RCM

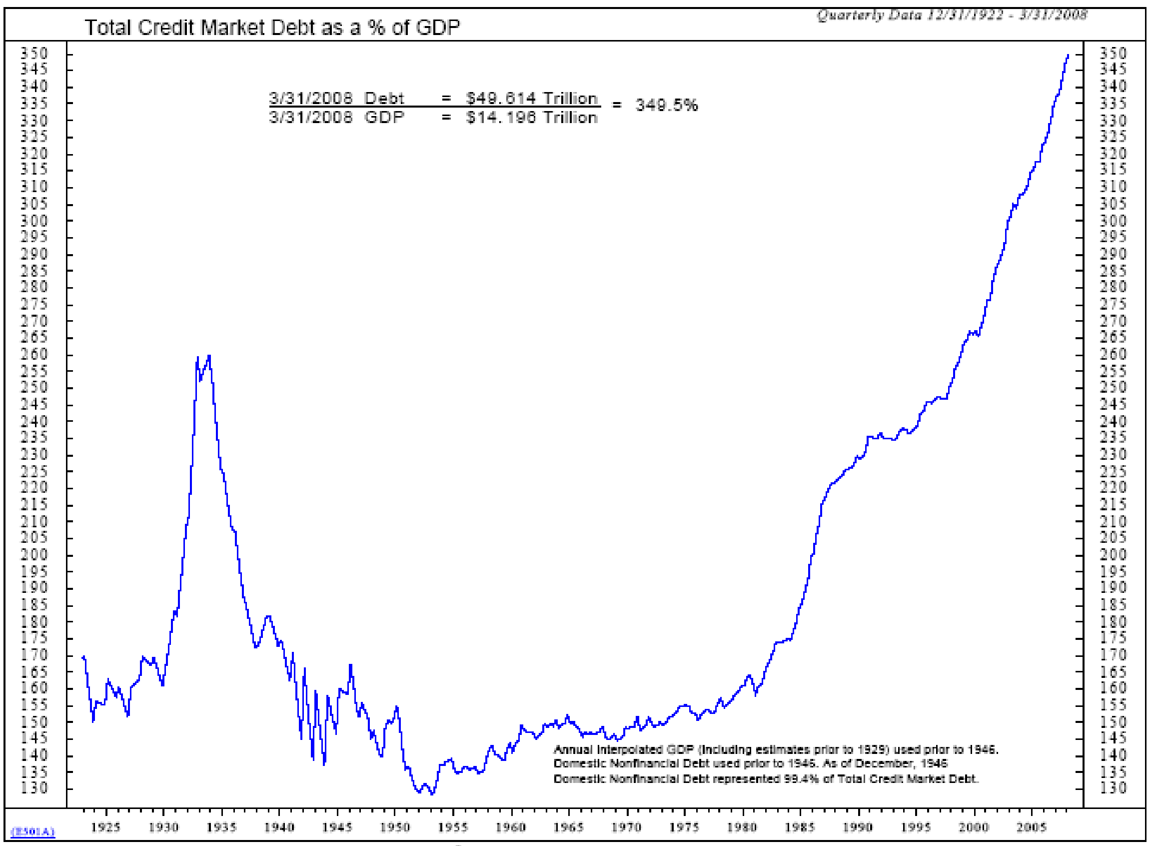
<u>Financial Crisis: Coming Of The Second Wave</u>
<u>Why The Second Wave Is Inevitable</u>

To: GPC and FICO
From: Frank Veneroso

June 19, 2008

<u>Executive Summary</u>

1. Why a second wave in the financial crisis must come is captured in the following chart.

2. 

3. This is a macroeconomic ratio of total debt to GDP. Macroeconomic ratios cannot go on unending moon shots.

4. But it has been a moon shot. How can that be?

5. Even though we have had a severe financial crisis the ratio of total credit market debt to GDP keeps on rising. It even rose in the first quarter of this year as the financial crisis intensified because fee hungry lenders continue to engage in expanding credit to profligate over-indebtedness borrowers.

