Forecasting Beyond the Credit Crisis – Part 3: The Money Supply

In part three, we move to examine a more broad-based, macro economic variable: the money supply

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Over the past several issues, a case has been made for continued dismay in the financial markets based on two metrics: the Dow/Gold ratio and Price/Earnings ratio, using the Dow Jones Industrial Average as a market proxy. Both figures point to the fact that markets are currently entangled in a secular bear market which should continue for some time to come. This month, we move to examine a more broad-based, macro economic variable: the money supply. While the last two ratios were based exclusively on stock market figures, the money supply stands in stark contrast. This input is controlled by a central organizing body which cares little for stock market returns, but rather simply about a stable and healthy economy. On the surface, a study of the money supply would seem to be a notable detour from our other two analyses, but in short order we will see their inter-connectedness. An analysis of this input, and specifically how it changes over time, will hopefully yield some additional insights into the future direction of equity markets.

The money supply can be loosely defined as the total amount of money held by the public at a particular moment in time throughout an entire economy. While there are a number of ways to measure the money supply, each includes two basic components: the total currency in circulation plus "demand deposits", which are essentially all money held in current accounts. A number of analysts and other interested parties have long studied and dissected the growth of the money supply predominantly because of the effects that it is believed to have on real economic activity and especially in regards to inflation. In the current examination, M1 will be used to represent the level of the money supply, which is calculated by the federal government as the total currency in circulation plus the amount of money in chequing accounts. In most Western countries, the money supply is controlled by a central bank (in the United States, for instance, it is the Federal Reserve Bank) and is considered an essential tool for controlling inflation.

The supply of money in the United States is a notable metric for a number of key groups, ranging from amateur investors to policy makers in the highest level of government. As discussed earlier, the money supply plays an important role in inflation throughout an economy and, by extension, impacts real returns on investment. To begin, plotted in Figure 1 is the level of the Dow Jones Industrial Average since 1959 through until mid-2008:

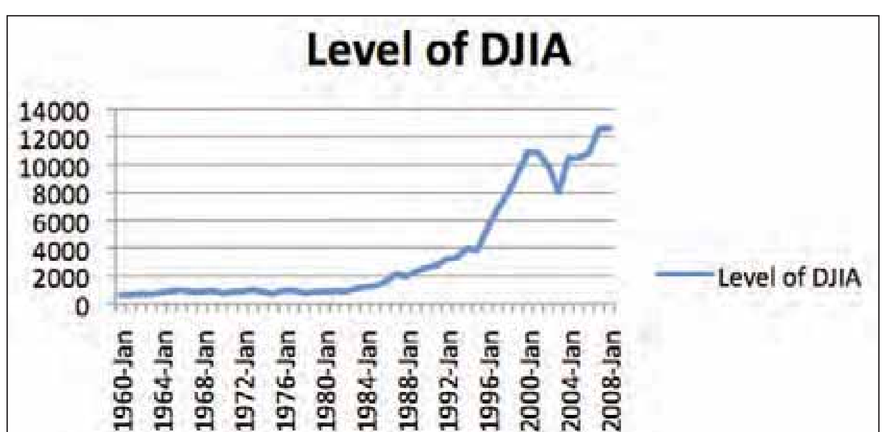

Figure 1: The Level of the Dow Jones Industrial Average 1959-2008
Source: The Author (2009)

Figure 2 shows the level of the money supply as defined by M1 again from 1959 through mid-2008. The year 1959 was chosen as the starting point for the data because this was when the M1 statistic first began to be calculated and maintained by the United States Federal Reserve bank.

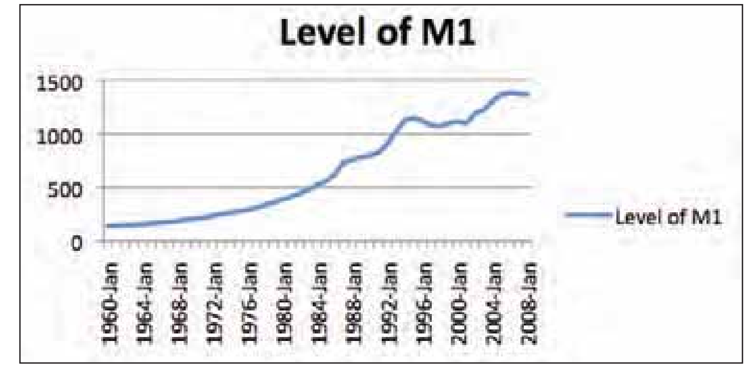

Figure 2: The Level of the Money Supply (M1) 1959-2008
Source: The Author (2009)

Even a brief, cursory look at the two graphs reveals remarkable similarities. First, there is an obvious, relatively constant upward progression to both graphs. Since 1959, not only have both levels risen rather consistently, but they both have ascended slowly at first and accelerated over time. Second, though both levels increased solidly over the period of examination, both experienced downturns around the same time, in the late 1990's and early 2000's. Third, both have since recovered from these downturns and continue to climb higher, as would be suggested from a historical perspective. In essence, these two plots bear an uncanny resemblance, suggesting that the level of the money supply moves relatively in tandem with the level of the Dow Jones Industrial Average, which may not have necessarily been envisioned from the outset.

