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# The US Housing Sector in Retreat: the Implications and Projected Recovery

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## Introduction

The following analysis presents RREEF Research's perspective on the current state of the troubled US housing sector and its near term outlook for recovery. The paper establishes a history of recent events and the role of securitization in the dynamics of the housing sector, followed by an assessment of housing market fundamentals based upon current supply and demand trends. We review the recent history of housing market conditions as they have deteriorated across the country and their resultant negative impact on home prices. On the positive side, we review demographic trends that will drive long-run housing demand, followed by our economic outlook and prospects for recovery in the for-sale housing sector.

The assumptions and analyses for this report are undertaken amidst economic uncertainty and unsettled financial markets. Further, the scope and longer range impact of recent government intervention, such as the Federal Reserve Board's decisive 75 and 50 basis point reductions in the federal funds rate that occurred in rapid succession, the fiscal stimulus package recently approved by Congress and the Treasury's plan for modifying subprime loans, have yet to play out.

## Executive Summary

The decline in housing alone is unlikely to push the US economy into recession. Housing investment, including construction and alterations, generally comprises only between four and five percent of GDP. While related industries, such as brokers and mortgage companies also benefit from residential investment, the overall sector has a relatively modest effect on economic growth. However, a housing market in decline generally implies falling home values. It is the impact of this negative wealth effect, which could result in declining consumer spending, that could result in a recession.

The current downturn in the US housing sector differs from previous housing cycles in that it was not precipitated by a national economic recession. Indeed, it was the housing sector's sharp downturn as a result of a dramatic oversupply of for-sale housing units and the subprime financial market collapse that occurred mid-2007 that set in motion a crisis of confidence. The fundamentals of the US economy were robust at the beginning of this downturn. A brief sequence of events leading to current market conditions is set out below:

- Following sweeping changes in household tenure, house prices rose at a compounded annual rate of 8.5 percent between 1996 and 2005 (the peak of national home price appreciation) as calculated by the S&P/Case-Shiller home

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price index. The magnitude of appreciation between 2000 and 2005 strengthened to an 11.4% annual rate.<sup>1</sup>

- Demand from speculators and unqualified buyers led home builders to produce an oversupply of for-sale units estimated at more than two million nationally.
- Lofty house prices and affordability challenges pushed buyers to the sidelines and house prices began a rapid descent. The confluence of price declines and higher interest rates resulted in a surge of mortgage delinquency, especially in the subprime market. Federal Reserve Chairman Bernanke reported late in 2007 that the rate of serious delinquencies for subprime mortgages with adjustable interest rates “has risen to about 12 percent, roughly double the recent low seen in mid-2005.”<sup>2</sup> Earlier this month, the Mortgage Bankers Association (MBA) reported the “serious delinquent” rate rose for all loan types, up 81 basis points for prime loans and 666 basis points for subprime loans. The MBA defines the serious delinquent rate as the percentage of loans that are 90 days or more delinquent or in the process of foreclosure. “Prime-All” and “Subprime-All” loans posted a serious delinquent rate of 1.67% and 14.44%, respectively.
- The pervasive distress of subprime mortgage defaults spread quickly to dislocate domestic and global financial markets, undermining the broader economy by eroding investor, business and consumer confidence. Banks and securities firms have amassed nearly \$200 billion of losses since the beginning of 2007 as the surge in subprime mortgage defaults rippled through the markets.

The US administration’s tactical response thus far is rapidly unfolding on a daily basis in an effort to mitigate the severity of the downturn. Recent actions include:

- A decisive 125-basis point cut in the federal funds rate target in late January, following an earlier 100 basis point cut in rates;
- Significant expansion of the Federal Reserve Bank’s term auction facility (TAF) to \$100 billion in an effort to facilitate market acceptance of a wide variety of collateral, including mortgages and corporate loans, which have become more difficult to sell; further, the Fed is initiating a series of cash injection operations through its network of bond dealers which will also total \$100 billion;
- Congressional approval of a \$168 billion fiscal stimulus plan, an amount equivalent to more than 1% of GDP. This legislation, which is expected to implement \$152 billion of the plan in 2008 and another \$16 billion in 2009, consists of tax rebates for lower and middle income households and business investment incentives; and,
- Mortgage loan cap increases for Fannie Mae and Freddie Mac, at least temporarily, to \$729,750 from \$418,000 to facilitate mortgage markets in expensive and particularly hard hit states, such as California and Florida.

The structure and efficacy of several other aggressive policies designed to shore up the housing and mortgage markets are new topics of debate. These programs may do little to help overleveraged borrowers, with little or no equity, who bought a mispriced asset. In many markets, homeowners now find their mortgage significantly exceeds their home

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<sup>1</sup> MacDonald, D., Thornton, D., “A Primer on the Mortgage Market and Mortgage Finance”, Federal Reserve Bank of St. Louis Review, January/February 2008.

<sup>2</sup> Bernanke (2007).

value, a position known as negative equity. Even homeowners who can still afford to pay their mortgage see less incentive to continue paying when home prices drop dramatically. A concerted public policy response is necessary to reduce the mounting number of homeowners who are willfully walking away from their mortgage obligations before they are in a negative equity position. A sampling and brief description of some of the programs aimed at helping homeowners avoid foreclosure as well as new rules for securitizing loans follows:

**HOPE NOW** – a Treasury-sponsored, private sector-led, consortium of mortgage lenders, servicers and investors to facilitate mortgage loan modification efforts, and the elimination of mortgage borrowers' tax liability on forgiven mortgages. Membership in this evolving effort includes the top six mortgage providers, which represent half of the US residential mortgage market, plus 94 percent of the subprime mortgage servicing market, with some 25 servicers represented. Notably, "in the second half of 2007, the industry assisted an estimated 869,000 homeowners and, coincident with the formation of HOPE NOW, the loan modification rate in the fourth quarter doubled over the rate in the third quarter."<sup>3</sup> The six major participating banks include Citigroup, Countrywide, Bank of America, JPMorgan Chase, Washington Mutual, and Wells Fargo.

**Project Lifeline** – an outreach program that targets homeowners who are 90 days or more delinquent in payments. The program is available not only to subprime borrowers, but all 90-day delinquent homeowners nationwide. Securitized loans, those packaged and sold to investors, would also qualify. The program was initiated by the same six largest mortgage servicers, with the idea that intervention may lead to a pause in the foreclosure process while a solution is found for the homeowner and lender.

**New Rules on Packaging Loans into Bonds** – US Treasury Secretary Paulson said the Presidential Working Group on Financial Markets will announce recommendations in "a number of months". The group includes heads of the Treasury, Federal Reserve, Securities and Exchange Commission and Commodity Futures Trading Commission, but has yet to reveal its conclusions. A review of rating agencies, off balance sheet contingent liabilities and accounting and valuation issues should feature prominently in the group's recommendations.

On balance, these significant and decisive monetary and fiscal policy initiatives should provide good stimuli and momentum to the economy by mid-year 2008. Local housing market conditions affect the duration and depth of a correction; therefore we should not expect a uniform recovery across the US as regional disparities have already emerged.

- Troubled areas will continue to be regions of the country that were most affected by speculators who bid up home prices well above what the resident population could afford to pay for them. This includes nearly all of Florida, many regions of California, the metropolitan areas of Phoenix, Las Vegas and parts of Washington, DC.
- Strengthening in-migration into metro areas such as Portland, Seattle, Austin, Raleigh and Charlotte has resulted in considerable resilience in their housing markets to date.
- The national home price has fallen 8.4% year over year according to the S&P/Case-Shiller price index. Comparatively, the National Association of

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<sup>3</sup> Statement by Secretary Henry M. Paulson, Jr. on New Private Sector Efforts to Reach Homeowners Facing Foreclosure, US Treasury press release dated February 12, 2008.

Realtors (NAR) data indicates a year-over-year decline of 5.8% while the Office of Federal Housing Enterprise Oversight (OFHEO) shows a 1.8% increase between 3Q06 and 3Q07. OFHEO's attempt to reconcile the divergence with the Case Shiller index found the dissemblance was largely city-specific. Generally, though, the addition of low priced, alternatively-financed homes to the GSE data sample resulted in significantly higher estimated price declines. Declines were particularly large for low and moderately priced homes without Enterprise-purchased mortgages. This does not bode well for the metropolitan areas highlighted later in Exhibit 5 with a high percentage of high risk loans.

- RREEF Research expects the national home price to fall approximately 10% to 15% in nominal terms and 17% to 23% in real terms between 2005 and 2009. Clearly, by this measure, the runaway home price appreciation in this housing cycle will deflate by a greater magnitude than any other down-cycle since 1970, much larger than the -6.8% and -9.2% real price adjustments in the 1988-1990 and 1979-1984 periods, respectively. Certainly, price declines could be of a greater or lesser magnitude in different regions of the country, and are highly dependent upon local economic conditions and space fundamentals.
- Price declines are further exacerbated by "foreclosure prevalence" and "foreclosure discount".<sup>4</sup> Foreclosure prevalence is defined as the percentage of total sales in a market owned and sold by a foreclosing lender (REO sales). Foreclosure discount is the percentage reduction in the sale price that a foreclosing lender will accept. According to a 2006 study by First American (latest available) study, foreclosures have their deepest impact in areas where they constitute more than 8 percent of total sales. In these markets or in neighborhoods where homes are neglected and in poor repair, foreclosure discount can mount to 20 to 30 percent. As of First Half 2006, the national foreclosure prevalence was 3.1% of all sales and the foreclosure discount was -14.2%.
- From another perspective, the house price to rent ratio, often compared to the price-to-earnings or PE ratio for stocks, suggests that in order to restore balance to the ratio, a 3% to 4% increase in rents should be met by a nominal decline in house prices of 14% to 17%.<sup>5</sup> Inflation-adjusted price declines could be considerably higher, but would not apply to all markets. For example, San Francisco County's household tenure rate is the inverse of the US, implying that some level of pent up demand for housing always exists. In supply constrained markets, prices will not necessarily adjust downward to return the price to rent ratio to a level deemed reasonable.
- Home prices in many metropolitan markets have already largely corrected, while others arguably remain "overvalued". Further or new price adjustments are expected in the Central Valley of California, Los Angeles, the Inland Empire, Miami, Naples, Portland, Phoenix, and Seattle. By some measures, Boston has fallen so far as to be "undervalued" by 6%.<sup>6</sup> Strong population growth typically enhances home price appreciation, but a lack of supply constraints can impede real estate appreciation. Accordingly, Dallas and Houston, broadly considered

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<sup>4</sup> Cagen, Christopher, "A Ripple, Not A Tidal Wave: Foreclosure Prevalence and Foreclosure Discount", First American Real Estate Solutions, November 16, 2006.

<sup>5</sup> "House Prices: How Far Down", Research Notes, National Multi-Housing Council, February 1, 2008.

