

Reconstructing American Home Values

On a National Level, We are About 75% of the Way to Price Stability for American Homes, While Some Markets Have Overshot to the Downside

Highlights

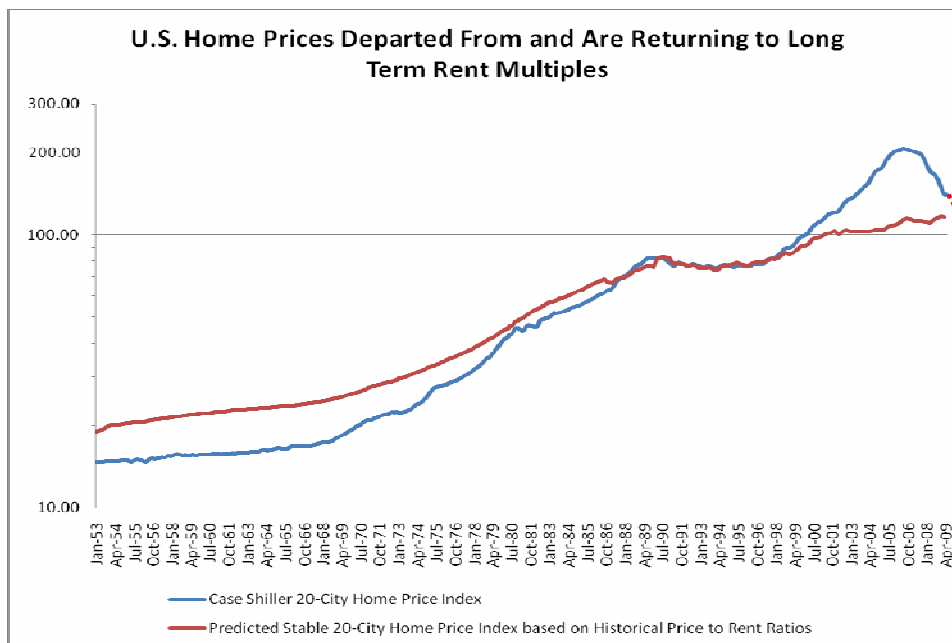
- One year ago, we projected that the U.S. housing market would decline from peak bubble-era levels by 28.2%. Although many observers thought we were overly pessimistic, it turns out we weren't pessimistic enough. Now, with the benefit of hindsight and more robust data points drawn from the last 12 months of market activity, we believe that housing will stabilize nationally, when expressed in terms of the Case-Shiller 20-City Index, at a decline of 43% from peak levels, or an index reading of approximately 117.
- To firmly return to the upper limits of historically justifiable levels of stable prices relative to rents in particular, we believe the Case-Shiller 20 markets must decline, on average (with considerable differences among markets), by an additional +/-16.9% from May 2009 levels.
- In the final years of this decade's housing mania, home buyers not only assumed the value of the home they acquired would rise to the moon; they were often paying more than 50% of purchase price toward what was effectively a wildly overpriced option on that presumed growth, relative to the portion that could be reasonably attributed to the shelter cost.
- In addition to being massively overpriced relative to the value of the embedded option on future growth, U.S. homes completely disconnected from every other indicia of the potential value of owning a home—rents, incomes, construction materials costs and labor costs.
- The bubble actually dates back to 1997, when housing diverged from a historical range of average price/rent ratios (which we have calculated as 11.4–13.8 times prevailing rents, dating back to 1953). The balloon in home prices accelerated to 15.2 times by the end of the tech bubble in March 2000. After a slight downward adjustment, and with the Fed's reaction to the events of Sept. 11, 2001, the price to rent multiple of U.S. homes commenced its relentless and unprecedented climb to its peak: 25.6 times at the end of 2005.
- To regain long-term stability and work off the current housing glut, prices will need to fall (net of extraordinary tax credits for the purpose of spurring short-term housing demand), such that the price to rent multiple re-enters its historical range of values. This has already occurred in several markets, as set forth in the appendix to this report, with the others expected to catch up over time. On a national basis, such an adjustment would still result in nominal (before subtracting inflation) growth of 48.5% in housing prices since 1997, as would be expected—but still a long way from the 163.8% rise to the bubble's peak.

Overview

One year ago, in our report *Putting a Floor Under American Homes*,¹ we wrote that the U.S. housing market—as measured by the Case-Shiller 20-City Composite Index (SPCS20R)—would decline by 28.2% from peak to trough as a result of the housing bubble’s collapse. We endured many quizzical stares at the time, and some government and private-sector leaders thought our projection wasn’t much more than an overstated curiosity.

We honestly wish our August 2008 prediction had come to pass, as awful as it seemed at the time. Now, with the benefits of hindsight and more robust data points, **we believe that housing, nationally, will stabilize, when expressed in terms of the Case-Shiller 20-City Index, at a decline of 43% from peak levels, or an index reading of approximately 117.**

The graph below (explained in detail later in this report) sets forth, on a logarithmic scale, the Case-Shiller 20-City Index, and contrasts it to where we believe prices should have remained (from an inflection point in 1997 to present day), based upon observed price/rent ratios from 1953 to 1997, the point at which the market initially diverged before going completely off the rails after 2001. The dashed red line illustrates the remaining price decline (nationally) that we believe necessary to return to sustainable levels.²



Sources: Case-Shiller 20-City Composite Index (SPCS20R) from 1987 to 2009; Percentage Changes in BLS Rent of Primary Residence and Home Purchase Indices from 1955 to 1983; Percentage Changes in FHFA Home Price Index from 1983 to 1986; Price-to-Rent Ratio incorporated from Moody’s Economy.com Price-Rent Ratios from 1986 to 2009.

While the Case-Shiller indices for several cities showed some improvement (on a seasonally unadjusted basis) for the last reported month of May 2009, we nevertheless found ourselves down over 32.3% nationally from the bubble’s peak—with several metropolitan statistical areas (MSAs) down more than 50%. As shown in

¹ http://www.westwoodcapital.com/articles/Putting_a_Floor_Under_American_Homes_Alpert_081208.pdf

² Our research has concluded that home prices ranged from 11.4 to 13.8 times rents, on average, from (at least) 1953 until 1997, with the exception of a small and short-lived uptick above this range in the late 1980s. By contrast, the price to rent multiple topped out at 25.6x at the bubble’s peak in 2007.

this report's appendix, several of the cities registering price firmness have overshot the point at which stability should be realized over the medium to long term. Supply-and-demand issues (a tsunami of foreclosed homes hitting the market *en masse*), will continue to create temporary regional pricing anomalies.

There is reason to believe, however, that housing nationally has yet to stabilize, despite the upturns—during prime selling season—in some markets. The housing-price meltdown is in its final leg, with markets that began their fall later catching up to those that crashed the earliest. The impact of this final decline will be severe in terms of the number of homes with mortgage loans that exceed the value thereof, and in terms of the loss severity to mortgage lenders. Of the \$11.2 trillion of home mortgages outstanding at the end of 2008, we expect that direct and derivative losses will approach the \$2 trillion level, with considerably more than that number of mortgages ending up underwater or otherwise impaired. In a decline of this magnitude, the final leg of losses is most painful to lenders' capital.

To firmly return to the upper limits of historically justifiable levels of stable prices relative to rents, the Case-Shiller 20 markets will need to decline, on average (with considerable differences among markets), by an additional +/-16.9% from May 2009 levels.

