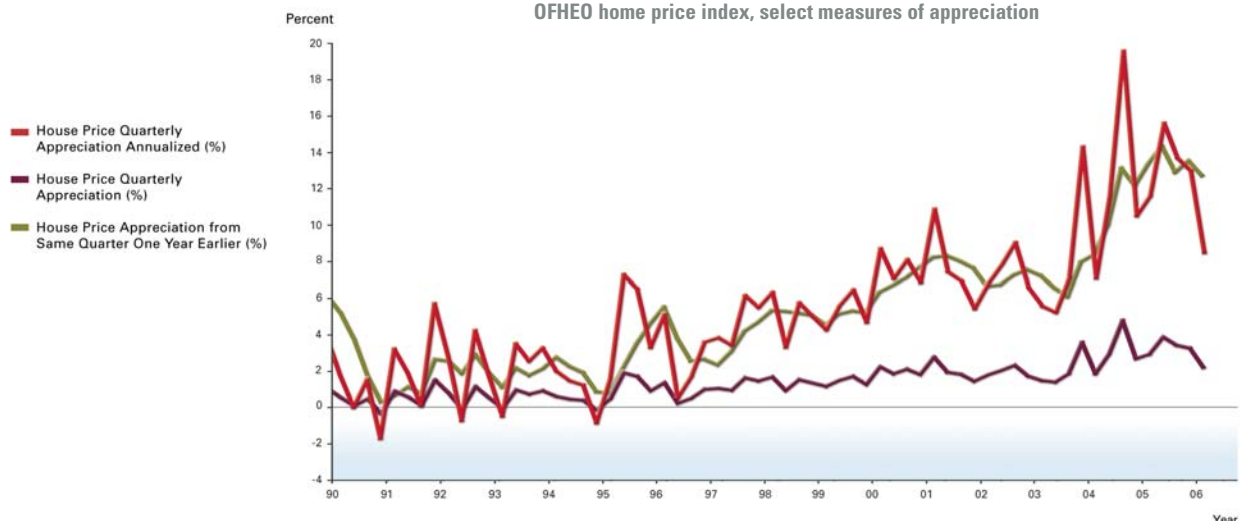
By Mark Milner, Chief Risk Officer, PMI Mortgage Insurance Co.

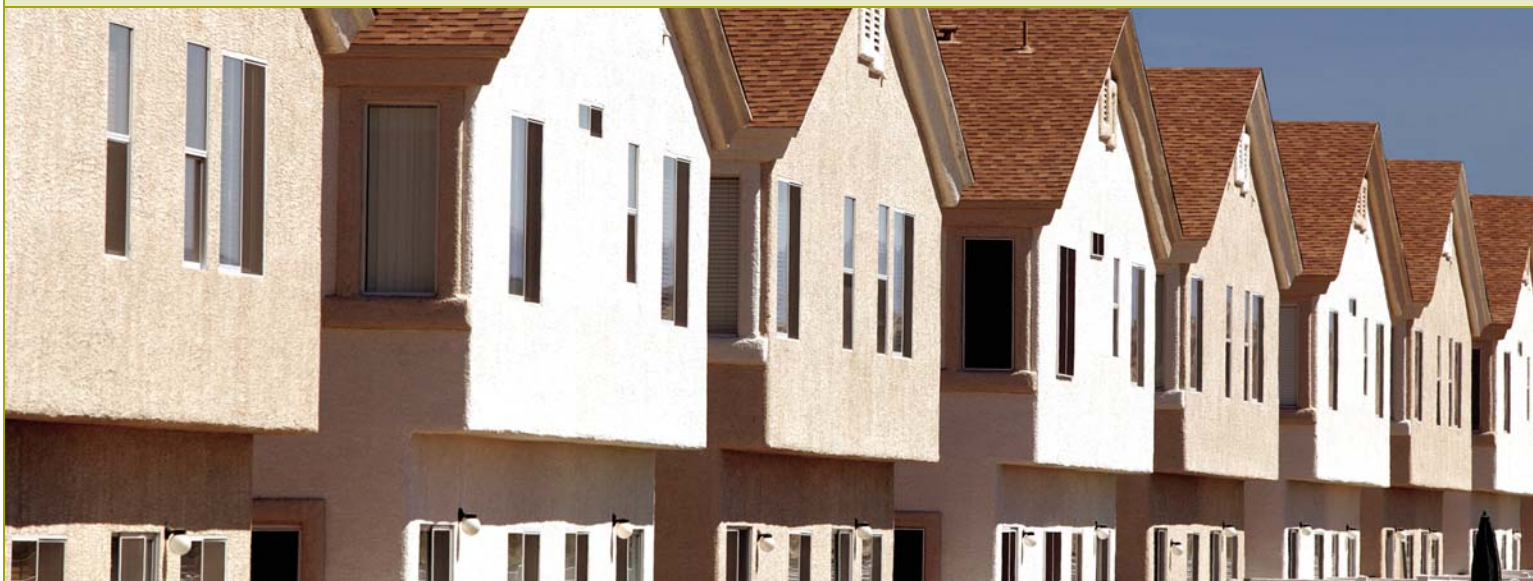
There's no doubt that affordability is a continuing challenge in the United States. The new and "exotic" products that lenders have introduced to try to address it reduce monthly mortgage payments, but at the price of increased risk to the borrower. Now there's a new alternative, in the form of mortgages that allow for lower payments, without significantly increasing borrower risk. More importantly, when we look at the value of homeownership, we see that, like the legendary tortoise, those who are in the game for the long term generally end up ahead.

Skyrocketing home prices over the past few years have created a significant affordability challenge, as families who wanted to purchase homes confronted the fact that their incomes just hadn't kept up. Now the market has

begun to slow—a welcome change for buyers—but affordability remains a challenge. The nationwide median home price in the first quarter of 2006 was \$217,900, but the nationwide median income was just \$59,600, meaning only
(continued on page 2)

U.S. Home Price Appreciation
OFHEO home price index, select measures of appreciation





Slow and Steady *(continued from page 1)*

46 percent of the American population can afford the median-priced home.¹ We see the same trend in PMI's Affordability IndexSM, which measures whether the median mortgage payment eats up a greater or lesser share of the median monthly income than it did in 1995. Over the past several quarters we've seen steadily decreasing affordability index scores for many of the major metropolitan areas in the country, a trend that's exacerbated by increasing interest rates. And it's visible in the shrinking size of the typical down payment. Unlike our parents' generation, most of us today don't put down 20 percent—or even close to it. In fact, according to the National Association of Realtors, the average down payment among first-time homebuyers in 2005 was just 2 percent.

The most recent response to the affordability crisis is the 40- or 50-year mortgage. Like the other alternative products introduced in recent years, including teaser-rate adjustable rate mortgages (ARMs) and interest only loans (IOs) and option ARMs, which allow borrowers to pay just the interest owed, or even less, for a fixed period of time, these new loans aren't right for all borrowers, but if the breaking point on purchasing a house comes down to using an alternative mortgage or not buying at all, the 40- and 50-year mortgages hold some benefit over more risky alternatives such as piggybacks, IOs, and option ARMs. Unlike home equity second liens, traditional rate cap structures are built into these longer-term mortgages, so borrowers know how frequently their interest rate can adjust and how high it can go. More important is that borrowers build equity with these mortgages, albeit slowly.

