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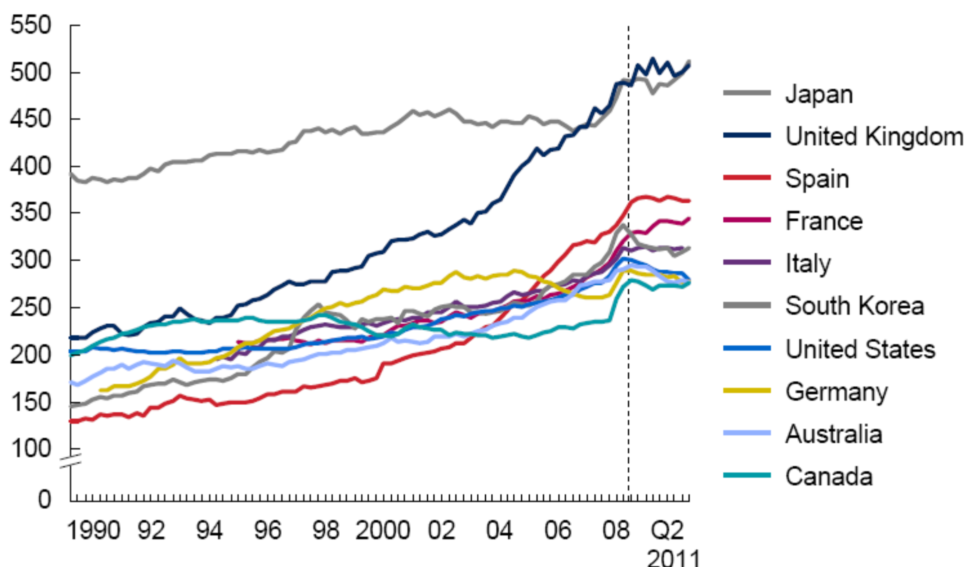
**The Resolution Of The Global Debt-To-GDP Bubble**
**And The Raging Bull Thesis**

As shown in the chart below, the overall level of debt relative to economic output or gross domestic product (GDP) in the world's major economies reached a point of historic excess that culminated in the financial crisis of 2008. Yet, debt to GDP has more or less only leveled off since the crisis. The imbalance has yet to be resolved. One could argue that we still remain at the peak of an historic global debt bubble. Indeed, we may be. However, the impending resolution of the debt-to-GDP bubble is not a reason for deflationary concern. In a global fiat currency world, debt-to-GDP bubbles are more likely resolved by inflation or by a combination of *real growth* and *inflation*. In contrast, deleveraging through austerity and deflationary default is much more common when government central banks adhere to hard money standards.




[1] Includes all loans and fixed-income securities of households, corporations, financial institutions, and government.

Source: McKinsey Global Institute

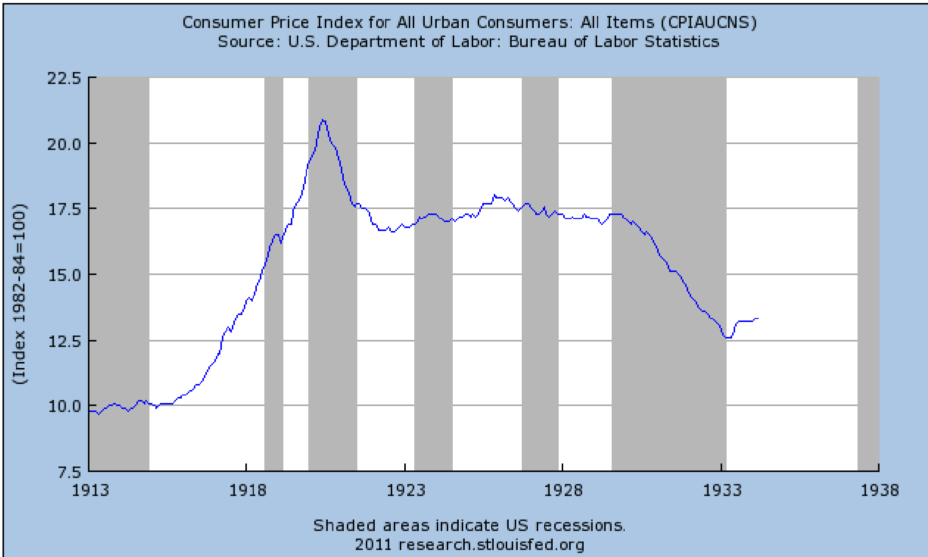
In the U.S. in particular, we are encouraged at the prospects in the intermediate term for *real* economic growth with only moderate inflation, a macro environment that could definitively lift the economy out of

The Great Recession. The conglomeration of Crescat macroeconomic themes, including **New Oil and Gas Resources, Nanoscale**, **Digital Evolution**, **U.S. Housing Recovery, and Global Fiat Currency Debasement** leads to an intermediate term Raging Bull Thesis for U.S. stocks.