Here's why:

Home Prices as Mispriced Options on Future Growth

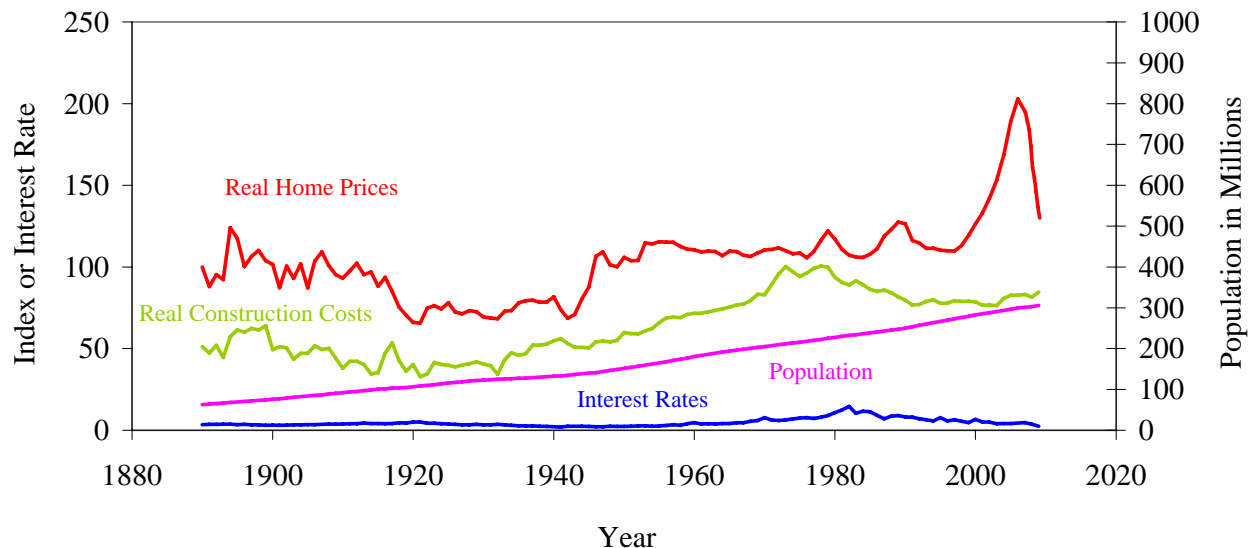
In last year's report, we advanced the notion that something about home prices had changed dramatically beginning in late 1997 and continuing for nine years through the apex of the housing bubble in late 2006. The cost of owning and carrying a mortgage on a house—at first in a few markets and ultimately throughout the nation—became more expensive, on an after-tax basis, than renting a home. This didn't make much sense to us in the late '90s, but it was easy to ascribe the phenomenon to the irrational exuberance of the overheated, productivity-boosted, high-tech environment of the early Internet age and the stock market bubble. Besides, things weren't out of whack in housing all that much—even in March 2000, just before the markets crashed.

Housing prices rose from 1997 through the end of the Internet bubble in March 2000 by some 30.2%, and—as detailed in this report—disconnected from traditional indicia of housing values (rents, personal incomes, construction materials and construction labor) by a smaller percentage. In some of the most populous Case-Shiller 20 markets—but certainly not a majority—it became more expensive to own, on an after-tax basis, than to rent (when one ignores the expectation of infinite home price appreciation (a silly thought, in hindsight). But none of this rather modest dislocation compared to what was to come in the subsequent decade.

In the final years of the housing mania of the 2000s, home buyers not only assumed the price they paid would rise to the moon; they paid more than 50% of their homes' purchase price toward what was effectively a wildly overpriced option on that presumed growth, relative to the portion that could be reasonably attributed to the cost of shelter. They not only massively overpaid that option; they were also leveraging themselves to the teeth to do so. For the entire period from 1997 through the bubble's peak in 2006, housing prices in the Case-Shiller 20 metropolitan statistical areas rose by a total of 163.8% before inflation, and 107.6% after inflation is taken into consideration!³

³ Please excuse our choice of punctuation; we continue to find these statistics amazing!

Let's pause to explain. A home's price can be separated into two components: (A) the value of the shelter itself, which one can measure in the capitalized cost of renting an equivalent home; and (B) an option on future price appreciation—the relative investment value of owning a home. Sure, there are some intangibles that come with pride in home ownership and setting down semi-permanent roots; but these are offset, in our opinion, by the fact that buying a home requires saving money for a down payment and then exposing that savings to an investment. In fact, as Yale Professor Robert J. Shiller (of the eponymous index) illustrated in his prescient book predicting the housing crisis,⁴ the investment in a home is negligible after inflation, over the long term. As the following graph illustrates, in the 107 years from 1890 to 1997, home values, after inflation (CPI or its equivalent), grew by a paltry 10%—that is, only an infinitesimally small 0.09% per annum on average, or 9/100 of 1%.



Source: <http://www.econ.yale.edu/~shiller/data/fig2-1.xls> and related data table

The value of the option on future price appreciation was, until 1997, similarly negligible and—after the mortgage interest deduction is taken into account—was essentially a free option. After all, there are other ways to hedge inflation that don't require cutting the grass and patching the roof. Of course, during the hyperinflation of the late 1970s and early 1980s, keeping up with inflation was a pretty darn good thing.

In fact, we'd go so far as to suggest that the hyperinflation in real estate asset values during the current decade was actually the last remaining vestige of the hyper-CPI inflation that Paul Volker successfully slew in the early 1980s. Having finally broken the back of the inflation obsession reflected in interest rates by the mid-1990s (even though the problem itself had long since been extinguished), the hangover remained in people's psyches during this decade's housing bubble.

Perhaps enough people remembered the rapid rise in nominal home prices (before inflation) to actually think of homes as a good equity investment and to view the bubble's rapid price rise as something they had seen before (even if they were too young, they heard about it!). Hyperinflation, of course, is still alive and well in the minds of some economic observers as a result of greater government intervention in the economy, since the collapse of the bubble. We see this as being extremely unlikely in the wake of so much destruction of capital, with interim deflation—particularly in rents—being a far greater concern.

⁴ Shiller, Robert J. *Irrational Exuberance*. New York: Currency, 2006. (Note further that Dr. Shiller was basing his predictions on an observed uptick in prices from 1997 to 2000, which he was already characterizing as irrational—before they became truly manic.).

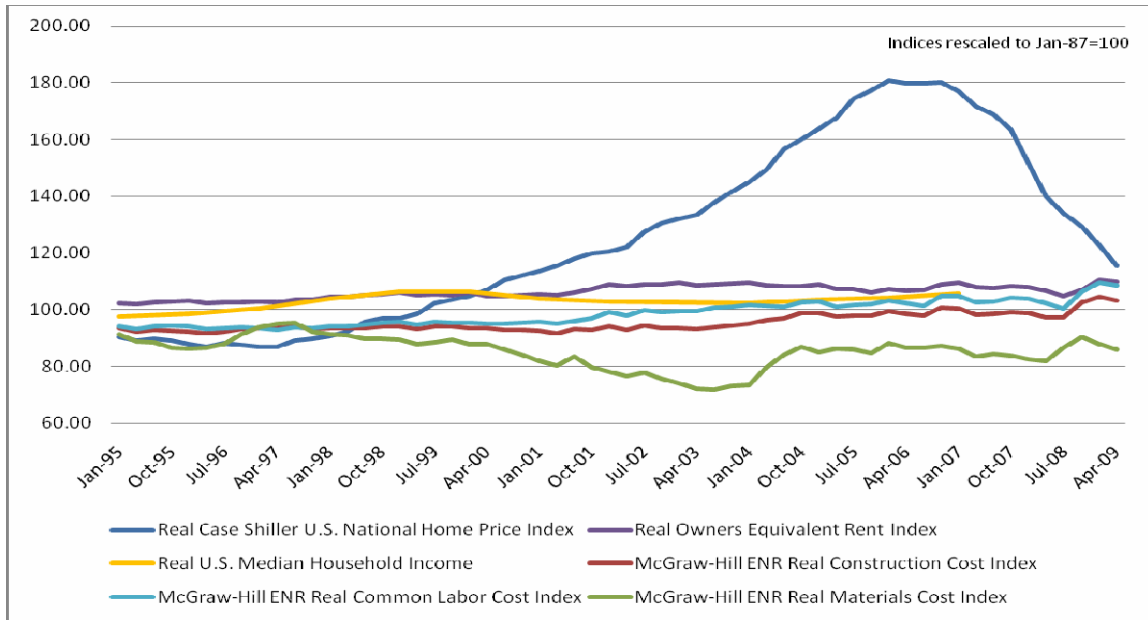
But we digress.....

Home Prices Relative to Other Metrics Relating to Value

In addition to being massively overpriced, relative to the value of the embedded option on future growth, U.S. homes completely disconnected from every other indicia of the potential value of owning a home. Home values must, over the long term, be rooted in the following:

- (i) ***The cost of shelter reflected in comparable rents.*** Rents are a function of the return that those with capital (*i.e.*, landlords) can earn by charging those without capital, or those who elect not to expose their capital to the real estate market, for shelter. In theory, the periodic cost of renting (on an after-tax basis) should involve a premium over the periodic cost of owning a home, as the latter alternative involves exposing one's capital; with the former, the tenant is paying for the right to "rent" another's capital. This is offset to some degree by the value of the option on future growth, as described above, which prior to the "great disconnect" of 1997 was not valued particularly highly.
- (ii) ***The cost of building materials and labor.*** In a severely land- or capital- constrained area, if population continues to rise and no new homes are built, home prices should continue to increase geometrically with the rise in population, based on scarcity value. The United States has recently been generating about 1.2 million additional households per annum and, if we didn't have a lot of land and plenty of capital—or if new growth was effectively redlined by zoning or geography—the growth in households would result in escalating home prices relative to inflation. The country enjoys both ample land, especially in the sunbelt-growth states, and plenty of capital. And even in geographically constrained area, such as our own Manhattan Island, technologies for building with greater density have made high-rise construction steadily more cost-effective.
- (iii) ***The incomes of those seeking housing.*** Ultimately, all of the other calculus contributing to the sustainable value of homes depends on people's ability to pay for them. Rising individual incomes, relative to inflation, should push home prices up by more than the rate of inflation, and the converse is also true. There is, however, another variable relative to incomes: the size of living space. Over time, for example, more slowly rising incomes can be accommodated through the provision of smaller homes—something seen in countries like Japan and, more recently, here, with an increasing percentage of owned homes of the condominium, attached and zero-lot line variety. But even such trends have their limits in terms of human discomfort and harmonious living.

