

The Crumbling Foundations of **U.S. House Prices**

MAY 2010 UPDATE

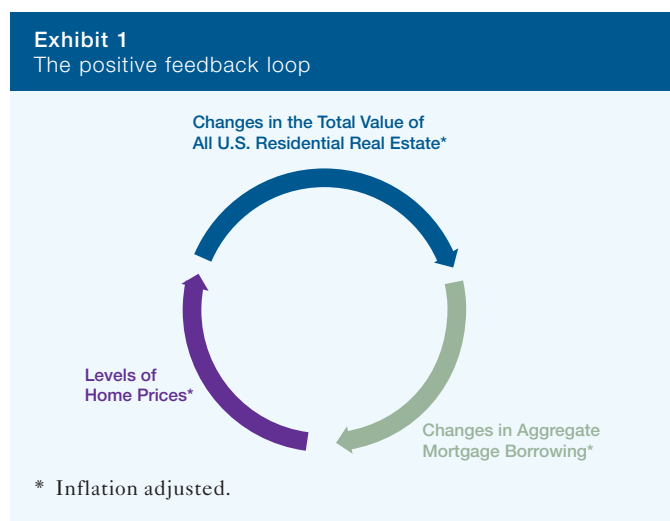
Ronald Temple, Managing Director, Portfolio Manager/Analyst

Emma Rasiel, PhD, Associate Professor of the Practice of Economics, Duke University

Our latest research on U.S. house prices indicates that we are at or near the bottom. We believe that the unprecedented degree and breadth of government and central bank intervention to stem the decline in prices has largely succeeded in averting a potentially disastrous situation.

To best utilize our latest research, it is worth recapping how our forecasts, the model itself, and our analyses have evolved with the continuing flow of information and policy changes.

Early in 2009 we introduced a model for predicting the level of U.S. house prices. We found that changes in the value of residential real estate assets were predictive of changes in mortgage debt outstanding three quarters later, which in turn were predictive of the level of real house prices three quarters after that, as depicted in Exhibit 1.



The model output indicated that, unless strong actions were taken to break the feedback loop among the variables, U.S. house prices were likely to overshoot on the downside relative to historical levels. We concluded that, absent extraordinary intervention, there could be 40% additional downside in house prices from mid-2008 levels. That said, we noted that recent announcements from the U.S. Treasury Department and the U.S. Federal Reserve (the Fed), as well as a nascent foreclosure moratorium among the largest mortgage servicing companies, gave us hope that our predictions would not be realized. We also highlighted our concern that the data underlying the model did not include adequate periods of time in which house prices declined in both nominal and real terms.

In May 2009, we published our first update of the house price model, incorporating data through year-end 2008. With two more quarters of data from periods with declining house prices (plus revisions to prior data), we were able to refine our forecast. We found that mortgage debt was indeed “stickier” in a downturn, and hence that the relationships do change. Specifically, we determined that while the downside in house prices was severe, it was less so than in our prior forecast.

Moreover, we indicated that our model did not explicitly incorporate changes in interest rates on mortgage loans when forecasting house prices. At the time of our note, rates on mortgages had declined by about 200 basis points from the point where the Fed announced it would begin buying mortgage-backed securities (MBS). Such a sharp decrease in funding costs would almost certainly influence how much downside there was in house prices, given that every 100-basis-point decrease in rates would reduce monthly payments by approximately 10%.

Our last update was in August 2009, when we incorporated the latest data and discussed for the first time our non-linear (quadratic) model, in addition to the linear version in prior reports. The quadratic model had diverged materially from the linear one, perhaps indicating a different pattern of behavior in house prices in down markets versus stable and up markets. We hypothesized that the quadratic model might well qualitatively fit a situation in which government intervention sharply reduced the downside risk in house prices—be it through reduced supply via foreclosure moratoria or increased demand through tax credits and lower mortgage borrowing rates. Specifically, we found that decreases in the value of residential real estate assets were no longer translating into the degree of decrease in mortgage debt outstanding that our linear model would have anticipated. With the incremental data and model refinements, our forecast became less negative. We indicated that we expected to see downside of 10% to 15% in house prices, but only after an increase in prices in the second and third quarters of 2009. In this current update, we have again a less negative forecast. We now believe house prices are at or near their lows, with perhaps 5% downside risk (we purposely avoid a specific target, as we cannot credibly attest to have the ability to forecast precisely, given the range of countervailing forces at work).