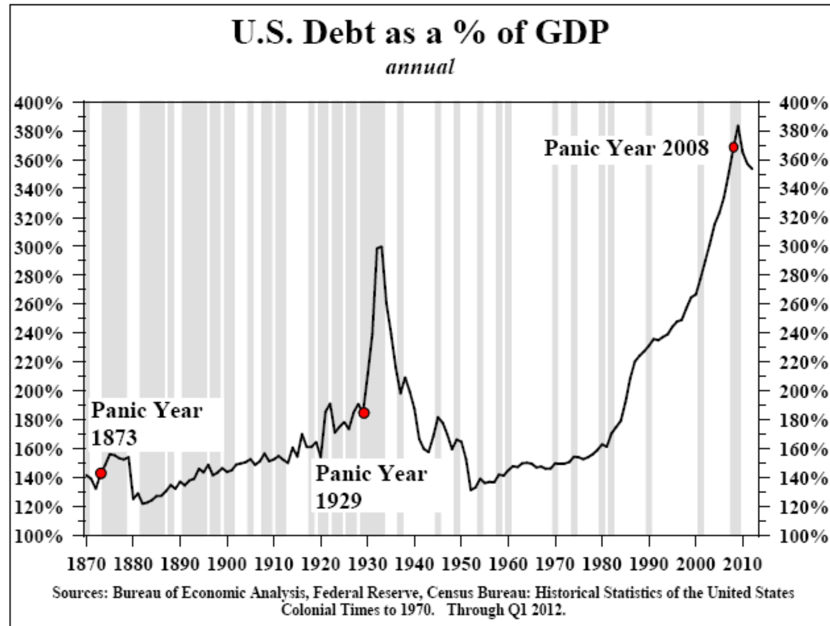
In the longer term, we are concerned that the Raging Bull thesis will morph to a Raging Inflation one as expansionary monetary and fiscal policies go too far, forcing market participants to adjust to higher inflation. Ultimately, inflation should prove the conclusive reconciler of the global debt-to-GDP bubble, but we are encouraged by the opportunity for real economic growth to go along with it, particularly in the medium term.

Many people believe that the excessive debt-to-GDP imbalances will be resolved by outright debt defaults and deflation. While debt defaults are an inevitable part of a debt-bubble cleansing process, fiat central banks and entrenched politicans are determined to avert their deflationary effects, and they have the tools to do it.

Deflation is a drop in the overall level of prices for goods and services, which pushes debt-to-GDP levels higher by increasing the nominal value of debt at the same time as it decreases nominal GDP. We saw this effect at work in the U.S. from 1929 to 1932 during The Great Depression. At that time, severe deflation (see the CPI in the chart below) contributed to plunging nominal GDP and spiking debt-to-GDP levels (shown in the second chart below).



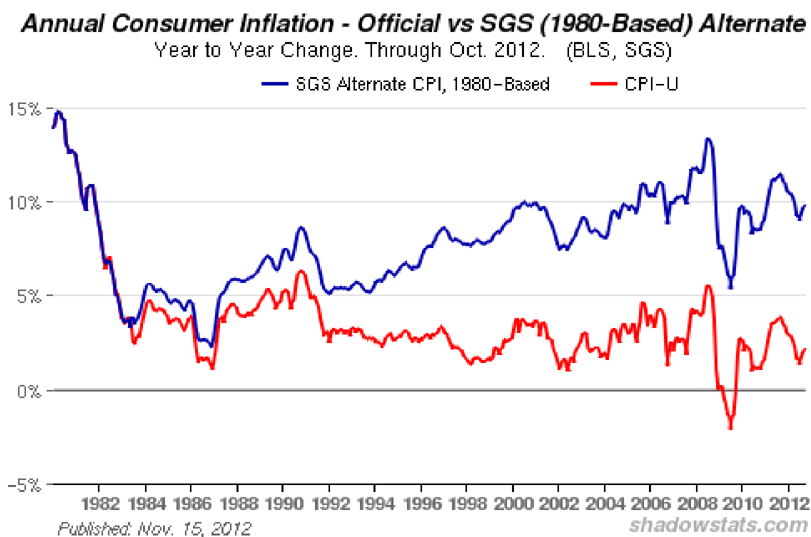

Source: Federal Reserve, U.S Department of Labor, Bureau of Labor Statistics




Source: Hoisington Investment Management Company

Debt-to-GDP bubbles tend to reach their peak point of maximum unsustainability after a finanical panic and amidst a profound deflationary (i.e., cash hoarding) consciousness. Three major financial panics are highlighted in the chart above, courtesy of Hoisington.