The graph on the following page clearly illustrates the real (after inflation) price of U.S. homes, relative to the real cost of the above correlated factors. In an environment in which every other indicia of home prices either remained flat or declined after the above-mentioned inflection point in 1997, home prices nevertheless rose by 107.6% by the bubble's peak, in real terms:



Sources: Case-Shiller 20-City Index (SPCS20R), BLS CPI All Items and Real Owners Equivalent Rent Index, McGraw-Hill Engineering News Record

But what about land and interest rates?

Land costs and interest rates are derivative phenomena that are almost invariably misunderstood by the casual observer of the housing market.⁵ Land is not unique in this respect; all non-regenerating physical commodities are similar, in that their value is highly derivative of economic use. But oil and gas, for example, can be relatively easily burned or refined for energy once extracted, and most minerals have some meaningful immediate industrial use. Good old land, however, is the one thing God created in a finite quantity that really has little, unless someone spends some money and does something to it. It is also entirely unique in being decidedly non-transportable. And other than its use in agriculture or mining, land is only suitable for two other economic uses: habitation and production.

This is a very long-winded way of saying that land's only value lies in its ultimate uses. It has no absolute value in and of itself (which is why, out in the middle of nowhere, it is, practically speaking, free). In the case of housing, land value is ultimately derived from what someone is willing to pay for a home. And since the costs of everything else related home value remained either static or declined during the bubble (bricks, mortar, labor, etc.), the only price increase involved the land underlying American homes. In a sense, this was not the great housing bubble; it was the great land bubble.

Interest rates, particularly the zero to negative real Fed Funds interest rates that will, by year's end, have prevailed in the United States for 80% of this decade, are often viewed as the cause of the bubble in financial asset values (real estate, corporate equities, etc.). They were most certainly among the top two catalysts (the other being an unregulated and incredibly irresponsible lending environment). And it is equally true that, during the bubble, the Fed and others grossly misread what was really transpiring in the global economy and were misguided relative to how the United States should deal with it.

⁵ A bit of a broad statement, perhaps, in that all prices and interest rates are ultimately derivative of some other economic activity.

But the bottom line is pretty straightforward. In an economy showing tepid growth in every business sector other than financials, with weak job growth and low producer and consumer inflation, low interest rates occur for a reason: because the economy is sufficiently in the doldrums to make demand for money modest, at best. During the bubble years, apologists often stated that low interest rates and rising asset values were the result of a sudden glut of capital. The truth was far more insidious.

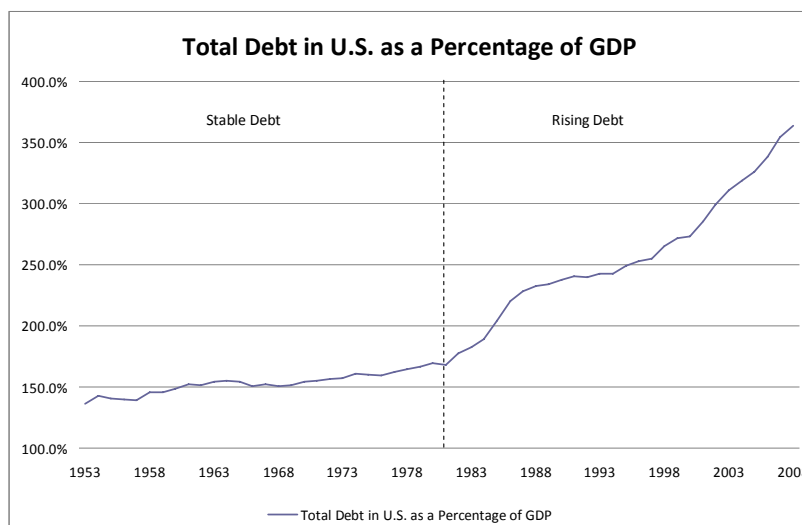
Low interest rates were the result of less demand for money because of an increase in other resources (such as outsourced labor and general productivity)—reflective not of an economic condition in which asset prices should rise, but one in which investment should decline (at least in the United States, relative to emerging economies). The only offsetting factor during the bubble was the massive increase in debt creation—growing in the United States to nearly \$50 trillion by the bubble’s end in 2007, from \$25 trillion at the decade’s start. And nearly all of that debt was secured (directly or indirectly) by the skyrocketing price of financial assets—which, in turn, spurred the creation of more debt. Uneconomically low interest rates linked to unrestrained lending, as we have demonstrated, do not change homes’ value—only the price paid—in an environment in which none of the other indicia of value increase in like fashion.

So, where does this leave us?

Home Prices Relative to the Historic Ratio of Prices to Rents

Since 1997–1998, we have been trying to understand why home prices suddenly disengaged from a band of historic prices, measured in terms of a multiple of rental value that dates back to the end of World War II.

The financial asset bubble of the 2000s was due to the creation of a mountain of low-interest debt, originated without regard to how housing prices were behaving anomalously in response to the debt itself. To our thinking, the bubble and ensuing crash were merely the long-awaited denouement to a tragedy nearly three decades in the making—during which growth in financial assets (chiefly, corporate equity and real estate) was increasingly driven by leverage, and government policies tended toward deficits and deregulation. The upshot of these trends is presented in the graph below, in which the inflection point leading to the tri-decadal period of steadily increasing leverage coincides perfectly with the beginning of the Reagan administration (for those ideologically inclined). Put plainly, we hit our tipping point in 2007, when the U.S. (and, by extension, global) economy could no longer sustain the debt burden we had incurred.



Source: Federal Reserve Board; Bureau of Economic Analysis

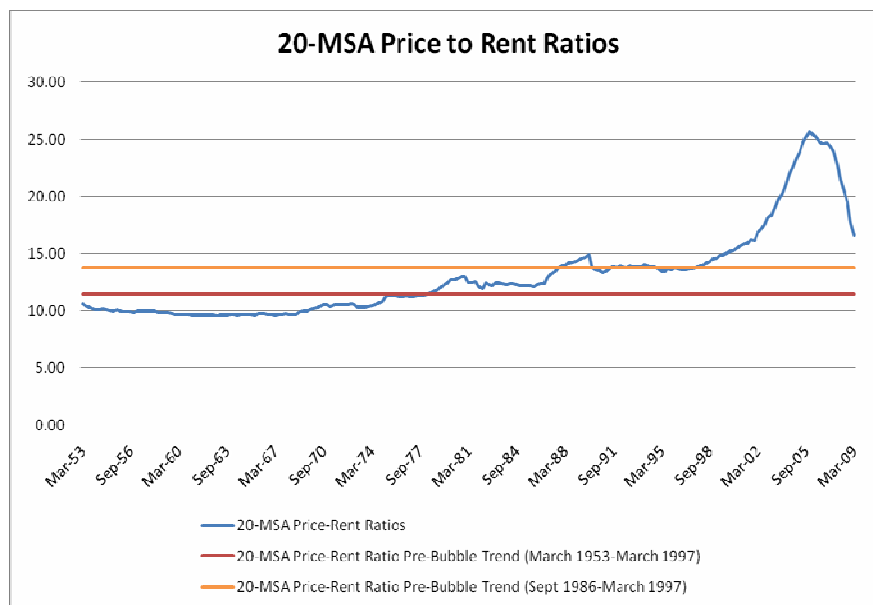
The question we now must ask is: Where would we have been had this not happened? Or, put another way, to where are we returning? To answer this, we did our own investigation into the pre-1997 relationship between home prices and prevailing rents.

Our hypothesis was that sustainable home prices should maintain a consistent range as a multiple of prevailing rents. We were fortunate to have obtained a good set of data on rents and prices/rent ratios from 1986 to date, via Moody’s Economy.com. To track price/rent ratios before 1986, we used Moody’s methodology and Case-Shiller 20 City data, for the post-1986 period, to back-engineer a set of ratios based the on percentage changes in the BLS Rent of Primary Residence and Home Purchase Indices, for the period of 1953 to 1986.

