

## Stock Market Timing

This paper, the final of our three-part series on the stock market's current bull market, analyzes the effects on future wealth of three different S&P 500 future return scenarios, based on different buy-sell-hold decisions. We discuss the trade-offs by assuming varying portfolio weights of cash and equities. Our previous whitepapers in this series analyzed the Price/Earnings (PE) ratio and the S&P 500 historical return streaks. Notwithstanding the recent 10% or so correction early this month, with the market posting record highs on what seems to be a daily basis, it leaves many questioning when this bull market will end. We won't attempt to answer that question in this paper, but we will analyze how the value of a portfolio would be impacted given various strategies, relative to hypothetical future bull and bear markets.

### **Return Expectations Revisited**

Given the relatively high current PE ratio, it's reasonable to assume that investors should anticipate lower equity returns over the next few years. Additionally, with recent interest rate hikes and plans of further policy tightening by the Fed, the PE ratio may decline going forward. These factors of rising interest rates, relatively high valuations, along with the increase in risk aversion and shrinking workforce pool (and corresponding lower GDP growth) that comes with the currently aging populace all point to lower returns going forward.

While an investor certainly could choose to cash out, it is generally recommended that investors should maintain balanced portfolios due to the difficulty of market timing<sup>1</sup>. Since equity returns are always positive in the long-term, it would seem more sensible to take a long-term perspective outside of extraordinary circumstances. Further, since one cannot predict the exact timing of markets, and models designed to predict such timing do not consistently succeed in the long-term, avoiding market timing is often recommended. This sentiment has been confirmed in the academic literature including the *Financial Analyst Journal* and the *Journal of Financial Research*. Were the current situation analogous to, say, 2000 or 2007 with a foreseeable recession on the horizon, then a case could certainly be made for

---

<sup>1</sup> Papers including JP Morgan's "Guide to Retirement" and Franklin Templeton Investments' "5 Things You Need to Know to Ride Out a Volatile Stock Market" shows that missing 10 of the best days in the S&P 500 between January 1, 1997 and December 30, 2016 resulted in a 4.00% return rather than 7.68% if fully invested. Missing a single day would be detrimental to returns.

pulling out of the market in the short-term, but there is no strong evidence to believe this is currently the case.

### **Description of our Scenario Analysis**

The following hypothetical scenarios reflect widely varying annual return outcomes in the stock market. The first scenario assumes that the market will rally for the next three years, during President Trump’s first term, but will experience a major correction soon thereafter. The second scenario assumes that the market will decline sharply in the next year but recover quickly. The third scenario assumes that the market continues to rise in year one, corrects in years two and three, then rallies in years four and five.

### **Hypothetical Equity Market Returns**

	<b>Scenario 1 - Trump Rally</b>	<b>Scenario 2 - Market Correction</b>	<b>Scenario 3 - Rally then Crash</b>
<b>Year 1</b>	20%	-30%	25%
<b>Year 2</b>	20%	6%	-40%
<b>Year 3</b>	20%	25%	-10%
<b>Year 4</b>	0%	15%	30%
<b>Year 5</b>	-30%	10%	10%