Overview

With the data for the fourth quarter of 2009 released by the Fed on March 11, as well as revisions to earlier quarters, our house price forecasts continue to look encouraging relative to our 2009 predictions. In this paper, we highlight a number of causes for these improvements, while injecting a note of caution about our predictions for the future path of house prices.

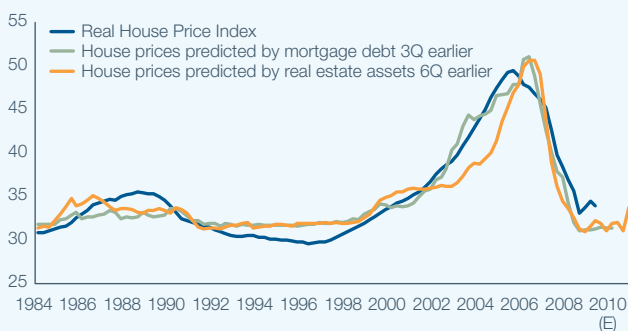
As noted in our August 2009 update, the extent and scope of government intervention has been unprecedented, with direct purchases of MBS, foreclosure moratoria, and loan modification programs. While these interventions may have pulled demand forward and reduced supply, it is possible that the resultant “soft landing” for house prices may have generated sufficient psychological benefits for the housing market to maintain an even keel going forward.

In our August update, we predicted that the housing market would fall an additional 8% during 2009, bottoming out and stabilizing in early 2010. In reality, the stabilization seems to have happened sooner: Case-Shiller data shows an incremental improvement (of just under 5% in nominal terms; 2.5% in real terms) from the first to the fourth quarter of 2009, although such a small increase can hardly be viewed as significant, and may yet be revised downward following revisions in future quarters.¹

With the addition of new Flow of Funds data through the fourth quarter of 2009, our updated model shows the housing market remaining relatively stable throughout 2010, with the beginnings of a rally in the first half of 2011. Thus our current forecast remains consistent with our August update: house prices bottomed in 2009 and are expected to remain reasonably stable for the rest of this year, with a small uptick by the second quarter of 2011 (as illustrated in Exhibit 2).

Exhibit 2

Real House Price Index versus house prices predicted by real estate assets and mortgage liabilities



As of 31 December 2009

Source: Board of Governors of the U.S. Federal Reserve System, Flow of Funds Accounts of the United States, Section B. 100 Balance Sheet of Households and Nonprofit Organizations, the Office of Federal Housing Enterprise Oversight (OFHEO), Standard & Poor's/Case-Shiller Home Price Indices, Bureau of Labor Statistics, Bloomberg² Seasonal adjustments were made using a linear moving average. Predicted changes in mortgage debt and real house prices based on single-factor quadratic regression models. Both models were developed by Dr. Emma Rasiel, Associate Professor of the Practice of Economics, Duke University.

There is no guarantee that the stated forecast will be realized.

As always, we are cautious about making predictions. There are a number of causes for concern.

- It is hard to assess the extent of the impact of the Fed's various interventions, especially during a period in which mortgage rates have exhibited considerable volatility:
 - By March 2010, over 230,000 homeowners had been guaranteed lower payments on their mortgages for five years, with nearly 100,000 more such modifications in the pipe-

line, and a total of approximately 1.1 million borrowers had started trial modifications.³

- These permanent and trial modifications represent a cumulative savings of \$3 billion to date.
- Refinancing flexibility and lower interest rates have saved more than \$7 billion over the first year of the modification program.⁴
- It is even harder to estimate what will happen as the Fed steps back from MBS purchases and allows the “invisible hand” to take over.
- In our revised modeling approach, we have tried to reflect the impact of the Fed's activity by introducing non-linear components—however, we cannot be sure whether this non-linearity is a result of the Fed's actions or a naturally occurring phenomenon, since we have no historic data for a sustained period of real reductions in house prices.

