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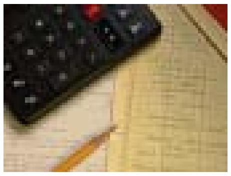

Economics & Financial Markets

United States Equity Markets

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March 1, 2009

Forecasting the end to the Current Recession: Housing the last Stumbling Block: Part II

I. **Introduction**

In January and February of 2008 we argued that the recession will end and the markets will rebound when there is sufficient evidence that the "underlying conditions that caused the recession are successfully resolved." Since the recession began oil prices have come down, the government has created the TARP, and TALF programs, we have had two stimulus programs, the banking system while still teetering on collapse at least there are programs to stabilize the major banks. The missing link however is housing. Home prices continue to fall and as long as home price are declining the banks cannot be stabilized, and they will not lend sufficiently to bring back the economy. Housing is the final stumbling block to the beginning of a recovery.

II. **Core Principles: When Do Recessions End**

In January of 2008 we established four necessary principles for the economy to emerge from a recession and for the market to rebound. These principles are:

> "Principle #1: In each recession the market recovery occurred only when there was sufficient evidence that the underlying conditions of the recession were resolved or perceived to be effectively concluded.
>
> Principle #2: The FFBond relationship needs to be clearly in the positive for the financial institutions to be expected to recover, and in each recession this relationship went negative prior to the recession.
>
> Principle #3: Traditional valuation metrics in a recession are virtually useless, as are traditional economic forecasting metrics for understanding when the economy will rebound. The necessary

condition is the cause of the recession must be addressed and only those metrics that can speak to that issue is relevant for the market prior to a rebound.

Principle # 4: No two recessions are alike and the remedy for resolving the problem are all indeterminate but dependent only on the cause of the recession. The fed is often the cause, but the fed is only the reactive cause and not the true cause."

More than a year later we still feel comfortable with these principles.

III. The Recession of 2007 to 2009

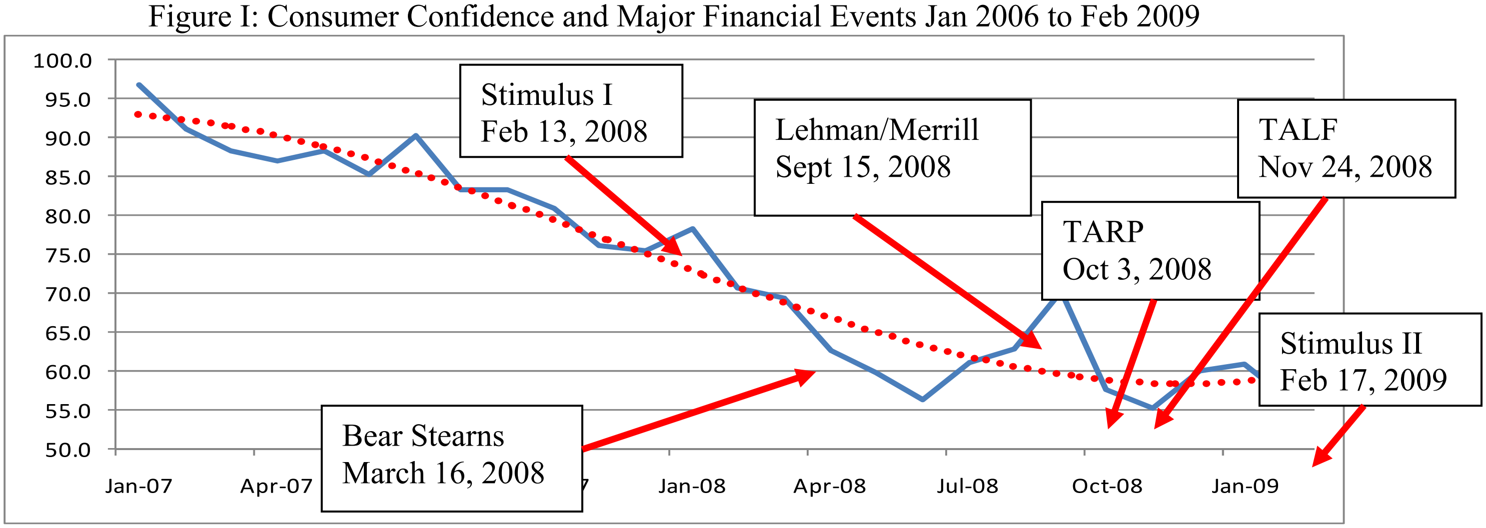
The Historians of the recession of 2007 to 2009 will likely determine that the cause was easy credit and lax regulations on the bundling and leveraging of non secure assets, which caused the financial institutions to nearly collapse. The recession of 2007 to 09 required three conditions, in the above language to be addressed before we can effectively believe that the recession will end. These conditions are:

