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"When you combine ignorance with leverage, you get some pretty interesting results."

Warren E. Buffett
Chairman and CEO
Berkshire Hathaway

LEVERAGE AND THE RATE OF CHANGE

By James K. Tonrey, Jr., Chief Executive Officer

With equity markets bumping up against all-time highs, volatility seemingly on the rise, and the US Federal Reserve Bank (FED) plotting a steady path to increasing interest rates, market participants are understandably anxious. The question most frequently asked by investors is… *where are we heading from here?*

At the very least, a recession would stall the markets and more than likely cause investors to seek lower risk assets. A recession is defined as *"a period of temporary decline which trade and industrial activity are reduced, generally identified by a fall in Gross Domestic Product (GDP) in two successive quarters."* When this occurs, sellers dominate buyers causing liquidity issues, and thus prices, to retreat. It is anyone's guess if one is on the horizon. As Paul Samuelson, noted economist, astutely and honestly said, *"Wall Street Indexes have predicted nine of the past five recessions."* With the US economy growing at an estimated 3-4% annualized rate due to improved global demand, the recent tax law changes, reduced regulation, and consumer confidence at seventeen-year highs, it is hard to imagine a scenario where an economic recession is imminent (trade tariffs?). However, there are always human behaviors lurking that can upset the proverbial apple cart.

While there are many economic and behavioral variables of concern, seen and unforeseen, the most important is the potential for large pricing disparities in assets. When the cost of housing and/or equities, for example, hit nosebleed levels and financial valuations get historically stretched, it marks a period when people are at the higher range of their risk behavior. The concern is that, at some point, these asset "bubbles" will come back down to earth. While inflated asset prices can keep us up at night, the real culprit hiding in this scenario is the use of *leverage*.

We use leverage in any one of a number of ways. We can leverage our personal relationships by asking a friend for a favor. Most of the time we use it in a favorable manner. There are times, though, when we use it in an unfavorable way. Maybe by asking that same friend to do something that is contrary to their beliefs but to our benefit. Financial leverage can be used in both positive and negative ways as well. It is useful when we borrow money to buy a house that is affordable or borrow to invest in something that creates a positive return after costs of the debt. Leverage is also good when kept to a certain level as a percentage of equity or assets owned. It is prudent to buy a house for $300,000 and take on a debt of $150,000, for example. But it is not smart to finance 100% of an asset, even if allowed. Therein lies the debt conundrum. As the economy gets stronger, banks tend to lend more and consumers tend to assume additional risk. The powerful emotion, greed, also works its way into the decision-making process. Banks and other lending institutions will ease lending standards and consumers will no doubt take advantage.

The use of leverage in the capital markets as a percentage of overall asset value, the debt-to-equity ratio, is worth watching. This equity value assessment can be an appraisal of a property, what a stock is trading at, or even the value of a graduate's earning power to pay off their student loan. In good economic times, prices are typically in balance, with debt a smaller and manageable percentage of overall net worth. But it is in the recessionary and down times that debt can and will be a nail biter to borrowers and institutions that are over their skis. Look no further than ten years ago in 2008/09, when we painfully witnessed how irresponsible leverage can almost bring down an entire economy. The paradox is that debt is fixed and must be paid back, while an asset's value can and will fluctuate. Back to our house example: in a severe downturn, the debt of $150,000 remains while the house may now only be worth $200,000. The debt-to-equity ratio has gone from 50% (150/300) to 75% (150/200).

Keeping close tabs on the amount of debt in an economy as well as the associated underlying asset values is critical, however, equally important is monitoring the *rate of change* of debt. Harking back to our old calculus class, the rate of change *is the speed at which a variable changes over a specified period of time*. Another way of looking at it is *momentum*. A market analyst will closely observe not only the amount of debt in an economy, but also the rate at which this debt is increasing or decreasing. It will portend or signal that some sort of change is in the air.

Let's put some teeth in our discussion by reviewing two ways to look at debt: *household debt and national debt versus GDP*. The next two paragraphs are taken from the work of the firm, *Trading Economics*.

> *Households debt to GDP in the US increased to 78.70% of GDP in the fourth quarter of 2017 from 78.50% of GDP in the third quarter of 2017. Households debt to GDP in the US averaged 57.79% of GDP from 1952 until 2017, reaching an all-time high of 98% of GDP in the first quarter of 2008 and a record low of 23.80% of GDP in the first quarter of 1952.*
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> *US Gross Federal debt to GDP recorded a government debt equivalent to 105.40% of the country's GDP in 2017. Government debt to GDP in the US averaged 61.70% from 1940 until 2017, reaching an all-time high of 118.90% in 1946 and a record low of 31.70% in 1981.*

Before we run for the hills let's add some perspective. First of all, there is no doubt that over the past few decades debt has been a big contributor to our country's growth, and that the rate of change of our debt has increased. The optimists will say that this is a good and healthy outcome as long as we continue to grow. They argue that GDP should then continue to increase at an even greater rate. The pessimists will say that these debt levels pose an unsustainable path that will ultimately lead to serious problems down the road since growth will eventually stall, especially when a recession takes hold and asset prices rollover.

The question then becomes what to look for to determine the direction of the economy and, therefore, the direction of the markets. Given that debt has to be serviced, or paid back, through interest payments (regardless of whether the debt is actually paid in full or simply rolled over), and that these payments increase as interest rates rise, one should argue that watching the ***rate of change in interest rates as well as overall debt loads*** is crucial. Remember that the more a borrower pays in interest, the less that is available for other capital spending or investments. Growth, or GDP, will ultimately slow. The less growth in our economy the greater the likelihood of a disruption in the financial markets.

While a recession or economic disruption is not expected in the near-term, staying mindful of the rate of change in overall debt levels remains vital. As Warren Buffett says, combining leverage with ignorance will certainly lead to interesting results.