Although the trends of both the Moody’s data and the pre-1986 sets of data were relatively flat, the period of 1953 through 1972–’73 (the latter corresponding to the first oil crisis and the elimination of fixed currency exchange rates) revealed price/rent ratios significantly lower than the post-1973 period. Accordingly, we developed two sets of averages—one for the entire 1953–1997 period, and the other from 1986 to 1997 (also a very stable period, but for a short-lived mini-bubble in the late 1980s). We set the average price/rent ratio for the longer 44-year period as the lower limit of our projected ranges of price stability and set the average price/rent ratio for the 1986 through 1997 period as its upper limit. Accordingly, our projected range of stable price to rent multiples runs from 11.4 times, on the low end, to 13.8 times.

For the purpose of this report—and because we are more confident in the data of more recent vintage—we have assumed that the high end of our range (price = 13.8x rent) is the likely point at which home prices will find stability. Finally, we applied the predetermined 13.8 to rental costs for the 1997 to 2009 period to arrive at a predicted index of stable and sustainable home prices for the 20 Case-Shiller cities.

The results of our work demonstrate that U.S. homes have risen in price fairly steadily with rents, which themselves have increased progressively in accordance with overall consumer price inflation (of which rents are a significant component). Other than during a short-lived period from 1987 to 1990 (and, even then, departing only modestly to 14.9 times prevailing rents), U.S. homes have traded at multiples that, at least in comparison to the just-ended bubble, have been relatively stable. The following graph tells the story:



Sources: Moody’s Economy.com Price/Rent Ratios, 1986–2009; Percentage changes in BLS Rent of Primary Residence and Home Purchase Indices from 1953 to 1983; Percentage changes in FHFA Home Price Index from 1983 to 1986

The departure from this long-established range began in 1997 and accelerated to a minor degree to 15.2 times by the end of the tech bubble in March 2000. After a slight downward adjustment, and with the Fed's reaction to the events of Sept. 11, 2001, the price-to-rent multiple of U.S. homes commenced its relentless and unprecedented climb to its peak at 25.6 times at the end of 2005.

To regain stability for the long term and work off the current housing glut, we believe prices will need to fall (net of extraordinary tax credits for the purpose of spurring short-term housing demand), such that the price to rent multiple re-enters its historical range of values. This has already occurred in several markets, as set forth in the appendix to this report, with the others expected to catch up over time.

On a national basis, such an adjustment would indicate an additional 16.9% drop in the value of housing (or 11.4% if expressed in terms of peak values). This would still result in nominal (before subtracting inflation) growth of 48.5% in housing prices since 1997, as would be expected, but still a long way from the 163.8% rise to the bubble's peak.

While we acknowledge that there are other factors involved in establishing home values—density and scarcity considerations, supply of and demand for housing units, and zoning limitations and changes, for example—there are few that do not have a similar impact on the rent levels. In fact, the only exogenous factor we believe should have a direct (although very local) impact on price-to-rent multiples is the existence of rent control or stabilization laws, which have long since waned in terms of significance to the housing markets.

And this brings us to a final subject: If housing values ultimately find their anchor in rent level, where are rents headed? Although subject to a high degree of variability from market to market, until recently rents have risen fairly consistently. But in July of this year, for the first time in the period we observed (1953–2009), nominal rents actually fell. This is not surprising, given that many vacant housing units that would have been owner-occupied are now being thrust onto the rental market. It's a disturbing trend that threatens to make even more likely that the final leg down in housing prices will follow the pattern we have described herein. Deflation in rents (to say nothing of in the broader economy) is a threat to be taken seriously.

The author wishes to thank Christy H. Chung for her invaluable assistance in connection with the research and financial modeling for this report.

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Appendix

Attached to this report are 20 graphs reflecting the level of home prices that would have been expected if the national stable price/rent ratio curve is adjusted for and overlaid on the Case-Shiller index data for each market. While this is not a particularly scientific approach, as there are doubtless some variations in normalized price/rent ratios from city to city, it does provide a basis for identifying those metropolitan areas that have stabilized or overshot the likely level of stabilization – and those where the additional losses are likely to be more severe.

There are two Case-Shiller markets that we believe are anomalous in terms of the results we obtained. One is Washington, DC, where the incoming administration and the creation of more government and related jobs are likely to continue to keep the housing market very robust (it has the widest gap between 1997 and current price/rent ratios). The other is the Detroit MSA – which has basically fallen off a cliff (as opposed to sliding down a mountain) as a result of the collapse of its core industry.

As for the remaining 18 markets – color coded below and on the attached as green (for those that have likely stabilized or come very close to having done so, or perhaps overshot) and red (for those in danger of significant further declines):

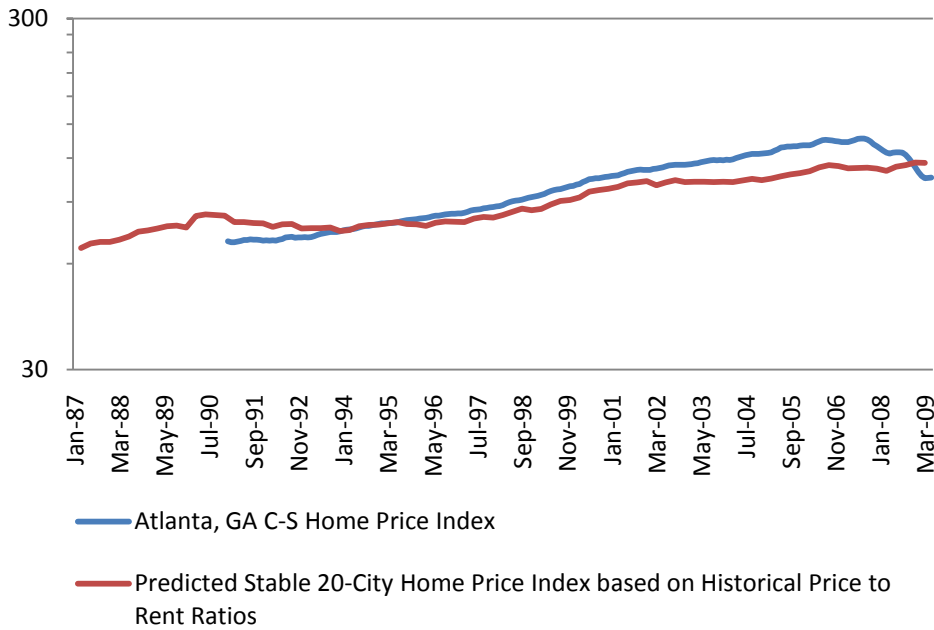
Likely Stabilized or Overshot

Atlanta, GA
Charlotte, NC
Chicago, IL
Cleveland, OH
Dallas, TX
Denver, CO
Las Vegas, NV
Minneapolis, MN
Phoenix, AZ
San Francisco, CA

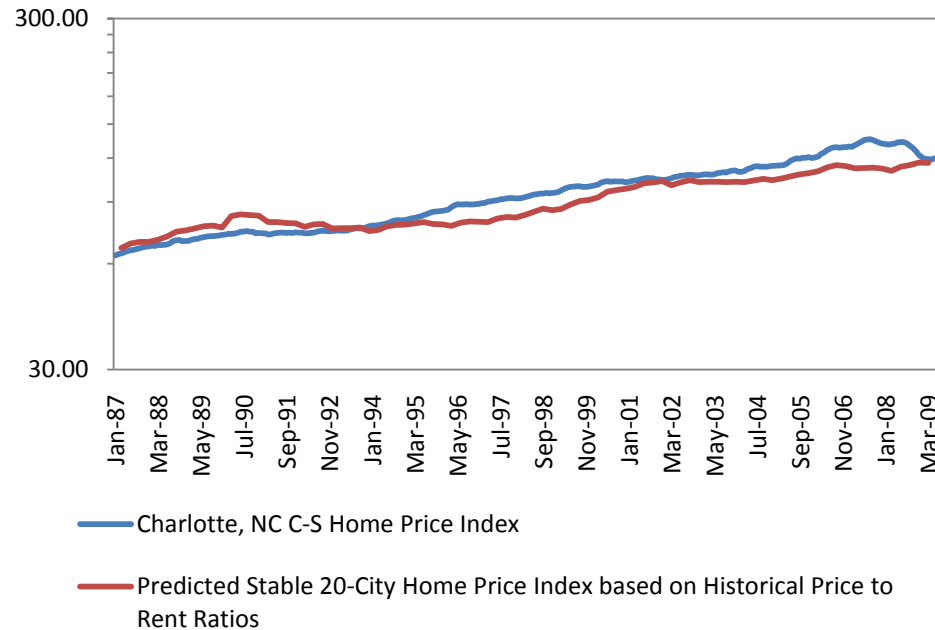
Further Declines Likely

Boston, MA
Los Angeles, CA
Miami, FL
New York, NY
Portland, OR
San Diego, CA
Seattle, WA
Tampa, FL