1. The banking system needs to be stabilized
2. Home prices need to stop declining and
3. The price of gasoline needs to remain under $2.75 per gallon.

Since the summer of 2008 the price of gasoline which was over $4.10 per gallon has fallen to the current level of just under $2.00 per gallon. The banking system while weakened and near collapse has been stabilized sufficiently with the help of the government programs from TARP and TALF, and are now being evaluated with respect to stress tests to determine how much money is need to continue to prop up the banks and the entire financial system. The one remaining area that caused the banking system to fundamentally fail is the fallout from the home mortgage crisis, the component that has received the least governmental attention.

Governmental Response to the Current Economic Crisis

Figure I: Consumer Confidence and Major Financial Events Jan 2006 to Feb 2009



Source: University of Michigan, SISR, WSJ

The NBER has identified that the recession of 2007 to 2009 began in December of 2007. Since then there have been 5 major government responses to the crisis. Figure I is a time line of these events. The early 2008 recognition that the economy was slowing, lead to the first Stimulus bill passed in February of 2008. Since then the next major governmental program coincided with the fall of Lehman and the sale of Merrill which various versions to infused capital into the troubled banks.

The TALF was created a month later when it was realized that many of the assets on the bank balance sheet which were originally thought to be purchased by the Treasury in the TARP authorization, were too massive and complicated to enter into such a purchase agreement. In response, the Fed created TALF I on November 25, 2008 which was expanded to TALF II on February 10, 2009 with 5 times the assets. Its intent is to begin to use the troubled assets as collateral for loans to the banks, which they hope will begin to create a market for these assets. On February 18, 2009 after much ranker the Obama stimulus bill was signed into law. Since then there has been elaboration of TARP II with some assistance to homeowners of about 50 Billion of the nearly 2 Trillion spend on the Financial system or 2.5% of the 2 trillion allocated to the financial system???

IV. Are all the necessary Conditions in Place for Ending the Recession – No Housing is still Uncertain

With the TARP and TALF the banking and financial system appears to have been stabilized and the systems are in place to prevent additional major bank failures. However, the housing crisis is continuing to put pressure on the banking system, and the home mortgage is the one area that the government may have under invested in. With home prices still falling at 2.5% to 3% m/m rate of decline, this decline is continuing to causing extreme havoc on the banking system, and until home prices stabilize, this recession will not be over.

