WESTWOOD CAPITAL, LLC

RESEARCH

February 7, 2011

Daniel Alpert Managing Partner • dalpert@westwoodcapital.com • +1-212-953-6448

Beyond the Double-Dip in Home Prices

The Future of Housing Demand and Pricing

Highlights

- With last week's release of Q4 Housing Vacancy Survey by the Census Bureau and prior week's release of the November S&P Case Shiller Index data, two things are clear: (i) the housing market is in the midst of what will be at least a several quarters' long, double-dip in home prices as the final act in the five-year tragedy of residential real estate price re-rationalization and (ii) it is time to look beyond this final stage, to the future of housing demand as excess inventories are slowly absorbed.

- We believe that the final leg of price adjustments can be expected to be over by the end of this year and will result in price declines to a level that is between 5% and 8% below the lows of April 2009 – to a Case Shiller 20 City Index reading of between 125 and 130, as we have published previously.

- The final fall to a level of sustainable home pricing is the result of continued supply/demand imbalances and a buildup of properties in the foreclosure pipeline. The demand for new homes, however, is more impacted by the continued existence of an outsized unutilized vacant housing inventory (the vestiges of the overbuilding during the middle of the past decade) and the dramatically reduced levels of net household formation caused by the Great Recession, than it is by price.

- Based on a continuation of the pace of new home construction in 2010 and modest recovery in net household formation (as well as other assumptions set forth herein), we expect that the current excess vacant unutilized inventory of approximately 1.4 million housing units will have a substantially lower impact on pricing levels by 2012 and should be reduced to absolute zero within approximately 2.5 years. We see a slightly more favorable situation in demand for new owner occupied housing than we do for rentals beginning in the second half this year – with residential construction seeing a substantial recovery, overall, in spring of 2012.

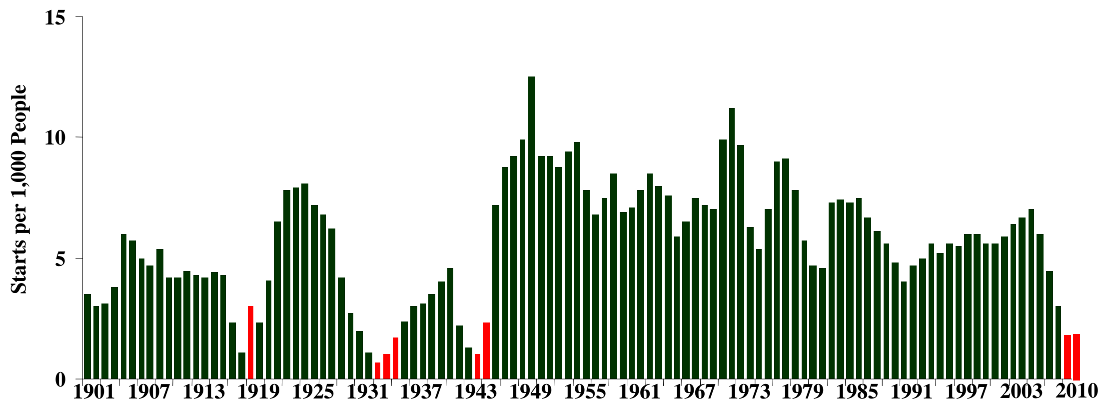
- There are, however, potentially more positive factors set forth in this report that should be taken into account with regard to the likely pace of absorption of the excess housing units created during the bubble period – particularly with respect to owner occupied homes. Our recent experience in studying the housing industry also shows us that, even though our medium-term macroeconomic view of the U.S. economy maintains a slow deflationary bias, the development of new housing units will recover without much regard to generalized levels of wage and price changes, as residential land, building materials and construction labor costs are, and will remain, very elastic in the absence of the renewal of excessive and irresponsible mortgage lending (although we expect required loan-to-value ratios on most mortgages to remain at conservative levels) .

- Since March of 2007, when we first sounded the alarm bells on the length and depth of the then-impending housing crisis, we have been identified as housing bears. We believe we were more realistic than bearish, and while others were assuming that the housing market had stabilized in mid-2010, we were not declaring victory over a massively dislocated market. Nonetheless, there is light at the end of the long tunnel of housing price retrenchment – and we see emergence out of the darkness following this final year of the Great Re-pricing.