Revised Model

In our series of papers, we have relied on the apparently robust relationship between changes in homeowners' real estate assets and mortgage debt, which are strongly correlated with aggregate U.S. residential house prices. The latest data from the Federal Reserve Flow of Funds confirms that these statistical relationships remain strong, through both bull and bear housing markets.

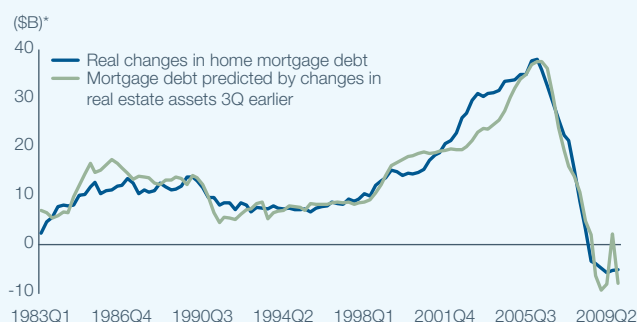
Changes in Real Estate Assets Predict Changes in Mortgage Debt Three Quarters Later

We observed in 2008 that homeowners' real estate assets (inflation-adjusted) appeared to predict real (inflation-adjusted) mortgage debt three quarters later, as shown in Exhibit 3. We argued that this relationship could be explained by households who view their home as part of their investment portfolio and “trade up” to more valuable real estate assets (with commensurate increases in mortgage borrowing) as they see their house values increase.

Six quarters later, we find that this relationship still holds, but only on a non-linear (quadratic) basis. We argued in our August 2009 update that the quadratic model might now be a better fit for the data because, in a housing bear market, mortgage debt outstanding may be “stickier”—that is, the ability of home owners to delever when home prices decline would be reduced relative to their ability to borrow in a bull housing market. This appears still to be the case. Specifically, from 1983 to 2009, more than 90% of the change in aggregate home mortgage debt is explained by earlier changes in real estate assets (see Exhibit 4).

Exhibit 3

Real changes in home mortgage debt can be largely explained by real changes in real estate assets three quarters earlier



As of 31 December 2009

* Inflation adjusted and indexed to 1952 dollars

Source: Board of Governors of the U.S. Federal Reserve System, Flow of Funds Accounts of the United States, Section B. 100, Balance Sheet of Households and Nonprofit Organizations.

Seasonal adjustments were made using a linear moving average.

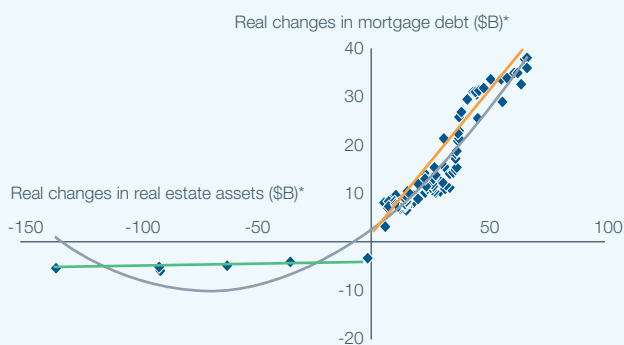
Predicted changes in mortgage debt based on a single-factor quadratic regression model developed by Dr. Emma Rasiel.

However, as noted earlier, this non-linearity could be a response to the Fed's interventions, a characteristic of the relationship during a bear market for housing, or both.