6. Can the moon shot in the debt to GDP ratio keep going on, like so many assume? The answer is, reversal is imperative now. Why?

7. There has always been mean reversion in real house prices in the post war period. House prices according to the Schiller Case Index had fallen 17% by the end of April. Extrapolations from some survey data say the decline was 20% by the end of May. Today the country's biggest real estate broker told us that, based on contracts being written now, home prices will have declined by 30% by the end of summer. Mean reversion in house prices is a 35% decline.

8. If home prices fall nationwide by 35%, a huge share of almost all mortgage debt will be deeply underwater. When mortgages are well underwater there are defaults and foreclosures. The odds are high that in the shakeout that will follow the total credit market debt to GDP ratio will finally fall from its moon shot trajectory.

9. The inevitability of large losses extends beyond mortgage losses. These added losses should further ensure an end to the moon shot, at least in the private debt to GDP ratio.

10. There is another reason why reversal is imperative now. There are no more serial bubbles to be blown that are beneficial to income and output, even in the short run. The housing bubble was able to bailout the bursting of the tech bubble because it lifted household wealth and in turn employment, income, and output. Not so, the next new bubble now underway – the commodity bubble.

11. The public is not on board this bubble. They are not feeling richer day by day. Rather, the public is exposed to commodities primarily as goods which they must buy to use. This bubble – and in particular the oil bubble – is taxing them and thereby making them poorer.

12. Now the serial bubblization of the Fed and Treasury portends recession, not recovery.

13. The reflation of credit and the economy engineered in this decade by the second bubble will not now happen again with the now well established third toxic oil bubble. The policy makers are in a box. The end of the moon shot in the debt to GDP would appear at hand.

14. Is there a way out? A partial answer is if the speculation in commodities really blows up. $60 oil will help a lot. It will help avoid serious recession which might make the financial accelerator go out of control.

15. The other partial answer is that eventually the government will turn private debt into public debt. We are not there yet. When the second wave comes and things get very ugly, this will then happen.

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<u>Financial Crisis: Coming Of The Second Wave</u>
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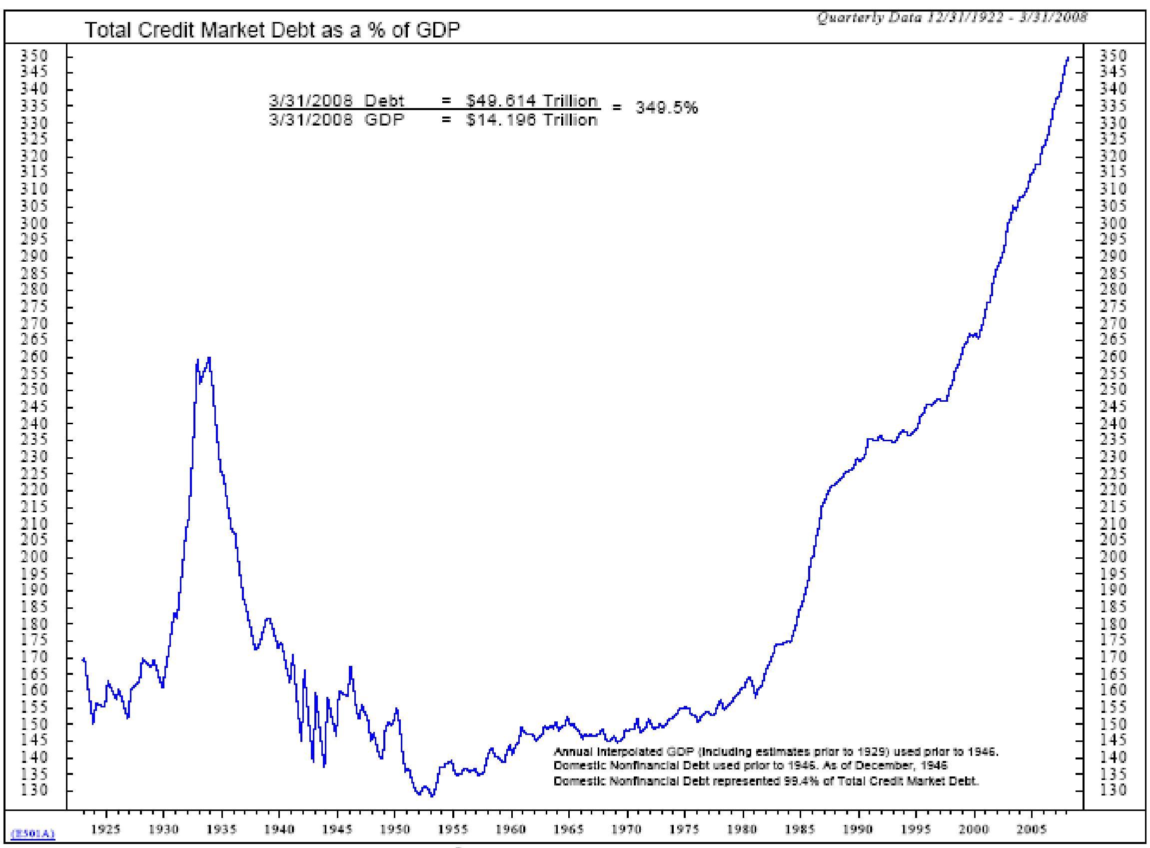
It is complex business to explain why a second wave in the financial crisis must come. One must explain why all the measures taken by the Fed and Treasury to date are not nearly enough. One must explain why the current extended debt structure is untenable, not only eventually but now. It would be nice if one could explain the sequence by which the second wave unfolds.