Already, due to the Fed's extraordinary monetary stimulus, in contrast to The Great Depression and in spite of some very real deflationary pressures, actual deflation in the wake of the 2008 financial crisis has been either extremely short-lived and minimal or nonexistent. One's view depends upon how one measures the general level of prices of goods and services. We look at two approaches to measuring inflation in the chart below.




Source: U.S. Department of Labor, Bureau of Labor Statistics (BLS), Shadow Government Statistics

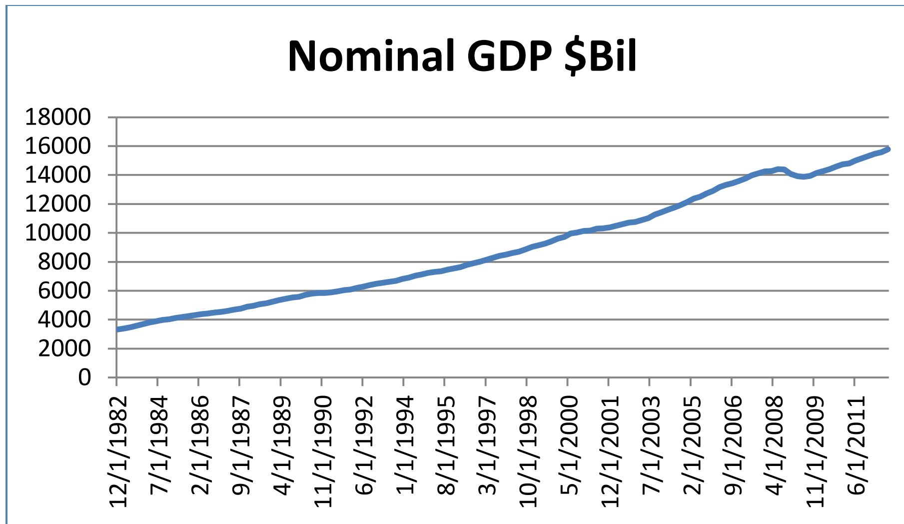
The red line is the U.S. government's measure of inflation, the change in the Consumer Price Index (CPI), courtesy of the BLS. It shows only minor deflation for a brief period in late 2008. The blue line is a forensic calculation of CPI, courtesy of John Williams, which shows no deflation at all post 2008. The BLS uses concepts and methods advocated by the Boskin Commission to revise actual measured consumer prices, mostly downward. These concepts are called "hedonic" and "substitution" adjustments and are an area ripe for abuse. Williams allows for the concept of hedonic adjustments (quality improvements) and accepts the BLS adjustments there. But he argues that the substitution concept is false. To use the Boskin Commission's example, substitution is the idea that if the price of steak goes up, one can substitute hamburger. The problem is that substituting hamburger for steak in the CPI basket does not measure the price of a constant standard of living. The BLS new method for making downward substitution adjustments to CPI, "geometric weighting", is particularly egregious. It uses a model to adjust the weight down for every good and service in the CPI basket that is going up, and the weight up for every good and service that is going down.

The problem with relying on a government measure of inflation is that governments have incentives to understate it. Here are several of them to consider:

1. Keeping inflation expectations low in order to keep real interest rates low, thereby making expansionary monetary and fiscal policies more effective at low points in the business cycle;
2. Containing growth in entitlement payouts linked to cost of living adjustments (COLAs);
3. Raising government revenues through taxation of inflation; and,
4. Keeping interest costs down on inflation-linked bonds. (e.g. TIPS)

The Boskin Commission's recommendations for downward adjustments to measured levels of consumer prices have been consistently adopted by the BLS since the early 1980s with overwhelming bipartisan support. In any case, whichever series one believes is closer to the truth, Williams' or CPI (we favor Williams'), *inflation*, *not deflation*, has predominated since the 2008 crisis. The only good news is that inflation has decelerated relative to pre-crisis levels.