Furthermore, while the quadratic model "fits the data" better than a simple, linear model (see Exhibit 4), there is no guarantee that this is the "correct" model. Notice in particular how, once changes in mortgage debt became negative (which occurred for the last 6 quarters—these are the six data points below the horizontal axis), the magnitude of these changes

Exhibit 4

90% of changes in mortgage debt can be explained by changes in real estate assets three quarters earlier



As of 31 December 2009

* Inflation adjusted and indexed to 1952 dollars

Source: U.S. Federal Reserve, OFHEO, the Case-Shiller Home Price Index

Seasonal adjustments were made using a linear moving average.

Predicted changes in mortgage debt based on a single-factor quadratic regression model developed by Dr. Emma Rasiel.

remained approximately constant, even as changes in real estate assets swung dramatically.

The horizontal green line in Exhibit 4 highlights this phenomenon. We cannot say for sure whether the relative stability of the mortgage debt decreases experienced in the last five quarters is a function of federal intervention, although this certainly seems like a plausible argument; but, if that is the case, our quadratic model is really just an amalgamation of two linear models, one of which (the orange line in Exhibit 4) reflects a fundamental relationship between changes in real estate asset values and mortgage debt (data from 1983 to the second quarter of 2008), while the other reflects Fed actions to limit the extent of the current crisis (from the third quarter of 2008 to the fourth quarter of 2009).

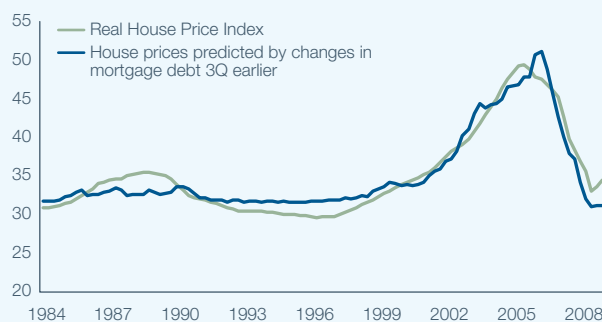
Changes in Mortgage Debt Drive Aggregate House Prices Three Quarters Later

Over the last three decades, home prices appear to have trailed changes in mortgage debt three quarters earlier, as shown in Exhibit 5. We have explained this phenomenon on the basis that it takes time for increased access to mortgage debt to feed through into housing demand and, ultimately, house prices.

Here again, we find that a quadratic model fits the data much better, as illustrated in Exhibit 6. The intuition for this relationship is similar: As U.S. consumers at all socioeconomic levels were increasingly able to borrow, house prices were driven higher on an aggregate basis.

Exhibit 5

Real house prices can be largely explained by real changes in home mortgage debt three quarters earlier



As of 31 December 2009

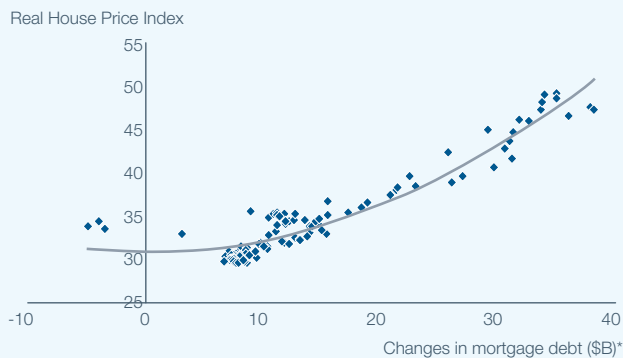
Source: Board of Governors of the U.S. Federal Reserve System, Flow of Funds Accounts of the United States, Section B. 100 Balance Sheet of Households and Nonprofit Organizations, OFHEO, Standard & Poor's/Case-Shiller Home Price Indices, Bureau of Labor Statistics, Bloomberg²

Seasonal adjustments were made using a linear moving average.

Predicted changes in house prices based on a single-factor quadratic regression model developed by Dr. Emma Rasiel.