The charts on page 8-9 show how different loans, including 40- and 50-year mortgages, will perform under a best-case scenario where interest rates remain flat and a worst-case scenario where rates rise by one percent per year. In both scenarios, principal repayment and equity buildup slow as the term of the loan lengthens,

but the monthly payment also drops. At \$113, the difference in monthly payments between a 30-year and 50-year loan term can mean a lot to a family that is stretching to get into a home, and they'll still have the benefit of slow, steady appreciation with less risk than many alternative products offer.

And that's important because owning a home generally makes good financial sense. As we discussed in the Spring 2006 Economic and Real Estate Trends (ERET), on the whole, homeownership in the United States has been a good investment, with the likelihood of a positive return increasing the longer the home is owned. Families who owned their homes for 10 years or more saw positive returns in nearly 100 percent of the cases studied.

The research on home prices by Ph.D. Economist Charles A. Calhoun that we showcase in this issue of ERET supports the view that homeownership is generally a good long-term, slow, and steady approach to building wealth—even with the risk of price declines shown in our Risk Index. The charts on page 5 show historical home price appreciation and possible future house-price paths for four metropolitan areas: **Boston**, **Houston**, **Los Angeles**, and **Pittsburgh**. The best- and worst-case scenarios can be dramatic – but the most likely outcome is positive, with gradual appreciation over time.

No doubt about it—for the past couple of years we've been in a hare-friendly market, where even rational, responsible citizens were tempted by the lure of real estate riches. Now, however, it's the tortoise's day once again, and that's not a bad thing. After all, building equity and wealth through homeownership over time has served a lot of people well. ♦

¹ National Association of Realtors

Local Economic Patterns and MSA Indicators

The table on pages 6 and 7 presents new U.S. Market Risk IndexSM scores reflecting PMI's current view on house price risk for the 50 largest U.S. metropolitan statistical areas (MSAs) and divisions. The scores were updated using first quarter 2006 house price data provided by the Office of Federal Housing Enterprise Oversight (OFHEO), employment data published by the Bureau of Labor Statistics (BLS), and the Affordability Index calculated by PMI. The average Risk Index score is now 288, indicating that the nation's 50 largest housing markets now have on average a 28.8% chance of experiencing a house price decline within the next two years. This is a 1-point increase over last quarter and a 70-point increase from a year ago. The table also shows that 13 MSAs have more than a 50% chance of home price decline, down from 14 last quarter. Among these 13, however, the average score has edged up from 562 to 573. The major trends we

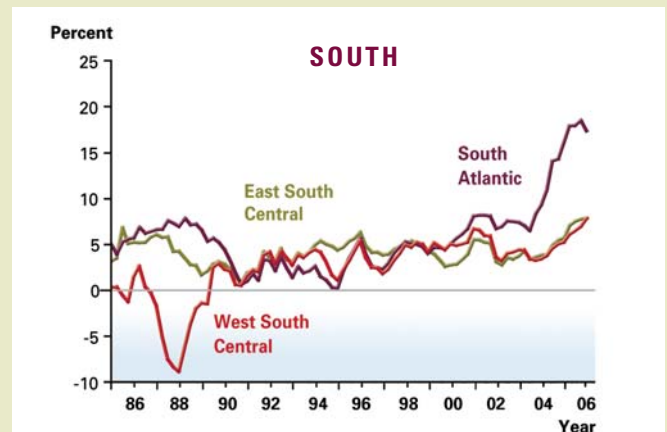
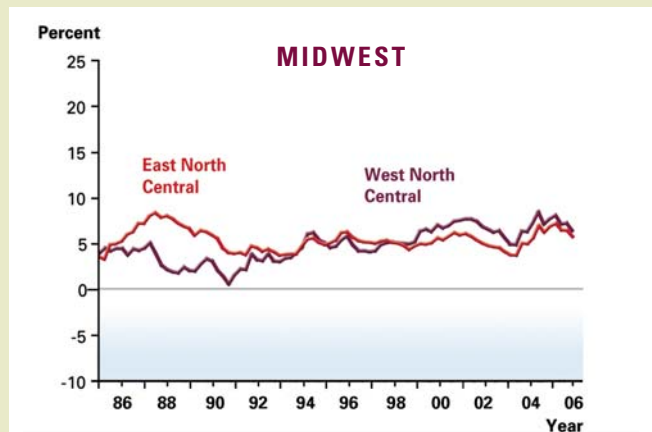
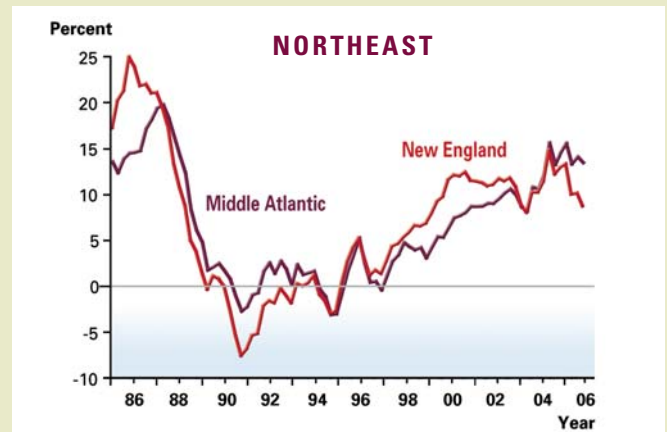
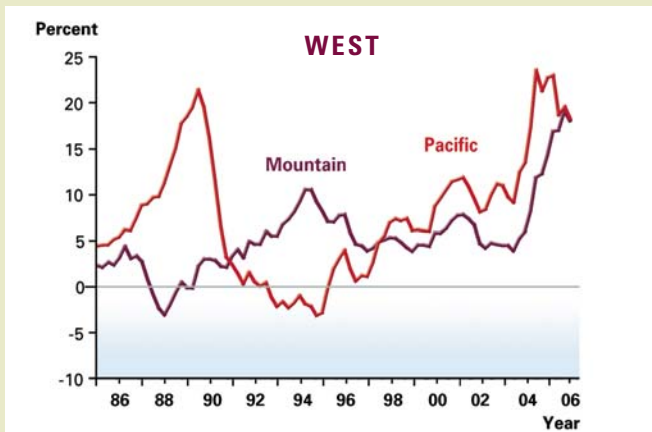
see—continued strong appreciation moderated by deceleration, continued economic strength, and the ongoing affordability challenge—are described in more detail below. Taken together, we believe they suggest a gradual cooling of the market as deceleration will be cushioned by the continued strength of the national and local economies.

Appreciation

Appreciation remains very strong by historical standards across much of the U.S. OFHEO reports that the average home price increased 12.54% over the last 12 months and 8.12 percent (annualized) from the fourth to the first quarter, significantly outstripping the Consumer Price Index (CPI), which rose by just 4.2% during the same period. Appreciation remained positive in all of the nation's 50 largest housing markets and in the double digits in almost half of those. Six markets saw year over year appreciation above 20%, led by Phoenix, where appreciation was *(continued on page 10)*

Regional Home Price Appreciation

by Census Division, percent change over previous four quarters as of first quarter 2006



How Low (Or High) Can House Prices Go?

