

# BULLSEYE

## *Highlights*

# Risk Management

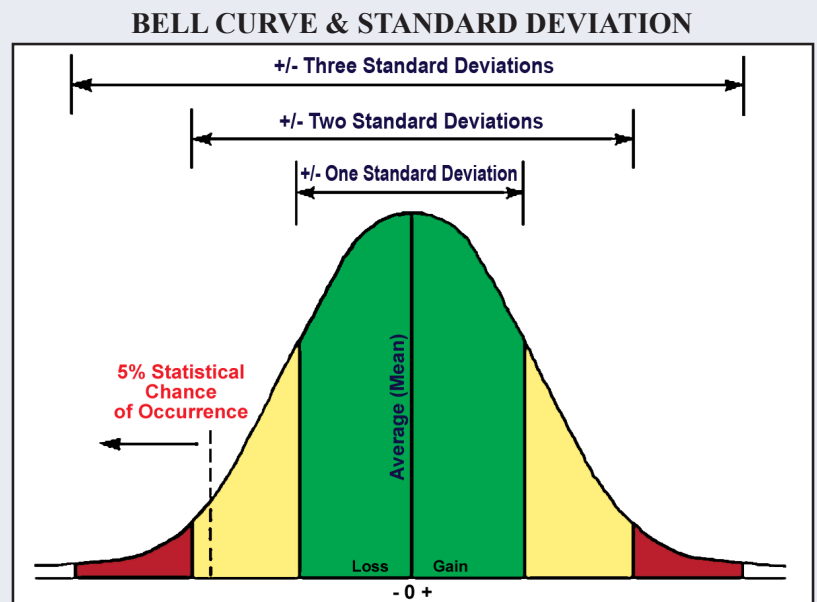
## *Aiming at a Moving Target*

Many investors have become accustomed to the expected risk/return characteristics of U.S. equities, largely shaped by the historical performance since the early 1980s. It's also possible to track reliable historical stock market data going back as far as the 1920s by looking at the Dow Jones Industrial Average. Regardless of the time period, the historical return of the stock market has generally been accepted as ranging between 10-12% annually. But the level of risk, as measured by standard deviation, is quite a different story. Since the early 1980s, the level of risk has only averaged around 15%. But looking back to the 1920s, it has averaged more than 20%.

Let's put that risk difference into perspective. While past performance is not indicative of future results, historical data may provide some insight for risk management purposes. We'll use a bell curve to illustrate the idea of "loss probability" (see the Bell Curve illustration below). Assuming equity returns on average are normally distributed, you'd expect some really good years (right), some really bad years (left), but most years falling into the average range (middle).

With an expected return of 11% and a 15% standard deviation, an equity investment has a 5% statistical probability of losing -18% or more. But when the risk assumption is increased to 20% standard deviation, that same investment has a 5% probability of losing -28% or more. As this example illustrates, even with a constant return expectation, greater volatility comes with a potential for bigger losses. While actual gains or losses may be higher or lower, this example simply shows how statistical averages can be used to analyze the mathematical probability for risk exposure.