Exhibit 6

91% of changes in real house prices can be explained by changes in mortgage debt three quarters earlier



As of 31 December 2009

* Inflation adjusted and indexed to 1952 dollars

Source: Board of Governors of the U.S. Federal Reserve System, Flow of Funds Accounts of the United States, Section B. 100 Balance Sheet of Households and Nonprofit Organizations, OFHEO, Standard & Poor's/Case-Shiller Home Price Indices, Bureau of Labor Statistics, Bloomberg²

Seasonal adjustments were made using a linear moving average. Predicted changes in house prices based on a single-factor quadratic regression model developed by Dr. Emma Rasiel.

From the first quarter of 2006, however, the rate of change of outstanding mortgage debt finally began to decrease, even though absolute mortgage debt was still increasing. At this point, we finally saw home prices begin to come down. However, house prices fell by a whopping 25% (in real terms) between the first quarter of 2006 and the second quarter of 2008, even though aggregate mortgage debt was still increasing during this time. It was not until the third quarter of 2008 through the fourth quarter of 2009 that mortgage debt levels began to come down—i.e., that changes in mortgage debt became negative. By this stage in the delevering process, house prices had actually begun to stabilize, falling only 10% further from the third quarter of 2008 to the recent bottom in the first quarter of 2009. In fact, we have seen a small recovery in the housing market over much of 2009, even as consumer delevering of mortgage debt continues.

Once again, it seems reasonable to speculate that the nonlinearities in this relationship, occurring as they do during the period of significant intervention, may be directly related to the Fed programs.

Qualitative Considerations

We have conducted our modeling work against a backdrop that includes a range of factors we believe are driving the improved forecast.

1. A virtuous cycle. The success of governmental intervention in stabilizing home prices can generate organic demand, if potential homebuyers who have been waiting in the wings for low prices become convinced that the bottom has been reached. These new buyers will further stabilize house prices, creating additional positive momentum.

We had indicated in our August 2009 update that we expected to see house prices increase before falling again. In our outlook papers on U.S. equity markets⁵ for the third and fourth quarters of 2009, we highlighted the likelihood of higher home prices before a subsequent decline. We have since seen prices fall, but the decline was only 1% in total over four months (based on the seasonally unadjusted Case-Shiller 20 City Composite Index). While we did not expect a sharp decline in prices, we would have expected a bit more downside.

Significantly, press coverage of home prices has transitioned to seasonally adjusted figures, which have increased for 8 consecutive months. One key driver of our forecast in the short term had been seasonal factors. To the extent that buyers have seen eight months of reported price increases, in some cases quite substantial ones, the virtuous cycle continues.

2. The stealth foreclosure moratorium. The Home Affordable Modification Program (HAMP) has been revised more than a dozen times since it was announced in February 2009. These changes have been important on several levels. Perhaps the most significant aspect is that mortgage servicing companies are expected, and in some cases legally required, to ensure that borrowers have been offered the most up-to-date modification program before lenders can initiate the foreclosure process. With a major revision to HAMP almost every month, it has become quite difficult for servicers to keep up with the required software reprogramming and employee retraining. This has created a considerable barrier to foreclosure from a compliance perspective. One servicer described HAMP as little more than a moratorium on foreclosures, and we can see the point.

With the latest set of HAMP changes, announced on 26 March 2010, we expect an even more pronounced delay to new foreclosures, as the program revisions are even more extensive than those in the past. For example, the new guidance requires servicers to consider an alternative modification approach, including more principal write-down for HAMP-eligible borrowers that have a loan-to-current-value of more than 115%. Importantly, this program will not actually be in place until “late 2010.” At that point, “the servicer is required to retroactively consider extinguishing an amount

of principal balance in the same amount that would have been forgiven under the new alternative approach” for any borrower that has a permanent or trial modification and is current under the new payment plan.⁶