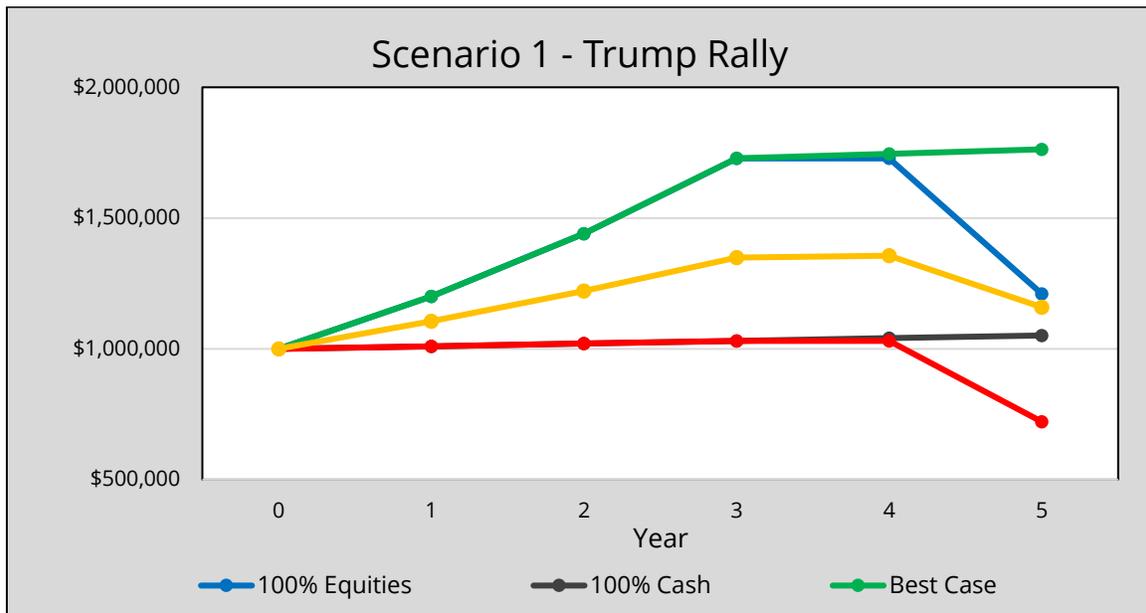
Each scenario will be followed with a graph displaying five data series reflecting different investment strategies, each beginning at the initial investment of \$1,000,000. One series shows the value of the portfolio if the investor chooses to hold 100% of his or her assets in cash. This would provide the investor with an assumed 1.0 percent annual return. Another series represents an investor who opts for a portfolio consisting entirely of equities, accepting a greater level of risk in hopes of higher return. Another series represents an investor who is uncertain about the market’s future, and holds a portfolio of half cash and half equities.

The next two series involve market timing. The best-case for an investor is that they are able to exit the equities market prior to a down year, by shifting all of the assets into cash, and re-enter the market when it rises. On the other end of the spectrum, there is the worst-case scenario for an investor following a market timing strategy; this unlucky investor exits the market in years where the market returns are positive, and enters before a down year.

### **Scenario 1 - Trump Rally**

The first scenario assumes that the market will rally for the next three years, during President Trump's first term, but will correct following that. Under this scenario, the investor who invests 100% in equities has ending wealth of \$1.21 million and realizes a total return of 21.0% over five years. The investor who is 100% in cash has ending wealth of \$1.05 million and realizes a total return of 5.1% over five years.

The best-case scenario, which results from correctly timing the market, involves remaining in equities the next three years, and then exiting prior to the hypothetical crash. An investor who correctly times the market has ending wealth of \$1.76 million and realizes a total return of 76.3% over five years.



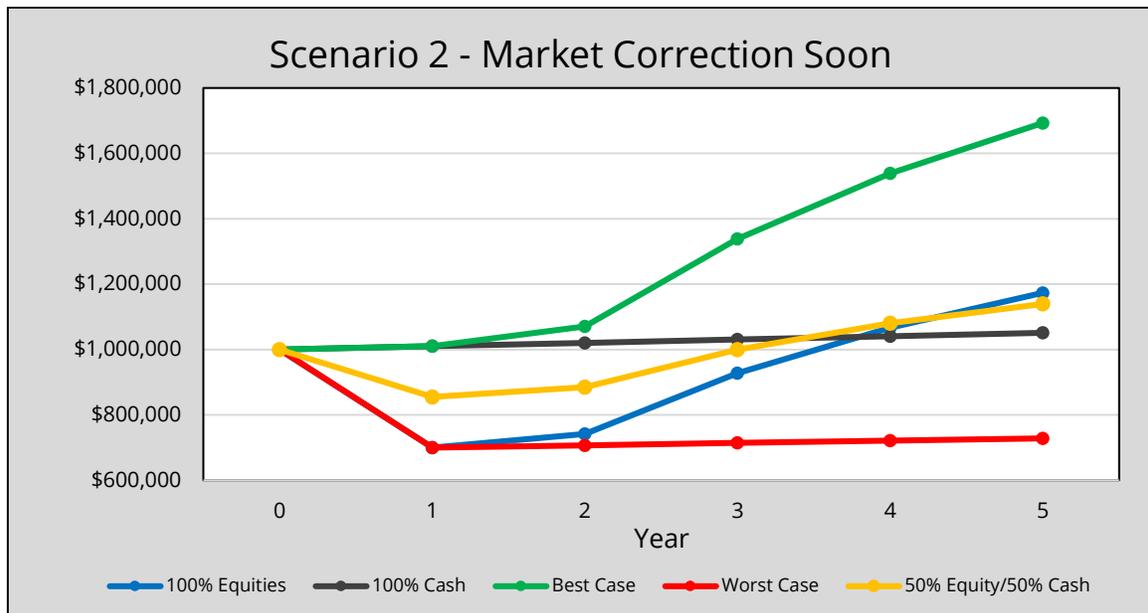
The worst-case scenario, which results from incorrectly timing the market, involves remaining in cash for the next three years, and then entering the equities market. An investor who incorrectly times the market has ending wealth of \$0.72 million and realizes a total return of -27.9% over five years. The dramatic difference in ending wealth between the best and worst-case scenario is \$1,041,522.