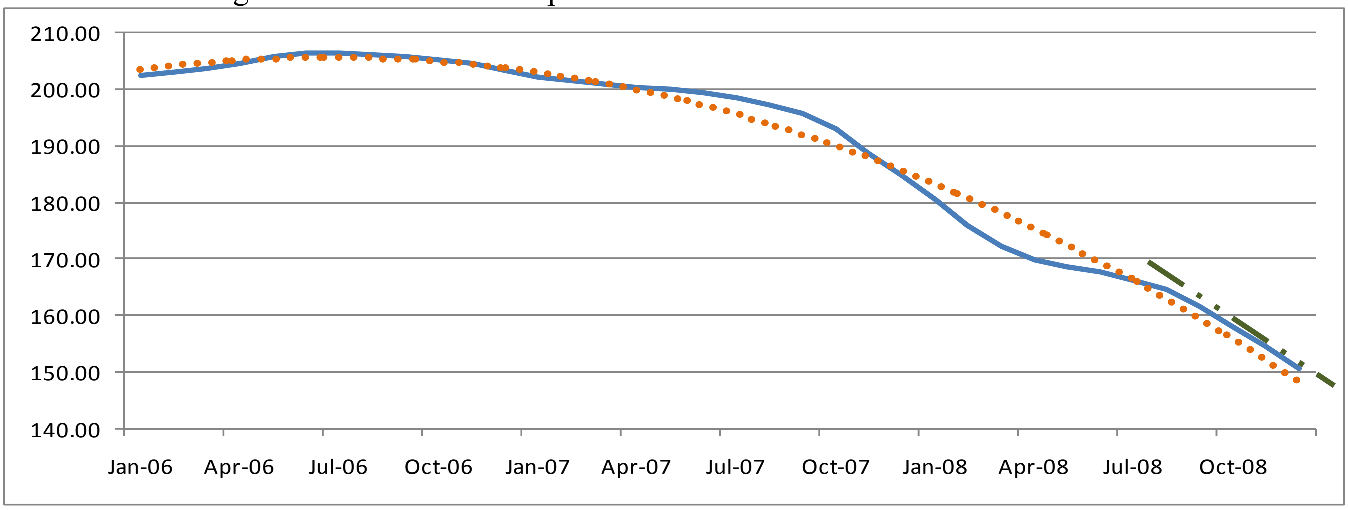
The banking system as we knew it may never be the same, but the banking system will survive this crisis with the assistance of the TARP and TALP programs. Unfortunately, with all the attention on preserving the banking system, we have seen much more limited efforts in dealing with the mortgage crisis. Given the above time line from Figure I it is reasonable that the current out turned out the way it has, because the banking system was in near collapse in August of 2008, a condition that is unsustainable with too many repercussions to even begin to consider. Unfortunately, for the past few years the governmental systems have been reactive instead of proactive.

The new 2009 Stimulus program will be of limited help because it will increase personal per capita income which is critical for this crisis to finally come to an end. However, as long as home prices are falling and the home owners are being foreclosed upon, the banks will continue to lose money and there will be no stabilization to the system. We are currently fighting a bottomless pit and in many ways addressing the effect and not the cause.

A. Case Shiller

The S&P Case Shiller index for December declined from 154.55 to 150.66 for the composite 20 cities a 2.52% decline, and declined from 166.00 to 162.17 a decrease of 2.31% for the 10 city composite. The slope of the decline increased over the past five months Figure III). The Case Shiller index show a constant slope of decline from August to the present a five month average of between 2 and 3% each month.

