

Lessons from Capital Market History, Part 2

By Harry S. Marmer, CFA

[Editor's note: This article is the second in a two-part series arguing that investors not only should be interested in financial market history but that they can learn valuable lessons from it. The first article in the series was published in the December 2016 issue. A complete version of the entire article, including additional charts, footnotes, and a bibliography, is available online at www.cfapubs.org.]

In a continuation of my last column in *CFA Institute Magazine* (December 2016 issue), I present a couple more popular beliefs about markets and then examine if the facts support these opinions. The ultimate objective of this form of analysis is to examine what investors can learn from capital market history and how these lessons can best be used in their long-term decision-making processes.

EQUITY MARKETS' VOLATILITY

A popular current argument is that equity markets have become more volatile over time. This has been a prime motivation for institutional investors moving assets away from stocks into alternatives such as real estate, private equity, and infrastructure, which appear less volatile than stocks.

Empirical research supports the following stylized facts concerning stock market return volatility:

- Volatility is negatively correlated with returns (i.e., volatility rises during “bad” times like recessions or bear markets).
- Volatility persists or clusters; large changes follow large changes, in either direction, and small changes follow small changes.
- These observations lead to the conclusion that volatility reverts to the mean.

An important axiom we can derive from these stylized facts is that the frequency of calculating data matters,

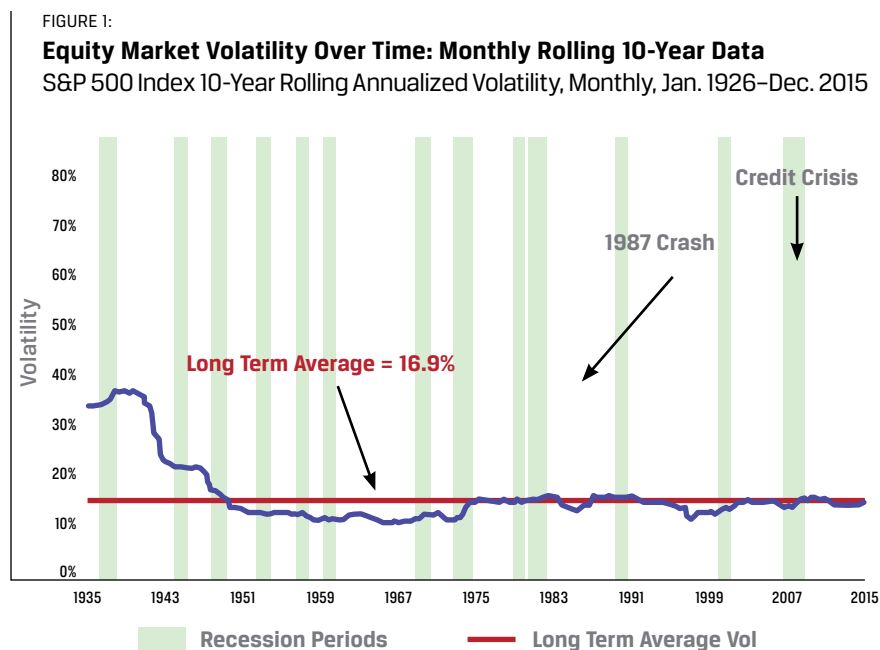
especially with respect to the interpretation of the data. Frequency refers to the periodicity of the data (intraday, daily, weekly, monthly, yearly, etc.) and how it is used in the calculation. For example, the risk of an asset class, which is typically described as the standard deviation of the returns of the asset class, could be calculated from daily, monthly, quarterly, or yearly return data. As discussed later in this article, the frequency used in the calculation is important because different frequencies can lead to significantly diverse results. More specifically, if investors use a long-term investment horizon (such as 10 years, which is similar in length to that used by private equity investors), public equity volatility will appear to be very stable (see Figure 1).

There is no doubt that investor views on volatility have been influenced by the increasing focus on short-term indicators, such as the Chicago Board Options Exchange Volatility Index (the VIX), which has become a popular indicator of market risk. The history of rolling 30-day volatility (as a proxy for the

VIX) illustrates that short-term volatility has spiked significantly more often, and with much higher spikes, than a longer-term measure of stock market volatility. This aspect is reflected in the statistically significant higher standard deviation of volatility for the 30-day volatility time series than the standard deviation for the monthly rolling 10-year volatility (10.0% for the VIX, versus 6.6%).

HISTORY REPEATS ITSELF

Investors often study the past in the hope that history repeats itself. However, the ultimate lesson that one learns from studying capital market history is that “history never repeats itself exactly; at best it rhymes.” This fact becomes very clear when history is used in an attempt to understand and evaluate the current interest rate environment. A review of interest rates in Figure 2 reveals that over the past 60-plus years, no historical environment is comparable to the current environment of low inflation and negative real yields. Dick Sylla, co-author of *A History of Interest Rates*, was quoted in the *Wall Street*