A portfolio consisting of 50% equities and 50% cash rebalanced annually, and thereby avoiding timing issues, results in ending wealth of \$1.16 million and a total return of 15.9% over five years.

### **Scenario 2 – Market Correction Soon**

The second scenario assumes that the market will decline sharply in the next year but recover quickly. Under this scenario, the investor who invests 100% in equities has ending wealth of \$1.17 million and realizes a total return of 17.3% over five years. As before, the investor who is 100% in cash has ending wealth of \$1.05 million and realizes a total return of 5.1% over five years.

The best-case scenario, which results from correctly timing the market, involves exiting the equities market for one year, then returning to and remaining in equities the for the following years. An investor who correctly times the market has ending wealth of \$1.69 million and realizes a total return of 69.3% over five years.



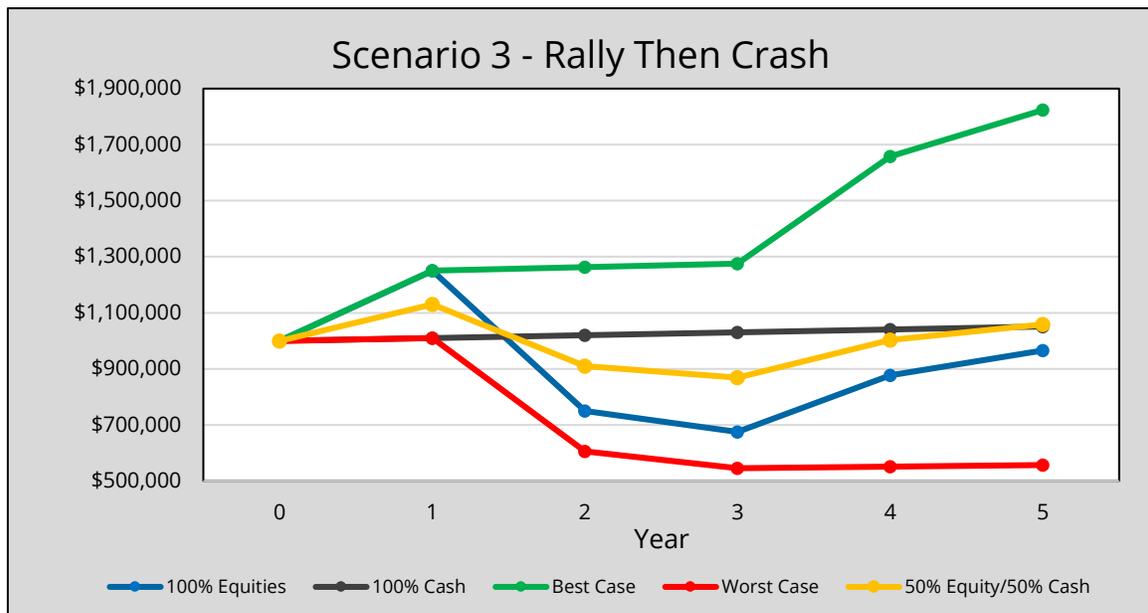
The worst-case scenario, which results from incorrectly timing the market, involves remaining in equities for year one, and then transferring to cash for the next four years. An investor who incorrectly times the market has ending wealth of \$0.73 million and realizes a total return of -27.2% over five years. The difference in ending wealth between the best and worst-case scenario is \$964,463.