Overview

While we are now experiencing the long-awaited double-dip in U.S. home prices, as the final act in the four-year tragedy of residential real estate price re-rationalization, it is time to look beyond to the future of housing demand in a post-crash world. We are in the midst of the longest and deepest downturn in per-capita housing unit creation since World War II, while population growth continues (albeit with a slightly curtailed immigration component). Household formation, the principal driver of housing demand, has faltered substantially – but as this report discusses, even in a real economy bouncing along in its present quasi-recovering state, the housing situation should see material stability after about 12 months (assuming the macro economy does not materially deteriorate).

Per Capita U.S. Housing Starts
The Only Periods Below the Current Levels of Per Capita Starts in Over 100 Years:
Two World Wars and the Great Depression



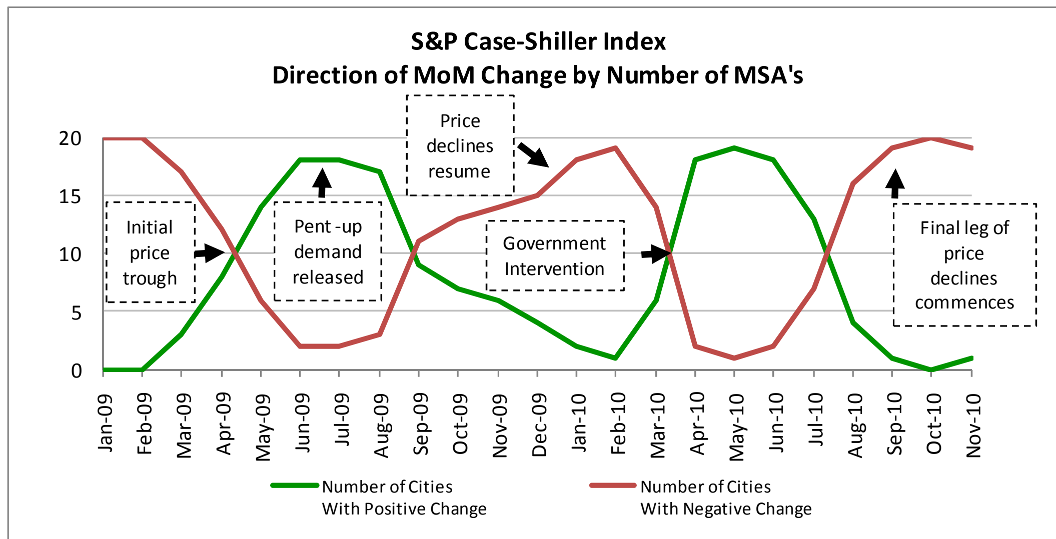
Source: U.S. Census Bureau

Following the government's market interventions, ending in H1 2010, home prices in the S&P Case Shiller 20 City Index markets have resumed their decline towards what we have previously estimated will result in a trough index reading of between 125 and 130, or a decline of about 5% to 8% from the post-bubble index low in April 2009. All of the Case Shiller 20 markets have recently shown steady unadjusted month-over-month weakness following the illusory stabilization of home prices during the tax credit and other interventions of late 2009 through mid-2010 - with the November figures, reported last week, showing declines in 19 of the 20 markets.

We continue to heavily discount the seasonally adjusted data for 2009 and 2010 (which do not factor into the headline index numbers in any event) as we believe the adjustment algorithm ignores substantial shifts in historic seasonal demand patterns, resulting from pent-up demand that shifted from the first half of 2009 into late-Q3 2009, Q4 2009 and, H1 2010, as well as the impact of government tax credits.

The ongoing final fall to a level of sustainable home pricing is the result of continued supply/demand imbalances, a buildup of properties in the foreclosure pipeline, the continued existence of an outsized unutilized vacant housing inventory (the vestiges of the overbuilding during the middle of the past decade) and the dramatically reduced levels of household formation caused by the Great Recession.

The following chart illustrates the month-over-month price directionality of the 20 metropolitan statistical areas in the Case Shiller Index, together with references explaining various inflection points. Note particularly that the only periods of substantial upward price movement correlate with the delayed "selling season" of 2009 (which saw the release of demand that was deferred during the recession) and the spring H1 2010 tax credit induced buying that also straddled a normal selling season. After both such periods, prices recommenced their declines.