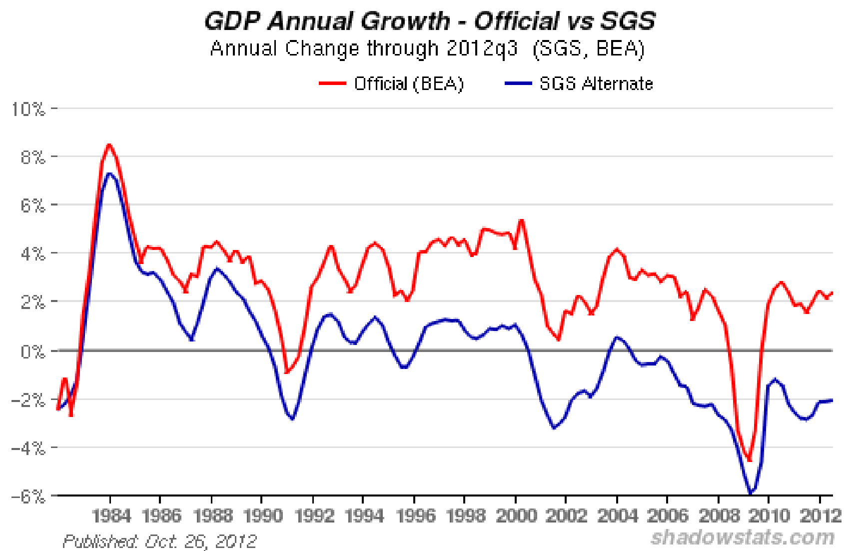
Another way to understand that we have not been undergoing a massive deflation, as in 1929 to 1932, is to consider the chart of nominal GDP post 2008. It did not plunge, but only declined modestly in 2008 and early 2009, and it has strongly rebounded to new highs. Positive nominal GDP growth can only be a result of two things, inflation or real economic growth.




Source: Bloomberg, Federal Reserve

If we assume that Williams' calculation of inflation is closer to the truth, then, based on extended negative real GDP growth as represented by the blue line below, we have been going through what many have been calling The Great Recession.

**Chart of Real GDP Growth**

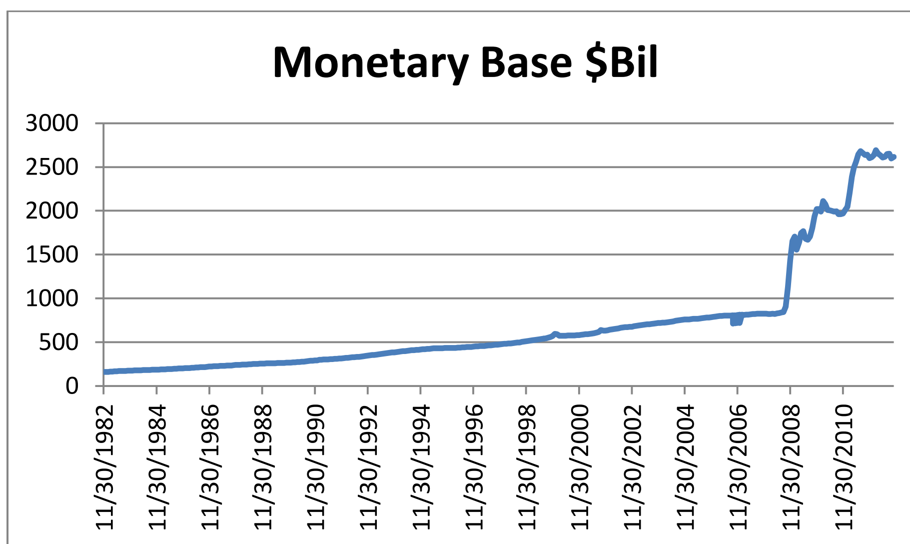



Source: Shadow Government Statistics

If indeed the U.S. has been through a great recession, i.e., depression, it has been an inflationary, not a deflationary, one. Perversely, many who believe we have been through, and are still going through, The Great Recession, also believe that it has been marked overall by deflation.

The reason that we have generally been through a period of inflation, and not deflation, is that the Federal Reserve has been able to increase the money supply to counteract the natural deflationary pressures of the 2008 financial crisis. In contrast, during the sharp deflation of the Great Depression from 1929 to1932, the U.S. adhered to a gold standard that precluded expansionary monetary policy. Ultimately, U.S. policy makers under FDR were forced to devalue the dollar relative to gold in 1932 to create new dollars and therefore, inflation. The gold standard was abandoned under Nixon in 1971, kicking off a decade of stagflation.

The amount of new dollars created by the Fed since the 2008 credit crisis is shown by the dramatic increase in the monetary base in the chart below.