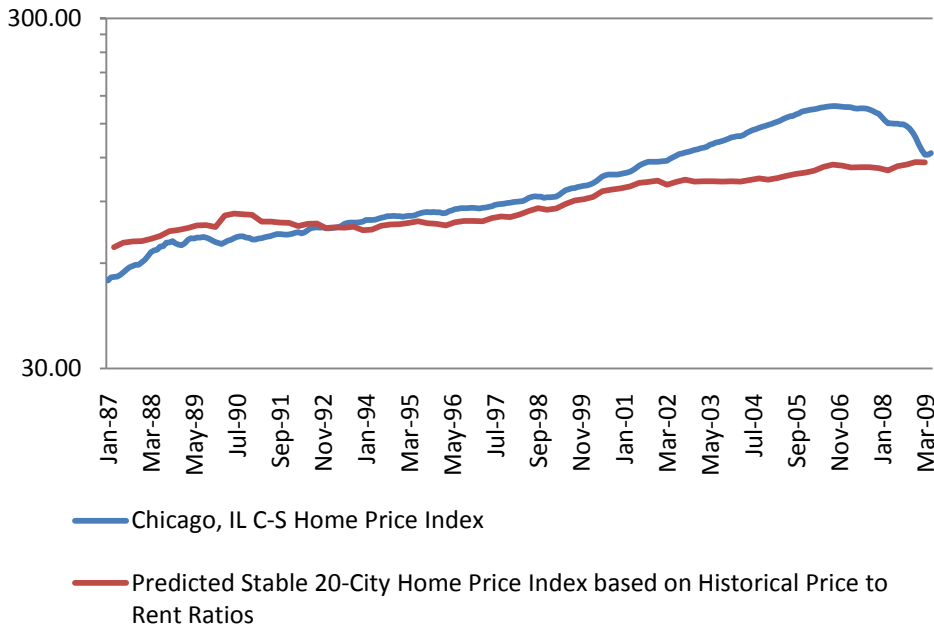
Atlanta, GA Home Price Index



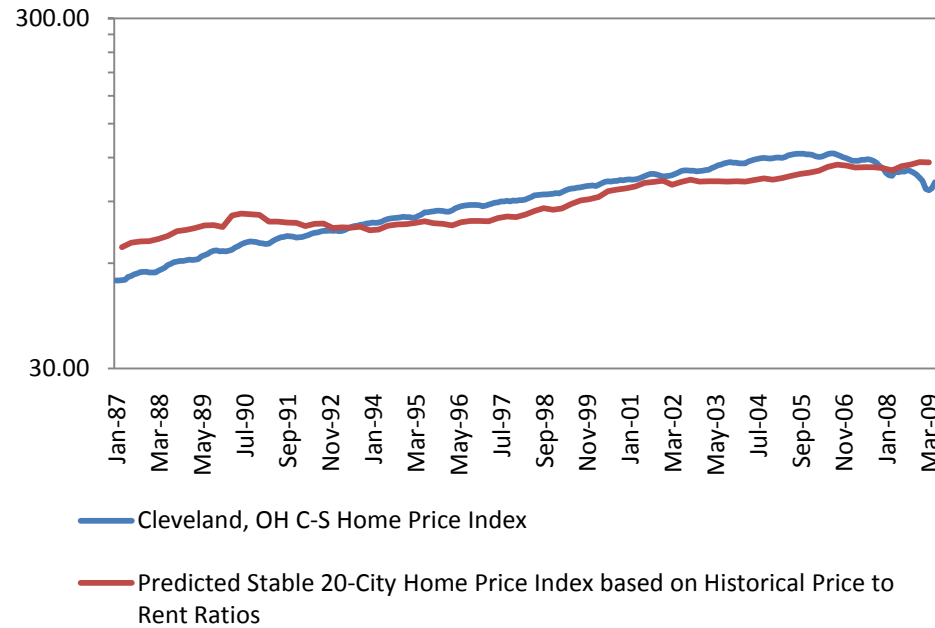
Charlotte, NC Home Price Index



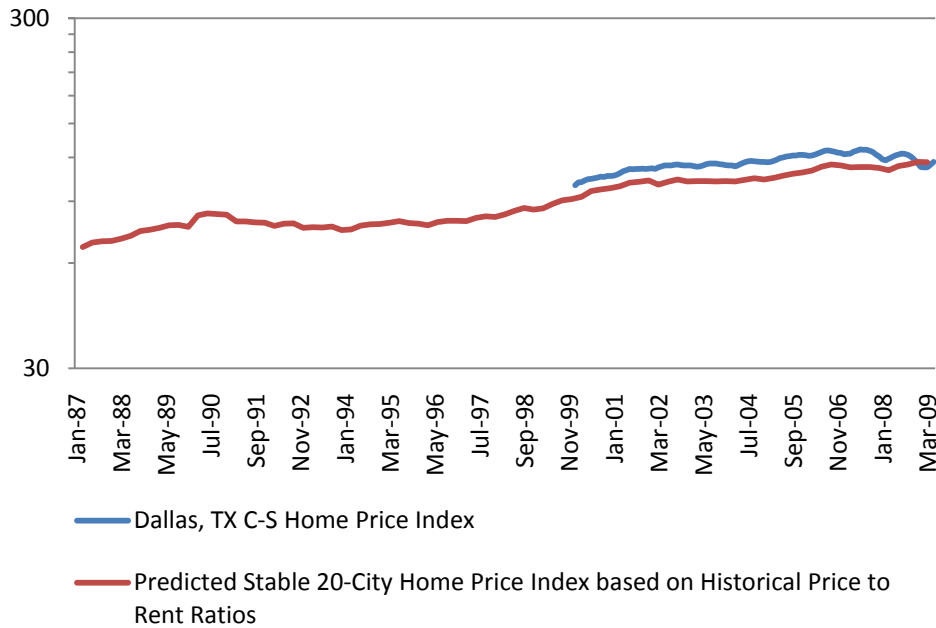
Chicago, IL Home Price Index



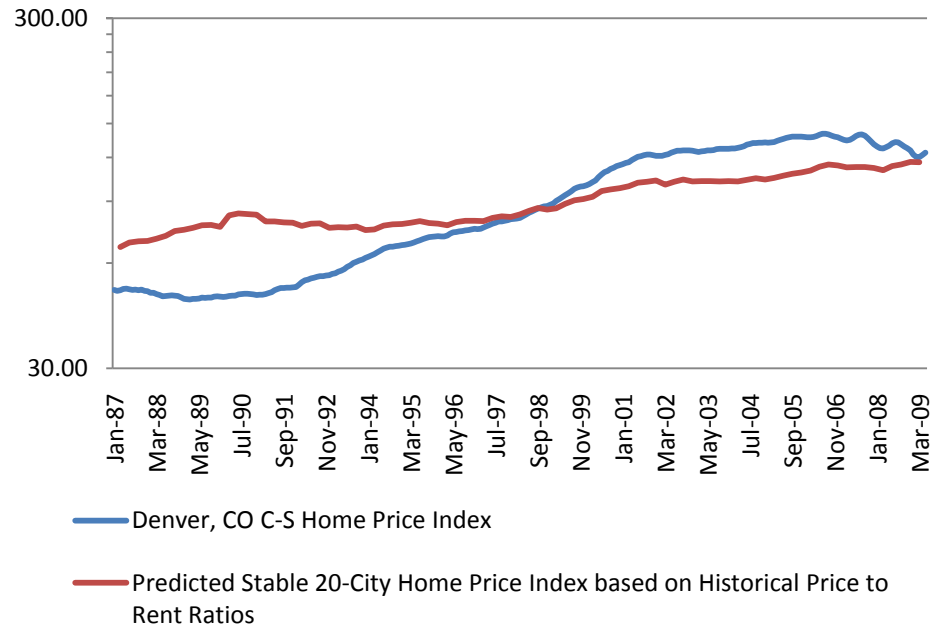
Cleveland, OH Home Price Index



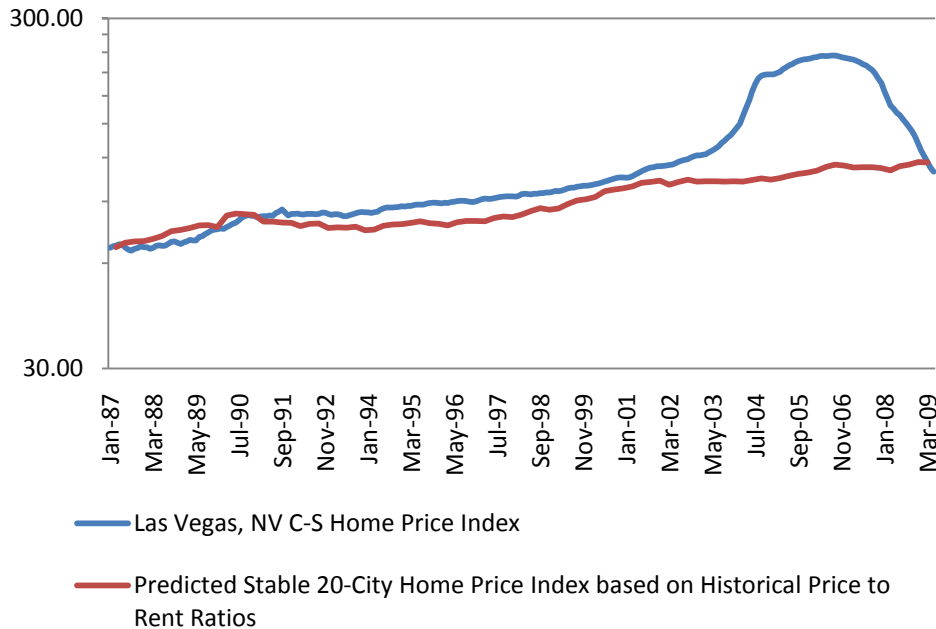