Source: Standard & Poor's

Quantifying Excess Housing Inventory

Much has been made of the "shadow inventory" (consisting of mortgaged homes in the process of foreclosure, more than 90 days delinquent or held as REO by lenders), that is impacting both home prices and the demand for new homes as many of them are ultimately liquidated. The most recent figures on the shadow inventory, from FirstAmerican CoreLogic, date from November 2010 and showed 2.1 million homes, up from 1.9 million a year earlier. The number of 90 day delinquent mortgages declined during 2010, as a record number of mortgages rolled into foreclosure. According to CoreLogic, when the shadow inventory is combined with visible housing inventory – the total number of available homes is 6.5 million, within striking distance of the highest such reading since the crisis began. This number – equivalent to 12.5% of all mortgaged homes – is expected to remain heightened through much of 2011.

There is reason to believe that, during 2010, delays in the resolution of shadow inventory (both circumstantial and intentional on the part of lenders – to say nothing of documentation issues) had the interim effect of supporting home prices. Undoubtedly, a final stage of price declines will be linked in no small part to the release of excess "for-sale" housing unit inventory[1] that had previously been backlogged.

November 2010 data published by Lender Processing Services show that, during 2010, 90+ day delinquency rates slowed (albeit 30 to 60 day numbers remain elevated), while loan cure rates grew as a result of HAMP and some improvement in the general economy. While visible inventory fell in late 2009, it has since increased back to the levels last seen when home prices hit their lows in April 2009. Accordingly, we would not be surprised to find that total visible plus shadow inventory is in the process of peaking and will, once again, force prices down to a level sufficient to renew demand. Not a pretty picture to be sure, but one that paves the way towards a real post-crisis bottom.

Nevertheless, we do not believe that tracking shadow and pending inventory of homes for sale is the most effective method of determining when supply and demand will be sufficiently near enough to equilibrium to generate a normalized environment for stable home prices and the development of new housing units.

---

[1] We use the term "for-sale" housing unit inventory to make clear that not all foreclosure resolutions or short sales result in a net increase to total housing unit available supply. Most, in fact, do not, as dispossessed residents often merely move from an owned unit to a rental unit.

The issue of whether a homeowner or a lender controls a given housing unit is of less importance[2] than that of whether the unit is vacant and unutilized – and therefore represents an overhang of supply in a given market.

Last week, the U.S. Census Bureau released its most recent data and analysis on housing unit vacancy. The data – which admittedly are only estimates – are very useful in tracking excess supply and predicting the pace of its likely absorption. Here is how we analyze the situation as of the end of Q4 2010:

Based, in part, on the expected growth in U.S. population and the a modest recovery in the pace of net household formation, we expect that demand for new housing units will return to normalized historical levels as current excess housing unit inventories are absorbed through 2011. As discussed below, we see a slightly more favorable situation in demand for new owner occupied housing than we do for rentals, with rentals having been the big absorption winner during 2010.

According to the Census Bureau, a surge in the construction of new housing resulted in the total number of housing units (both for sale and rental) increasing by 8.1 million units from the fourth quarter of 2004 to the fourth quarter of 2008. The estimated growth in total households during the same period was 4.8 million which, when added to approximately 1 million homes removed from housing stock ("scrappage") during the same period, indicates that the number of housing units increased 140% more than the number of new households plus srappage during that period. This came on the heels of one of the longest continuous building cycles in U.S. history, which began in 1992.

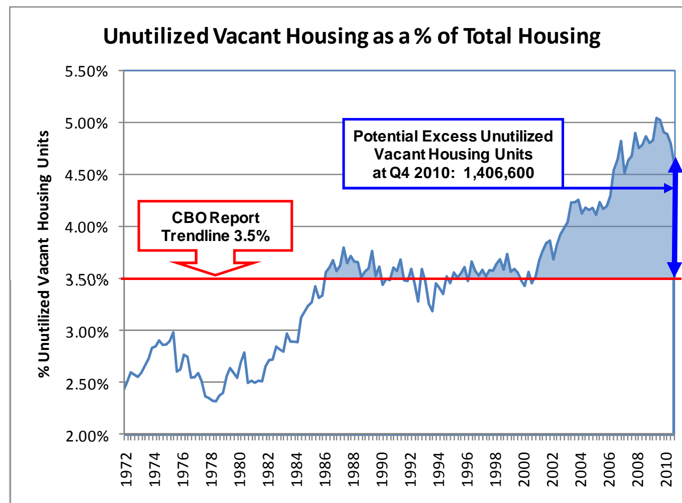
In assessing the impact of such overbuilding and the prospects for the revitalization of the housing markets, we favor a methodology used by the Congressional Budget Office ("CBO") and presented in a November, 2008 report entitled The Outlook for Housing Starts, 2009 to 2012 (the "CBO Report").