EVIDENCE FROM HISTORICALLY-BASED SIMULATION MODELS

By Charles A. Calhoun

Recent commentary on real estate markets acknowledges that residential house prices are unlikely to sustain the impressive appreciation of recent years—particularly in relatively high cost markets concentrated in the U.S. coastal regions—but there is general reluctance to offer firm house price forecasts for specific market locations. While precise forecasts of housing values can be made with only limited statistical confidence, we can use historical house price indices and statistical models to ask and answer questions like: “How low could housing prices decline in the next year, the next five years, or the next ten years, and how likely is this to occur?” That’s what we’ve done, using house price indices published by the Office of Federal Housing Enterprise Oversight (OFHEO). Figures 1.1 to 1.4 show historical HPI series through the first quarter of 2006 for Boston and Los Angeles—two regions that have garnered attention over the years for both spectacular increases and declines in housing values—and for Pittsburgh and Houston, which illustrate somewhat different market experiences.

Figures 2.1 to 2.4 extend the historical data to illustrate the range and likelihood of possible future outcomes for house prices in each of the four metropolitan regions. Here we used statistical models to simulate 1,000 house price scenarios for each region. The simulated house price paths are based entirely on the trends and volatility observed in the historical data. The charts show the mean and plus and minus two standard deviation levels, as well as the single best and worst house price paths for each set of simulations. A useful rule of thumb for normal distributions is that roughly 95 percent of the outcomes will fall between plus or minus two standard deviations of the mean. Thus, house price paths outside of these boundaries have less than a 5 percent chance of occurring (in other words, less than 2.5 percent of outcomes are better, and less than 2.5 percent of outcomes are worse). The best and worst paths (out of 1,000 random scenarios) correspond to 1 in-1,000 chance events. While these are very unlikely to occur, in the case of the worst-case scenario, the potential negative consequences are still useful for purposes of credit risk management and calculating economic and regulatory capital levels.

Figures 2.1 to 2.4 provide some interesting contrasts. The distributions of house price paths for Boston and Los Angeles suggest the strong likelihood of positive house price appreciation over the next ten years. The distribution for Pittsburgh implies much lower expected appreciation, and very little chance of either very high or very low rates of appreciation. The distribution for Houston implies positive appreciation on average, but at a lower rate than for Boston or Los Angeles.

The individual worst- and best-case scenarios shown in the charts are equally probable by design.

Worst-Case Scenarios

The worst-case scenarios in Figures 2.1 to 2.4 are sufficiently negative to imply considerable loss of borrower equity should they actually occur, as well as increased mortgage foreclosures, particularly for recent home purchasers. For Boston, Los Angeles, and Houston, these scenarios are comparable to the worst-ever historical house price experience in these markets. Although Pittsburgh’s historical data do not indicate an obvious potential for a sharp decline in housing values, they do show the potential for sustained stagnation in housing values.

Best-Case Scenarios

The house price simulations also show considerable upside potential and illustrate the underlying asymmetry toward positive house price appreciation, particularly in Boston and Los Angeles, and to a slightly lesser degree in Houston. The distribution for Pittsburgh indicates a narrower range of possible outcomes, with very little probability of high rates of appreciation. House price scenarios that exceed the plus two standard deviation levels will occur less than about 2.5 percent of the time. None of the scenarios shown in the charts constitutes a specific house price forecast, so one should not allow the more dramatic best-case outcomes to induce unrealistic expectations regarding future housing values.

While house price appreciation is the outcome of a number of economic factors which this model does not attempt to simulate, this approach, using historical house price indexes and time-series statistical methods, is one way to develop future house price scenarios. Obviously actual outcomes will vary from the described paths, particularly over time, but these scenarios are valuable because they can describe the range of possible future outcomes and their relative chances of occurring. Ultimately, simulations of this type are valuable in assessing mortgage credit risk exposures and in setting economic or regulatory capital levels against unexpected losses, and can provide borrowers, lenders, and investors with insights to help manage their businesses. ♦

This article is based on the forthcoming paper, “How Low (Or High) Can House Prices Go? Evidence from Historically-Based Simulation Models,” by Charles A. Calhoun, to be published by The PMI Group, Inc. and available at www.pmigroup.com. In a related paper Dr. Calhoun plans to illustrate the application of similar worst-case scenarios in assessing the relative credit risk exposure of alternative mortgage products.

¹ The best and worst paths are defined as those closest in distance to the best and worst outcomes in every time period from any scenario across the entire period of the simulation – in this case 10 years into the future.

² Note that the distribution of simulated HPI values is not symmetric. Whereas the underlying “rates” of appreciation are assumed to be normally distributed and have a symmetric distribution, the HPI values correspond to a log-normal distribution.

³ For example, the forthcoming Basel II advanced internal ratings-based methodology for minimum capital for credit risk on residential mortgages employs a formula based on a 1-in-1000 chance event for the level of unexpected losses.

FIGURE 1.1

Historical House Price Index
Boston–Quincy MA (MSAD 14484)



FIGURE 2.1

Historical and Simulated House Price Index Paths
Boston–Quincy MA (MSAD 14484)

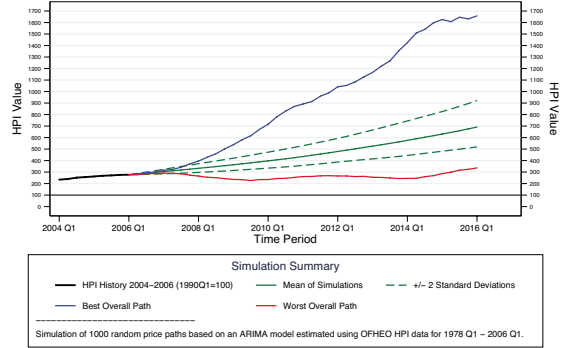


FIGURE 1.2

Historical House Price Index
Los Angeles–Long Beach–Glendale CA (MSAD 31084)

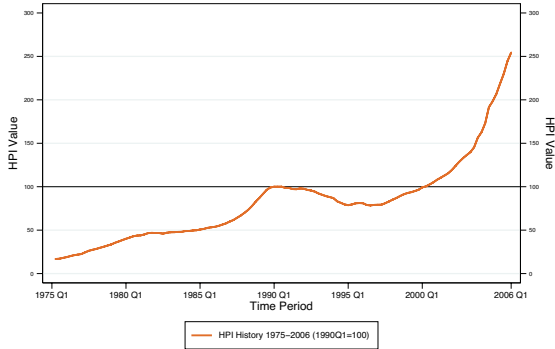


FIGURE 2.2

Historical and Simulated House Price Index Paths
Los Angeles–Long Beach–Glendale CA (MSAD 31084)