I have been trying to do this in a fairly complete document and it has proven to be a complex and lengthy process. But above all there are two simple considerations, when taken together, make the inevitability of the second wave crystal clear.

The first consideration is captured in the following chart.



This chart shows something that has gone vertical, something that is on a moon shot. If it were the GDP of Argentina in pesos I would agree that the moon shot could go on and on. But it is not the Argentine economy in domestic money terms. It is a macroeconomic ratio of total debt to GDP. Macroeconomic ratios cannot go on unending moon shots. They are basically mean reverting series. In many cases, such as an economy's investment ratio or its profit ratio, these values tend to be more or less the same on average over long periods of time. There are some such ratios that exhibit an upward bias or a downward bias; the ratio of service output to GDP and the ratio of industrial production to GDP are examples. But even though there may be a secular "tilt" to the mean, the shift in that mean is always gradual. Over short periods of time like a decade or so mean reversion tends to bring you close to where you came from.

For the above ratio of credit market debt to GDP there is no gradual tilt to this ratio over the last two decades. It has been a moon shot. How can that be, given that it is a macroeconomic ratio? Is there anyway this ratio can avoid a significant reversal – let alone reversion to the mean?

If we look back in history, we see one prior vertical takeoff in this ratio – the period from 1930 to 1933. In that episode economic agents did not want to increase their aggregate debt to GDP. The ratio rose because a combination of rapid price deflation and rapid output declines caused the denominator of the ratio – GDP – to fall in half. The numerator – outstanding debts – was more stubborn, as debt contracts are written in nominal terms and they are not readily extinguished by default or inflation.

It is noteworthy how this enormous spike in the debt to GDP ratio occurred. A very bad recession from mid 1929 to mid 1930 started to take the denominator – nominal income – down rapidly. As I explained in my note last week (*Financial Crisis, Coming Of The Wave Second, The Interlude: The Great Fake Out*, June 16, 2008), according to the theories of Friedman and Schwartz, Irving Fisher and Ben Bernanke the subsequent rise in private debt relative to nominal income set into motion monetary and credit dynamics which sent nominal income into a downward spiral and the debt to GDP ratio into an upward spike.

The resulting financial and economic carnage was so great that all economic agents wanted mean reversion. But debt is a stubborn thing to dislodge. It took a generation encompassing a wartime inflation to revert to the mean and eventually overshoot it to the downside.