The CBO Report, among other things, used Census Bureau data to quantify the volume of excess, unutilized vacant inventory of housing units in the second quarter of 2008. The CBO's estimate of "excess" vacant units was based upon a trend showing a norm of 3.5% of total housing units in the United States being unutilized vacant during the 1990's, a period during which the authors of the CBO Report believe the supply of, and demand for, housing to have been roughly in balance. When that 3.5% vacancy trend over time was compared, in the CBO Report, with a contemporary estimate of approximately 4.8% of United States housing stock being comprised of unutilized vacant units, an apparent excess of 1.3% existed over the assumed balanced trend during the 1990's. Applying the calculated excess vacancy percentage of 1.3% to the then-total stock of 129.7 million housing units, the CBO reported that the data implied an excess vacant inventory of 1.7 million housing units at the time.

Using data from the Census Bureau covering the fourth quarter of 2010, the methodology used in the CBO Report indicates that, at the end of this past quarter, approximately 4.6% of the United States housing stock was comprised of unutilized vacant units, an apparent excess of 1.1% over the assumed 3.5% balanced trend during the 1990's. Applying the calculated excess vacancy percentage of 1.1% to the stock of 130.8 million housing units at the end of the fourth quarter of 2010, indicates an excess unutilized vacant inventory of 1.41 million units.

This is a meaningful decline from the peak level of 2.00 million excess unutilized vacant units (1.54% of total housing stock) in the third quarter of 2009. The following graph illustrates the foregoing calculations:

[2] In reality, it is more a factor in determining the timing of an eventual market pricing bottom, and the level of that bottom as the housing market juggles ongoing demand, excess supply and new supply – as discussed herein.



Sources: U.S. Census Bureau, Congressional Budget Office

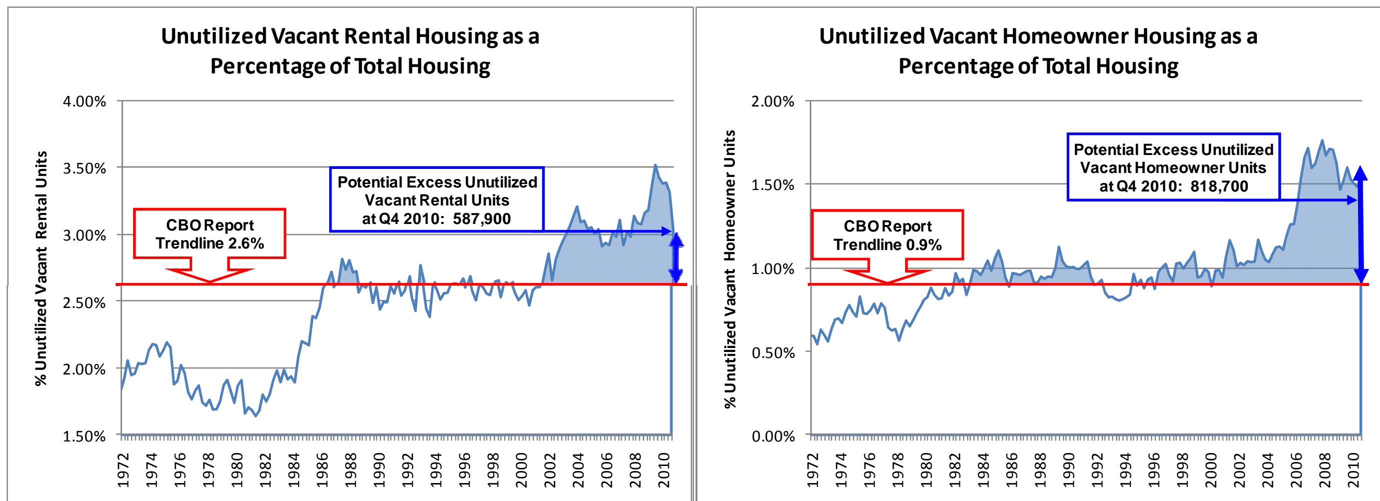
In terms of predicting a return to housing equilibrium, we should be reasonably agnostic as to whether excess housing units are available for rent or sale – after all absorption of any residential unit takes downward pressure off housing prices and rents. But given that we have two distinct housing markets – rental (~35% of units) and owner occupied (~65% of units) – it is appropriate to examine each independently. To do this, we have computed the excess unutilized vacant units for (a) the total of owner occupied units, units for sale, and utilized vacant units (such as seasonal homes)[3], and (b) rented occupied units and units for rent. Separating the categories of inventory produces the following analysis using the CBO Report methodology.