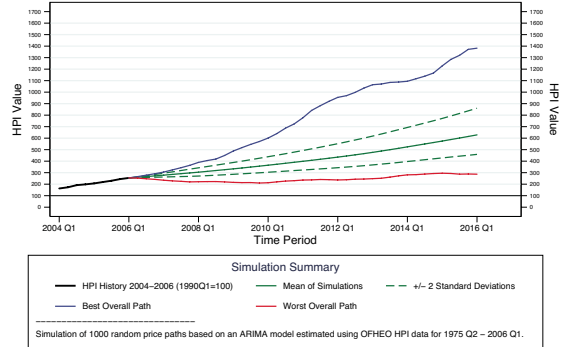


FIGURE 1.3

Historical House Price Index
Pittsburgh PA (CBSA 38300)

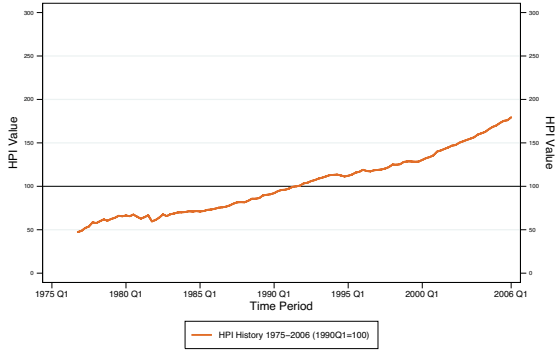


FIGURE 2.3

Historical and Simulated House Price Index Paths
Pittsburgh PA (CBSA 38300)

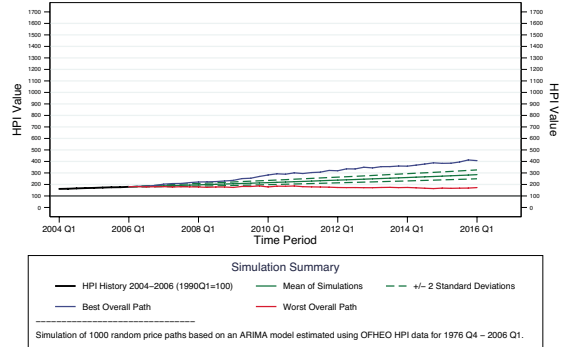


FIGURE 1.4

Historical House Price Index
Houston–Sugar Land–Baytown TX (CBSA 26420)

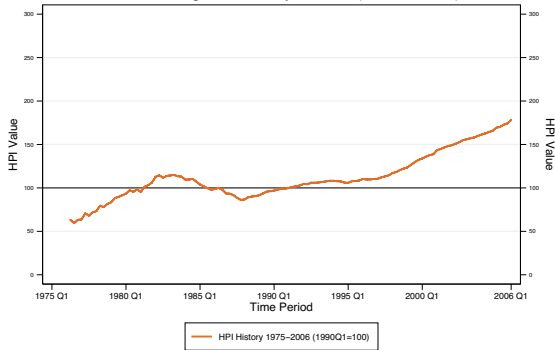
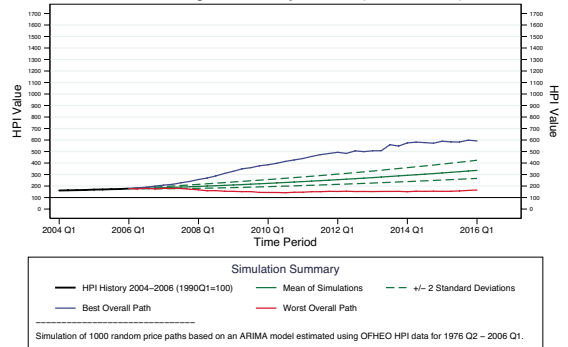


FIGURE 2.4

Historical and Simulated House Price Index Paths
Houston–Sugar Land–Baytown TX (CBSA 26420)





METROPOLITAN AREA ECONOMIC

MSA

MSA	RISK MEASURES		HOME PRICES		
	Risk Index ¹	Appreciation ²		Acceleration ³	
		2004Q1:2005Q1	2005Q1:2006Q1		
San Diego-Carlsbad-San Marcos, CA	599	23.04%	7.72%	-15.32%	
Nassau-Suffolk, NY (MSAD)	589	15.09%	12.17%	-2.92%	
Boston-Quincy, MA (MSAD)	588	11.10%	5.66%	-5.43%	
Santa Ana-Anaheim-Irvine, CA (MSAD)	588	22.77%	17.55%	-5.23%	
Sacramento-Arden-Arcade-Roseville, CA	585	23.82%	12.38%	-11.44%	
Riverside-San Bernardino-Ontario, CA	583	26.04%	19.28%	-6.76%	
Oakland-Fremont-Hayward, CA (MSAD)	582	20.59%	16.56%	-4.04%	
Los Angeles-Long Beach-Glendale, CA (MSAD)	575	23.95%	20.74%	-3.22%	
Providence-New Bedford-Fall River, RI-MA	568	14.65%	9.54%	-5.11%	
San Francisco-San Mateo-Redwood City, CA (MSAD)	560	17.18%	13.63%	-3.55%	
San Jose-Sunnyvale-Santa Clara, CA	559	17.36%	14.54%	-2.82%	
Cambridge-Newton-Framingham, MA (MSAD)	537	9.81%	5.16%	-4.65%	
Edison, NJ (MSAD)	536	15.69%	14.01%	-1.68%	
New York-White Plains-Wayne, NY-NJ (MSAD)	498	15.23%	15.04%	-0.20%	
Las Vegas-Paradise, NV	481	30.06%	14.46%	-15.61%	
Newark-Union, NJ-PA (MSAD)	459	15.04%	12.49%	-2.56%	
Fort Lauderdale-Pompano Beach-Deerfield Beach, FL (M	441	21.90%	25.69%	3.79%	
Washington-Arlington-Alexandria, DC-VA-MD-WV (MSAD)	431	21.80%	19.69%	-2.11%	
Miami-Miami Beach-Kendall, FL (MSAD)	359	20.33%	24.71%	4.38%	
Minneapolis-St. Paul-Bloomington, MN-WI	355	9.13%	6.55%	-2.58%	
Detroit-Livonia-Dearborn, MI (MSAD)	337	3.46%	2.03%	-1.42%	
Baltimore-Towson, MD	307	19.53%	17.96%	-1.57%	
Tampa-St. Petersburg-Clearwater, FL	294	18.22%	23.28%	5.07%	
Virginia Beach-Norfolk-Newport News, VA-NC	278	21.01%	19.68%	-1.32%	
Warren-Troy-Farmington Hills, MI (MSAD)	184	4.08%	1.95%	-2.13%	
Orlando-Kissimmee, FL	179	18.70%	27.75%	9.05%	
Phoenix-Mesa-Scottsdale, AZ	175	20.14%	31.13%	10.99%	
Atlanta-Sandy Springs-Marietta, GA	165	4.99%	4.69%	-0.30%	
Denver-Aurora, CO	149	3.93%	3.19%	-0.74%	
Philadelphia, PA (MSAD)	130	14.89%	12.66%	-2.23%	
Chicago-Naperville-Joliet, IL (MSAD)	127	10.56%	10.03%	-0.53%	
St. Louis, MO-IL	112	8.30%	7.33%	-0.97%	
Seattle-Bellevue-Everett, WA (MSAD)	109	12.17%	16.73%	4.56%	
Portland-Vancouver-Beaverton, OR-WA	108	11.97%	19.38%	7.41%	
Milwaukee-Waukesha-West Allis, WI	108	10.82%	8.08%	-2.74%	
Kansas City, MO-KS	101	5.71%	4.81%	-0.89%	
Austin-Round Rock, TX	93	2.85%	6.75%	3.91%	
Charlotte-Gastonia-Concord, NC-SC	87	4.26%	5.53%	1.27%	
Houston-Sugar Land-Baytown, TX	83	4.81%	5.11%	0.30%	
Dallas-Plano-Irving, TX (MSAD)	80	3.20%	3.90%	0.70%	
Nashville-Davidson-Murfreesboro, TN	71	6.26%	8.63%	2.38%	
Fort Worth-Arlington, TX (MSAD)	69	4.06%	2.77%	-1.29%	
Cleveland-Elyria-Mentor, OH	68	4.03%	2.39%	-1.64%	
Columbus, OH	65	4.57%	3.74%	-0.83%	
San Antonio, TX	65	5.84%	8.21%	2.37%	
Cincinnati-Middletown, OH-KY-IN	64	5.18%	4.00%	-1.18%	
Memphis, TN-MS-AR	61	3.96%	6.08%	2.12%	
Indianapolis-Carmel, IN	58	3.54%	3.49%	-0.05%	
Pittsburgh, PA	57	5.40%	5.35%	-0.05%	

