Long-term stock market cycles

DeForest McDuff
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Preview

Welcome back. After a brief vacation for July and August, I hope to be back to regular monthly publications. This is the first of a three part series discussing investment cycles as a long-term investing thesis. The next two issues will analyze the gold and real estate markets from a similar perspective.

In this issue, I focus on long-term U.S. stock market cycles. The basic premise is that the stock market tends to fluctuate between periods of extreme low and high valuations over a multi-year timeframe. Past articles that touch on similar themes include:

- **Thinking about historical P/E ratios, June 2006**
- **The bleak outlook for the U.S. stock market, March 2008**
- **Asset class rotation, June 2008**
- **Bear market anatomy, May 2009**

A historical understanding of long-term stock market cycles helps to put the current market into perspective. Although we reached decent (but not great) valuations earlier this year, I recommended only a modest allocation to U.S. stocks. I could not be more bullish because I believe that we will reach even cheaper valuations in the future.

I still have somewhat of a mixed stock market outlook, but my overall impression is that valuations are on the expensive side. As such, a more defensive (but still mixed) stock market strategy is in order.

Historical stock market cycles

Understanding where we have been is necessary for understanding where we are going. I begin by describing the major bull and bear markets of the last 125 years using data from **Yale economist Robert Shiller**.

I categorize major "Bull" and "Bear" markets in the chart below based on peaks and troughs of the S&P 500 price per share divided by the 10-year earnings moving average, a valuation metric popularized by Shiller:

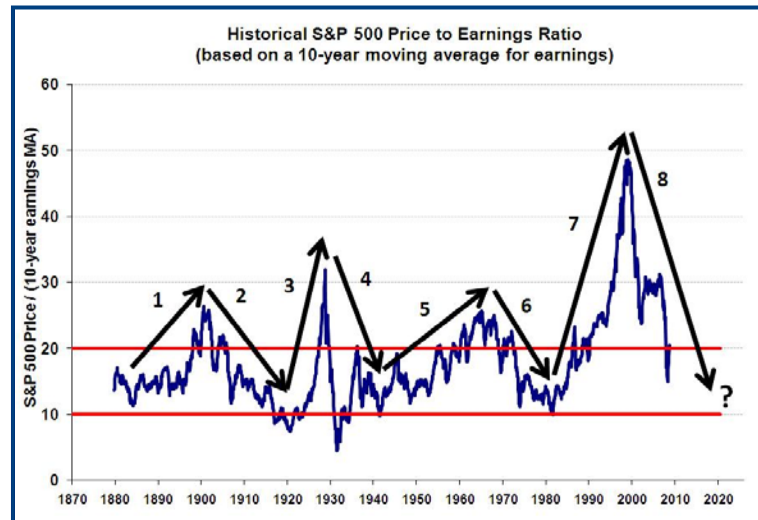
	Market	Start	End	Years	10y PE	Start S&P	Dividend	Price Growth	10Y RE Growth	Inflation	Total Return	Real Return
1	Bull	Jan-1885	Jun-1901	16.5	11.3	$ 4	7.2%	4.3%	0.9%	-0.6%	9.6%	**10.2%**
2	Bear	Jun-1901	Aug-1921	20.2	26.5	$ 9	3.6%	-1.4%	2.2%	4.3%	-0.3%	**-4.4%**
3	Bull	Aug-1921	Sep-1929	8.1	7.4	$ 6	7.4%	21.6%	-2.8%	-0.3%	28.3%	**28.7%**
4	Bear	Sep-1929	Apr-1942	12.6	31.9	$ 31	3.0%	-10.4%	0.2%	-0.6%	-4.6%	**-4.0%**
5	Bull	Apr-1942	Jan-1966	23.8	9.7	$ 8	8.7%	11.0%	3.2%	2.9%	12.9%	**9.7%**
6	Bear	Jan-1966	Apr-1980	14.3	25.7	$ 93	2.9%	0.7%	2.0%	6.8%	-2.1%	**-8.3%**
7	Bull	Apr-1980	Dec-1999	19.7	11.6	$ 103	5.7%	14.3%	0.9%	3.8%	13.8%	**9.6%**
8	Bear	Dec-1999	??	9.7	48.6	$ 1,429	1.2%	-3.3%	3.0%	2.5%	-4.1%	**-6.5%**
				Current:	20.5	$ 1,026	2.5%					

Notes: PE = Price / Earnings, S&P = S&P 500 Price/Share, CPI = Consumer Price Index, 10Y RE = 10-year real earnings moving average