Figure III: Case Shiller slope of the decline in Home Pirces 2006 to 2009

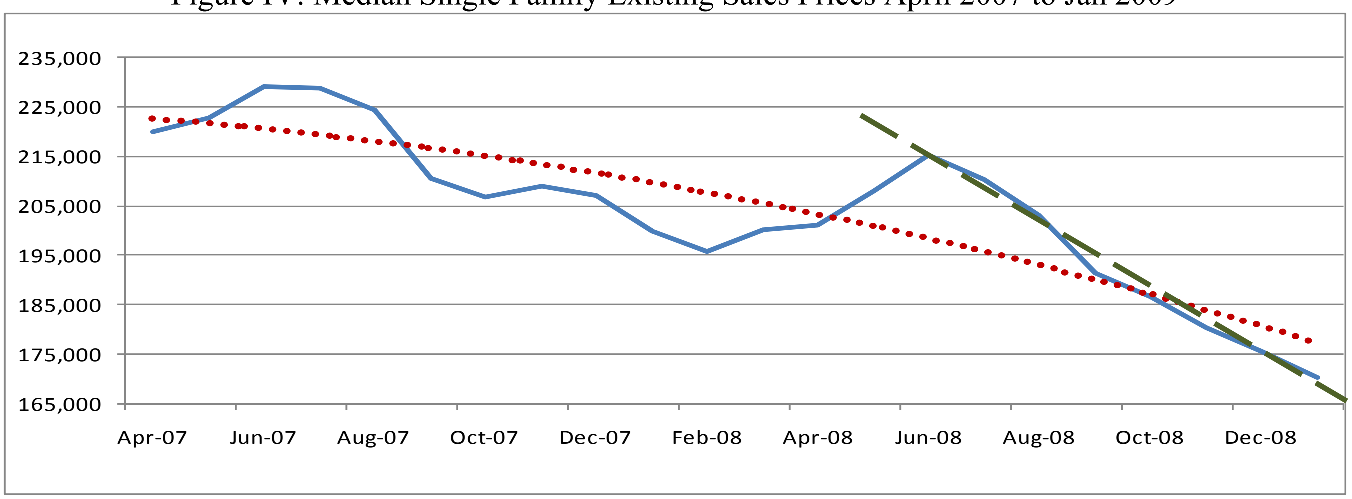


Source: S&P Case Shiller, SISR

B. National Association of Realtors (NAR)

The median sales price of home declined again in January of 2009 with a constant slope of decline since June of 2008. January 09 existing home prices fell 3.07% after falling 2.55% in December of 08 and 3.32% in the prior month of November.

Figure IV: Median Single Family Existing Sales Prices April 2007 to Jan 2009



Source: National Association of Realtors, SISR

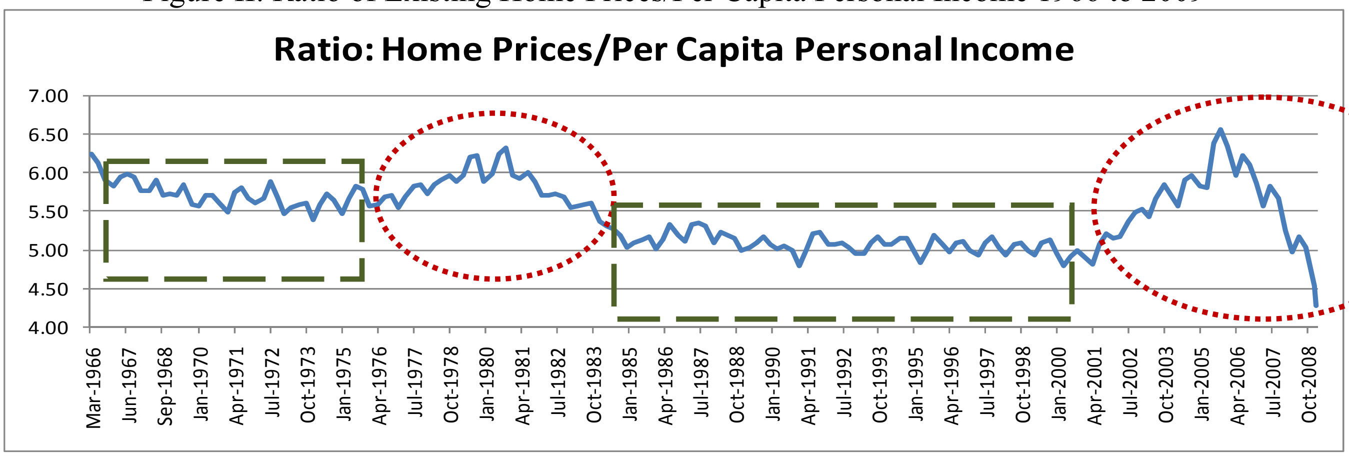
These falling home prices are the final stumbling block to ending this recession and the banks will continue to lose money and teeter on failure until home price stabilize. Once home price stabilize the recession will finally be near it end.