Over the last year the U.S. has undergone the worst financial crisis in the three generations since that horrific episode of the 1930s. Even though we have had a severe financial crisis the ratio of total credit market debt to GDP keeps on rising. This could have occurred because government was socializing debt, but that has not happened yet. Private debt to GDP rose as rapidly last year as it did before the onset of the financial crisis. It even rose in the first quarter of this year as the financial crisis intensified. But unlike the 1930s, when this ratio rose even though economic agents did not want it to rise because nominal income was falling, in this episode the private debt to GDP ratio has kept rising because fee hungry lenders continue to engage in expanding credit to profligate over-indebted borrowers.

If one looks at this chart with a historic perspective it is clear that this ratio cannot keep on rising. But if you ask people in the market place whether we must go though a period in which credit falls sharply relative to income they will say that need not be. It is widely acknowledged that it has taken several units of debt to produce a unit of GDP in recent years. Most people strangely assume that will be the case in the next recovery. The same attitudes hold for our policy makers. They do not talk about an eventual reduction of credit relative to income. They talk about providing new channels of credit to offset constricting ones; for example, expanding the lending of the GSEs to offset the falloff in securitizations.

Can the moon shot in the debt to GDP ratio keep going on, like so many assume? Or has something happened that makes at least a reversal, if not mean reversion, imperative now?

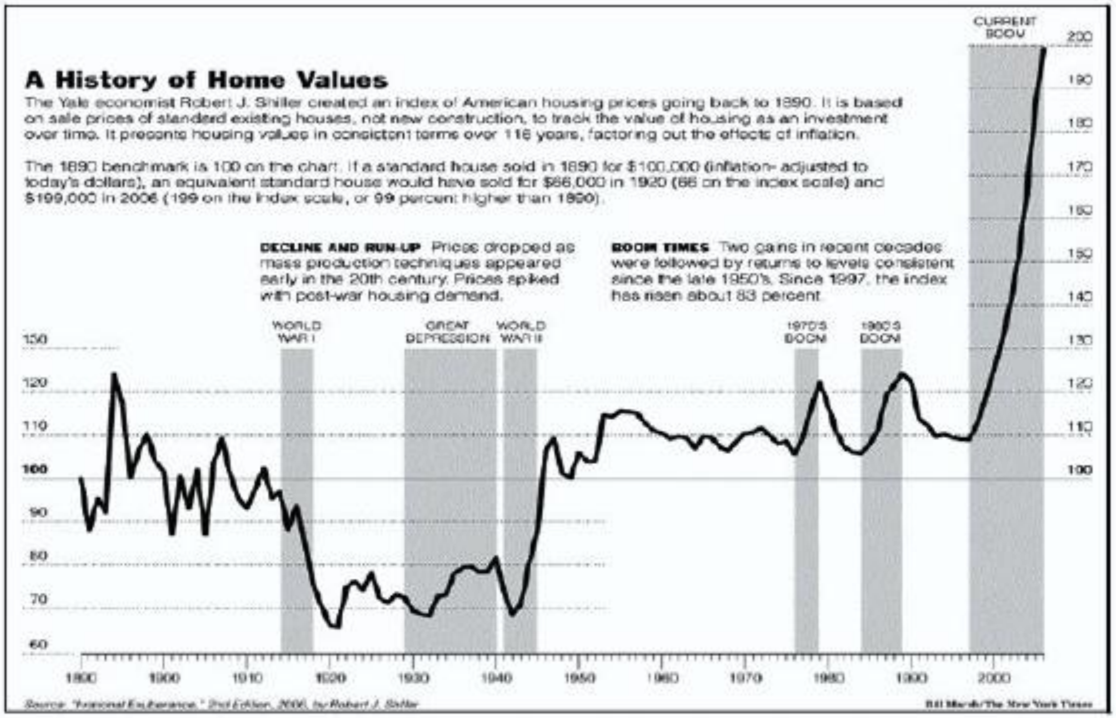
The answer is, reversal is imperative now. Why? It is widely understood that starting in the mid 1990s we entered into a historically novel path of serial bubblizations. Each asset bubble went hand-in-hand with an expansion of credit to the private sector. The bursting of the first bubble threatened the economy and the fabric of finance. Therefore, the policy makers had to act to engineer a new bubble with its hand-in-hand credit expansion to offset the dangerous fallout of the bursting of that prior bubble.