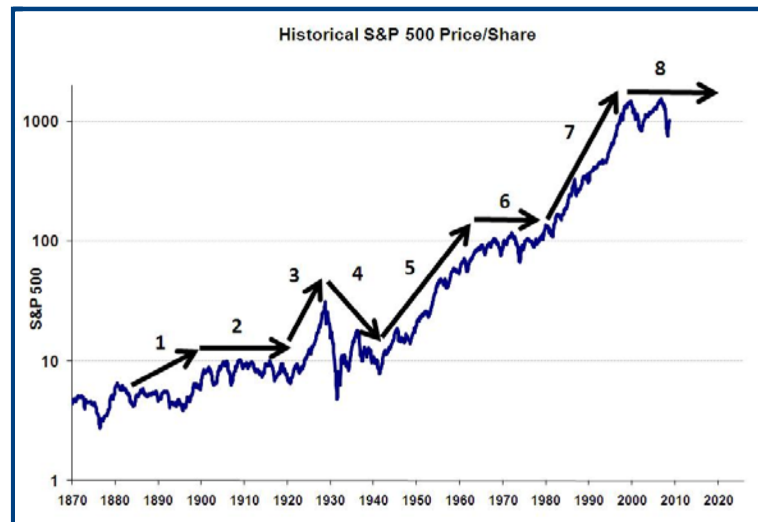
Historical bull markets are characterized by long periods of real returns above 9% per year. The last four bull markets began with price to earnings multiples at 12 times or less and dividend yields at least 5.7%.

Historical bear markets are characterized by long periods of negative real returns: -4.0% per year or worse for each bear market in the table above. The last four bear markets began with price to earnings multiples at 25 times or more and dividend yields at 3.6% or less.

These bull and bear markets can be seen graphically by plotting the price to 10-year earnings ratio over time:



Or by just plotting the price:



Bear markets occur in one of two ways: (1) a 1929-style crash as in Period 4 or (2) an extended period of flat prices and growing earnings as in Periods 2 and 6. I suspect that the current bear market will ultimately be characterized by flat prices continuing for at least a few more years.

The main take-away is this: historical bull and bear markets are defined more by multiple expansion and contraction than by changes in fundamentals. To me, this suggests a world where stocks can be "overvalued" or "undervalued" relative to fundamentals rather than a world where prices always accurately reflect value.

Earnings

The current earnings picture has some good news and some bad news. First, the good news. Shiller's earnings measure - which I believe incorporates some smoothing - has rounded a bottom as of March 2009. This earnings measure bottomed at $6.86 per share and as of the June data is up to $7.90 per share. This is quite a good sign, from my perspective, as the earnings peak in June 2007 helped to identify the 2007 price peak (see **March 2008**).

Now, the bad news. The long-term earnings picture is not encouraging. Earnings have literally fallen off the chart - well, okay...outside the red lines:

Here's what I wrote in **March 2008**: "Given the housing slowdown and the oncoming recession, I'd say it is quite likely that we are at a multi-year earnings peak." But bearish as I was at the time, even I could not imagine such a dramatic earnings collapse.

The real risk to stocks right now is that June 2007 represents an earnings peak that will last for years. The chart above indicates that the 10-year earnings moving average is near the top of the channel. If the earnings channel represents a true trend, then we may be in for a prolonged period of slow growth as we drift back towards more average levels.

The magnitude of the earnings crash suggests more similarities with a Depression than I might have initially been willing to admit. This risk should not be ignored. Who will want to buy the stock market at 20 times earnings with earnings drifting sideways for a decade?

Stock market valuation and cycle

Think of the stock market outlook having two main components: (1) valuation and (2) cycle. For valuation, my preferred measure is Shiller's 10-year earnings measure, graphed above. For cycle, I try to take contextual evidence and earnings fluctuations to characterize markets in a Bull/Bear framework. My investing style is to assess the stock market outlook as a combination of these two measures.

John Hussman of Hussman Funds utilizes a slightly different component pair: (1) valuation and (2) market action (for more info, see **Context Matters, June 8, 2009**). Whereas my "cycle" characterization focuses on categorizing time periods in a binary fashion, "market action" represents more of an expected return distribution conditional on continuous measurable variables. The distinction arises partly from differences in investing philosophy and partly from differences in econometric sophistication (i.e., I might consider similar strategies if I had the means, time, and energy).

For valuation, the stock market is once again expensive. Above $1000 per share, the S&P 500 is over 20 times the 10-year earnings moving average, which is just under $50 per share. I tend to view a P/E under 12 as cheap and a P/E over 18 as expensive. I'm not against investing at P/Es between 12 and 18, but it should be in the context of a longer-term investment plan.