V. Home Prices likely to Decline by another 15% over the next 4 Months

There are many measures which can project when home prices will stop declining. Many theorists look to various home affordability indices. The affordability index, however, does not capture the full equation. The necessary equation includes the supply of homes, affordability, lending conditions and various systemic shocks to the system, interest rates, unemployment, energy costs, and inflation among many others.

In many ways all of these factors are included in the simple ratio of existing home prices over per capita income (EH/PCI). The price of the home will be affected by inflation, unemployment, home inventories, affordability, the lending environment; and per capita income is a good indicator of how able individuals are to maintain their homes. The ratio also is the long run equilibrium between home prices and income.

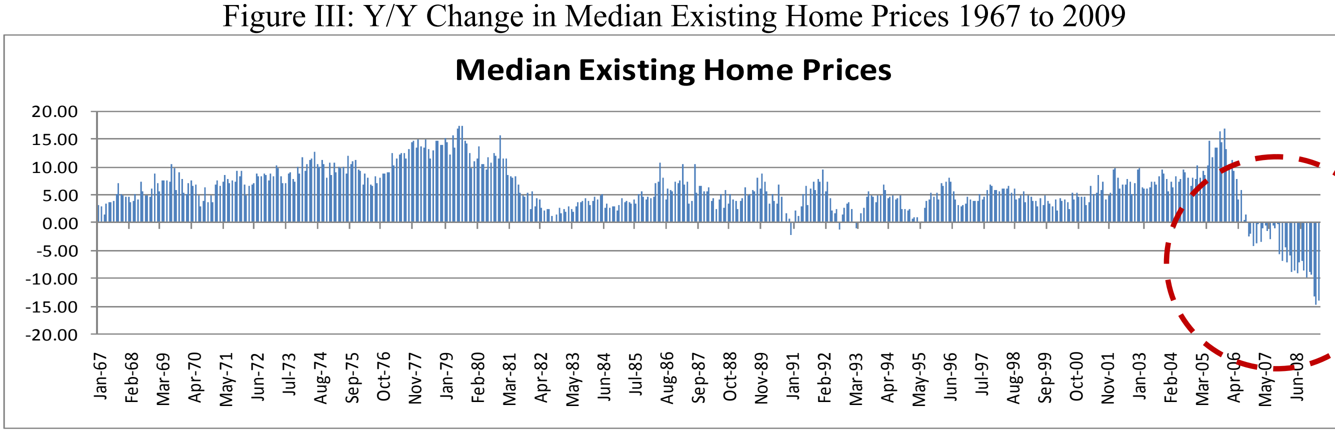
Figure II: Ratio of Existing Home Prices/Per Capita Personal Income 1966 to 2009



Source: NAR, BEA, SISR

In the late 1970's and early 1980 there was an increase in the ratio only to see it crash and again stabilize at a much lower level. That lower level like the stable level of the late 1960's to late 1970's lasted for 20 years until it rose again in the early 2003 period. The steady state condition indicates that there is a long term relationship between income and home prices with these two indicators moving together in times of inflation, unemployment, and other economic events.

Figure III: Y/Y Change in Median Existing Home Prices 1967 to 2009



Source: NAR, SISR

One of the more interesting aspects of the 1980 and the mid 2000 increases in the ratio is that we are currently in uncharted territory. During the post war period we have never experienced an instance in U.S. history where we have had home prices decline. There was only one month on a year over year change basis in 1991 when home prices dropped less than 1%, but NEVER have we seen a phenomenon like we are currently seeing, where homes are down 20 to 30% nationally, and more in certain regions.

The irony is why does the EH/PCI ratio in Figure II look so similar between the 1980 spike and the 2000 spike? In the late 1970's we had a period of very high inflation, actually the highest during the post war period. The increase in the ratio was a consequence of home prices following the rate of inflation with income lagging. The reversal had home prices stable but income catching up to create the period of equation. Stability occurred when income began to rise with home prices remaining constant.