<sup>6</sup> "House Prices in America", Global Insight/National City Joint Venture, December 2007.

low barrier to entry markets, are ranked the most undervalued housing markets in the country.

- The long run demographic trends that underpin demand for housing remain robust and are as equally impressive and positive as the current supply side is daunting. The Joint Center for Housing Studies of Harvard University estimates the pace of household formations will increase by 16% between 2005 and 2015 to an average of 1.46 million per year.<sup>7</sup>
- Immigrants are expected to play a key role in the New York, New Jersey, California and Florida housing markets as these states are traditional immigration gateways. Arizona, Georgia and Texas are the three fastest growing states for immigration; therefore demand for rental and entry level housing will be an important driver in both mainstay and emerging gateways.
- RREEF Research projects demand for homes to approach a cumulative 2.9 million units, surpassing completions of 3.8 million between 2008 and 2010, which includes demand for rental housing in excess of 1.8 million units.
- The housing market will stabilize when inventories definitively recede, and we expect housing starts in 2008 and 2009 will be sufficiently suppressed to begin gradually clearing the market of excess inventories by the end of the decade. We expect delivery of housing units to rebound to around 1.0 to 1.2 million units by 2010.

## The Rise of Homeownership and Mortgage Securitization

Housing, particularly owner-occupied housing, has been a US public policy issue since 1918, both with respect to affordability for lower income families as well as the development of an efficient mortgage market for the middle class.<sup>8</sup> Public policy for the last decade has been geared toward promoting homeownership, particularly among minorities and low income households. The Federal Reserve Bank consistently cut the federal funds rate following the 2001 recession to stimulate the economy, ultimately enhancing home affordability. When the economy moved into a strong recovery period between 2004 and 2005, the Federal Reserve Bank pursued a policy of modestly stepping up interest rates. Lenders and investment banks responded by creating exotic mortgage-backed securities (MBS) based on lower lending standards, arguably offsetting the negative effects of higher interest rates on housing demand.

From a consumer perspective, the mortgage industry re-invented itself; emerging far more creative, responsive and consumer-driven than ever before. Entry level hybrid loans and other mortgage "solutions" reflected a major shift from fully amortizing loans to nontraditional products, which did not exist a few years ago, and captured significant market share, as high as 40% of all loans in some markets. Concurrently, builders actively pursued a new homeowner profile. This policy mandate ultimately proved successful, steadily raising the homeownership rate between 1995 and 2006 to 69%, well above the long term average of 64% (See Exhibit 1). This 500 basis point increase reflected a major transformation of the nation's housing market, and occurred in a remarkably short period of time.

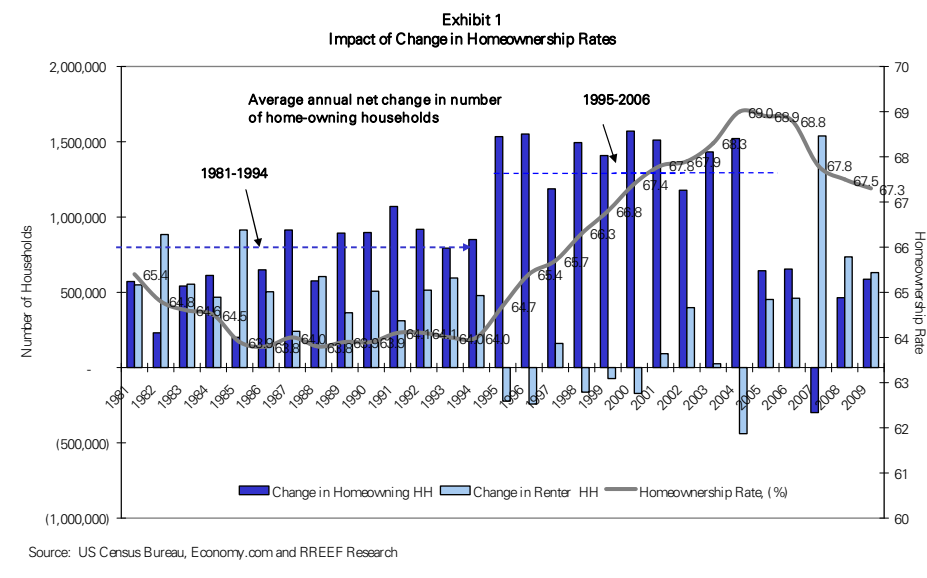
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<sup>7</sup> "State of the Nation's Housing, 2007". The Joint Center for Housing Studies of Harvard University.

<sup>8</sup> William Poole, "Housing in the Macroeconomy", Federal Reserve Bank of St. Louis Review, May/June 2003, Volume 85, Number 3.

The sweeping change in tenure for so many households resulted in higher rates of homeownership not only in the youngest adult age (<25 years old) cohort, which soared 1,000 basis points above trend, but also among single heads of households and minorities. The absolute values are even more startling. The homeownership rate averaged 64% fairly steadily between 1981 and 1994, during which time approximately 700,000 households each year became new homeowners. Comparatively, between 1995 and 2006, the number nearly doubled, soaring to an average of 1.3 million new ownership households annually.

Exhibit 1 also highlights the sustained loss of more than 620,000 renter households between 1995-2001 and an anemic gain of approximately 77,000 lost between 2001 and 2004. A reversal of this weakness began in 2005 and 2006, resulting in a gain of more than 450,000 households in each of these two years.

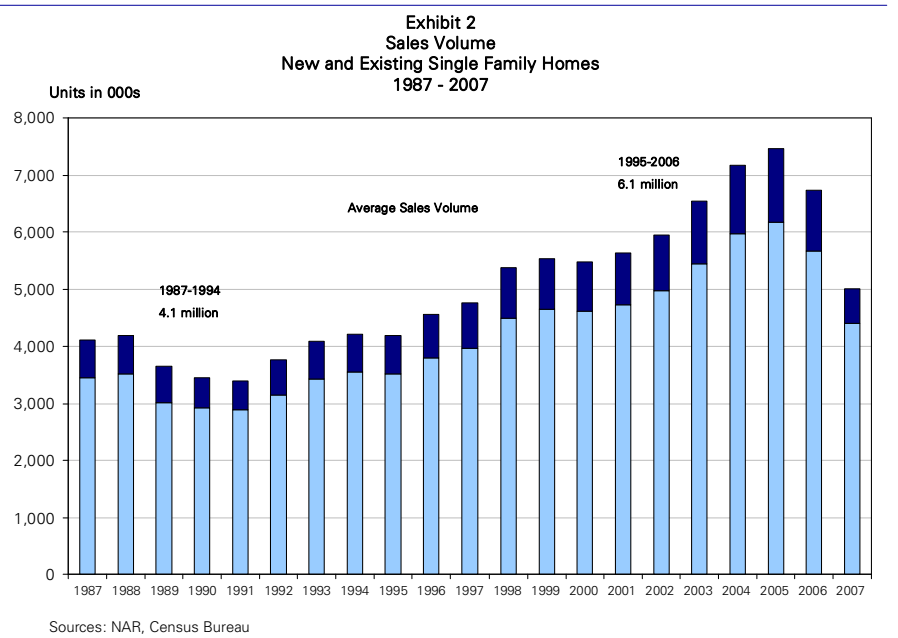


Low interest rates, relaxed mortgage underwriting and an astonishing amount of capital lifted the impediments to homeownership for many residents and opened the floodgates to new home and condominium purchasers. This flood of new capital into the for-sale home market resulted in significant price increases. These price increases were temporarily sustainable as interest rates and loan terms became even more favorable.

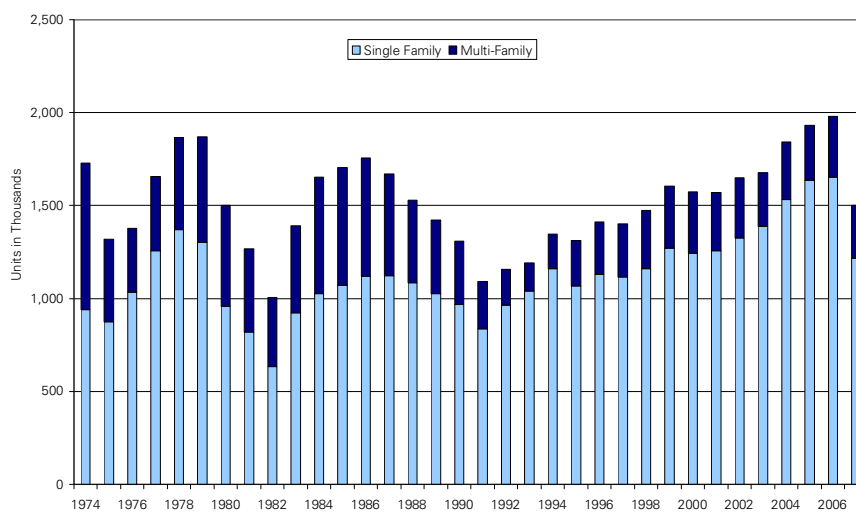
Ever-escalating home prices drew a new set of buyers into the market. Second home sales became a larger share of the market, estimated to represent 13% of total home sales. Some of these sales represented owner-occupiers, newly affluent buyers benefiting from a strong economy. However, many bought on the expectation of future price appreciation; prime second home destinations also benefited from surging national prices, so that their motivation was largely investment. Another even more adventurous group of home buyers were pure market speculators, estimated to comprise 25% nationally, and much higher in certain regions. Many of these speculators were not highly capitalized individuals, but deployed limited savings or home equity to buy and flip houses in rapidly escalating housing markets, such as Phoenix, Las Vegas and Florida. They could be viewed as the modern equivalent of the “dot com” investors of the 1990s. Together these investors and second home buyers inflated home sales by nearly 40% to unprecedented and unsustainable new highs. These events triggered soaring price

appreciation, tightened unsold inventories and sparked an unparalleled construction boom as builders rushed to capitalize on this windfall demand.

A turning point in the cycle occurred in 2006 as rising mortgage rates and higher home prices forced many buyers to the sidelines. Affordability became a major challenge and home sales declined, inventories mounted, home prices stalled, and investors exited the markets. Exhibit 2 reflects 2007 sales volume retreating to the lowest in a decade. Following peak completions in 2005 and 2006 of nearly two million units in each year, builders began to retract. Note in Exhibit 3 that completions for 2007 have receded to same level as 1980.