The first bubble was the bubble in tech stocks. Its' bursting threatened economy and the fabric of finance. The policy makers engineered a second bubble in housing which went hand-in-hand with a bubble in housing finance. That new bubble overcame the deflationary threat of the bursting of the tech bubble. Serial bubblization worked – for a while.

But housing prices are now falling. Though private household indebtedness keeps rising the fall in housing collateral now threatens the continuation of that process.

From this point of vantage we can see why the reversal of the moon shot in the debt to GDP ratio is imperative. First, house prices now seem to be in an unstoppable downward spiral. Yes, much lower mortgage rates could make housing more affordable than in the past. That might prevent a complete reversion to the mean in house prices. But despite the Fed’s cutting the policy rate by 325 basis points mortgage rates today are higher than where they were before the credit crisis began.

Here is the famous chart of the bubble in house prices.



-*Robert Schiller*, August 28, 2006, New York Times

There has always been mean reversion in real house prices in the post war period. Mean reversion will involve about a 35% decline in nominal house prices this time around. House prices according to the Schiller Case Index had fallen 17% by the end of April. Extrapolations from some survey data say the decline was 20% by the end of May. Today the country's biggest real estate broker told us that, based on contracts being written now, home prices will have declined by 30% by the end of summer.

U.S home prices will fall another 10 percent this summer, according to Henry Silverman, chief executive officer of Realogy Corp., the country's biggest residential real estate brokerage.

Silverman said his estimate was based on current open contracts for home purchases, which he described as a lead indicator because "if you sign a contract now, you will close in September." Home prices will decline a total of 30 percent, he said.

-Bob Ivry, "U.S. Home Prices to Fall 10 Percent This Summer, Silverman Says", June 18, 2008

There is a futures market in home prices. The futures prices keep falling. This futures market now predicts a 35% decline from the peak by some time next year. That is a complete reversion to the mean. The country's biggest residential real estate broker tells us mean reversion may come sooner.

Mean reversion in house prices makes reversal in the debt to GDP ratio a very, very high probability. Why?

It has been calculated from the flow of funds accounts that the ratio of aggregate mortgage debt to residential real estate value reached a peak of 50% when the home price and home finance bubbles reached their peak at the end of 2006. But the flow of funds accounts do not capture second and third mortgages. They do not capture the home equity loans that are in portfolios other than those of the commercial banks. There is a large "other" household debt item in the flow of funds accounts which includes various such claims against residential real estate collateral. I encountered one ratio calculated by the housing finance industry that suggested that, at the home price peak at the end of 2006, the aggregate loan to value ratio was 57%.

In the interim there has been some addition to the real stock of residential collateral. There has also been additions to aggregate mortgage claims through new lending and the reverse amortization of many outstanding mortgage loans. If home prices fall nationwide by 35%, it follows that the average loan to value ratio will exceed 90%. About 30% of all residential real estate in value terms is without a mortgage. For all real estate with a mortgage, the distribution of mortgage indebtedness is very skewed. With the average loan to value ratio rising to almost 90%, a huge share of almost all mortgage debt will be deeply underwater.

All studies show that when mortgages are well underwater there are defaults and foreclosures. This applies to the majority of mortgage debt classified as prime as well as the margin of mortgage debt classified as subprime. If home prices mean revert, the odds are high that in the shakeout that will follow the total credit market debt to GDP ratio will finally fall from its moon shot trajectory.