The other key aspect, in our view, is that HAMP modifications are likely to keep additional inventory out of the market, as mortgage modifications are increasingly being applied to prime as well as subprime mortgages, and as principal and payment reductions have become much more prominent features. Specifically, the quarterly Office of the Comptroller of the Currency (OCC) and Office of Thrift Supervision (OTS) Mortgage Metrics Report shows that for the modifications initiated in the fourth quarter of 2009, 42% of borrowers enjoyed monthly payment reductions in excess of 20%. This ratio compares to only 26.1% of borrowers in the fourth quarter of 2008. Interestingly, as recently as the first quarter of 2008, 64.3% of borrowers getting loans modified saw payments either stay the same or increase. In the fourth quarter of 2009, this percentage had declined to 17.8%.⁷

3. Financing conditions continue to improve. The market for mortgages not guaranteed by government-sponsored enterprises (GSEs)—such as the Federal Home Loan Mortgage Corporation (Fannie Mae) and the Federal National Mortgage Association (Freddie Mac)—is beginning to show signs of reopening. Additionally, we have seen anecdotal evidence that investors are seeking to purchase jumbo whole loans through a process known as reverse inquiry, in which mortgage providers are asked to originate loans with specific characteristics. Jumbo rates are at multi-year lows, and originations of jumbo loans have stabilized.⁸

Key Elements of Remaining Uncertainty

The extreme degree and breadth of intervention, discussed above, has led us over time to question the output of our model. With more recent data and research, we believe we can say with some confidence that the most negative outcomes are much less probable than we feared.

While we are more confident, there are numerous uncertainties that still could change our views. Among these:

- 1. Unemployment.** While there are signs of stabilization in the employment market, they are merely tentative. Although we are positively inclined regarding these signs, our confidence in a sustained material improvement is low.
- 2. The end of the Federal Reserve MBS Purchase Program could still lead to higher rates.** We had been concerned that the end of the MBS Purchase Program in

particular would lead to an increase in mortgage borrowing rates of as much as 100 basis points. It now appears that, while we might have gotten the headline right, the drivers of this increase are both different than we expected and potentially less detrimental to the housing market. Our concerns for mortgages relative to other securities have been mitigated by several factors:

- The GSEs purchased delinquent loans. In mid-February, Freddie Mac and Fannie Mae indicated that they would buy all mortgages that were over 120 days past due out of Agency MBS pools. The amount of loans to be repurchased totals approximately \$200 billion, reducing the supply of Agency MBS outstanding by an amount equivalent to about four months of Fed purchases. The GSEs will have to issue unsecured Agency debt to fund these purchases, implying that the total amount of debt outstanding will not change, although the basis could narrow.
- Gross supply of MBS declined. In mid-2009, originations of Agency MBS exceeded \$200 billion per month. By early 2010, originations had declined to under \$100 billion per month.
- Net new money flows into long-term fixed-income funds exceeded \$100 billion⁹ year-to-date through 7 April 2010. These flows were met with strong supply of corporate debt, but likely ended up in residential mortgages as well.
- Investors appear ready to fill the gap. Many investors have been structurally underweight Agency MBS given the huge demand from the Fed and Treasury, which collectively bought approximately 80% of all gross issuance in 2009. As the Treasury stopped purchases in December 2009 and the Fed gradually wound down purchases through the first quarter of 2010, these investors were poised to cover their structural underweight positions, especially considering the decline in yields available from other parts of the securities markets.

3. The duration of the economic downturn could force high-end homes onto the market. Looking at price tiers, we see that the high end has not come down as much as we would have expected. The wealthy had staying power through the trough. The question is whether they will be able to sustain that staying power if the economy remains weak for a more extended period of time than most commentators expect.

4. Reduced fiscal stimulus and higher tax rates in 2011. While the risk of a double-dip in the economy is widely viewed as improbable now, there are still substantial economic headwinds coming in 2011, as the fiscal stimulus spending that totaled approximately \$200 billion in fiscal

2009 (12 months ended 30 September 2009), and an additional \$404 billion in fiscal 2010, falls to only \$135 billion in 2011.¹⁰

This decline in stimulus spending occurs at the same time as the Bush tax cuts are scheduled to expire, leading to an increase in federal tax receipts of nearly \$500 billion.¹¹ This increase in tax revenue equates to 3.3% of the Congressional Budget Office's forecast of 2011 GDP, and represents an increase of 22.8% over the fiscal year ending 30 September 2010. However, if the Obama Administration's current budget plan were fully implemented, a number of tax increases would not occur, including those on taxpayers earning less than \$250,000. These changes, combined with revenue-raising plans (most of which we believe are unlikely to pass Congress), would cut the tax increase on the federal side to \$343 billion, or 2.3% of GDP. Even in this "good case," the higher tax burdens and lower stimulus spending and transfers are a real risk to the economy so early in a recovery.