	Total Housing Stock	**Rental Units**	**Owner Occupied Units**
1990's Baseline Average Unutilized Vacant Percentage	3.52%	2.58%	0.94%
Q4 2010 Unutilized Vacant Percentage	4.60%	3.03%	1.57%
Q4 2010 Excess Unutilized Vacant Percentage	1.08%	0.45%	0.63%
Housing Stock	130,845,000		
Excess Unutilized Vacant Inventory	1,406,600	587,900	818,700

Comparing the above data to that of Q1 2010, shows a fairly dramatic absorption of excess unutilized rental housing (seen, as well, in falling vacancy rates and firming rents) to 587,900 units from 1,046,100, while the number of excess unutilized owner occupied homes remains at a high level. This is what we would have expected to see, as erstwhile homeowners became renters.

[3] Note that we have lumped utilized vacant units all into the owned unit category as we assume that a seasonal rental, for example, has an alternative use that is more akin to a second home than that of the multifamily residential property that comprises most rental units – but there is some, statistically small, bleed-through in the way we are employing the Census Bureau vacancy numbers.

The below graphs set forth historical data on total excess unutilized vacant housing units for owner occupied and rental units, respectively (note the substantial drop in excess rental units over the past 12 months):



The Road to Inventory Absorption and Housing Market Stabilization

The foregoing supply, coupled with a dearth of demand resulting from the Great Recession's strongly negative effects on employment and household net worth – along with a corresponding reduction in net household formation as reported by the Census Bureau – has resulted in a substantially lower pace of both existing and new home sales. Our expectation is that demand in most regions will, over the next 24 months, substantially absorb excess supply, with the timing subject, among other things, to the factors discussed below.

As a result of the low pace of home sales, the rate of construction starts of new homes has slowed to the lowest level since 1945, with 554,000 housing units started in 2009 and 587,600 units started in 2010. We expect that, in time, the combination of improving household formation and the current pace of demolition of older homes can be expected to reduce the inventory of unutilized vacant homes to historically normalized levels. For example, over the three, pre-crisis, years from April 2005 through March 2007, the Census Bureau reports that the United States saw the formation of approximately 1.3 million new households per year (coincidently, about the annual average for the entire post World War II period), while that figure dropped to an average of 509,000 from April 2008 through March 2010 (including a dismally low 357,000 households for the year ended March 2010). According to the CBO Report, the United States typically has seen the removal (scrappage) of about 250,000 housing units per year from the total housing inventory.

Based on the foregoing metrics, if the estimated 2010 pace of new home construction were to continue and household formations recover to a point only half way between the pre-crisis and crisis era averages (to about 904,000 households/year)[4], the excess vacant unutilized inventory of approximately 1.41 million housing units assumed above will have a substantially lower impact on pricing levels by 2012, and should be reduced to absolute zero[5] within approximately 2.5 years. We believe these are reasonable assumptions in even a very mildly recovering economy.

[4] Note that the levels of net household formation for the past three years have averaged lower than any year since the end of World War II and the assumed recovery level of 904,000 households/year is only 68% the average level of net household formation for the 60 years from 1947 through 2006 – during which period the U.S. population averaged 72% of that of today.

[5] We caution that the absorption of excess inventory will likely occur at very different times in different regions of the country and that absorption of all of the excess supply will be preceded by demand for certain housing products (owner occupied homes vs. rentals and starter homes vs. McMansions, for example) well before others.

As set forth in the above table, however, about 42% of the country's excess vacancy comes from a rental market that we estimate has 587,900 (0.45% of total stock) more unutilized vacant units than would exist in a state of housing market equilibrium, while the much larger category of owner occupied units show an estimated excess unutilized vacancy of 818,700 units (0.63% of total stock). While the rental and for-sale markets are certainly linked from the standpoint of absorption of the existing excess, we would expect that the number of single family homes and condominiums will be absorbed at a faster pace than will the number of rental units, as monthly rentals have firmed with the decline in rental vacancies and additional price reductions for owner occupied housing will increase absorption – especially in a somewhat improving employment environment.