So far I have discussed why falling home prices and failing mortgage debt must probably end the moon shot in the debt to GDP ratio. In fact, the debt excesses lie beyond housing and its mortgage finance. I have discussed the broader and more complex picture in many prior papers. The inevitability of large losses extends beyond mortgage losses. When you total the potential default losses up they are horrendous.

I have been leapfrogging the competition continually for a year now in estimating what these losses will be. When the competition said they would be $300 billion, I said they would be $600 billion. When the competition said they would be $300 billion, I said they would be over $1 trillion. When the competition said they would be $600 billion, I said they would be $2 trillion." Soon came the IMF leapfrogging the competition with an estimate of almost $1 trillion. Today the hedge fund manager John Paulson has leapfrogged the IMF with an estimate of $1.3 trillion.

"John Paulson, founder of hedge fund Paulson & Co., said global writedowns and losses from the credit crisis may reach $1.3 trillion, exceeding the international Monetary Fund's $945 billion estimate. We're only about a third of the way through the writedowns."

Tom Cahill and Poppy Trowbridge, "Paulson & Co. Says Writedowns May Reach $1.3 Trillion", Bloomberg News, June 18, 2008

Reality will leapfrog the IMF and John Paulson. The losses coming from all quarters will be staggering. I think they will be enough to end the moon shot, at least in the private debt to GDP ratio.

Is there any light at the end of the tunnel? Yes, when the government turns a lot of private debt into government debt. We are not there yet. To get there things must get uglier, there must be a second wave. Then a rise in the government debt to GDP ratio will allow the private debt to GDP ratio to fall.

This is the first reason why rising relative indebtedness must reverse soon, why a second wave is imperative.

There is another reason why. There are no more serial bubbles to be blown that are beneficial to income and output, even in the short run. The housing bubble was able to bailout the bursting of the tech bubble because it lifted household wealth and in turn employment, income, and output. Not so, the next new bubble now underway – the commodity bubble.

When the credit crisis intensified late last summer I was told that the Treasury instructed the investment banks to not force deleveraging on the hedge funds. The implication was the financial authorities did not want the mortgage based crisis to spread to other parts of the financial system. Whatever happened, it seems that the highly leveraged investment banks and hedge funds were shielded from the credit contraction. Their leverage ratios remained high. In the first quarter, with the crisis centered on Bear Stearns, one would have thought a major deleveraging in the investment banking sector would have occurred. But the Bear Stearns bailout apparently provided a different message.

According to the first quarter flow of funds accounts the financial sector did not deleverage. Instead, faced with yet another bailout and a guarantee of easy money and more bailouts to come leveraged speculators set off the third bubble – the commodity bubble.

But the effects on the economy from the commodity bubble are very different than those of the housing bubble. The public is not on board this bubble. They are not day trading tech stocks and feeling richer day by day. They are not buying second homes and investment homes, pyramiding their real estate wealth. The public's involvement in the commodity bubble market is vestigial at most. Rather, the public is exposed to commodities primarily as goods which they must buy to use. This bubble – and in particular the oil bubble – is squeezing the bejesus out of everyman. Rather than being a new bubble that makes households feel richer, it is a bubble that is taxing them and thereby making them poorer.

The serial bubble solution to the problem of prior bubbles and the financial fragilities they spawn has come to a dead end with a third toxic oil bubble the financial authorities did not expect and do not want – the commodity bubble. Now the serial bubblization of the policy makers portends recession, not recovery.

The reflation of credit and the economy engineered in this decade by the second bubble will not now happen again with the onset of the third bubble. The policy makers are in a box. The end of the moon shot in the debt to GDP would appear to be at hand.

Is there a way out of this second dilemma that portends a second wave? Yes, in part. With the commodity bubble it is easier since it is only a speculation to the point of manipulation. If Paulson and the administration stopped protecting the speculators and manipulators and blew them up and we got $60 oil, the worst would be avoided. Yes, some financial institutions feeding off the commodity bubble would probably go bust, and there is a danger in that. But better that than a severe oil led recession that puts a heavy foot to the financial accelerator economy wide.