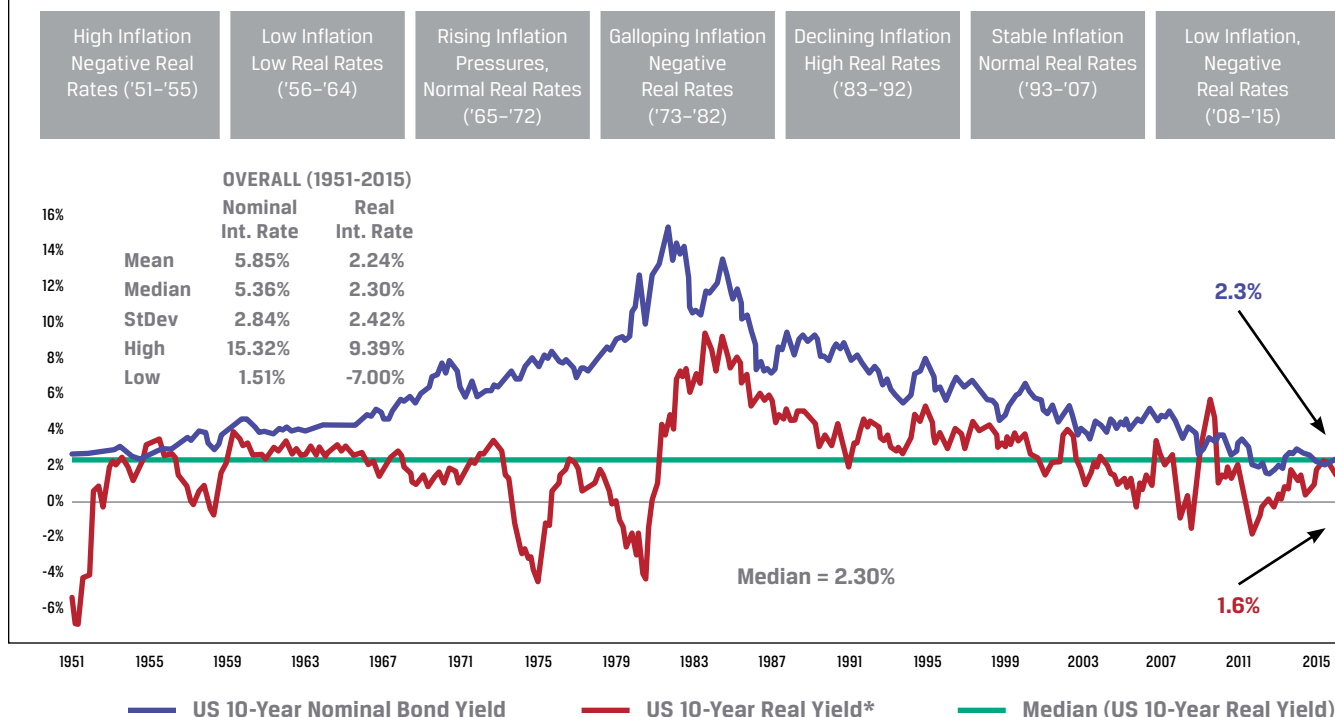


Source: Hillsdale Investment Management

FIGURE 2:

Interest Rate Regimes

Interest Rate Regimes Classified By Inflation Environment*, Monthly, Jan. 1951–Dec. 2015



* The Real 10-Year US Treasury Yield is based on 10-Year US Treasury Inflation-Indexed Yield, Constant Maturity from January 2003 to June 2013. Data prior to January 2003 are based on 10-Year US Treasury Bond Yield vs. 12-Month Change in US CPI. Data as of 31 December 2015.

Source: Hillsdale Investment Management.

Journal as stating that “There were no negative bond yields in 5,000 years of recorded history” (“The 5,000-Year Government Debt Bubble” by James Freeman, 31 August 2016). This reflects the stylized fact, as presented in an article titled “An Analysis of the Real Interest Rate Under Regime Shifts” by Rene Garcia and Pierre Perron, that “the ex-post real interest rate is essentially random with means and variances that are different” over various periods and subject to jumps caused by structural events.

Looking back in time does provide insight into the many long-term drivers of nominal and real interest rates. More specifically, a recent study of long-term interest rates by the Council of Economic Advisers concluded that these key drivers include “the rate of productivity growth, beliefs about future risks, consumer preferences, demographic shifts, and the stances of monetary and fiscal policy.” Comprehending long-term drivers can help investors understand and recognize regime shifts and adjust their capital market assumptions with respect to

determining policy asset mixes, thereby improving the decision-making process.

APPLYING LESSONS

The interpretation of historical data from which to test investment hypotheses is a key role for an analyst. For that purpose, some important, although basic, techniques can be recommended for analyzing and assessing capital market data: developing a hypothesis, visually inspecting the data, analyzing the entire return distribution, and recognizing that data frequency matters with respect to data interpretation and the investment decision-making process.

In summary, the following lessons can be employed by investors to help achieve their investment objectives and invest wisely for the long term:

- Avoid investment and policy investment decisions that are dependent on predicting the length of or the turning points in the business or stock cycle.
- Properly assessing money managers requires a period longer than the typical three or four years.

- Market timing should be avoided because it is a low-odds strategy.
- Equity market volatility is time varying and has not significantly increased over time. Investor perceptions have been skewed by short-term metrics.
- Regime shifts create “new” investment environments that have an impact on capital market assumptions and on the investment decision-making process.

Indeed, investors can learn a great deal from the study of capital market history. Winston Churchill said it best: “Study history, study history. In history lie all the secrets of statecraft.”

Harry S. Marmer, CFA, is a partner at Hillsdale Investment Management and a member of CFA Society Toronto.

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