The PMI Market Risk Index is not tuned to evaluate the effect of catastrophic events such as Hurricanes Katrina and Rita. As a result there is no score for New Orleans-Metairie-Kenner this quarter.

INDICATORS *As of June 2006*

LABOR MARKETS

Employment Growth ⁴	Unemployment Rate 2006Q1	
2005M03:2006M03	Local ⁵	Local De-meaned ⁶
1.71%	4.00%	-0.33%
0.74%	4.20%	0.18%
0.92%	5.14%	1.03%
1.57%	3.50%	-0.53%
2.90%	4.73%	-0.09%
2.49%	4.57%	-1.03%
2.40%	4.53%	-0.38%
1.29%	5.23%	-0.91%
0.49%	6.36%	1.50%
1.39%	4.23%	-0.30%
0.62%	5.00%	-0.79%
0.92%	4.27%	0.56%
2.09%	4.60%	0.28%
1.40%	5.37%	-0.94%
6.23%	3.80%	-1.29%
0.01%	5.03%	0.18%
4.39%	2.97%	-1.76%
2.66%	3.03%	-0.42%
1.88%	3.63%	-2.26%
1.61%	4.37%	0.81%
-1.11%	8.57%	2.29%
1.97%	4.03%	-0.31%
3.07%	3.10%	-1.17%
1.94%	3.73%	0.20%
-0.61%	6.60%	1.91%
4.50%	2.90%	-1.32%
6.02%	3.97%	-0.35%
3.19%	4.80%	0.91%
2.08%	4.97%	0.56%
1.28%	4.87%	0.04%
1.17%	5.40%	-0.33%
0.86%	5.47%	0.88%
4.30%	4.40%	-0.85%
2.78%	5.63%	-0.62%
-0.75%	5.33%	0.63%
1.48%	5.30%	0.76%
3.76%	4.20%	-0.12%
2.34%	4.70%	-0.04%
3.10%	5.30%	-0.07%
3.84%	4.97%	-0.10%
2.67%	4.33%	0.59%
2.51%	4.80%	0.07%
-0.07%	5.50%	0.69%
0.84%	5.00%	0.99%
2.31%	4.70%	-0.05%
1.28%	5.50%	1.13%
1.83%	6.03%	1.38%
0.92%	4.80%	1.29%
1.14%	5.37%	0.34%

AFFORDABILITY

Index ⁷ (1995Q1=100)
70.54
69.72
80.59
64.28
69.09
61.14
67.19
61.83
80.12
75.41
72.10
89.30
77.12
75.40
76.93
85.94
59.36
80.52
64.66
88.82
97.59
89.06
72.92
91.32
106.01
75.70
73.34
102.94
106.61
98.48
97.05
107.76
93.32
89.18
107.96
112.42
121.15
123.42
127.74
127.78
117.27
134.54
123.05
126.57
131.04
128.56
130.14
134.42
130.19

- The **Market Risk Index score** translates to a percentage that predicts the probability of a house price decline over the next two years. For example, a Risk Index score of 100 means there is a 10% chance that house prices in that MSA will fall in two years.
- Appreciation** measures increases in home prices for the previous and current year (*based on quarterly OFHEO HPI*). Research indicates that house price growth is very persistent in the short run: a year of low appreciation is likely followed by another year of low appreciation. Consequently, low or negative appreciation in the past year is a sign of impending trouble. The Risk Index score will thus vary inversely with last year's appreciation.
- Using previous and current year appreciation, **acceleration** measures the change in home 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. Home price appreciation for this area is 10% for the year 2001 and 1% for the year 2002. Because the appreciation rate dropped by 9% points from the year 2000 to the year 2001, home price acceleration is minus 9% points at the end of 2002. The model interprets negative home price acceleration (*slowing growth*) as a warning sign that home prices may be close to their peak and likely to fall soon. Accordingly, the Risk Index score increases as home price acceleration declines, other things equal.
- The **employment growth rate** is calculated with Bureau of Labor Statistics total non-agricultural employment monthly observations, from the indicated months (*12-month growth rate*). Lower employment growth is a sign of weakness in the local economy; therefore, the Risk Index score increases as employment growth falls.
- The **local unemployment rate** is calculated with Bureau of Labor Statistics MSA-wide quarterly averages, not seasonally adjusted.
- The **de-meaned unemployment rate** indicates the current unemployment rate compared to its past rate. For example, a de-meaned unemployment rate of 1% for the calendar year 2005 means that the current unemployment rate is 1% higher than the five-year average from 1999 to 2003. The higher the de-meaned unemployment rate, the higher the Risk Index score.
- Using median household income, home price appreciation, and the cost of the 30-year fixed rate mortgage (FRM), PMI's **Affordability Index (AI)** measures the change in home purchasing power over time according to how affordable homes are today compared to 1995. An AI score above 100 means homes are more affordable; a score below 100 means they are less affordable. For example, an AI score of 110 means that if your monthly mortgage payment took 30% of your monthly income in 1995, today it takes only 27% (*a change of 10% based on the original ratio of 30%*). Conversely, an AI score of 90 means that the share of your monthly income taken by your monthly mortgage has increased to 33%. The higher the AI, the less vulnerable a housing market is to local economic shock (and hence the lower is the Risk Index score). The AI score is calculated as $AI_t = (I_t/QI_t)/(I_{95}/QI_{95})$ where subscript t denotes the current quarter, I_t measures household income, and QI_t represents qualifying income index defined as

$$QI_t = HPI \cdot 0.80 \cdot 4 \cdot 12 \cdot \left[\frac{r}{12} \frac{(1 + \frac{r}{12})^{360}}{(1 + \frac{r}{12})^{360} - 1} \right]$$

where r denotes the 30-year FRM, 0.80 is LTV, and $4 \cdot 12 \cdot []$ represents index of the annual mortgage payment under a 25% mortgage payment-to-income threshold.