Possible Accelerators of Absorption

There are also several other – generally quite positive – factors that should be taken into account with regard to the likely pace of absorption of the excess housing units created during the bubble period – particularly with respect to owner occupied homes. Our recent experience in studying the housing industry also shows us that, even though our medium-term macroeconomic view of the U.S. economy maintains a slow deflationary bias, the development of new housing units will recover without much regard to generalized levels of wage and price changes, as residential land, building materials and construction labor costs are, and will remain, very elastic in the absence of the renewal of excessive and irresponsible mortgage lending[6].

First off, our analysis (and that of the CBO report) utilizes a baseline percentage for unutilized vacant homes equal to the average percentage that unutilized homes bore to total housing stock during the 1990's, the last period during which housing prices conformed to their century-long trend of rising roughly in line with general inflation.[7] While home prices escalated at a pace far in excess of inflation during the past decade, until the collapse of the housing bubble, there is at least a colorable argument that the percentage of unutilized vacant housing units that prevailed from 2000 through 2002 (before the period of substantial overbuilding, and itself a period of some economic distress) was more typical of where such inventory will ultimately stabilize. As the ratio of unutilized vacant housing units to housing stock averaged 3.67% from 2000 to 2002, comparing today's excess to that period would indicate 1.2 million excess units – as opposed to the 1.4 million in our base case above.

While deferral of marriage and, perhaps more desirable, the deferral of divorce, had a significant impact on the pace of household formation during the Great Recession, the greatest impact on the slowing number of households appears to have been intergenerational and relational "bundling." Whether in the form of children moving back in with parents, siblings seeking shelter in the home of a brother or sister, or simply singles rooming together in greater numbers, it is clear that such bundling has had a major impact on the slowing in the creation of net new households to a level that in the year ended March 2010 was less than 30% of pre-crisis average levels. The tracking of net new households, and the estimation of the impact thereof on economic vitality from improved levels of household formation, are – at best – inexact sciences. Nevertheless, it stands to reason that material improvements in employment and incomes could result in a wave of "unbundling" that could spur more rapid absorption of excess unutilized vacant housing units.

What we believe will be a relatively rapidly occurring double dip in home prices (with a possible blip upwards during this year's spring "selling season") will reinforce the return of housing to its longer term economic trends. The two metrics we watch closely are prevailing multiples of home prices to equivalent annual rentals, and the relationships between home prices and all other typical indicia of housing cost and affordability. As set forth in the graph below, real housing prices (after inflation) are well on their way to returning to the trend lines for all other inputs affecting the value of homes – construction material costs, construction labor costs and buyers' incomes –