5. Finally, one could argue that our model will no longer be reliable even after the crisis has ended, because we are witnessing the fundamental restructuring of the U.S. mortgage and housing markets. For example, in the past, default triggered a highly predictable chain of events over which the borrower lost either most or all control. In this cycle, the sheer scale of defaults has led to an ongoing series of changes to the foreclosure process. At times, the resolution process for defaulted mortgage borrowers appears more like a negotiation than the fulfillment of an existing contract. While we have been supportive of extraordinary measures by government to avoid a house price overshoot on the downside, one of many trade-offs is that cash flows from mortgages are now less predictable in terms of amount or timing. In our view, this decreased visibility will almost certainly lead to higher interest rates on mortgages relative to other securities in the future.

Further, we should note that the modification process is in itself a form of writing off mortgage debt, which is done through a reduction of the present value of the capital by moving the return of cash to a later date. Some of the common changes involved in modifications merely delay principal repayments, and transform a 30-year mortgage into a 40-year one. This is effectively a default on the original terms of the loan and represents a reduction in the present value of payments to the debt owners who financed the home purchase. As such, unlike in the past, the write-off of principal is implicit rather than explicit.

Conclusion

While we might not have seen the absolute low in national house prices, we do appear to be nearing one. However, the degree and breadth of intervention in the mortgage and housing markets by the federal government, the states, and the Federal Reserve preclude us from making confident predictions—especially since the landscape will change again as the interventions are scaled back.

The trade-off of the intervention and earlier stabilization in prices is that we are likely to see a period of several years in which home prices are rather lethargic. Prices have stabilized earlier and at higher levels than we had forecast, in large part due to government restrictions on the ability to foreclose on borrowers who default. The strategy of "kicking the can down the road" can be effective at avoiding an overshoot in prices to the downside, but it does not mean everything is solved. Many of the borrowers who are in default today and are in the process of modifying their loans will likely re-default later. Over time, the people who have the ability and willingness to pay will find a resolution, while the truly uncreditworthy will lose their homes. The good news is that, by avoiding an overshoot, the government has stopped a vicious cycle in which lower prices lead to more defaults, which then lead to lower prices.

Moving beyond this crisis, a bigger question to contemplate is how the mortgage loan industry will look in the future. The process around defaults has changed; right now, it appears to be a temporary change, but there is no guarantee of that. With the potential for a new regulatory structure around mortgage lending and the broad application of modification practices, we would expect to see changes in the interest rate on mortgages, relative to other securities, to reflect the decreased visibility of cash flows.

On the other hand, perhaps a move back to lending only to borrowers with substantial down-payments and sterling credit quality will make the mortgage industry one of the safest private sector lending arenas, once again.