HOW TO CHOOSE A MORTGAGE

An Alternative for Affordability: 40- and 50-Year Mortgages

With affordability a continuing challenge for American home buyers, the array of alternative mortgages continues to grow. Some of the newest options are 40- and 50-year mortgages, which lenders have recently begun offering to borrowers who want to help offset record-high home prices and rising interest rates.

The charts on this page show the payment schedule for six different mortgages—15-year, 30-year, 40-year, and 50-year adjustable rate mortgages (ARMs) that are fixed for the first five years, a 30-year mortgage where the payments are interest only for the first five years (IO), and a 30-year fixed rate mortgage. They also show how fast you would pay down your loan balance.

Both the best and worst case scenarios are based on an introductory interest rate that is fixed for five years. In all cases we assume a \$250,000 purchase price, a 20 percent down payment, and an annual appreciation rate of 4 percent.

Best Case Scenario

In the best case scenario, interest rates remain flat, so the monthly payment remains steady except for an increase in year five when the initial rate resets to the fully-indexed rate or, in the case of the IO, amortizing payments begin.

- With a 30-year ARM, borrowers pay \$113 more each month than with a 50-year ARM. But after five years, the 30-year ARM borrower has built up additional equity of \$67,600 vs. the 50-year borrower's equity of \$57,387 (not including initial equity from down payment), and the 30-year borrower has paid down more than four times more of the initial balance than the 50-year borrower.
- While the payments on the 15-year ARM are significantly higher than any other loan, these borrowers also pay down the balance and build up equity much faster. At the end of year five, the 15-year borrower has paid off almost a quarter of the mortgage and built up equity of more than \$100,000.
- With a 30-year FRM, the borrower never sees a payment shock and has paid down the balance and built up equity nearly equivalent to the 30-year ARM borrower.

Worst Case Scenario

In the worst case scenario, we assume interest rates rise by one percent per year for the first four years of the loan.

- Because of the initial fixed rate (or IO period) during the first five years, equity build up and balance paid for all loans is about equal to the best case scenario. It is after

the initial interest rate resets to the fully-indexed rate (or the IO period ends) that borrowers start to see significant interest rate and payment shock.

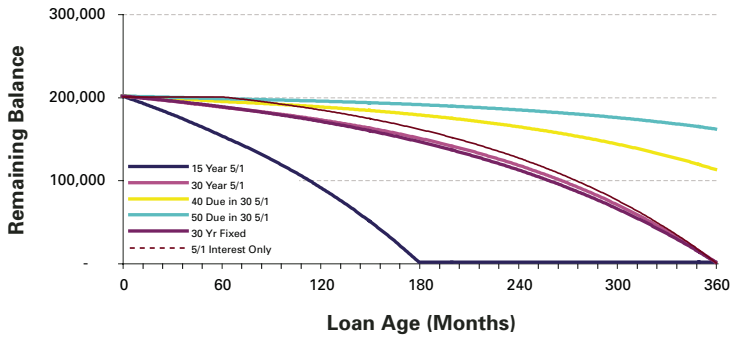
- Interest rates for all ARMs soar to more than 11 percent in year six, with 15-year borrowers seeing a rate that is .3 percent lower than 50-year borrowers. In contrast, the interest rate for 30-year FRM borrowers is unchanged at 6.5 percent.
- Borrowers with IOs see the greatest payment shock, with monthly payments increasing almost 100%. 50-year ARMs are not far behind, with monthly payments increasing more than 75 percent. After six years, interest rates on 50-year ARMs reach as high as 11.85 percent.
- At a 95.4 percent increase, payment shock is highest with IO loans, but many other borrowers could also see a significant shock, which increases the longer the repayment term is stretched out. In year six, payment shock for 15-year borrowers is 26.3 percent, 56.5 percent for 30-year borrowers, 68.6 percent for 40-year borrowers, and 75.6 percent for 50-year borrowers. There is no payment shock for a 30-year FRM.

The Bottom Line

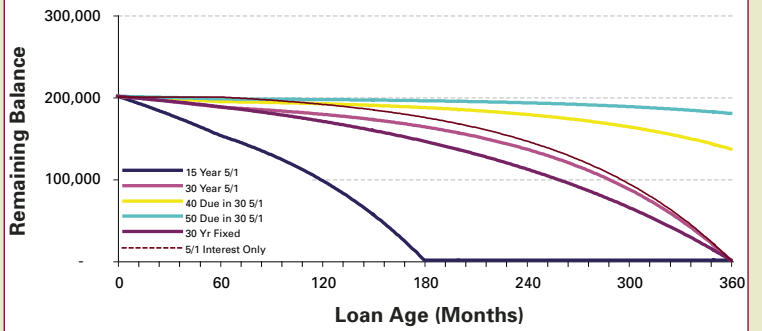
Most experts do not expect interest rates to stay flat for the next five years, nor do they expect them to rise as dramatically as in the worst case scenario. A more likely situation is somewhere in between. The new 40- and 50-year mortgages build equity more slowly than traditional 15- and 30-year loans, but they also offer lower monthly payments, without the risks of an IO or option ARM. Borrowers need to assess their financial situation, expectations for the future, and comfort level for risk, and then choose the best mortgage for them and their family. Maybe these new products are a better fit. ♦

¹ The interest rate on the 30-year FRM is based on the 2005 average according to HSH Associates. Interest rates for 5/1hybrids of different maturity are PMI estimates for 2006 based on industry data. Hybrid loans are assumed to have a periodic cap of 5 percent for the first reset, 2 percent for subsequent resets, and a 5 percent lifetime reset cap.