As it pertains to the current study, the movements in the levels of the money supply and the Dow Jones Industrial Average play a large role in secular market trends. Perhaps most notably, the downturn towards the end of the previous century in both graphs illustrates nicely the transition between a secular bull and bear market. The money supply as measured by M1 had been moving up steadily throughout the most recent secular bull market, which began in 1982. At the onset of this secular bull market, the rate of change of the money supply began to increase; this can be seen in the chart as the line steepens beginning in the early 1980's. The leveling off, and eventual decrease, in the money supply occurred in the late 1990's and this immediately preceded the end of the secular bull market and the beginning of the secular bear market in which American stock markets currently find themselves.

However, the fact that the graphs are nearly identical does not present a full picture, certainly not in the context of the future of equity markets. Additionally, the claim that a steepening of the slope of the two curves signals the onset of a change in secular market trends is neither convincing nor overly obvious. Given the similarities between the two graphs presented above, it is worthwhile to plot the annual change in the level of the money supply as defined by M1 over the same prescribed time period of about forty years. This graph is presented in Figure 3:

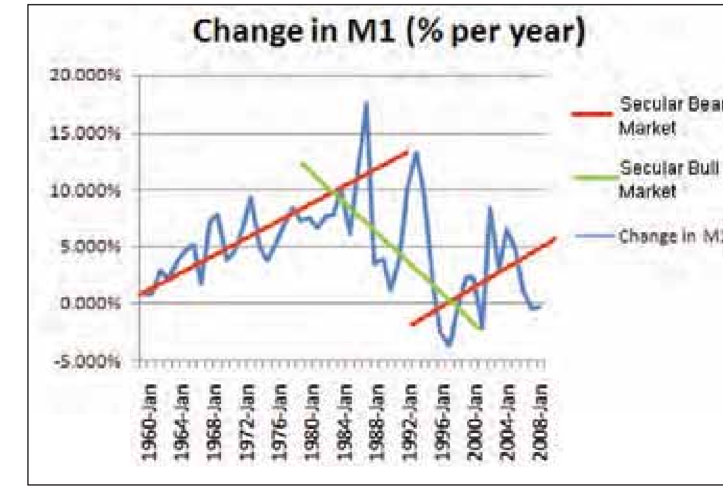

Figure 3: Change in the Level of the Money Supply (M1) 1959-2008
Source: The Author (2009)

Now we can truly see some very interesting and illustrative points emerge thanks to this new graphical depiction. To begin, though the long-term trend for the money supply is generally up in a fairly consistent fashion, it is obvious that the change in the level of the money supply is not always in an uptrend. In reality, it appears as though it follows cycles just like many other variables and inputs of the capital markets. Also, and most importantly, these upward and downward alterations in the rate of change of the money supply seem to coincide with secular market trends in the stock market. Added to this graph are red and green lines, both of which represent lines of best fit through the data over the observation period. The red lines represent the time period when the Dow Jones Industrial Average is experiencing a secular bear market and green represents the periods when a secular bull market is underlying the Dow Jones Industrial Average. During secular bear markets, it appears as though the money supply is expanded at a faster pace, likely by the Federal Reserve in an effort to encourage the nation to emerge from the underlying economic difficulties it is experiencing. The opposite appears to hold during secular bull markets; though the money supply still increases, it increases at a slower rate in order to pull back on the economy, seeking to circumvent an unsustainable overexpansion. This, incidentally, also helps to explain why, in good times and bad, there is generally always inflation. Even though the rate of change in the money supply may be decreasing, it is still a positive change, meaning that there will continue to be a rising price level.

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Given the above results, past experiences seem to suggest that American stock markets have again entered a secular bear market phase which began in 2000 with the collapse of the tech bubble. After nearly two decades of the money supply growing at a slower pace, and even decreasing in the mid-1990's for a period of time, this rate of change has again picked up starting in 2000 and is resuming an upward trend. The situation mirrors that which was seen at the onset of the previously secular bear market from 1966-1982 where the money supply grew at a dramatic rate. The behaviour of the money supply, as measured by M1, is another indication that equity markets are currently knotted in a secular bear market.

The presentation above tells another grim tale with regards to equity markets, and coupled with the discussions from the last two issues regarding the Dow/Gold ratio and the market Price/Earnings ratio, the future does not look bright. All three metrics independently point to the fact that markets are centered in a particularly severe secular bear market and that it should continue for some time to come. In the conclusion of this four-part series, we will look towards the future, including an extrapolation of the data, some analysis to gain an understanding of how long the current secular market trend will continue, and what a prudent investor can do to navigate these turbulent waters. *

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