Notes

- 1 It is important to note that, like Flow of Funds data, several previous quarters of Case-Shiller data tend to get revised from quarter to quarter, which may alter percentage changes by 50-100 basis points. For example, when the Case-Shiller estimates for the first quarter of 2009 were first released, they reflected a 6.9% decrease (in nominal terms) relative to the fourth quarter of 2008. These data were revised at the same time that the new data for the second quarter of 2009 were released, resulting in an updated reduction of 7.4% from the fourth quarter of 2008 to the first quarter of 2009—50 basis points worse than previously reported.
- 2 Aggregated U.S. house price data were obtained from two sources, the Office of Federal Housing Enterprise Oversight (OFHEO) (<http://www.ofheo.gov/hpi.aspx>), and the Case-Shiller Home Price Index (available from Robert Shiller's website: <http://www.econ.yale.edu/~shiller/>). The OFHEO data begins in the first quarter of 1975, while the Case-Shiller Index begins in 1987. We chose to merge the two series, because we believe the Case-Shiller Index provides a more accurate assessment of U.S. house prices in recent years. We used a simple regression model to “backdate” the Case-Shiller Index from its starting point in 1987 back to the OFHEO data starting point in 1975.
- 3 Source: <http://www.makinghomeaffordable.gov/docs/Mar%20MHA%20Public%20041410%20TO%20CLEAR.PDF>
- 4 Modification specifics from Home Affordable Modification Program (HAMP) report
- 5 Available at http://www.lazardnet.com/lam/us/literature_research.shtml
- 6 Quotes from http://makinghomeaffordable.gov/docs/HAMP%20Improvements_Fact_%20Sheet_032510%20FINAL2.pdf
- 7 Source: <http://www.occ.gov/ftp/release/2010-36a.pdf>
- 8 Source: Inside Mortgage Finance, Bloomberg
- 9 Source: ICI
- 10 Source: Congressional Budget Office, <http://www.cbo.gov/ftpdocs/108xx/doc10871/AppendixA.shtml#1097121>
- 11 Source: Congressional Budget Office, <http://www.cbo.gov/ftpdocs/112xx/doc11231/frontmatter.shtml>

Important Information

Published on 3 May 2010.

This report is for informational purposes only. It is not intended as, and does not constitute, an offer to enter into any contract or investment agreement in respect of any product offered by Lazard Asset Management, and shall not be considered as an offer or solicitation with respect to any product, security or service in any jurisdiction or in any circumstances in which such offer or solicitation is unlawful or unauthorized or otherwise restricted or prohibited.

The information and opinions presented have been obtained or derived from sources believed by Lazard to be reliable. Lazard makes no representation as to their accuracy or completeness. All expected or predicted opinions or data expressed herein are as of the published date, unless otherwise specified, and are subject to change.

Past performance is not a reliable indicator of future results.

BACKTESTED PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS. ONE OF THE LIMITATIONS OF BACKTESTED PERFORMANCE RESULTS IS THAT THEY ARE PREPARED WITH THE BENEFIT OF HINDSIGHT. AS A RESULT, THE MODELS THEORETICALLY MAY BE CHANGED FROM TIME TO TIME TO OBTAIN MORE FAVORABLE PERFORMANCE RESULTS. THERE ARE OTHER FACTORS RELATED TO THE MARKETS IN GENERAL OR TO THE IMPLEMENTATION OF ANY SPECIFIC INVESTMENT PROGRAM WHICH CANNOT BE FULLY ACCOUNTED FOR IN THE PREPARATION OF BACKTESTED PERFORMANCE RESULTS AND ALL OF WHICH MAY ADVERSELY AFFECT ACTUAL PERFORMANCE.

© 2010 Lazard Asset Management LLC. **Australia:** Issued by Lazard Asset Management Pacific Co., Level 39 Gateway, 1 Macquarie Place, Sydney NSW 2000. **Germany:** Issued by Lazard Asset Management (Deutschland) GmbH, Alte Mainzer Gasse 37, 60311 Frankfurt am Main. **Japan:** Issued by Lazard Japan Asset Management K.K., ATT Annex 7th Floor, 2-11-7 Akasaka, Minato-ku, Tokyo 107-0052. **Korea:** Issued by Lazard Korea Asset Management Co. Ltd., 10F Seoul Finance Center, Taepyeongno-1ga, Jung-gu, Seoul, 100-768. **United Kingdom:** For Professional Investors Only. Issued by Lazard Asset Management Ltd., 50 Stratton Street, London W1J 8LL. Registered in England Number 525667. Authorised and regulated by the Financial Services Authority (FSA0). **United States:** Issued by Lazard Asset Management LLC, 30 Rockefeller Plaza, New York, NY 10112.