Dallas, TX Home Price Index



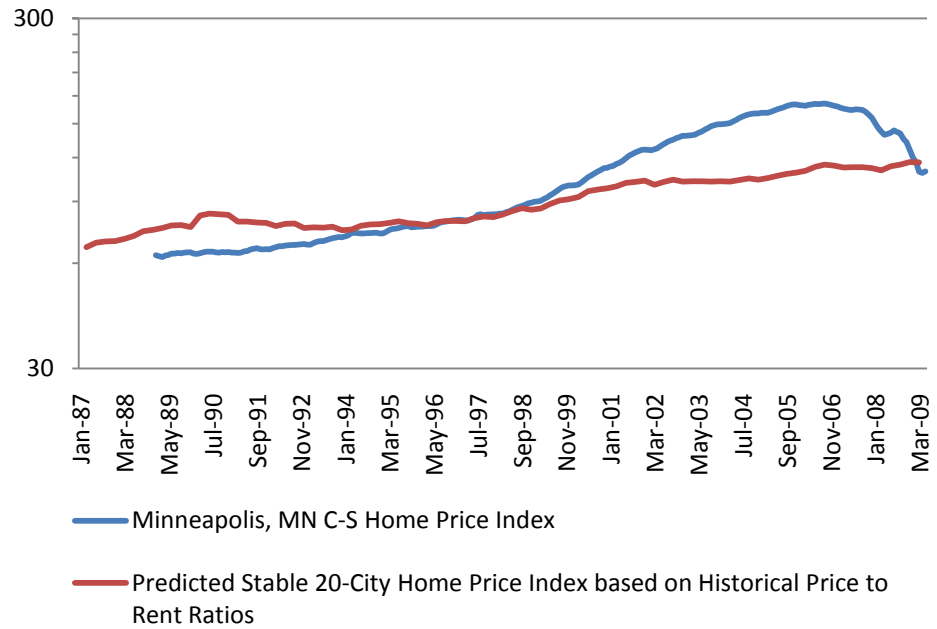
Denver, CO Home Price Index



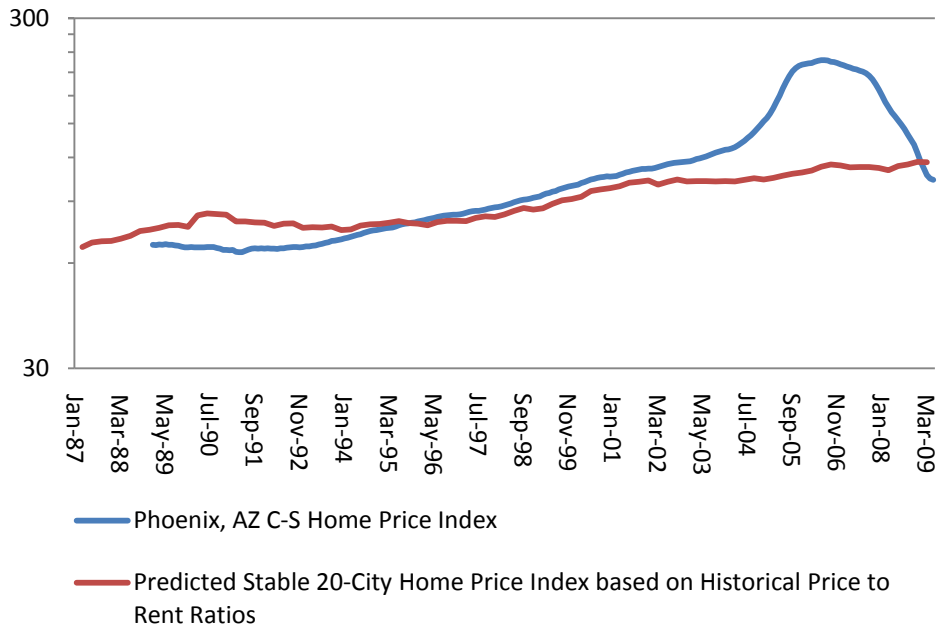
Las Vegas, NV Home Price Index



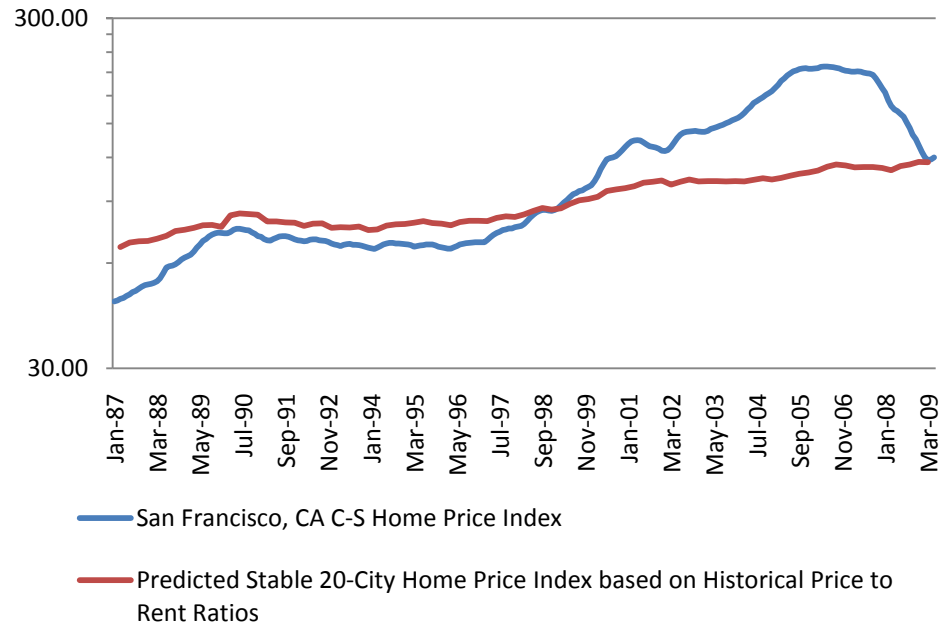
Minneapolis, MN Home Price Index



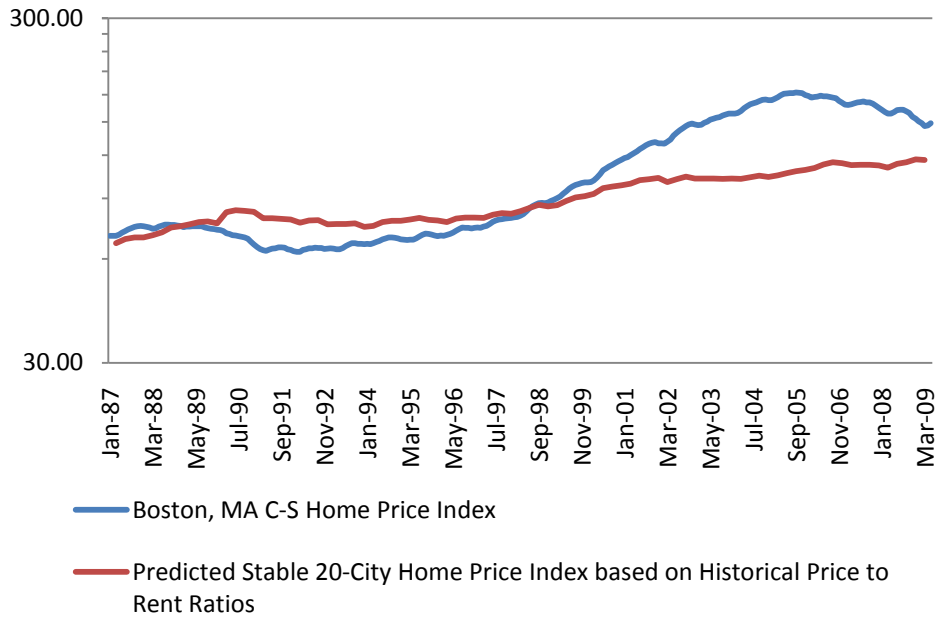
Phoenix, AZ Home Price Index