**Exhibit 3  
US Housing Completions  
1974-2007**



## The Correction Unfolds

The absence of discipline that evolved in the most recent pro-cyclical phase of lending ultimately resulted in the unraveling of the housing sector in much of the US. Regulatory oversight was lax and further complicated by poor to non-existent agency coordination. For example, the implications of predatory lending were acknowledged long before interagency guidance on nontraditional lending was issued in 2006. And, even then, regulators had to issue a separate “subprime” guidance. Regulators now must prudently tighten lending standards, all the while mindful of reducing the availability of credit and exacerbating the housing downturn. Exhibit 4 below outlines the framework for mortgage industry regulation.<sup>9</sup>

**Exhibit 4  
Mortgage Lending Regulators**

Regulator	Who It Regulates	Examples of Lending Institutions
Federal Reserve	Financial holding companies, bank holding companies, member state banks	Citigroup, JPMorgan Chase, KeyCorp, SunTrust Bank, Wachovia Corporation, Deutsche Bank
Office of the Comptroller of the Currency (OCC)	Nationally chartered banks	Citibank, National Association; Mellon Bank, N.A.; PNC Bank National Association; Wells Fargo Bank, National Association
Federal Deposit Insurance Company (FDIC)*	State chartered banks that are not members of the Federal Reserve System	BancorpSouth Bank, Bank of the West, Branch Banking and Trust Company, GMAC Bank
Office of Thrift Supervision (OTS)	Savings and loans associations (thrifts)	Countrywide Bank, FSB; Washington Mutual Bank; World Savings Bank, FSB
National Credit Union Administration	Federal credit unions	BECU (formerly Boeing Employees' Credit Union),
State regulators*	State chartered banks, mortgage brokers, non-depository lenders	New Century Financial

\*Banks regulated by the FDIC can also be regulated by the state in which they are located.

Source: Moody's Economy.com

As noted by the Office of Federal Housing Enterprise Oversight (OFHEO), “A variety of factors contributed to a relaxation of credit discipline that ultimately led to the drop in

<sup>9</sup> “Into the Woods: Mortgage Credit Quality, Its Prospects, and Implications”, Moody's Economy.com, July 2007.

mortgage market liquidity in August 2007. Subprime mortgages originated in 2005, 2006 and the first half of 2007 were poorly underwritten, as often occurs at the end of a credit cycle, and their poor performance is weighing heavily on the market.”<sup>10</sup> The report concludes that many of the new loans were adjustable rate mortgages with low initial “teaser” rates. Some consumers who obtained such mortgages apparently did not understand the extent to which their monthly payments would reset or they believed that price appreciation would permit them to refinance at a lower rate before their rate changed. As a consequence, mortgage defaults on subprime mortgages increased to 14.44% in the fourth quarter of 2007, compared to 5.5% in the second quarter of 2007 and 3.3% two years ago.

Mortgage securitizers continued to issue private-label mortgage backed securities (MBS) backed by subprime loans against a backdrop of rising default rates. In retrospect, secondary market investors relied too heavily on credit rating agencies to assess the credit risk of the securities and underestimated the market risk. Further, a significant rise in evidence of mortgage lending fraud in 2006 compounded the error. Exhibit 5 represents the top metropolitan areas ranked by the percentage of high risk loans made as a percentage of 2006 loan origination volume. Half of the top 10 markets with the riskiest loans originated in Florida, followed by the California, Nevada, Illinois and Arizona metropolitan areas. The sum of the risky loan volume for all five Florida MSAs totals \$49.3 billion compared to nearly \$41 billion for Los Angeles alone. Ranked by total subprime loan volume, Los Angeles and Riverside (CA) top the list, followed by Chicago. Chicago has the highest number of high risk loans at 139,585.

The housing sector has dominated headlines for many years. The shift from positive to negative news began 18 to 24 months ago. Few paid much attention to this news, however, until the mortgage market collapsed last summer. Market analysts and participants warned of a witch’s brew of:

- *pricing bubbles*
- *predatory lending practices*
- *rising subprime mortgage defaults*
- *increasingly risky mortgage products*
- *excessive construction by homebuilders*
- *the market disequilibrium created by speculators or “flippers”, and*
- *mounting unsold inventories of homes.*

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<sup>10</sup> 2007 Performance and Accountability Report, Office of Federal Housing and Enterprise Oversight, September 2007.

**Exhibit 5**  
**High-Rate (~ Subprime) Loans as a Percentage of Loan Origination Volume**  
**By Metro Area, 2006**

Metropolitan Area	State	High-rate loans	High-rate loans	High-rate loan volume	High-rate loans
		(number)	Pct. of total loans	(\$ millions)	Pct. of total volume
Miami-Miami Beach-Kendall	FL	76,312	48.2	14,921	41.3
Fort Lauderdale-Pompano Beach	FL	51,236	41.5	9,796	36.0
Riverside-San Bernardino-Ontario	CA	130,921	38.7	30,777	35.5
Orlando	FL	58,642	36.9	9,695	32.2
Tampa-St. Petersburg-Clearwater	FL	65,161	36.1	9,377	30.7
Las Vegas-Paradise	NV	58,917	36.2	10,859	30.6
Chicago-Naperville-Joliet	IL	139,585	32.9	23,806	28.1
Phoenix-Mesa-Scottsdale	AZ	121,133	34.1	20,422	28.1
West Palm Beach-Boca Raton-Boynton	FL	27,768	34.0	5,556	27.9
Newark-Union	NJ/PA	29,652	29.8	6,750	27.7
Houston-Baytown-Sugar Land	TX	74,091	33.7	7,479	27.5
Los Angeles-Long Beach-Glendale	CA	134,399	31.9	40,568	26.4
Baltimore-Towson	MD	52,213	31.4	8,554	26.1
Washington, D.C.-Arlington-Alexandria	DC, VA	91,566	29.7	20,818	25.7
New York-Wayne-White Plains	NY/NJ	75,107	28.3	22,536	25.3
Jacksonville	FL	27,120	31.4	3,552	25.1
Atlanta-Sandy Springs-Marietta	GA	96,522	30.9	11,739	24.5
Sacramento-Arden-Arcade-Roseville	CA	36,311	26.9	8,466	24.3
St. Louis	MO/IL	43,044	29.8	4,516	24.3
Fort Worth-Arlington	TX	24,638	29.7	2,330	24.0
Kansas City	MO	29,339	29.2	2,963	23.2
Boston-Quincy	MA	19,157	22.9	4,629	22.5
Dallas-Plano-Irving	TX	47,207	29.0	5,162	22.4
Edison	NJ	25,241	21.6	5,907	21.8
San Antonio	TX	20,532	27.7	1,828	21.3
Oakland-Fremont-Hayward	CA	36,598	25.0	11,827	21.1
Portland-Vancouver-Beaverton	OR	30,959	24.4	5,077	20.8
Denver-Aurora	CO	38,414	25.5	5,341	20.0
Santa Ana-Anaheim-Irvine	CA	31,398	23.2	11,029	19.4
San Diego-Carlsbad-San Marcos	CA	35,081	22.7	10,264	19.2
Charlotte-Gastonia-Concord	NC	25,651	26.2	2,742	19.1
Philadelphia	PA	40,207	22.5	5,116	18.4
Seattle-Bellevue-Everett	WA	34,658	21.5	7,072	17.3
Bridgeport-Stamford-Norwalk	CT	9,253	23.4	2,343	16.9
San Jose-Sunnyvale-Santa Clara	CA	15,394	19.0	5,914	16.1
Raleigh-Cary	NC	11,897	20.9	1,381	15.8
Austin-Round Rock	TX	14,705	20.0	1,686	15.6
San Francisco-San Mateo-Redwood City	CA	9,077	14.2	3,981	11.7

Source: Wall Street Journal Research, RREEF Research  
<http://online.wsj.com/public/resources/documents/retro-SUBPRIME07.html>

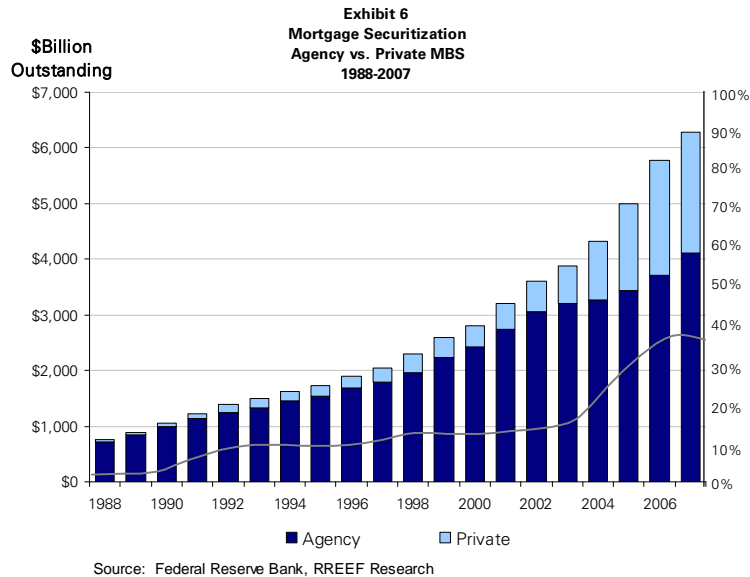
The exhortations proved out with varying degrees of urgency, triggering a debate about the inevitability of a hard landing and the deleterious effect on the US economy. This market shift and its knock on the MBS market and potential impact on the broader consumer-driven US economy has combined to create an understandable crisis of confidence in global financial markets and the US housing sector, in particular.

William Poole, out-going President of the Federal Reserve Bank of St. Louis, suggested in a 2002 speech, "... periods of great market instability arise when three conditions are met. First, something happens that has widespread significance and is large enough to matter to lots of people. Second, the triggering event is a surprise. Third, substantial uncertainty clouds resolution of the problem. It is especially difficult for investors to know what to do when the government's response to an unfolding situation is highly uncertain." <sup>11</sup>

<sup>11</sup> "Financial Stability" presented before The Council of State Governments Southern Legislative Conference Annual Meeting, New Orleans, Louisiana, Aug. 4, 2002:  
[www.stlouisfed.org/news/speeches.html](http://www.stlouisfed.org/news/speeches.html).

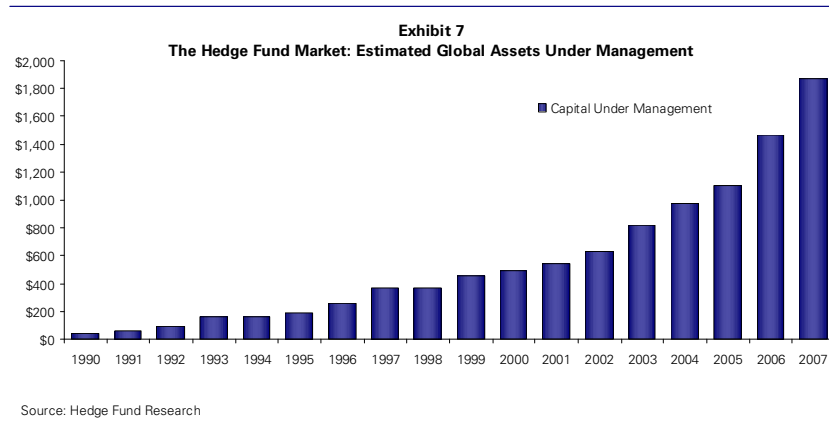
Applying Mr. Poole’s conditions to the current situation suggests that the first condition is the rapid and weighty correction of the housing sector. The exposure of highly rated residential and commercial mortgage backed securities to subprime mortgages that began rapidly defaulting came to light in a very public way starting in June 2007, when Merrill Lynch seized \$800 million in assets from two high profile Bear Stearns hedge funds heavily involved in subprime mortgage investments. Given the brisk growth of the mortgage-backed securities and hedge fund industries in recent years, and the looming prospect of 1.5%, or an estimated 2.2 million, of US households facing foreclosure, this is large enough to matter to “lots of people” both domestically and internationally.