A portfolio consisting of 50% equities and 50% cash rebalanced annually results in ending wealth of \$1.14 million and a total return of 13.9% over five years, about the same result as in scenario 1.

### Scenario 3 – Rally Then Crash

The third scenario assumes that the market continues to rise in year one, followed by a bear market in years two and three, then rallies in years four and five. Under this scenario, the investor who invests 100% in equities has ending wealth of \$0.97 million and realizes a total return of -3.5% over five years. As before, the investor that is 100% in cash has ending wealth of \$1.05 million and realizes a total return of 5.1% over five years.

The best-case scenario, which results from correctly timing the market, involves investing in equities during year one, then transferring to cash for years two and three, and returning to equities for years four and five. An investor who correctly times the market has ending wealth of \$1.82 million and realizes a total return of 82.3% over five years.



The worst-case scenario, which results from incorrectly timing the market, involves investing in cash for year one, transferring to equities for the next two years, and returning to cash for the final two. An investor who incorrectly times the market has ending wealth of \$0.56 million and realizes a total return of -44.4% over five years. The difference in ending wealth between the best and worst-case scenario is a staggering \$1,267,066.

A portfolio consisting of 50% equities and 50% cash rebalanced annually results in ending wealth of \$1.06 million and a total return of only 5.9% over five years; about the same as holding cash, in this scenario.

## **Conclusion**

The decision to buy, hold or exit the equities market is a difficult one. With perfect timing, remarkably high returns result. However, poor timing would result in large opportunity costs and/or realized losses. The table below summarizes our numerical results.

<b>Ending Portfolio Value after Year 5</b>			
	<b>Trump Rally</b>	<b>Market Correction Soon</b>	<b>Rally Then Crash</b>
100% Equity	\$1,209,600	\$1,173,288	\$965,250
50%Equity/50%Cash	\$1,159,362	\$1,139,360	\$1,058,552
100% Cash	\$1,051,000	\$1,051,000	\$1,051,000
Best Case Timing	\$1,762,733	\$1,692,886	\$1,823,429
Worst Case Timing	\$721,211	\$728,423	\$556,363

Under our first scenario, where the bull market continues for a few more years, holding 100% of assets in equities would result in a portfolio of \$1,728,000 at the end of the third year. At the end of year five, following the decline, that portfolio would be at \$1,209,600.

The second scenario, involving an immediate market correction and then a rally, would result in a portfolio of \$1,173,288 at the end of year five, if 100% of assets were held in equities. If this investor were savvy enough to exit the equities market just prior to the correction and reenter after, the ending portfolio would be worth \$1,692,886.

Lastly, the final scenario of a rally followed by a major crash results in a negative return in an all equity portfolio, worth only \$965,250 at the end of year five. Holding all cash and earning a measly 1% per year, however, would result in a \$1,051,000 portfolio.

Due to the uncertainty in anticipating the timing of a downturn or continued rally in the S&P 500, "investing and forgetting" in all equities or in a balanced portfolio is often

the value-maximizing strategy in the long run. In our hypothetical scenarios, while not nearly as lucrative as correctly timing major turns in the market, passively investing in equities would be the superior strategy to holding cash in most cases and far better than incorrectly timing the market.

*Questions and comments may be directed to Martin Hanan, CFA at 817-481-4900 or [mhanan@valuescopeinc.com](mailto:mhanan@valuescopeinc.com).*



Marty Hanan is the founder and President of ValueScope, Inc., a valuation and financial advisory firm that specializes in valuing assets and businesses and in helping business owners in business transactions and estate planning. Mr. Hanan is a Chartered Financial Analyst and has a B.S. Electrical Engineering from the University of Illinois and an MBA from Loyola University of Chicago.

*The information presented here is not nor should it be treated as investment, financial or tax advice and is not intended to be used to make investment decisions.*