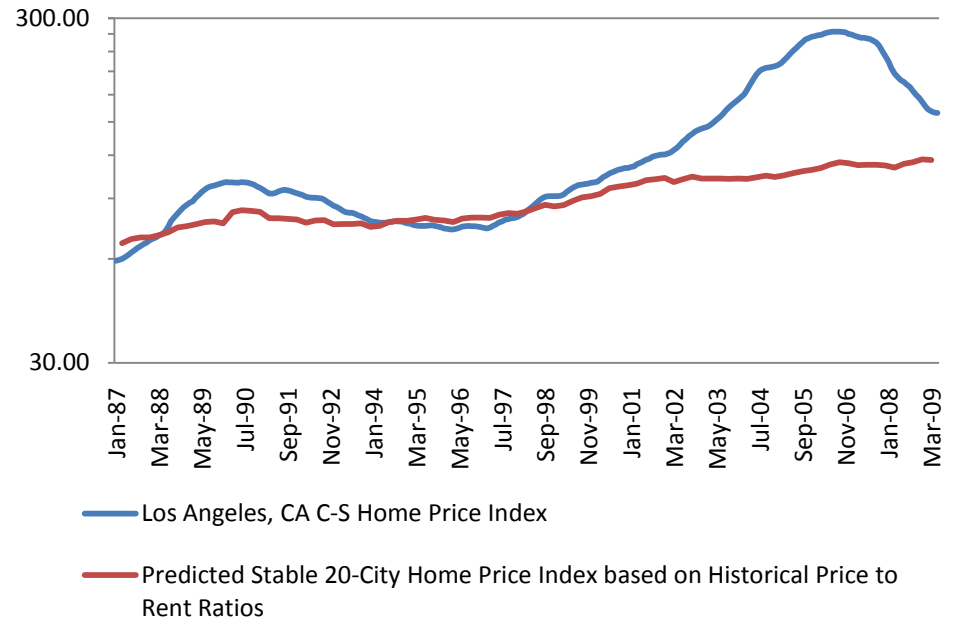
San Francisco, CA Home Price Index



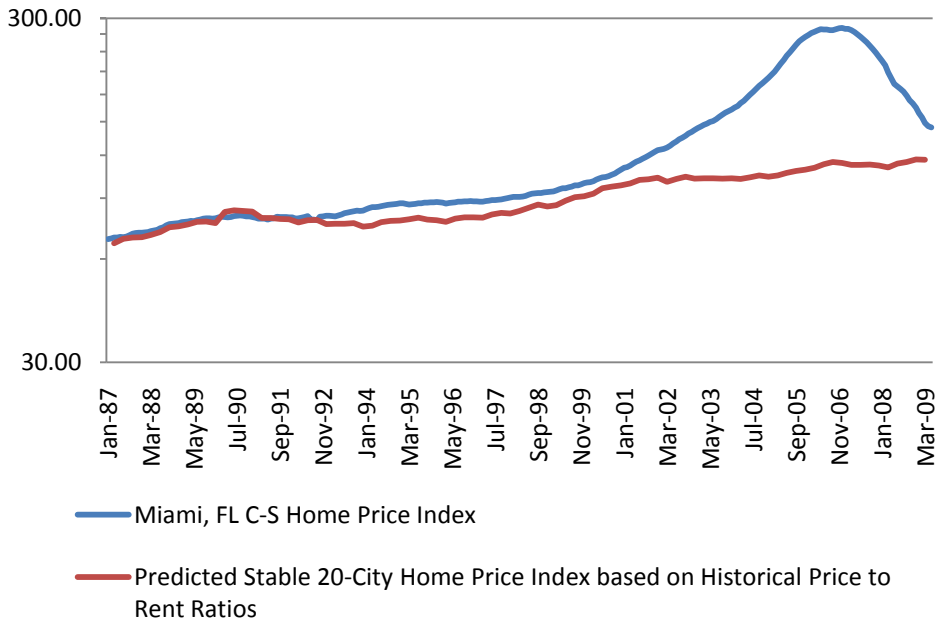
Boston, MA Home Price Index



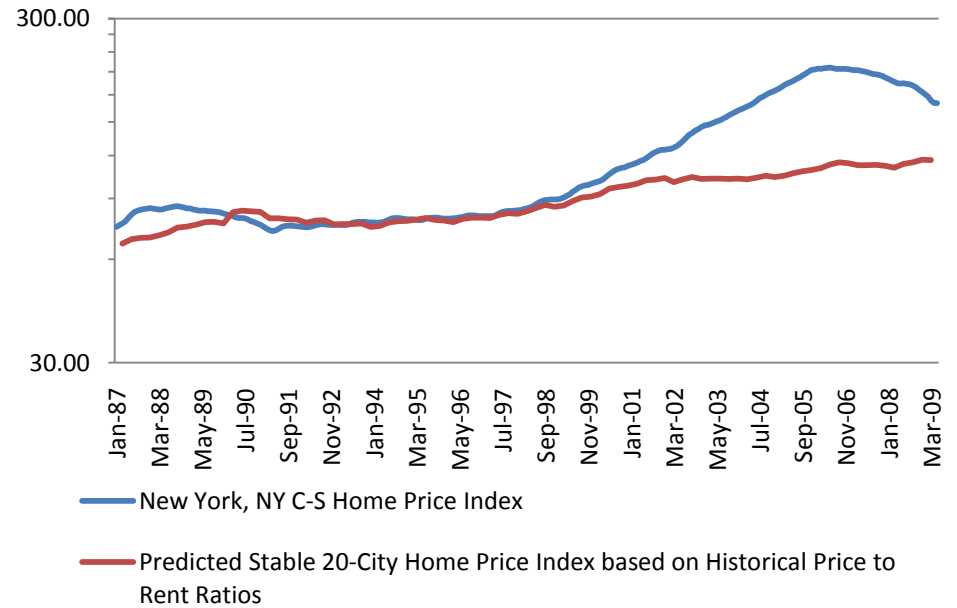
Los Angeles, CA Home Price Index



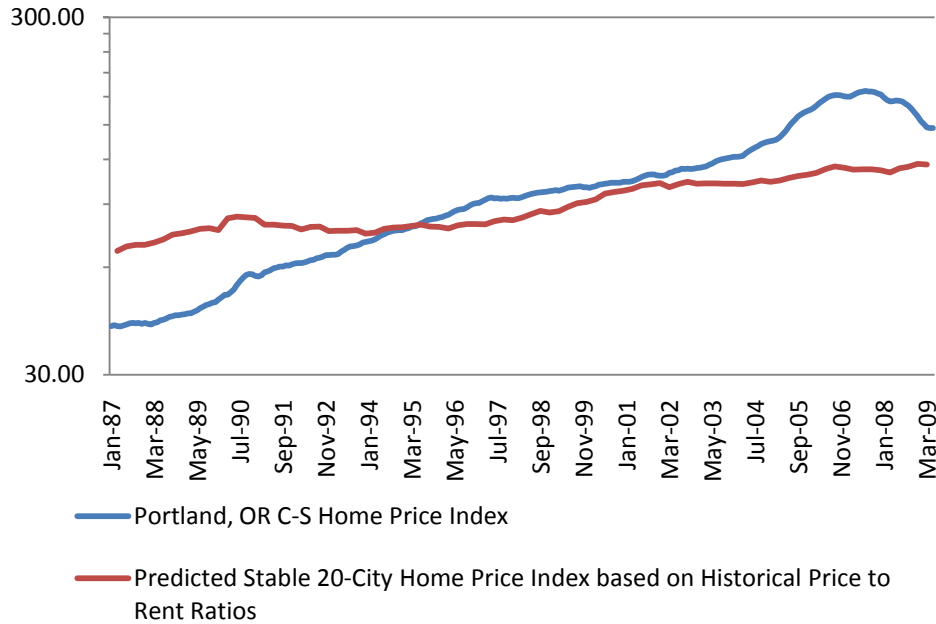
Miami, FL Home Price Index



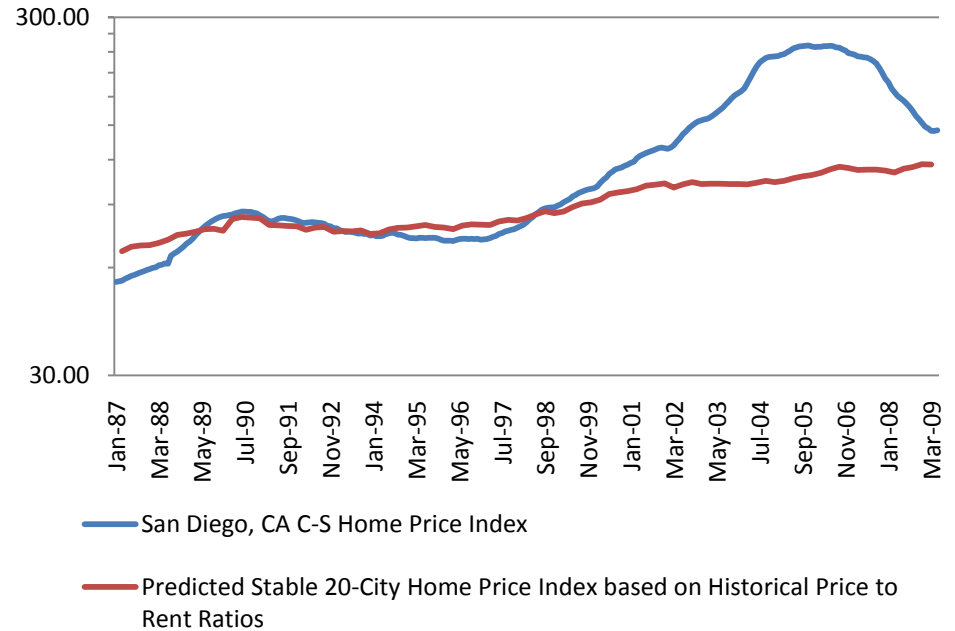