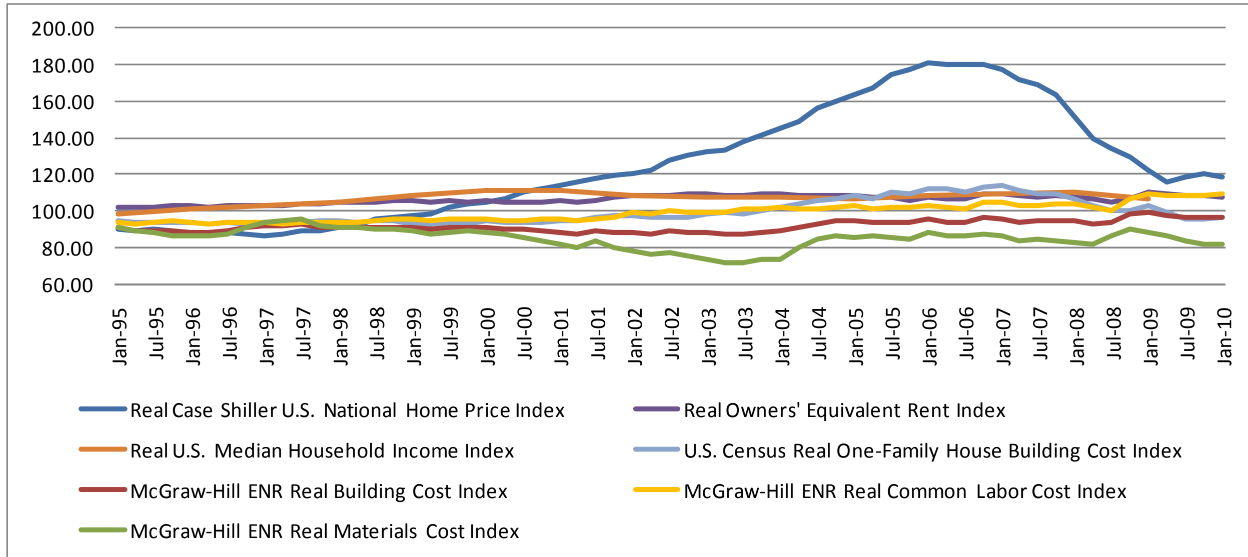
---

[6] Our medium-term deflationary bias, however, will pose some challenges to residential mortgage finance – as financiers should require more equity from borrowers for much of the coming decade.

[7] As Robert Shiller demonstrated in his prescient book, *Irrational Exuberance*, a decade ago.

demonstrating that the real source of the bubble in housing was the value attributed to, and/or paid for, land. Price to rent ratios for the 20 metropolitan statistical areas surveyed in the S&P Case Shiller 20-City Index data are similarly returning to the range that prevailed for at least the half century prior to this past decade, as we demonstrated in our earlier research on that subject.[8]

Real Home Prices Relative to Other Metrics Impacting Housing Cost, Excluding Land
(Indices rescaled to January 1987=100 and adjusted for inflation)



Significant regional differences in the degree of price retrenchment are becoming more acute as the national figures enter their final leg down. Markets such as Atlanta, Charlotte, Detroit, Las Vegas, Miami, Portland, Seattle and Tampa have already declined below their prior lows in the spring of 2009. But the acceleration of price declines in markets that had previously not seen the largest levels of price depreciation will be, we believe, the story in 2011 as mortgage delinquency, default, foreclosure and liquidation rates increase. On the other hand, a resurgence of household formation is likely to favor lower cost states – mostly in the sunbelt – that will benefit from in-migration, steadier absorption and stabilization.

Housing affordability is a major factor in reaching equilibrium and restarting demand. The two commonly used housing affordability indices – published by the National Association of Realtors and the National Association of Home Builders, respectively, show home affordability at an all-time high since the creation of the indices. This factor would seem to bode well for home price stabilization, although it must be noted that approximately 60% of the affordability improvement shown in the indices has been generated by the historically low mortgage interest rates that are the result of the unprecedented, accommodative monetary policy of the Federal Reserve Bank. Low interest rates have certainly served to support the pricing of owner-occupied homes at the margin. Fortunately or unfortunately, depending on one's point of view, such accommodative policies are likely to continue to be necessary to offset deflationary tendencies elsewhere in the U.S. economy – and even as long term rates begin to warm to a recovery as they have since late last year, it is not unreasonable to expect that the additional housing price declines we are already seeing will rebalance the affordability equation.

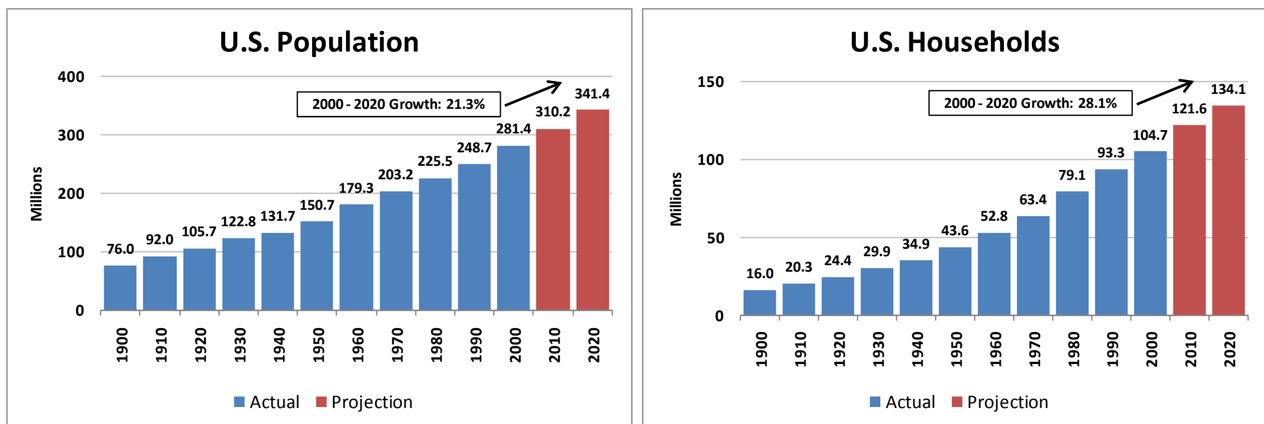
Demand for housing finds its wellspring in population growth – itself driven by a mix of births, lengthening mortality trends and immigration. The U.S. is fortunate to enjoy extensive resources – not the least of which is inhabitable land – and much of the country remains sparsely populated relative to many of our economic competitors. Projecting future population growth, and especially household growth, in a period of economic disruption can be a tricky business – even in the absence of constraints on the ability to accommodate or afford new