Exhibits 6 and 7 below, illustrate the growth in the mortgage securities and hedge fund industry. Securitization of residential mortgages has more than tripled in the last decade to become a \$6.3 trillion industry, as of 3Q07. The share of private-label MBS doubled to 11.4% from 5.3% between 1990 and 1996, but grew to capture a 35% share in the following decade. Similarly, “Since 1990, hedge fund assets under management have increased more than 30 times over.”<sup>12</sup> Hedge fund assets under management grew another 27% in 2007 and now represent a \$1.9 trillion industry. While these volumes illustrate the enormous capital flows to this sector, they do not imply under-performance for the sector as a whole. Clearly, not all mortgage-backed securities are underperforming, nor did all hedge funds buy the riskier pieces of subprime securities.



The second condition, the surprise or triggering event, is the seizing-up of the financial markets, which occurred not only because of the uncertainty surrounding who holds the risk in the subprime mortgages, but also because of the subsequent downgrading of mortgage backed securities by the ratings agencies. Many subprime lenders have folded and some subprime hedge funds have been restructured or liquidated. Investors lose money every time a security is downgraded; how much is unknown as yet because market clearing prices have not been re-established.

<sup>12</sup> Leitner, C. , A. Mansour, S. Naylor, “Alternative Investments in Perspective”, September 2007, RREEF Research.

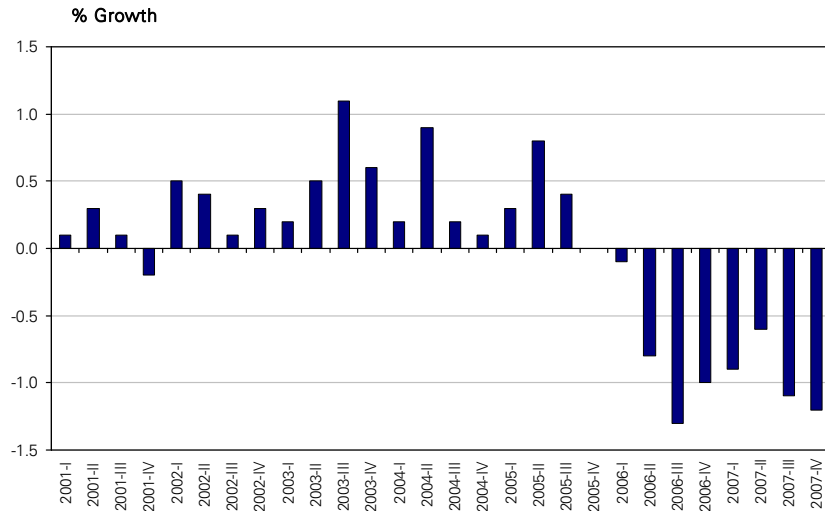


The third condition of great market instability is a highly uncertain government response. For example, as noted earlier, agency guidance on subprime lending was issued late in the cycle. Further, six months after the collapse of several blue-chip hedge funds, the Treasury announced a plan for modifying subprime loans in order to reduce the number of borrowers who might default in the coming year. We will not address the details here, but it's too early to know whether this action is early enough or the scope broad enough to be effective. Similarly, it is too early to determine whether the Fed's monetary policy and the Administration's fiscal stimulus package will prove to be effective countermeasures in both calming the debt and equity markets and rescuing a significant number of homeowners and lenders at this point in the economic cycle.

## Why Housing Matters – Measuring the Economic Impact

The housing sector's long-term average share of GDP growth generally ranged between 3.0% and 5.0% between 1980 and 2005. When measured during housing's breakaway years, 2001-2005, the share rose to a lofty 14.5% of GDP growth. Of course, its elevated share during that period is partially attributable to overall GDP weakness during the 2001 recession. At the height of residential investment spending in 1Q06, housing represented 6.2% of overall GDP growth. Since then, housing's role in the macroeconomy has shifted from one of major contributor to that of detractor. Housing has receded to close to its 4.2% trend as residential investment has declined 28% from its peak. Not surprisingly, eight sequential quarters of declines in residential construction have been a stubborn anchor on GDP performance (See Exhibit 8). As the decline in residential construction finally reaches bottom, likely in 2Q08, overall economic growth will likely ramp back up, assuming continued resilience in other areas of the economy.

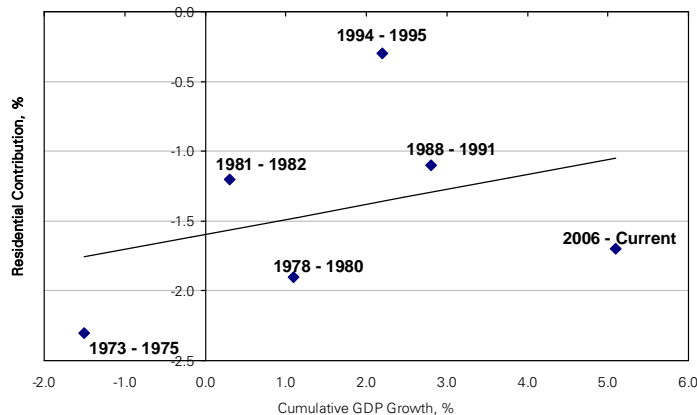
**Exhibit 8**  
Residential Investment's Drag on GDP Growth



Source: Bureau of Economic Analysis

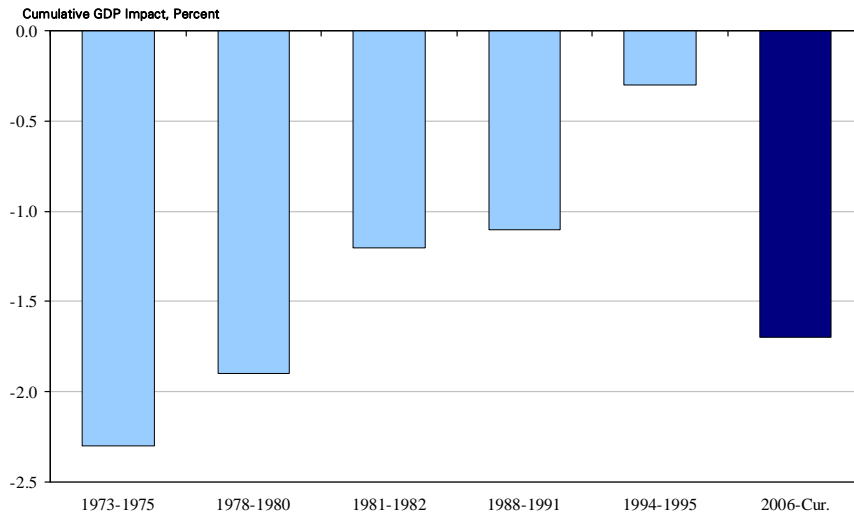
Exhibit 9 tells us a great deal about the current housing downturn relative to previous cycles. The graph depicts the contribution of residential construction to cumulative GDP during different periods of historical downturns. The most obvious conclusion is that this housing downturn was not precipitated by an economic recession as in previous years. Cumulative GDP between 2006 and 2007 totaled 5.1% against housing's drag of -1.7%. Exhibit 10 is a variation of the same metric within the context of the cumulative GDP impact. Assuming more pain to come in residential investment spending in tandem with weakening in the other components of GDP in 2008, the "2006-Current" bar promises to dip even further and bring the current downturn alongside the 1978-1980 period. Exhibit 11 depicts the resilience of the Private Consumption, or consumer spending, and Other components of current GDP relative to previous cycles. As of 4Q07, private consumption comprised \$10.1 trillion (72%) of overall GDP. The Other category, comprised mainly of government spending and private and business investment, is notable for its strength as well during this housing cycle. Exhibit 11 highlights the US economy's fundamental strengths in areas outside of housing, making a decent case for a brief period of weakness in 2008 followed by a rebound in 2009 and 2010.

**Exhibit 9**  
Historical Downturns  
Residential Construction vs. Total GDP Growth



Source: Bureau of Economic Analysis, RREEF Research

**Exhibit 10  
Historical Downturns  
Residential Construction**



Source: Bureau of Economic Analysis & RREEF Research

**Exhibit 11  
GDP Growth Comparison  
Current Housing Downturn vs. Previous Cycles**

	Annual Growth Rates, %			
	Total GDP	Private Consumption	Residential Investment	Other
Current*	3.9	3.3	-1.7	2.3
Average of Other Cycles**	1.0	0.8	-1.4	1.5
Difference	2.9	2.5	-0.3	0.8

\* 2Q 2006 – 4Q 2007

\*\* 1973-1975, 1978-1980, 1981-1982, 1988-1991, 1994-1995

Sources: Bureau of Economic Analysis, Foresight Analytics

The current retrenchment in employment in housing-related industries, includes contraction in the Construction, Trade, Mortgage Lending and Brokerage sectors. Employment in housing-related employment peaked in 2006; since then, approximately 328,200 total jobs have been lost, with Mortgage Lending bearing the brunt, at least on a relative basis, of about 22.1%, or 79,000 jobs. The diminution of the number of construction jobs exceeds 212,000, representing a 3.8% change from its peak. Further, markets where housing became a major driver of employment growth tend to be over-supplied in housing inventory, carry the largest number of high risk loans, and are feeling the effects of the sharpest deceleration in growth relative to other markets. Exhibit 12 ranks the markets most affected by housing-related employment.