Source: Bloomberg, Federal Reserve

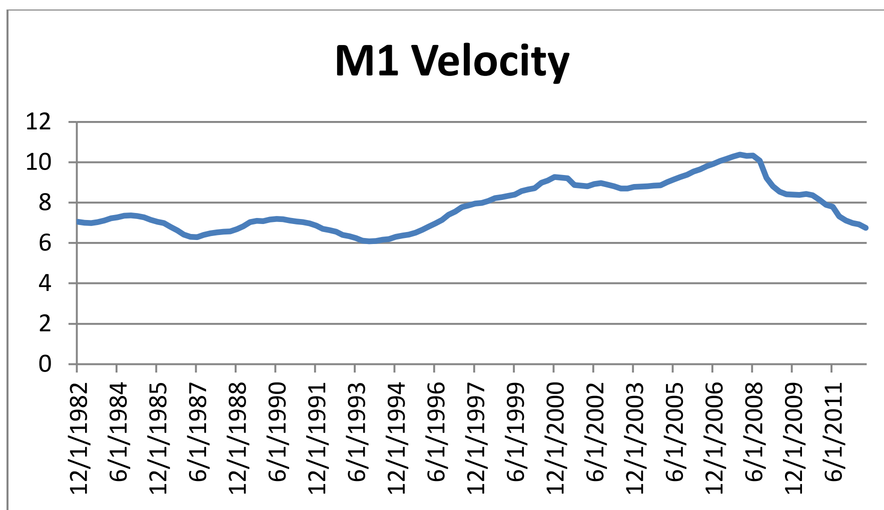
Today we live in a global fiat money world, where central banks and fiscal policy makers are ultimately responsible for maintaining the value and stability of their currencies and, thus, the overall inflation rate, absent a hard money standard. Central banks can create money out of thin air. Such an ability is important to combat true deflationary forces, but it is also subject to abuse by policy makers who have a strong inflationary bias.

Central banks all over the world have been aggressively creating new money to prevent deflation and stimulate their economies in the post-2008 financial crisis world, and they have largely succeeded, at least on the deflation prevention side.

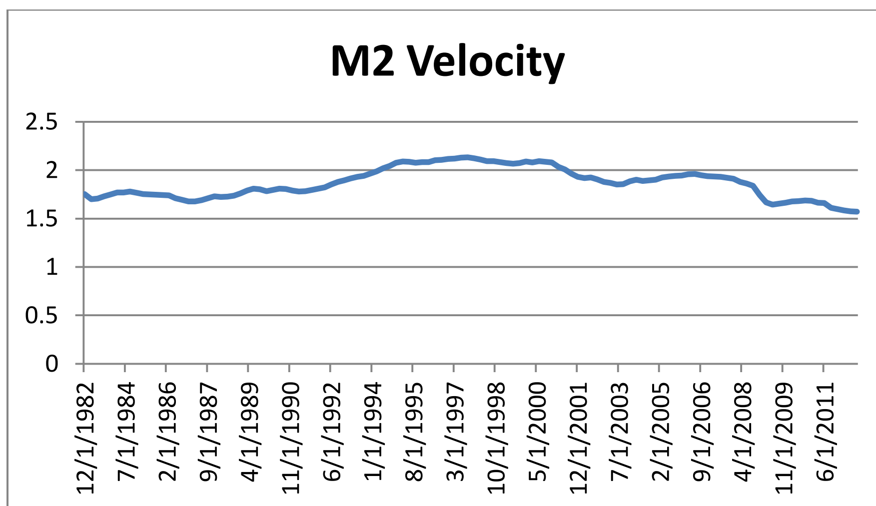
There have indeed have been deflationary forces, at least to date, that have justified aggressive monetary expansion. These deflationary pressures have revealed themselves in monetary measures such as the *velocity of money* and the *money multiplier*.

Money velocity declines when there is a high demand for holding cash balances among economic participants as opposed to using that cash for consumption and investment. A declining money velocity is a sign of a deflationary investor consciousness. It is a deflationary force.

In the short run, inflation can swing above and below the rate of money supply growth based upon variations in money velocity. Money velocity is how many times money changes hands in a given year to purchase new goods and services. Economists used to believe that money velocity was relatively constant, but that has not been true during the last two decades. Money velocity has proven to be a function of inflationary versus deflationary cognitive and behavioral biases in the marketplace.