New York, NY Home Price Index



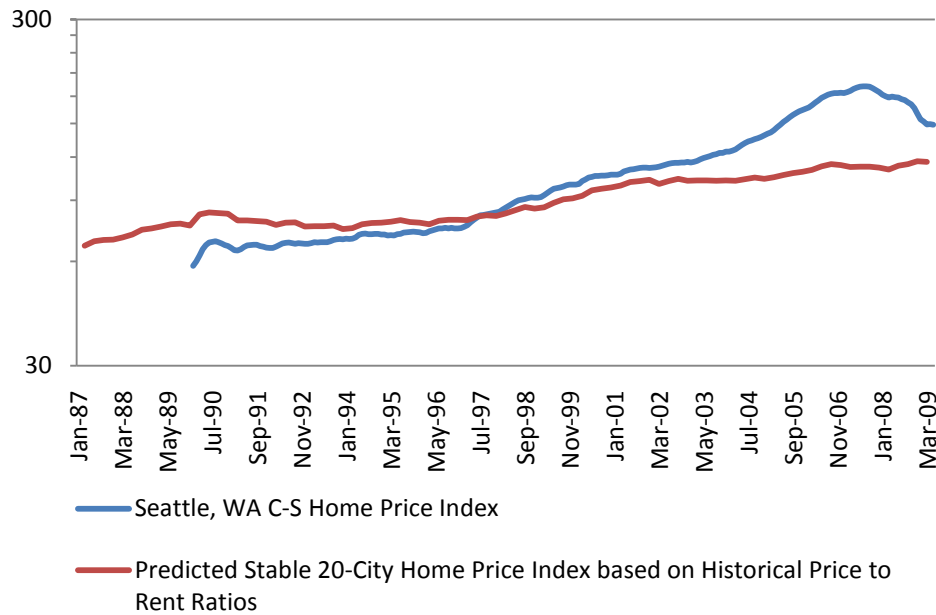
Portland, OR Home Price Index



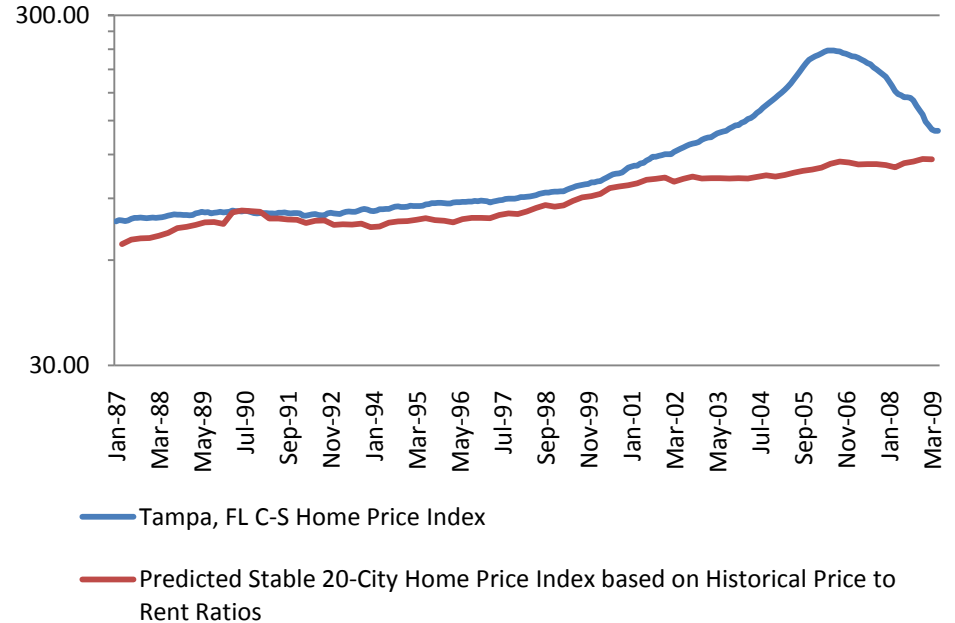
San Diego, CA Home Price Index



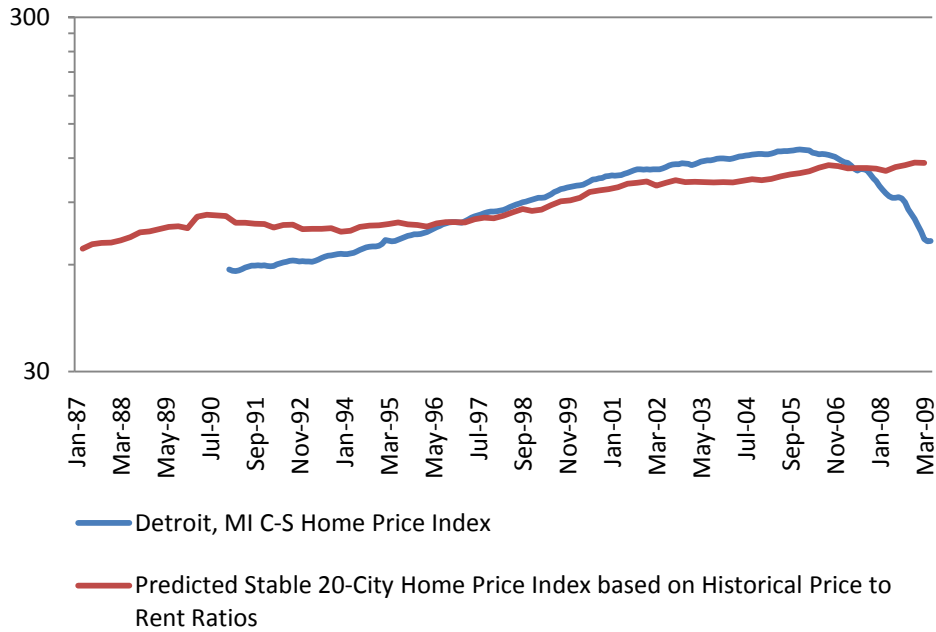
Seattle, WA Home Price Index



Tampa, FL Home Price Index



Detroit, MI Home Price Index



Washington D.C. Home Price Index