**Exhibit 12**  
**Metro Area Employment Growth**  
**Impact of Construction Pull-Back**

Area Name	Construction Employment Share*	Overall Employment Growth, December		
		2005-2006	2006-2007	Deceleration
Cape Coral-Fort Myers, FL	16.5%	3.7	1.3	-2.4
Las Vegas-Paradise, NV	12.1%	3.7	0.8	-2.9
Baton Rouge, LA	11.4%	1.0	2.4	1.4
Reno-Sparks, NV	11.1%	3.4	0.4	-3.0
Riverside-San Bern., CA	10.2%	2.5	2.5	0.0
Sarasota-Bradenton-Venice, FL	10.0%	2.2	-0.7	-2.9
Phoenix-Mesa-Scottsdale, AZ	9.9%	5.3	1.3	-4.0
Boise City-Nampa, ID	9.3%	6.2	0.6	-5.7
Bakersfield, CA	8.8%	3.6	2.4	-1.2
Palm Bay-Melbourne-Titusville, FL	8.7%	0.0	-0.1	-0.1
Orlando, FL	8.5%	3.4	2.3	-1.1
Albuquerque, NM	8.4%	2.6	0.9	-1.7
Jacksonville, FL	8.3%	2.9	1.3	-1.6
West Palm Beach-Boca Raton, FL	8.2%	1.7	1.3	-0.4
Tacoma, WA	8.0%	2.1	2.0	-0.1
United States	5.7%	1.7	1.0	-0.7

Sources: BLS, RREEF Research

## Housing Fundamentals

### Current Housing Conditions

As 2007 ended, the U.S. housing market entered its most significant decline in decades, the result of several years' worth of over-investment in and over-production of housing. Sales volume is down 30% to 40% in a broad swath of markets, and prices are falling. In 2007, the national average home price fell in nominal terms for the first time since at least the 1960s. New housing starts declined about 29% during 2007; however, some developers continue to build into already over-supplied markets. New deliveries, lower prices and rising defaults and foreclosures are combining with tighter credit conditions to further weaken prices. Falling home sales and starts generally lead the decline in home prices so a further decline in prices is likely. Exhibit 13 reflects US sales and inventory trends of existing single-family homes and condominiums. The combination of a 23% decline in sales and continued production of new housing units resulted in a 54% increase in the inventory of unsold homes as of January 2008.

**Exhibit 13**  
**Existing Home Sales and Supply Trends**

Year	Existing Home Sales	Single Family Sales	Condo and Co-op Sales	Inventory	National Mos. Supply	Single Family Mos. Supply	Condo/Co-op Mos. Supply
2004	6,778,000	5,958,000	820,000	2,244,000	4.3	4.3	4.1
2005	7,076,000	6,180,000	896,000	2,846,000	4.5	4.4	4.7
2006	6,478,000	5,677,000	801,000	3,450,000	6.5	6.4	7.8
2007	5,652,000	4,939,000	713,000	3,974,000	8.9	8.7	10.7
2007 Jan	6,380,000	5,590,000	788,000	3,539,000	6.7	6.5	7.4
2007 Dec	4,910,000	4,320,000	588,000	3,974,000	9.7	9.4	11.9
2008 Jan (p)	4,890,000	4,340,000	550,000	4,191,000	10.3	10.1	11.8
<b>%Δ from last month</b>	-0.4%	0.5%	-6.5%	5.5%	6.2%	7.4%	-0.8%
<b>%Δ from last year</b>	-23.4%	-22.4%	-30.2%	18.4%	53.7%	55.4%	59.5%

Note: Seasonally Adjusted Annual Rate  
(r) - revised, (p) - preliminary

Source: National Association of Realtors and RREEF Research

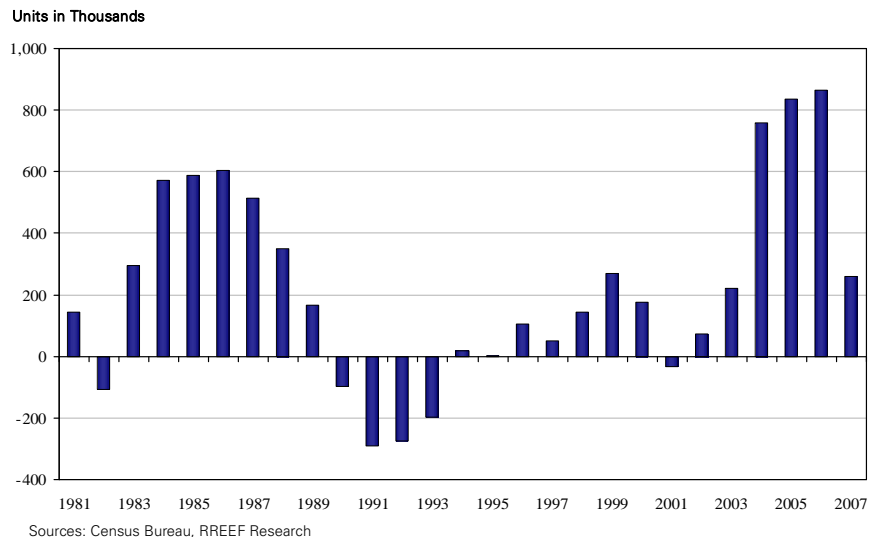
## Rising Unsold Inventories

Following a decade of under-production of housing units in the 1990s, deliveries escalated between 1997 and 2006. Given the strength of sales, the inventory of unsold homes remained balanced at around four months until 2006 before doubling to the current 10.3 months. Investor and second home demand is more vulnerable to the vagaries of economic cycles. Therefore, it is useful to distinguish between sales demand and demographic demand; the latter we assume to be represented by new household formations only, when determining the magnitude of excess supply.

Residential production outpaced underlying demographic growth, as represented by new household formations between 2002 and 2006. The overproduction of housing accelerated in 2004, as residential completions rose and household formation actually slowed. But strong price appreciation and available mortgage credit fueled the purchase of homes, and investors emerged as a significant source of demand for homes. As noted earlier, investors and second home buyers combined to inflate sales by approximately 38% to 40%, possibly higher in some markets. Existing home sales averaged 4.1 million units annually between 1987 and 1994; annual sales volume spiked 48% to an average of 6.1 million units between 1995 and 2007.

Since 2003, RREEF Research estimates that a cumulative 2.94 million more housing units were produced than warranted by fundamental household growth (See Exhibit 14). The overproduction was most acute during 2004 to 2006, when investor and second home buyer activity peaked. Housing starts peaked at 2.1 million units in 2005, while deliveries peaked at 2.0 million units in 2006. Activity during 2007 fell sharply (down 29% for starts and 21% for completions), but the estimated supply overhang implies that activity should fall further during 2008 and 2009.

**Exhibit 14**  
**Supply Overhang**  
**Annual Residential Completions vs. Household Growth**

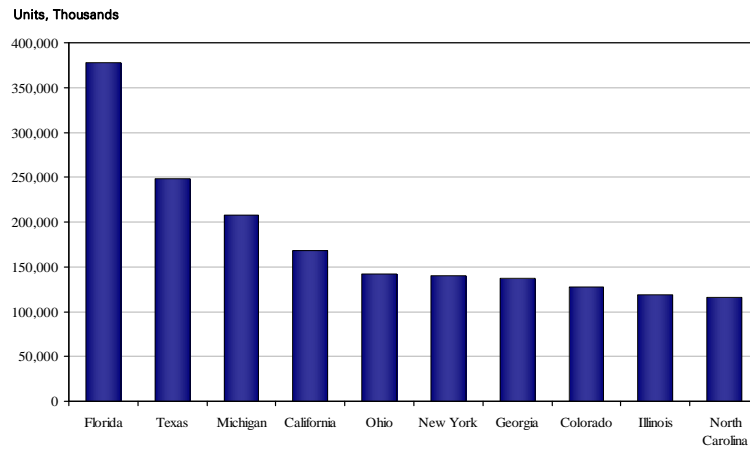


Household formation is expected to expand at a pace of 1.2 to 1.4 million new households per year, resulting in a two to three year time frame for the national housing market to recalibrate to a point of relative equilibrium. Some markets are already in relative balance, while others will require a longer transition to health, as described below.

## Regional Supply and Demographic Trends

The greatest excess production in housing units generally occurred in high growth areas, such as California, Florida and Texas. Exhibit 15 simply represents the difference between the number of housing units produced and the estimated number of household formations. Florida stands out from these other states in terms of overproduction by virtue of the sheer volume of development during the last several years. Some other states, such as Michigan and Ohio, are also noteworthy areas for overproduction. Since these have not historically been high growth areas, the volume of residential production during the past several years could not be absorbed.

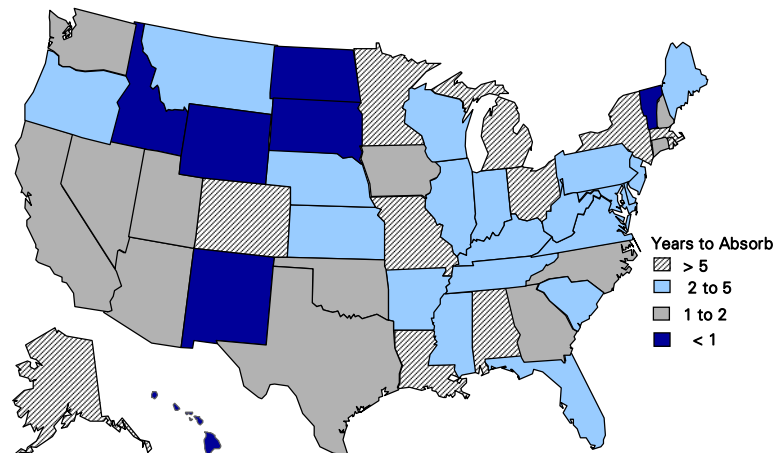
**Exhibit 15**  
Excess Production – Top 10 States  
Housing Unit Growth vs. Household Growth, 2000 to 2006



Sources: Census Bureau, RREEF Research

Another metric for gauging oversupply is the estimate of the number of years necessary to absorb the excess units. Viewed within this context, the greatest problems are seen to be mainly in the Midwest and Northeast (See Exhibit 16). Both regions endure slow population and household growth trends for long periods of time. Thus, the overproduction of housing in these areas, while smaller in magnitude, will take longer to

**Exhibit 16**  
Housing Excess  
Years to Absorb Excess Production



Source: Census Bureau, RREEF Research

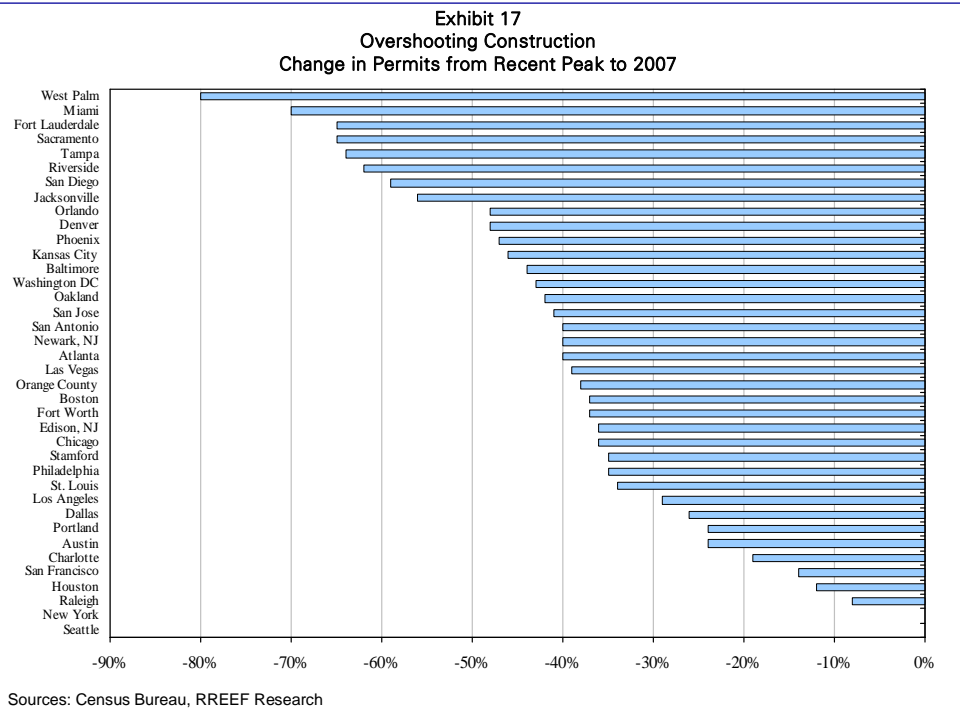
be absorbed through the formation of new households.