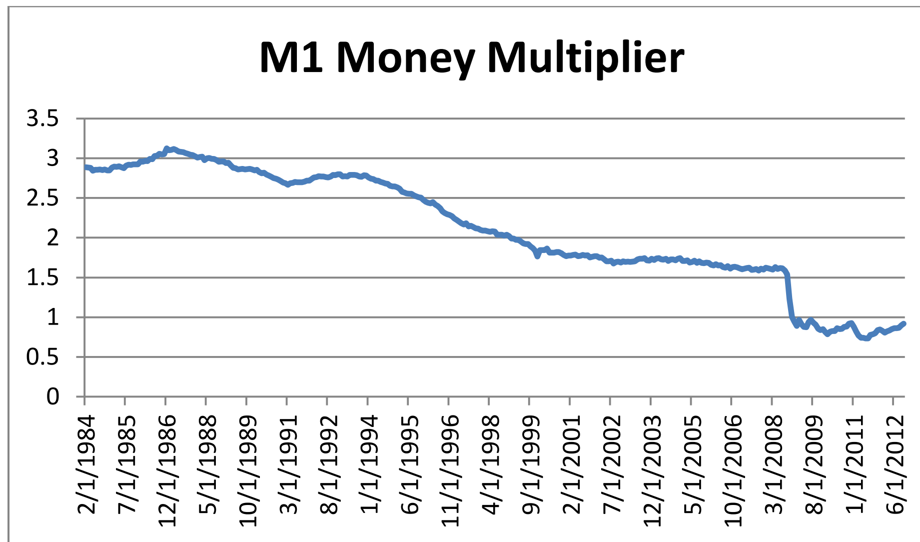



Source: Bloomberg, Federal Reserve

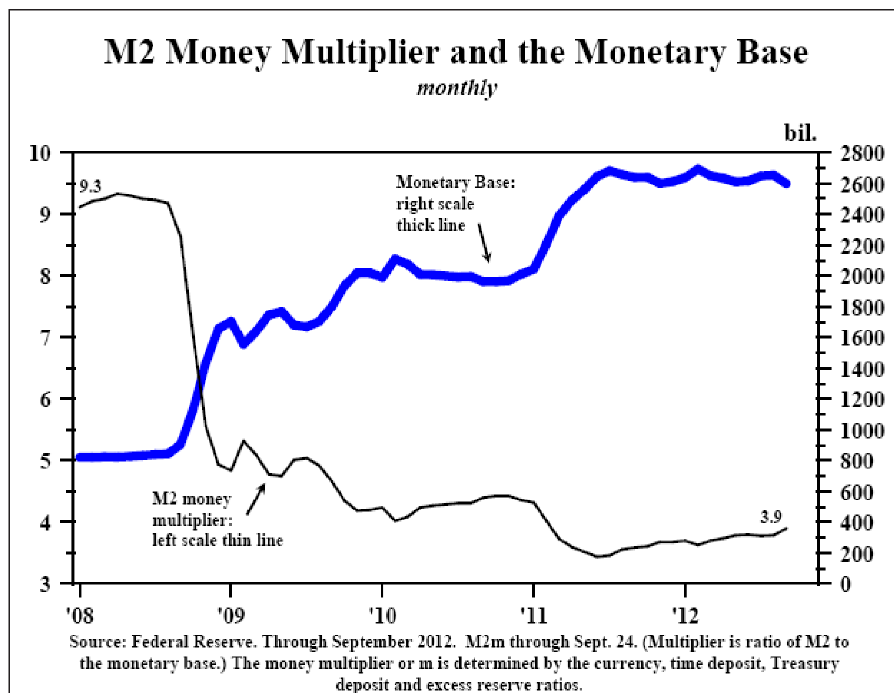



Source: Bloomberg, Federal Reserve

The money multiplier is similar to money velocity but it is function of how much banks are lending. A low and contracting money multiplier is a sign of bank conservatism in its traditional core lending function combined with declining demand for new loans by borrowers. A contracting money multiplier is a deflationary force, indicating both a declining supply and demand for new loans. The money multiplier recently has shown signs of stabilization and increase, indicating that banks are starting to lend again.