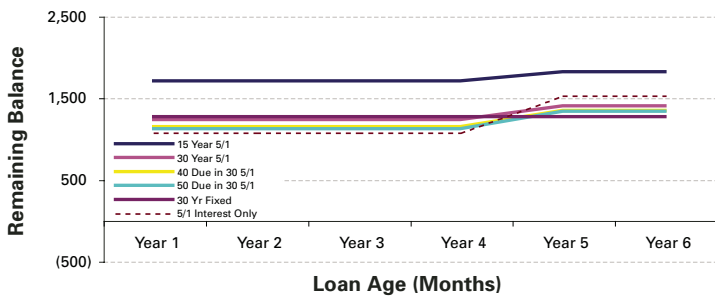
LOAN BALANCE OVER TIME - BEST CASE



LOAN BALANCE OVER TIME - WORST CASE



MONTHLY PAYMENT - BEST CASE



MONTHLY PAYMENT - WORST CASE

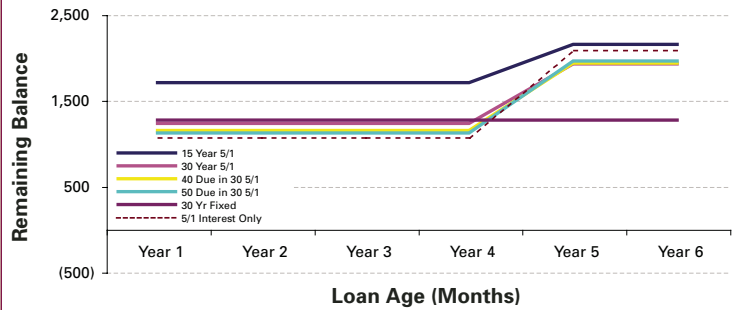


TABLE 1. MONTHLY MORTGAGE PAYMENT AND RATE – BEST CASE SCENARIO

		BEST CASE					30-Year FRM
		15 Year Fixed for 5	30 Year Fixed for 5	40 Due in 30 Fixed for 5	50 Due in 30 Fixed for 5	30 Year I/O Fixed for 5	
Monthly Payment	Year 1	1,699	1,225	1,143	1,112	1,067	1,264
	Year 2	1,699	1,225	1,143	1,112	1,067	1,264
	Year 3	1,699	1,225	1,143	1,112	1,067	1,264
	Year 4	1,699	1,225	1,143	1,112	1,067	1,264
	Year 5	1,812	1,397	1,339	1,326	1,524	1,264
	Year 6	1,812	1,397	1,339	1,326	1,524	1,264
End of Year 5	Payment Shock	6.7%	14.0%	17.2%	19.2%	42.9%	0.0%
	Balance Paid	47,697	13,437	6,506	3,224	0	12,778
	Equity Buildup	101,860	67,600	60,669	57,387	54,163	66,941
Rate Assumptions(%) (Fully-Indexed Rates)	Initial	6.10%	6.20%	6.30%	6.40%	6.40%	6.50%
	First Repricing	7.55%	7.65%	7.75%	7.85%	7.65%	N/A

TABLE 2. MONTHLY MORTGAGE PAYMENT AND RATE – WORST CASE SCENARIO

		WORST CASE					30-Year FRM
		15 Year Fixed for 5	30 Year Fixed for 5	40 Due in 30 Fixed for 5	50 Due in 30 Fixed for 5	30 Year I/O Fixed for 5	
Monthly Payment	Year 1	1,699	1,225	1,143	1,112	1,067	1,264
	Year 2	1,699	1,225	1,143	1,112	1,067	1,264
	Year 3	1,699	1,225	1,143	1,112	1,067	1,264
	Year 4	1,699	1,225	1,143	1,112	1,067	1,264
	Year 5	2,146	1,917	1,927	1,953	2,084	1,264
	Year 6	2,146	1,917	1,927	1,953	2,084	1,264
End of Year 5	Payment Shock	26.3%	56.5%	68.6%	75.6%	95.4%	0.0%
	Balance Paid	47,697	13,437	6,506	3,224	0	12,778
	Equity Buildup	101,860	67,600	60,669	57,387	54,163	66,941
Rate Request Assumptions(%) (Fully-Indexed Rates)	Initial	6.10%	6.20%	6.30%	6.40%	6.50%	6.50%
	Year 1	7.55%	7.65%	7.75%	7.85%	7.65%	N/A
	Year 2	8.55%	8.65%	8.75%	8.85%	8.65%	N/A
	Year 3	9.55%	9.65%	9.75%	9.85%	9.65%	N/A
	Year 4	10.55%	10.65%	10.75%	10.85%	10.65%	N/A
	Year 5 (first reprice)	11.55%	11.65%	11.75%	11.85%	11.65%	N/A
Year 6	11.55%	11.65%	11.75%	11.85%	11.65%	N/A	



Local Economic Patterns *(continued from page 3)*

at 31.1%, followed by **Orlando, Fort Lauderdale, Miami, Tampa,** and **Los Angeles**. The Pacific census division, consisting of **California, Oregon,** and **Washington**, has regained its position as the fastest appreciating division, overtaking the Mountain Division.

Deceleration

Although home prices continued to appreciate across the 50 largest MSAs, the pace of appreciation slowed in 34 markets. **Las Vegas** led this trend with appreciation of 14.5%, down 15.6 percentage points from the 30.1% appreciation the area experienced the prior year. **San Diego** (down 15.3 percentage points to 7.7%) and **Sacramento** (down 11.4 percentage points to 12.4%) also saw significant slowing. Among the markets with a risk of price declines above 50%, four—**San Diego, Boston, Providence,** and **Cambridge**—have seen appreciation drop into the single digits. Although on a year over year basis appreciation accelerated at a rapid pace in **Phoenix**, having increased 11 percentage points over the previous year, the pace of appreciation slowed on a quarter over quarter basis from the fourth quarter of 2005 to the first quarter of 2006. The rate of appreciation slowed by more than half a percent in the East North Central census division, which includes **Wisconsin, Illinois, Indiana, Ohio,** and **Michigan**. This general deceleration is not surprising since the recent rates of appreciation have exceeded the long-term average of 4-6% per year by so much.

Economic Strength

Although unemployment is low by historical standards, among the 50 largest MSAs, seven, all in the Midwest or Northeast, saw unemployment rates 1% or more higher than the long-term average for that area (local de-meaned): **Detroit, Warren, Providence, Memphis, Indianapolis, Cincinnati,** and **Boston**. In 25 MSAs, in contrast, including all California MSAs in the top 50, the unemployment rate was below the long-term average. Employment growth was positive in all of the top 50 markets except four, all located in the Midwest: **Detroit, Warren, Milwaukee,** and **Cleveland**. **Las Vegas** led the nation in job creation with employment growth of 6.2% over the past 12 months, followed closely by Phoenix at 6%. Looking beyond the first-quarter data, May was the third consecutive month of slowing job growth. While builders had been a source of job growth during the housing boom, adding some 300,000 jobs per year for the past two years, construction employment

was flat in May, reinforcing other reports of a slowing housing market. The long-term impact of this slowing on the Risk Index remains to be seen and will vary by region.