By contrast, the South and West have historically experienced more rapid population and household growth, so the excesses of the last several years, while greater in magnitude, will actually take less time to recover. The South has somewhat greater excess than the West, due to greater affordability and a more permissive development environment. Therefore, while the Sunbelt markets may require 2 to 5 years to absorb excess housing units, Western markets generally appear to need about half that amount of time.

A handful of states: Vermont, North and South Dakota, Wyoming, Idaho, New Mexico and Hawaii, appear to have avoided the excess housing production of the 2001 to 2006 period. While some of these states, such as Idaho, New Mexico and Hawaii, have experienced rapid growth, it so far has been matched by household formation.

### Metro Area Supply Outlook

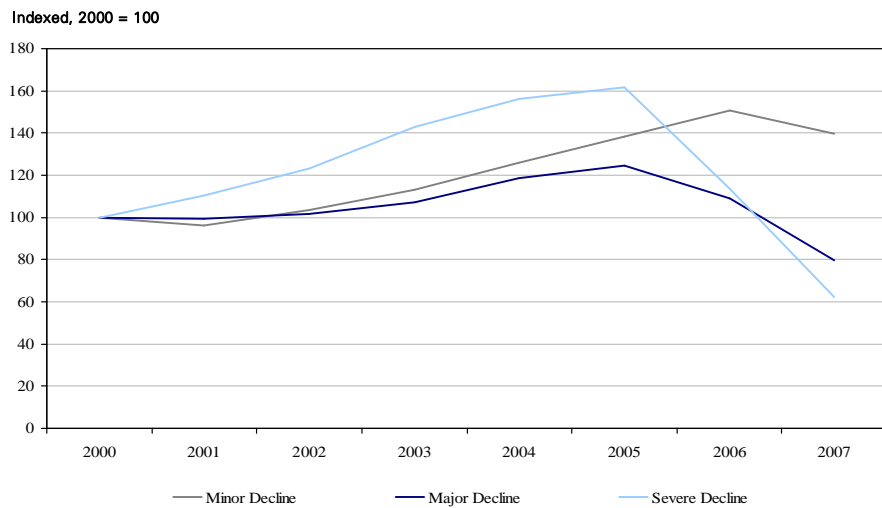
The areas at the forefront of the housing boom, such as South Florida and Central and Southern California, experienced the greatest amount of overbuilding and now reflect the sharpest declines in construction (See Exhibit 17).



RREEF Research has categorized major markets into three groups, based on the decline in residential permit activity in 2007 compared with the recent peak: Severe Correction (greater than 50% decline in permits), Major Correction (20% to 50% decline in permits) and Minor Correction (decline in permits of 20% or less).

As a group, the markets currently in the midst of a severe correction rose higher and peaked sooner than the other categories (See Exhibit 18). With the exception of Fort Lauderdale and West Palm Beach, where activity peaked in 2002 and 2003, respectively, the Florida markets continued their rapid growth until 2005. The California markets in severe decline: San Diego, Riverside and Sacramento, actually peaked in 2003 and 2004, although permit activity remained elevated through 2005 before retreating.

**Exhibit 18  
New Construction Patterns  
By Metro Category, Indexed**



Sources: U.S. Census Bureau, RREEF Research

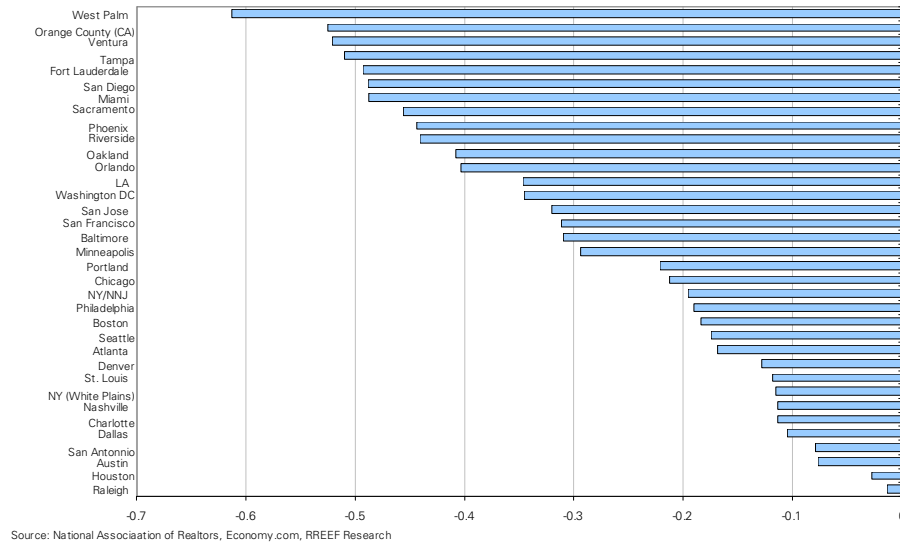
Most markets are experiencing a major correction, with a 20% to 50% decline in permits from their peak through 2007. These markets peaked somewhat later than the “Severe Correction” markets, generally in 2004 and 2005. Housing production in these markets also ramped up less rapidly than in the “Severe Correction” markets.

Relatively few markets are experiencing a minor correction, with permits in 2007 declining less than 20% versus their recent peak. One market, Seattle, will actually post higher permitting activity in 2007 than in any other year since 2000. Housing production in these markets as a group has increased significantly since 2000, but grew behind the pace of the “Severe Correction” markets. As a result, they peaked later (mainly in 2005 and 2006). Nevertheless, overbuilding is a concern in some of the larger markets, such as Houston and New York.

### Home Sales Recede

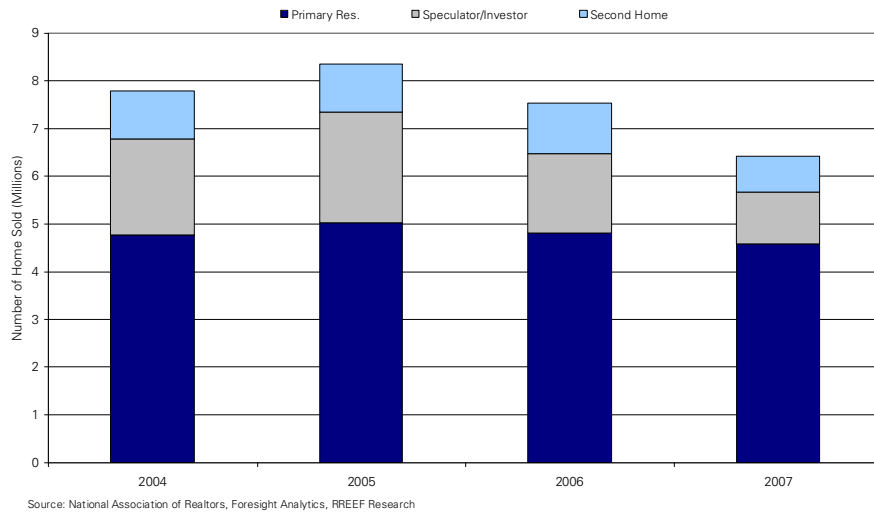
Home sales continue to decline in most major metropolitan areas across the US. Existing home sales receded by 23.0% measured from peak to the current trough; similarly, the number of new homes sold fell by 29.3% by the same measure. Given the current weakness of the overall economy, home sales are unlikely to increase substantially during the first half of 2008. Exhibit 19 ranks the metro areas by the decline in home sales from peak-to-trough. California and Florida, with five and six metro areas listed, respectively, dominate the top 12 markets facing the sharpest deterioration in home sales. Arizona rounds out this group of markets. Markets performing similarly to the US, include Chicago, Portland, San Francisco, San Jose, Washington, DC and Los Angeles, with declines ranging between 20% to 39%. Texas is home to four out of the five markets with the least deterioration in home sales, with declines in sales volume ranging between 2.7% and 10.5%. Raleigh thus far has held up the best. It is likely that sales in this last group of markets were less influenced by the outsized investor and second home demand evident in the first group of markets discussed, therefore, sales were less inflated from the beginning of the cycle.

**Exhibit 19**  
**Metropolitan Area Existing Home Sales Trends**  
**(Peak to 4Q2007)**



Based upon data reported by the National Association of Realtors, RREEF Research estimates that investor home sales peaked in 2005, topping approximately 28% of total sales, which translates to 2.3 million units (See Exhibit 20). We estimate as investor demand waned a bit in 2006, second home sales peaked, with approximately 14% of total sales, or 1.07 million units. These data include both existing and new single family and condominium sales.

**Exhibit 20**  
**Components of Demand for New and Existing Homes**



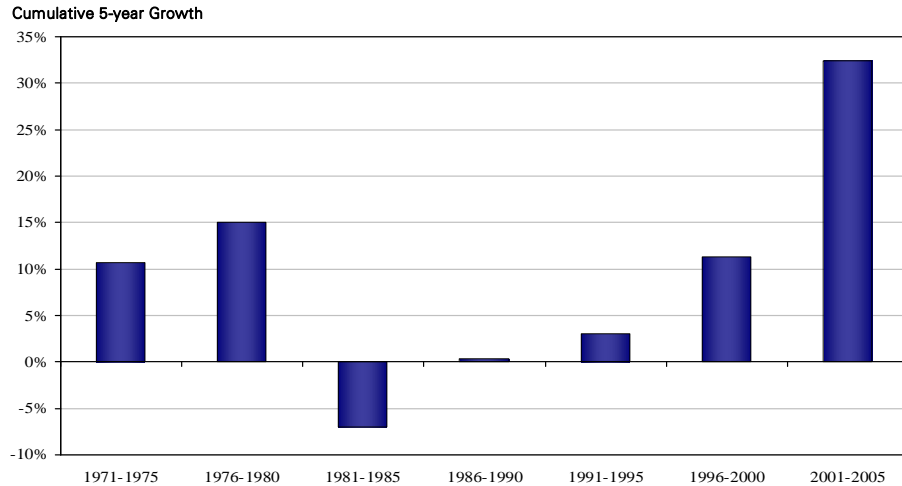
### Home Prices Have Yet to Fully Correct

The housing boom was both fueled by and resulted in strong price appreciation. Median home prices grew by 50% during the 2001 to 2005 period, with particularly rapid growth during 2004 and 2005. At first glance, this period does not particularly stand out

compared to previous periods, actually trailing the nominal 53% to 76% home price growth of the 1971-1975 and 1976-1980 periods.