For cycle, I think we are still in a long-term bear market. Until evidence suggests a **major bear market low (a concept discussed in May 2009)**, I will remain cautious except at extraordinary valuations. We have not reached the kind of valuations that characterize such a low, **but we were getting close in March 2009**.

The combination of valuation and cycle still have me thinking defensively for the U.S. stock market. With the benefit of hindsight, March 2009 seems like a good buying opportunity - but over what time horizon? March 2003 seemed like a good buying opportunity for years until prices dropped back to the same level 6 years later. Maybe we have another 2-4 year mini-boom from here, maybe not. Ultimately, I think it's difficult for most investors to identify and take advantage of ups and downs over such a short time period. Better to focus energy on identifying the longer term trends (unless you find short-term trading fun, which I certainly do).

On the whole, I personally would not buy the S&P 500 over $1000 per share. I would cautiously add to positions below $900 per share and would become a more aggressive buyer if we creep down into the $700-$800 range again. But chasing a market higher almost always leads to disaster.

Long-term investing cycles

Thinking of long-term investing cycles is certainly a useful construct for characterizing the past. The big question, of course, is whether it is useful for assessing the future. All things considered, I think that it is.

As I discussed in **June 2008**, most investors will be wrong at market extremes. That's how markets become extreme in the first place. From major peaks, the market tends to disappoint investors for years. Valuations deflate slowly over time as sentiment shifts, producing lousy long-term results. At market troughs, prices are depressed because the average investor is skeptical of stocks. Valuations improve slowly over time as the "buy-and-hold" strategy begins to work. The natural ebb and flow of investor sentiment over time produces such long-term investing cycles.

It takes a number of mini-bear markets to adequately discourage investors and produce negative sentiment strong enough for a major bear market low. John Mauldin elaborates:

> "As I wrote in August 2000 and August 2006, I write again in August 2009: There's a recession in our future. I was early both of those times and I'm early now -- maybe two years early, though I doubt it. And as I pointed out both of those last times, the stock market drops an average of over 40% during a recession. In 2006, I was given a hard time about my recession call and prediction of a bear market. I think it was John Rutherford who dismissed my bearish vision. And he was right for the next three quarters, as the market proceeded to rise another 20%. I looked foolish to many, but I maintained my views.
>
> **You have choices. You can buy and hold (buy and hope?) or you can develop a strategic alternative. The next bear market, as I wrote in 2003 and in Bull's Eye Investing, will likely be the bottom. (It takes at least three of them to really take us to the bottom.) But the next one will change perceptions for a long time. Valuations will drop. Savings will rise even more. And a generation will grow up. The adults will return. Chastened. Scarred. Shaken. But we will muddle through. That's what we do."** [emphasis mine]
>
> - John Mauldin, **Why We Won't Avoid a Double-Dip Recession**, August 31, 2009

In other words, it will take years of investor disappointment to shake the kind of bull market optimism that developed during the 1980s and 1990s. We have already been through 9 years. John Maudlin suggests that after the 2000-2002 and 2007-2009 recession, one more should be enough. I tend to agree, but I will evaluate the evidence as it comes.

Conclusion

Identifying long-term investing cycles is just one of many perspectives from which to interpret patterns in historical market data. In some sense, I take the existence of cycles as a given and examine the data from there. I can imagine someone with a more traditional **efficient market hypothesis perspective** using the same data to reach a different conclusion. You will have to do your best to formulate your overarching investment theory and interpret the data accordingly.

Unfortunately, validating such a investment thesis will take years. That's part of the reason for recording ideas and thoughts as we go along. Because theories always work in hindsight, the more relevant test is whether this investing thesis produces accurate out-of-sample predictions - that is, whether information gathered and interpreted today helps to predict future stock market returns. Only over time will we know one way or the other. For me, part of the fun is the journey itself.

Lest you think I remain too vague, let me make a crystal clear prediction: A price to earnings multiple defined by the 10-year earnings moving average above 20 is unsustainable. Regardless of whether the market bounces above this metric for the next few years, it will eventually fail. I predict a bear market low using this P/E measure in the 10-12 range - but definitely under 13 - sometime before 2015. For those who don't view this as a particularly aggressive prediction, consider that this represents a valuation decline of 35% from here. Not even the March 2009 low reached such an attractive level.

I tried something like this before with some success in **August 2007**. As for the prediction above, only time will tell.

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