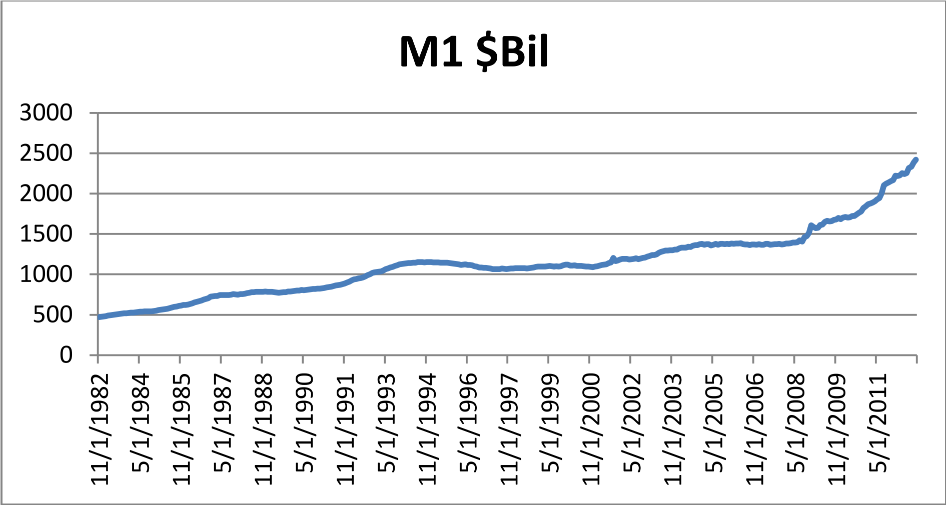

Source: Bloomberg, Federal Reserve



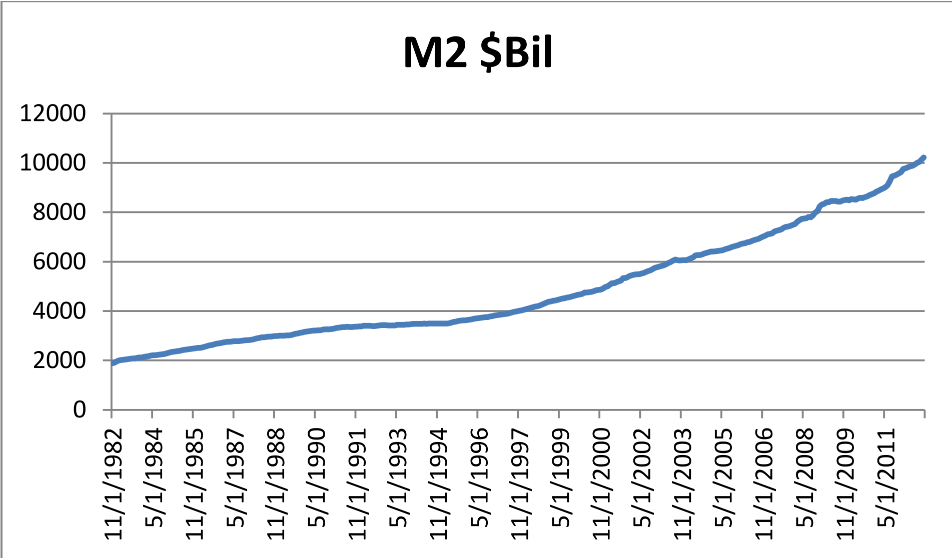

Source: Hoisington Investment Management

Economists have demonstrated that inflation in the end is driven by the growth in the money supply. The money supply is a function of both the monetary base (MB) and the money multiplier (MM). The money supply (M) is known in two forms today, M1 and M2. M1 is currency in circulation plus bank demand deposits, and M2 equals M1 plus large time deposits (M1 = MB x M1V and M2 = MB x M2V). Nominal GDP is also a function of the money supply, and of money velocity (GDP = M x V).

Despite the deflationary forces of declining money velocity and a low money multiplier in wake of the 2008 financial crisis, the overall growth in the money supply (the driver of inflation) as measured by either M1 or M2 has persisted due to the Fed's aggressive expansion of the monetary base.




Source: Bloomberg, Federal Reserve




Source: Bloomberg, Federal Reserve

**Conclusion:**

**Deflationary pressures have counterbalanced massively aggressive central bank stimulus since the 2008 financial crisis to draw out a plateau of extreme debt-to-GDP levels globally. Aggressive monetary policy has worked to counter deflationary pressures, but as economists have confirmed, monetary policy works with a lag. The lag effects are due to kick in powerfully to reverse the deflationary trends in money velocity and the money multiplier, increase nominal GDP, and reduce overall debt-to-GDP levels, even in the face of fiscal restraint.**

**Deflationary consciousness continues to rage, but investors should not confuse central bank interest rate suppression with deflation. When a central bank deliberately creates an environment of negative real interest rates, it is an inflationary force, not a deflationary one. We see an intermediate term sweet spot in the U.S. economy amidst an ongoing deflationary wall of worry at a time when a significant real economic recovery is beginning. Low equity valuations with respect to the current low interest rate environment and improving fundamentals are further support for an emerging Raging Bull Thesis for U.S. stocks.**

**The 'fiscal cliff' is perhaps the most advertised pending recession in U.S. history, but it appears to us to be a bear trap for investors. The fiscal cliff is a straw man set up by policy makers to be knocked down with ongoing deficit spending, interest rates suppression, monetization of debt, and the surreptitious inflation tax. It is a bipartisan economic deal that is already done and in full swing. Fear over the fiscal cliff, i.e., a sharply contractionary fiscal policy of severe tax rate hikes and spending cuts in the face of an otherwise fledgling economic recovery, continues to fuel the current deflationary market consciousness.**