In real (inflation-adjusted) terms, however, the 2001 to 2005 period stands well above other periods since 1970. Real prices grew by 32%, as compared with 11% during 1996-2000 and 15% during 1976-1980 (See Exhibit 21).

**Exhibit 21**  
**Home Price Growth**  
**In Real Terms, Adjusted for Inflation**

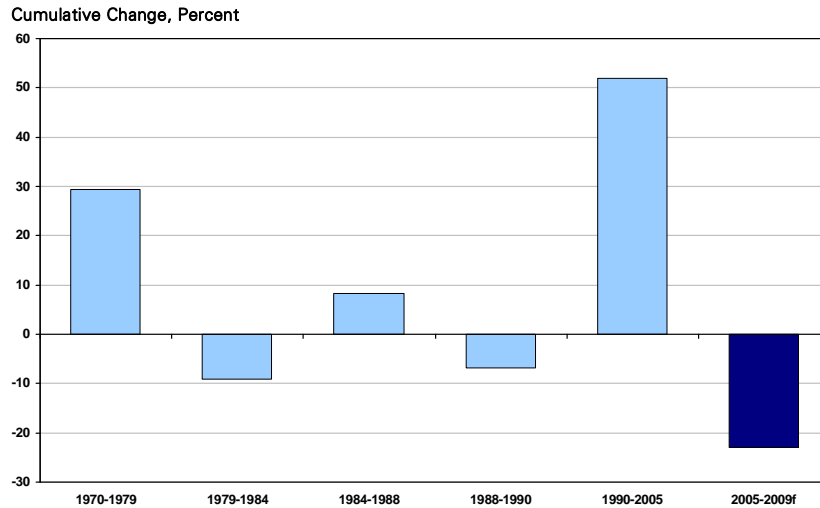


Sources: National Association of Realtors, BLS, RREEF Research

Once housing prices began to fall due to oversupply, aggressive borrowing trends compounded these price adjustments. Overextended borrowers who have problems meeting their mortgage obligations, often as a result of adjustable rate mortgages resetting to higher rates, now find that their home is worth less than the mortgage. Homeowners have begun to lose their homes through foreclosure in growing numbers. As foreclosed homes hit the market, they depress prices further in many of the same areas that witnessed a big run up in appreciation between 2001 and 2005.

RREEF Research expects the national home price to fall approximately 10% to 15% in nominal terms and 17% to 23% in real terms between 2005 and 2009. Clearly, by this measure, the runaway home price appreciation in this housing cycle will deflate by a greater magnitude than any other down-cycle since 1970, much larger than the -6.8% and -9.2% real price adjustments in the 1988-1990 and 1979-1984 periods. Prices should generally bottom out in 2009, as the excess production of the housing boom gets whittled down, allowing prices to rise in 2010. This forecast will put long-term home price growth back in line with the 1970 to 1989 period, when prices grew an average of 1% per year in real terms (See Exhibit 22).

**Exhibit 22  
Recent Cycles  
Real Home Prices**

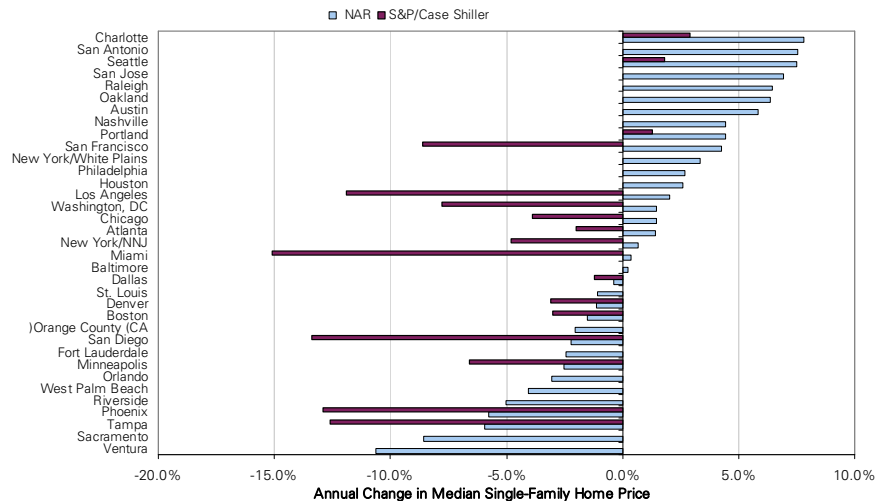


Source: Bureau of Economic Analysis, RREEF Research

**Metropolitan Home Prices**

The former high-flyers of the housing boom, South Florida, Central and Southern California and the Southwest, are the areas experiencing the sharpest declines in prices. Markets such as Sacramento, West Palm Beach, Fort Lauderdale, Riverside, Orlando and Phoenix have seen oversupply concerns translate into price declines of 4% or more during 2007 (See Exhibit 23). These were markets that featured a high degree of investor activity and sharply rising prices through 2005 and 2006. As oversupply and foreclosures rock these markets, prices are expected to fall further during 2008 and possibly 2009.

**Exhibit 23  
Metropolitan Area Price Trends 2006-2007**



Source: National Association of Realtors, S&P/Case Shiller, Economy.com, RREEF Research

Note that with respect to home prices, at least three data sources, each with unique advantages and drawbacks, are widely quoted. All three provide historical data series for home prices. Briefly, the National Association of Realtors (NAR) reports median and

mean price of existing houses sold. The Office of Federal Housing Enterprise Oversight (OFHEO) house price index is based on paired data, or repeat sales, of the same single-family houses in the mortgage databases of Freddie Mac and Fannie Mae. The S&P/Case Shiller house price index is comprised of paired sales of single family houses, but includes fewer covered geographies than either NAR or OFHEO.

Exhibit 23 reflects the significant gap between the NAR and S&P/Case Shiller estimates of house price changes over the last year. We have provided S&P/Case Shiller data for markets in which it was available. An even bigger gap exists when the S&P/Case Shiller index is compared to OFHEO due to the inclusion of inexpensive homes without enterprise-financed mortgages (possibly higher risk) in the S&P/Case Shiller index and OFHEO's inclusion of refinance appraisal valuations, which S&P/Case Shiller does not include. OFHEO's attempt to reconcile the divergence between the two house price measures found the dissemblance was largely city-specific and that reporting intervals could strongly influence price changes. But,..."in general, the impact of adding low priced, alternatively-financed homes to the data sample is that estimated price declines become significantly higher...price declines seem to be particularly large for low and moderately priced homes without Enterprise-purchased mortgages."<sup>13</sup> This does not bode well for the metropolitan areas highlighted in Exhibit 5 with a high percentage of high risk loans.

NAR data reflects softening prices in many markets, but are either down or up by moderate amounts during 2007. Prices fell much less precipitously in some major markets, such as Dallas, Boston and Washington, DC, 2% to 3% on average, compared to the boom-bust markets. Other major markets, mainly in Northern California and the Mid-Atlantic, have eked out small price gains during 2007, despite much slower sales volume. S&P/Case Shiller data reflect stronger price declines, notably, Miami, San Diego, Phoenix, Tampa and Los Angeles all reflect prices declines in excess of 10%.

A few markets, such as San Antonio and Austin in Texas, Charlotte and Raleigh in North Carolina, and Portland and Seattle in the Pacific Northwest, had relatively strong price appreciation during 2007, a function of better supply-demand balance and above-average economic growth. However, even in these areas, price growth has occurred at a decelerating rate, as markets across the country have been impacted by the national housing downturn and tighter mortgage market.

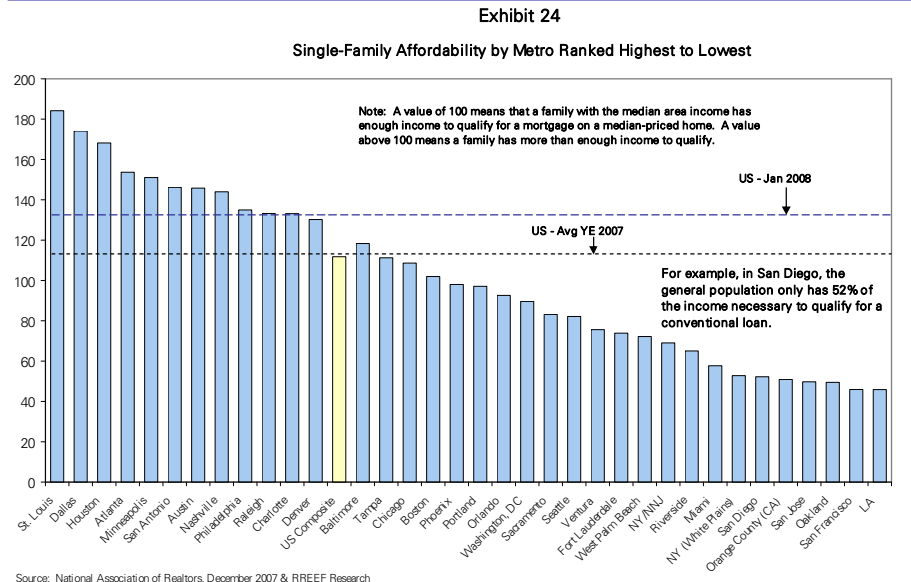
### **Shifts in Affordability**

Affordability depends on several variables, primarily home prices, which are a function of supply and demand, local incomes and interest rates, followed by underwriting standards. The National Association of Realtors (NAR) publishes an affordability index that measures whether a family earning the median area income could qualify for the median priced single family home. An index value above 100 implies that the family has more than enough income to qualify for a mortgage on a median priced home. Therefore, the NAR December 2007 value of 122 implies that a family earning the median family income has 122% of the income necessary to qualify for a conventional loan covering 80 percent of a median priced existing single family home. The calculation assumes a down payment of 20 percent of the home price and a qualifying ratio of 25 percent. The 112 value for the US is a composite of fixed and adjustable rate mortgages and represents a 5.4% increase in affordability over 2006.

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<sup>13</sup> Revisiting the Differences between the OFHEO and S&P/Case-Shiller House Prices Indexes: New Explanations", January 2008. Office of Federal Housing Enterprise Oversight.