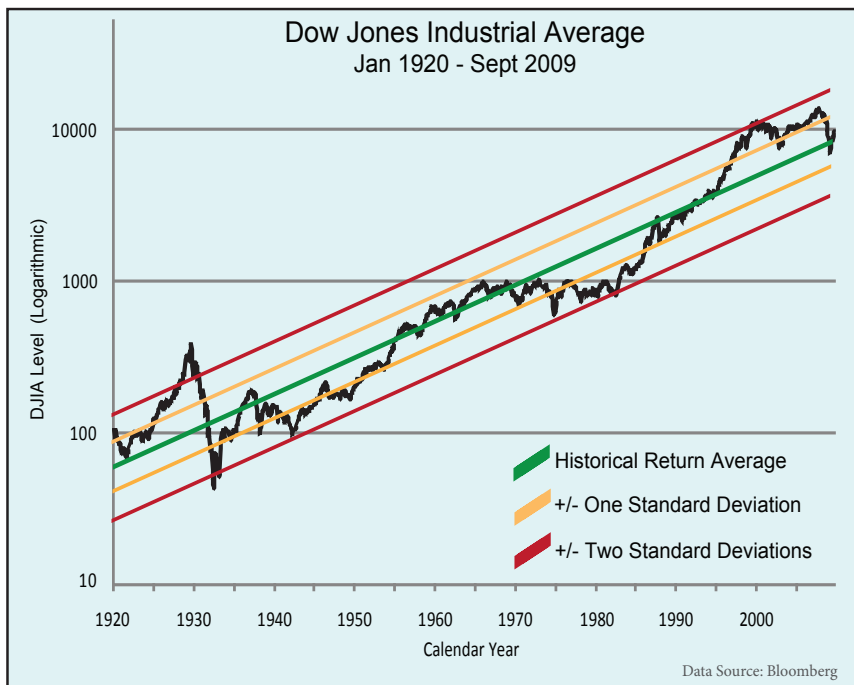
While the stock market's returns have been fairly consistent across all long-term times, fixed income returns have been considerably higher since the 1980s than the longer-term averages dating back to the 1920s. As measured by U.S. Treasury notes, fixed income markets have averaged a return of 10% with a standard deviation of 10% since 1981. But dating back to the 1920s, fixed income averaged closer to 6% return and 8% standard deviation. While fixed income has garnered greater returns, it has done so by taking on more risk.



How much risk are investors facing today? Coming out of the wild swings of 2008 and into 2009, near-term volatility for equities is at approximately 30% for stocks and 12% for bonds, based on the Volatility Index (VIX) and options market pricing data. These forward looking estimates seem to be consistent with the market's measured risk levels of the past year (which is roughly twice the historical risk level of the previous few decades). Using our bell curve example based on long-term averages, stocks previously only had a 5% statistical probability of losing -18% at any given time. But at the current levels of risk, there is a 5% probability of losing -48% or more with stocks.

In the past, a moderately conservative 40/60 portfolio (40% equity and 60% fixed income) with a standard deviation of 10.8% only had a 5% statistical probability of losing -7.5%. In today's market environment, the same moderately conservative 40/60 portfolio would be subject to a blended risk level of 18% standard deviation, based on the risk expectations mentioned above. That means the portfolio would have a 5% probability of losing more than -25% of its value—that's currently more than three times the historical expected amount of risk for such a conservative portfolio. In fact, based on the VIX and options pricing data, today's 40/60 portfolio could have greater risk exposure than a 100% equity portfolio had just a few years ago. It's unlikely that the average investor's risk tolerance has changed that much, but their risk exposure seems to have.

The image to the right illustrates the long-term trend lines of the DJIA since the 1920s. It would make sense that an investor might be willing to assume more risk if they honestly believed an investment had the potential to outperform its long-term averages. However, based on this illustration, we can see that equities appear to be in step with their historical averages. Considering that the stock market has already rallied more than 50% from the lows set earlier in the year, investors might be faced with a very difficult question: ***"Are my return expectations realistically aligned with my risk tolerance?"***



## CONCLUSION

Understandably, some investors feel the need to play catch-up after the sharp declines of the past few years. But it's unlikely that their risk tolerance has increased threefold, considering the fact that their risk exposure has potentially tripled. Do investors have too much equity exposure for their risk tolerance? If stocks fall again, will bonds provide enough of a cushion, if any at all? One solution might be to reassess current portfolio allocations and to consider alternative and tactical investments as a potential hedge against traditional investments. The noncorrelated nature of alternatives provides a complementary source of returns to stocks and bonds, especially when managed to specific risk levels. In changing market environments, trying to achieve risk/return expectations is like trying to hit a moving target. Alternatives provide a way to focus your aim.

**Definition of Standard Deviation:** A statistical measurement of risk based on historical price volatility. The greater the volatility, the higher the standard deviation (i.e., historical risk).

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