Affordability

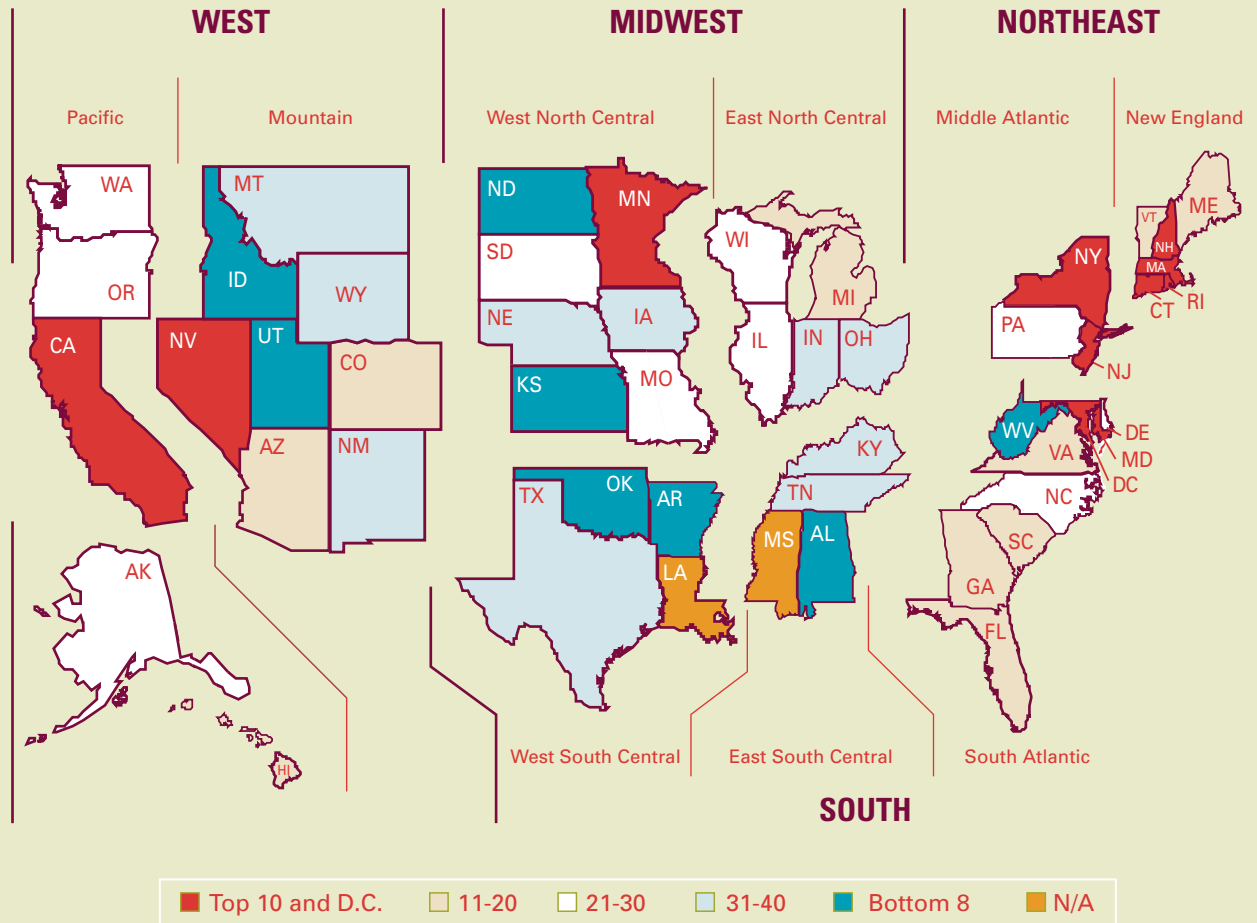
Affordability worsened in many of the 50 largest MSAs as home prices continued to increase faster than incomes. **Nassau-Suffolk** saw its score drop below 70, which we consider a threshold below which an area is particularly vulnerable should an economic shock occur. There are eight MSAs with scores below 70. With a score of 59.36, **Fort Lauderdale** is the least affordable area among the 50 largest MSAs, followed by **Riverside** and **Los Angeles** at 61.14 and 61.83, respectively, and then **Santa Ana, Miami, Oakland, Sacramento,** and **Long Island**. Affordability increased slightly in 19 markets, due largely to slower price growth and, in **Austin** and **San Antonio**, to income growth that exceeded house price appreciation.

Regional Trends

Of the 13 highest risk MSAs, eight are located in California and five in the Northeast along the Boston-to-New York corridor. **San Diego** once again claims the top spot, with a score of 599, or a 59.9% chance that prices will decline in two years. **Long Island** (Nassau-Suffolk) switched places with Santa Ana, making **Long Island** No. 2 and **Santa Ana** No. 4. **Sacramento** moved into the top five for the first time. The biggest gains this quarter were not among the MSAs at the top of the list but rather those in the middle. **Newark** and **Miami** both gained 32 points, taking them to 459 and 359, respectively. **Washington, Baltimore,** and **Las Vegas** gained 30, 28, and 24 points, respectively, to 431, 307, and 481, driven by deceleration and declining affordability, despite strong job growth in all three areas. Although the rate of appreciation has slowed in **Las Vegas**, at 14.5% prices still increased much faster than incomes, which led to the drop in affordability. Declining affordability also accounted for Phoenix's 30-point gain. The risk of price declines decreased in 20 of the top 50 markets. ♦

The PMI Market Risk Index is not tuned to evaluate the effect of catastrophic events such as Hurricanes Katrina and Rita. As a result there is no score for the New Orleans-Metairie-Kenner MSA this quarter.

Geographic Distribution of HOUSE PRICE RISK



The above U.S. map depicts in color the geographic distribution of house price risk for all 50 U.S. states and the District of Columbia. The color codes rank order the 10 riskiest states in red (11 including the District of Columbia), followed by the next 10 riskiest states in tan, white, light blue, the 8 least risky states in aqua, and Louisiana and Mississippi in yellow. As in the previous three quarters, California and the Northeastern states top our list. Most divisions experienced slight increases in risk this quarter, but risk decreased slightly in the West North Central and West South Central regions. (This presentation is based on the data for 369 MSAs available in the appendix to ERET posted on the publications page of the newsroom at <http://www.pmigroup.com>.)

TABLE 1: CENSUS REGION RISK INDEX

Division	Risk Index
New England	474
Pacific	467
Middle Atlantic	328
South Atlantic	237
Mountain	163
West North Central	151
East North Central	119
West South Central	71
East South Central	65

The PMI Market Risk Index is not tuned to evaluate the effect of catastrophic events such as Hurricanes Katrina and Rita. As a result, there is no score for Louisiana and Mississippi this quarter.

Cautionary Statement: Statements in this document that are not historical facts or that relate to future plans, events or performance are 'forward-looking' statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements include, but are not limited to, PMI's U.S. Market Risk Index and any related discussion, and statements relating to the value of homeownership and future economic and housing market conditions. Forward-looking statements are subject to a number of risks and uncertainties including but not limited to, the following factors: changes in economic conditions, economic recession or slowdowns, adverse changes in consumer confidence, declining housing values, higher unemployment, deteriorating borrower credit, changes in interest rates, the effects of Hurricanes Katrina and Rita or other natural disasters, or a combination of these factors. Readers are cautioned that any statements with respect to future economic and housing market conditions are based upon current economic conditions and, therefore, are inherently uncertain and highly subject to the changes in the factors enumerated above. Other risk and uncertainties are discussed in the Company's filings with the Securities and Exchange Commission, including our report on Form 10-K for the year ended December 31, 2005 and Form 10-Q for the quarter ended March 31, 2006.

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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 decline over the next two years (eight quarters), with an index value of 100 implying a 10% probability of falling house prices.

The Risk Index uses information on past house price growth and variables measuring local employment and unemployment, as well as local income measures and interest rates. The Risk Index is determined by the following variables: (i) Home Price Appreciation, (ii) Home Price Acceleration, (iii) Employment Growth, (iv) the De-meaned Unemployment Rate, which we define as the difference of the local Unemployment Rate from its average in recent years, and (v) PMI's proprietary Affordability Index.

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.

Please contact your PMI representative for more information or printed versions.

The ERET report will be produced quarterly.

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