Falling home prices and interest rates help bring affordability back into line; however, newly tightened underwriting standards seriously challenge the presumption of greater affordability. Further, expensive coastal markets like California and New York are particularly sensitive to interest rate changes and loan limits in non-conforming, or jumbo, loans. Involvement by government sponsored entity (GSE) lenders to keep the mortgage market liquid will necessitate changes to the limits on non-conforming loans, an issue that is currently under consideration in Congress. Exhibit 24 depicts the affordability index for



major metropolitan areas. Seven of the 10 least affordable markets are California markets, two are in New York and Miami rounds out the list. It is interesting to see Phoenix and Boston line up side-by-side in affordability. Residential real estate re-priced in Phoenix over the last decade; how firmly this will hold is in question, but clearly incomes have not kept pace driving affordability lower in recent years. The usual Sunbelt suspects continue to dominate the list in higher affordability, including Atlanta, Dallas, Austin, Houston, San Antonio, Charlotte and Raleigh.

## Prospects for Recovery

### General Economic Outlook

The near term economic outlook is clouded by the prospect of a recession, the probability of which has increased to 50%, given financial market volatility and lack of investor confidence. In any event, economic growth is expected to be very slow to modestly negative from the end of the third quarter 2007 through mid-year 2008. With an environment of either minimal growth or modest negative growth (recession), it will be a period of uncertainty. Both home buying and consumer activity will reflect caution. Longer term, however, we anticipate a healthy recovery beginning late in 2008. The reasons for our longer-term optimism are as follows:

- *Sustained, if slowing, global economic growth;*
- *A healthy business economy, with strong corporate financials and rapidly expanding exports;*

- *With some notable exceptions, a healthy banking industry; those banks most impacted by the mortgage crisis are being recapitalized or will be purchased by healthier institutions;*
- *Restrained interest rates;*
- *Continued low, albeit modestly rising, unemployment rate;*
- *Stabilization of energy prices in light of a slowing global economy;*
- *A consumer market expected to maintain modestly positive growth; and,*
- *Swift accommodative monetary policy by the Federal Reserve and other major central banks.*

We forecast real GDP growth of 1.2% in 2008, most of which will be back-loaded during the year. Employment growth is forecast to slow to 0.7% for the year, which will lead to an unemployment rate that peaks at 5.8% in 2009. Although substantially higher than the robust 4.5% achieved in mid-2007, this represents a healthy rate of unemployment by historical and global standards (See Exhibit 25).

With the negative impacts of the housing, financial and consumer markets receding later in 2008, and solid underlying business fundamentals, renewed healthy economic growth is forecast beginning in 2009.

**Exhibit 25**  
**Forecast Highlights: U.S. Economy 2007-2009**  
 (annual percent change)

	2007	2008	2009		2007	2008	2009
Real GDP	2.2	1.2	2.0	Consumer Price Inflation	2.9	3.3	1.4
Consumption	2.9	1.4	1.7	Payroll Employment Growth	1.1	0.3	0.6
Business Fixed Investment	4.8	1.7	-0.9	Unemployment Rate (%)	4.6	5.4	5.8
Equipment & Software	1.3	1.6	3.0	Federal Funds (%)	5.0	2.4	2.7
Exports	8.0	8.2	8.4	Ten-Year Treasury (%)	4.6	3.4	3.9
Imports	1.9	-0.1	3.4	30-Year Fixed Mortgage (%)	6.3	5.5	5.8

Source: Global Insight and RREEF Research

Significant downside risks exist to this forecast. The consumer is a wild card, and could cut consumption more than forecast in response to housing's negative wealth effect. Given the dominant role of consumption in the US economy, this is clearly a worry. In addition, inflation is a concern. Although weaker economic growth should moderate inflationary pressures, the Federal Reserve has a difficult role in devising a monetary policy that moderates inflationary pressures rising from a declining dollar, continuing high oil and commodity prices, and a high fiscal deficit, while also stimulating sufficient growth to avoid a recession.

### Outlook for Housing Fundamentals

History reminds us that markets recover. Local housing market conditions reflect a unique mix of employment and demographic trends, housing inventories, credit and foreclosure issues and development regulations, all of which affect the duration and depth of a correction. Therefore, we should not expect a uniform recovery across the US. Regional disparities have already emerged as noted earlier in this paper. However, from a national housing perspective, the outlook for the long run demand side of the equation is equally

as impressive and positive as the current supply side is daunting. Housing does not drive the economy; conversely, housing demand is derived from underlying economic growth. Stronger job and income growth, enhanced by powerful demographics and growing affordability, will eventually result in increased home sales and chip away at existing inventories.

The long run demographic trends that underpin demand for housing remain robust. The Joint Center for Housing Studies of Harvard University estimates the pace of household formations will increase by 16% between 2005 and 2015 to an average of 1.46 million per year. The report further states that “the foreign born contributed over 40 percent of net household formations between 2000 and 2005,...up from 15 percent in the 1980s.”<sup>14</sup> Immigrants are expected to play a key role in the New York, New Jersey, California, and Florida housing markets as these states are traditional immigration gateways. Arizona, Georgia and Texas are the three fastest growing states for immigration; therefore, demand for rental and entry level housing will be an important driver in both mainstay and emerging gateways.

Demographic shifts are emerging in various segments of the housing sector. A big contributor to overall housing demand will be the leading edge of the echo boom population, which by its sheer numbers, promises to have an enormous influence on the magnitude and characteristics of housing demanded in the next decade. The echo boom, baby bust and foreign-born population have revitalized many urban cores in the last decade, notably New York, San Francisco, Miami, Seattle, Denver and Portland. Baby boomers ignited demand for second homes in recent years; luxury second home sales should continue to be a significant component of sales demand in fringe areas, 7 to 15 miles outside major metropolitan areas and include more traditional retirement locales with mountain or water amenities as they retire in increasing numbers.

From a regional perspective, seriously troubled metropolitan areas will continue to be regions of the country that were most affected by speculators, who bid up home prices well above what the resident population could afford to pay for them. This includes nearly all of Florida, many regions of California, the metropolitan areas of Phoenix, Las Vegas and parts of Washington, DC. Besides affordability, the coastal regions are further hampered by soaring insurance and property taxes. In-migration has slowed measurably into these areas and is one reason other areas, such as Portland, Seattle, Austin, Raleigh & Charlotte, have seen considerable resilience in their housing markets.

We expect the national economic recovery to begin in earnest mid-2008. We assume the US skirts recession but remains hampered by slow growth this year. Based on current population projections, we expect fundamental housing demand will average between 1.2 and 1.4 million per year starting in 2008, following a small but unprecedented net loss in the ranks of homeowners as the homeownership rate continues to slide into 2008 (See Exhibit 26). This level of growth represents a pace that is 2.8% higher than the average number of households created in the 1990s, and on par with the average created between 2000 and 2007. We estimate that net new homeowner demand will be little more than true household growth, some obsolescence and second homes. We expect demand for second homes to dip in 2008, but rebound relatively quickly in 2009 and 2010, growing strongly thereafter.

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<sup>14</sup> State of the Nation’s Housing, 2007. Joint Center for Housing Studies of Harvard University.

**Exhibit 26  
Housing Supply and Demand  
2003-2010**

	2003	2004	2005	2006	2007	Forecast		2010
						2008	2009	
Housing Completions	1,678,000	1,842,000	1,932,000	1,979,000	1,500,200	980,000	950,000	1,000,000
Housing Demand								
New Household formations	1,458,050	1,082,350	1,095,375	1,115,175	1,239,625	1,199,347	1,217,370	1,390,743
Estimated Second New Home Sales	102,000	120,000	122,400	128,400	89,880	35,000	75,000	125,000
<b>Total Demand</b>	<b>1,560,050</b>	<b>1,202,350</b>	<b>1,217,775</b>	<b>1,243,575</b>	<b>1,329,505</b>	<b>1,234,347</b>	<b>1,292,370</b>	<b>1,515,743</b>
Completions - Total Demand (Excess)	117,950	639,650	714,225	735,425	170,695	(254,347)	(342,370)	(515,743)
Cumulative Excess Inventory Completions	117,950	757,600	1,471,825	2,207,250	2,377,945	2,123,598	1,781,228	1,265,485
% Change in Excess Inventory		542%	94%	50%	8%	-11%	-16%	-29%
US Households	108,948,600	110,004,200	111,072,600	112,148,600	113,354,100	114,701,800	116,102,800	117,567,590
Homeownership Rate	68.30	69.00	68.90	68.80	67.8	67.5	67.3	67.3
Owner Occupied Households	75,575,678	77,097,064	77,740,045	78,394,456	78,095,464	78,559,468	79,145,990	80,081,969
Annual Incremental Change	1,432,627	1,521,386	642,981	654,411	(298,992)	464,004	586,521	935,970
Renter Occupied Households	35,076,947	34,637,811	35,090,205	35,550,969	37,089,586	37,824,929	38,455,778	38,910,551
Annual Incremental Change	25,423	(439,036)	452,394	460,764	1,538,617	735,343	630,849	454,773

Source: US Census Bureau, Economy.com, RREEF Research

The net decline of 100 basis points in the homeownership rate over the last year swelled the inventory of unsold and vacant inventories of homes and condos. This year will be a very weak year for backfilling vacated homes, especially if the homeownership rate declines another 50 basis points as we expect it will and is impeded by mortgage lending trying to regain its footing in fits and starts. Lower interest rates and home prices will help boost sales and refinancing, but the return to more prudent underwriting standards re-instates the biggest obstacles to homeownership – down payments and credit history. This will level the playing field again for homes and rental properties, and we anticipate strong demand for both types of housing. We project demand for homes to approach a cumulative 2.9 million units, surpassing completions of 2.9 million between 2008 and 2010, which includes demand for rental housing in excess of 1.8 million units.

On the supply side, we expect delivery of new housing units to rebound to around 1.0 to 1.2 million units by 2010. Housing starts for 2008 and 2009 should be low enough to help begin gradually clearing the market of excess inventories by the end of the decade. The troubling rising tide of foreclosures is an issue that lower interest rates, aggressive monetary policy, fiscal stimulus, and dedicated workout programs will stem to some degree as homeowners refinance from adjustable rate mortgages into lower fixed rate products.

A slow growth but, ultimately, resilient US economy underpins the forecast for recovery within the next two years. As of this writing, the weight of evidence leans toward a recession primarily because this situation does not appear to be self-correcting. For example, following the technology boom of the 1990s, suppliers retrenched, pulling supply and demand back into balance. In the case of housing, the new supply are foreclosed homes, which makes it difficult for pricing to find a bottom and reinforces a vicious cycle of homeowners' inability to sell their homes just to breakeven on their mortgages. Foreclosure is a protracted and messy process, made all the more difficult in this cycle because so many loans are securitized, sold and resold. Further, the government-led initiatives are surely limited in their efficacy when they focus on the "serious delinquent" loans instead of stopping the process before a homeowner ends up in foreclosure. Experts in both the private and public sectors have generated a number of thoughtful proposals to address the problems of negative equity and the credit markets, a topic too broad for discussion here. The key to "righting" the housing sector is a targeted and swift public policy response that gets in front of mounting foreclosures.

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