**Deflation remains the predominant cognitive market bias that will allow the aggressive Fed monetary policy to be effective, particularly in the face of the fiscal straw man. We could be entering a period of strong nominal economic growth where both real and inflationary components of nominal GDP conspire to confound the conventional wisdom still mired in deflationary consciousness to lift the economy out of The Great Recession. Ultimately, real economic growth can only be generated by productive allocation of capital and human resources across the household, business, and government sectors. We see that playing out through three Crescat macro themes in particular: New Oil and Gas Resources, Digital Evolution, and Nanocscale.**

**If we go over the full fiscal cliff due to a partisan stalemate that leads to more extreme tax hikes and spending cuts, it will be a rocky set up to the Raging Bull Thesis, to be sure. However, we do not see that as likely since politicians have a tendency to avoid their own suicide. However, we can easily see the lame duck Congress bridging the deal into the first quarter of 2013 instead of completing it in December. In the end, the fiscal cliff should prove to be more bark than bite, much like the Y2K computer problem, the tech sector's straw man of 1999.**

**The mosaic of Crescat's current macro themes points to a self-reinforcing period of nominal, including real, economic growth in the U.S., one that could confound market participants by driving P/E multiples higher and equity risk premiums lower under ongoing Fed-dominated low**

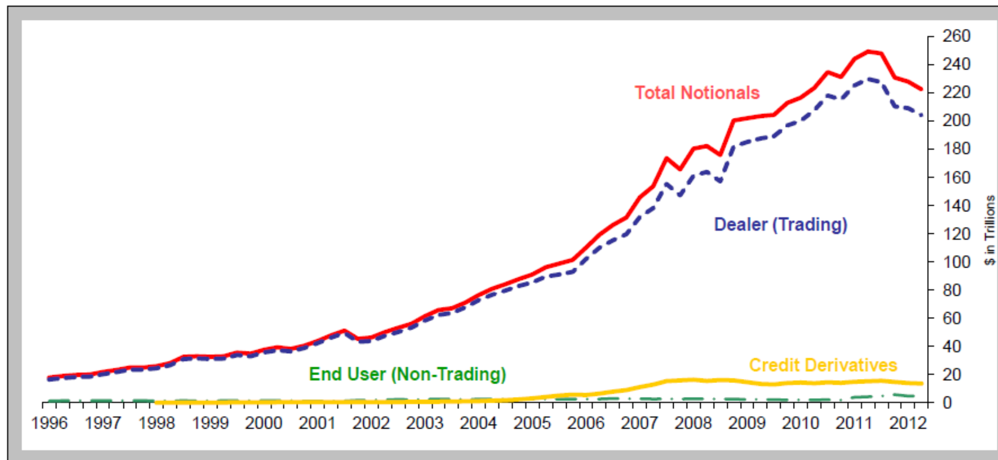
nominal and negative real interest rates. In the end, any fiscal compromise or even going over the full fiscal cliff, however unlikely the latter might be, would be a welcome deflationary force to counteract otherwise highly inflationary Fed monetary policy.

Eventually, we see the Raging Bull Thesis morphing to a Raging Inflation one. For now, we see a sweet spot for the U.S. economy, and the stock market, that could drive our outlook for the next several years as we transition from a period of deflationary/recessionary consciousness to one of continued nominal and emerging new real economic growth based upon a combination of Crescat macro themes.

The Crescat themes that support the Raging Bull Thesis are the Resolution of Debt-to-GDP Bubble, New Oil and Gas Resources, Nanoscale, Digital Evolution, U.S. Housing Recovery and Global Fiat Currency Debasement. Crescat's China Infrastructure Bubble and Aussie Housing Bubble themes counterbalance and hedge the raging bull themes. Contact Crescat and request a Firm Presentation for more information on these themes.

The biggest risk to our Raging Bull Thesis is a disorderly loss of control of low interest rates by the Fed, particularly in the off-balance-sheet derivative markets. Fortunately, we see a trend emerging of declining notional values of derivatives as shown in the chart below. This, so far, has been happening absent a major financial crisis or rise in interest rates. This indicates the Fed could be overseeing an orderly reduction in the systemic notional exposures of interest rate derivatives, an encouraging trend.

**Derivative Notionals by Type of User**
Insured U.S. Commercial Banks and Savings Associations




Source: U.S. Treasury Department, Office of the Comptroller of Currency

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