The late 1970's and early 1980's recession ended in November of 1982. Stability in the housing market occurred in 1983 to 1984 when the EH/PCI ratio which had gone from a 10 year average of 5.65 up to 6.32 an 11.78% increase and then dropped 20.89% to 5.05. This indicates that after the shock of the recession and the housing crisis, it took more income per dollar of home value to achieve equilibrium.

The higher relative income per dollar of home value was required to soak up the excess inventory. Stated differently for a given level of income home prices needed to come down, more than the equilibrium that had existed in the prior steady state condition. We expect to see the same pattern in 2009 with a drop in the steady state line of equilibrium.

In mid 2006 we saw the ratio peak at 6.56 a 30.02% increase. Currently the ratio has fallen back to 4.28 a 34.76% drop in the ratio. Assuming the patterns are the same we would expect that the ratio is likely to fall to about 3.6% which would be a 45.12% drop in the ratio. At constant income home prices we would need them to fall to $143,053 from the current $169,900 which would be another 15.8% drop from the current price of the medium existing home to have a 3.6 ratio.

At the current rate of decline of 2.5% (Case Shiller) to 3.07% (NAR) we would expect that home prices would continue to decline for another 4 months prior to stabilizing with the EH/PCI ratio at a much lower level than the two decade average of 5.05, and be closer to a 3.6 ratio. The lowering of the ratio is caused by the sucking up of the excess home inventory to the point where personal income and home prices are again in equilibrium. As home price exceeded their equilibrium ratio of income to home prices the markets eventually collapsed from its own weight.

VI. Stimulus Package 2009

The stimulus of 2009 has many aspects to the package. Slightly less than 40 percent of the package is for tax cuts. The problem with rebate checks and tax cuts are that if they are temporary in nature, the recipient will treat them as such and it will not be calculated into their expected income stream. In that respect it will be spent and treated as found money, hardly having a long term desired effect. The merchants who receive an increase in orders from this limited program will similarly treat these events are limited onetime events and will not reorder beyond this one event. Once the onetime event is over we return to the prior state with no long run impact. This is exactly what happened to Stimulus I in February of 2008.

The current tax cuts in the 2009 Stimulus package are a bit better in that they are mostly payroll tax savings which will continue for a few years and each household will have a little extra money, approximately $18 per week. Great news, but it is better than Stimulus I in that the expectation is that this will last for a period and there will be some adjustment in spending habits, as limited as it may be. The infrastructure components are better but it will take time to figure out what to do and how. An example of this is that the $25 B allocated for the auto industry has had zero allocated because the energy department is still reading proposals on which programs are viable for energy alternatives. At this rate there may not be any U.S. companies around to receive the money.

Despite these factors the key to the housing stabilization is the increase in per capita income and the stabilization of home prices, so people can afford them. If the stimulus bill is ever spent and the stimulus finally comes, it will increase the denominator which is a positive. It is likely that PCI will increase faster than home prices, as it did in the 1980s. While this will stabilize the economy the bank recovery may be delayed.

VII. Conclusion

Using the EH/PCI ratio we are projecting that home prices will decline another 15% prior to the period when home prices stabilize. Based on the current rate of decline, as indicated in Case Shiller and NAR, home prices will stop declining in May or June of this year. The rate of decline in both the Case Shiller and the NAR report since August has been at a constant slope of between 2.5% and 3 %.

If our assumptions are correct we can expect that home prices will hit bottom in about 3 to 4 months at this current rate of decline. By then the stimulus programs should begin to kick in and the denominator of the EH/PCI equation will increase meaning that affordability will be slightly enhanced. If all these assumptions are correct we should see the end of the recession by then.

To put a positive spin on this report we are likely to see the end of this recession by midsummer, which is not to say that we will go straight up, but at least begin the long trek back. It has been more than a decade and the major market indices have gone nowhere. We are likely to see improvement in the indices sooner rather than later if this analysis is correct.

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