[8] Reconstructing American Home Values, August 2, 2009

members of society (U.S. birthrate still marginally exceeds 2 births per woman, so our population – minus early mortalities – remains organically stable). The U.S. population is presently estimated by the Census Bureau to exceed 310 million people – up about 10% from 281 million in 2000. The Census Bureau estimates that U.S. population a decade from now will rise to between 336 million and 346 million – using a low and high estimate of immigration, respectively. The midpoint of 341 million would represent the same 10% increase as during the past decade – but involves the addition of more than 3 million people per year on average. Needless to say, they will all need a place to live.

In terms of future household formation, the best work we have seen on the topic comes from the Joint Center for Housing Studies at Harvard University. The center's midpoint estimate sees the creation of 12.5 million households over the coming decade – an average of 1.25 million per year. Add to that an average expected annual scrappage rate of 325,000 units and an increase in vacant units in line with the CBO Report's 3.5% average, and demand for new homes should average 1,625,000 units per annum for the coming 10 years. Contrast that number with the pace of housing starts of 587,600 in 2010.

Harvard University Joint Center for Housing Studies
Population and Household Growth Trends and Projections



Conclusion

How long starts must remain depressed to absorb excess supply will, as indicated above, differ from region to region around the country, just as overproduction of housing was far more severe in some metropolitan areas relative to others or the nation as a whole. Nevertheless, we believe that absorption of the excess - in all regions – is finally well underway as a result of:

- Sustained affordability of housing (both rental and owner occupied) likely producing eventual unit growth in line with unit demand, the latter of which should rebound steadily without harming affordability and without a reemergence of debt fueled speculative excesses.

- The impending final release of shadow inventories which will keep preclude upward pressure on prices notwithstanding seasonal, short-term upticks.

- The inexorable growth of U.S. population, despite lackluster growth in employment and incomes, will eventually see the resumption of historical levels of net household formation. This should surge when economic activity produces some degree of escape velocity to exit the aftermath of the Great Recession.

Since March of 2007, when we first sounded the alarm bells on the length and depth of the then-impending housing crisis, we have been identified as housing bears. We believe we were more realistic than bearish, and while others were assuming that the housing market had stabilized in mid-2010, we were not declaring victory over a massively dislocated market. Nonetheless, there is light at the end of the long tunnel of housing price retrenchment – and we see emergence out of the darkness following this final year of the Great Re-pricing.

This research report ("Report") is for discussion purposes only and intended only for Westwood Capital, LLC, ("Westwood") clients. This Report is based in part on current public information that Westwood considers reliable, but we do not represent it is accurate or complete, and it should not be relied on as such. Westwood's business does not include the analysis of any specific public company or the production of research reports of the same. Westwood may produce other opinions, published at irregular intervals. Westwood's employees may provide oral or written market commentary to Westwood clients that reflect opinions contrary to those expressed in this Report. This Report is not an offer to sell or the solicitation of an offer to buy any security in any jurisdiction. It does not constitute any recommendation or advice to any person, client or otherwise to act or invest in any manner.

This Report is disseminated primarily electronically and, in some cases, in printed form. Electronic research is simultaneously available to all clients. Disclosure information is also available at http://www.westwoodcapital.com/.

If this Report is being distributed by an entity other than Westwood or its affiliates, that entity is solely responsible for distribution. This Report does not constitute investment advice by Westwood, and neither Westwood nor its affiliates, and their respective officers, directors and employees, accept any liability whatsoever for any direct or consequential loss arising from use of this Report or its content.

Daniel Alpert is a Managing Partner and Founder of the New York investment bank Westwood Capital, LLC, and its affiliates. He is a frequent commentator on the housing and credit crises on the CNBC, FoxBusiness and Bloomberg networks, as well as in leading newspapers, periodicals and websites.