

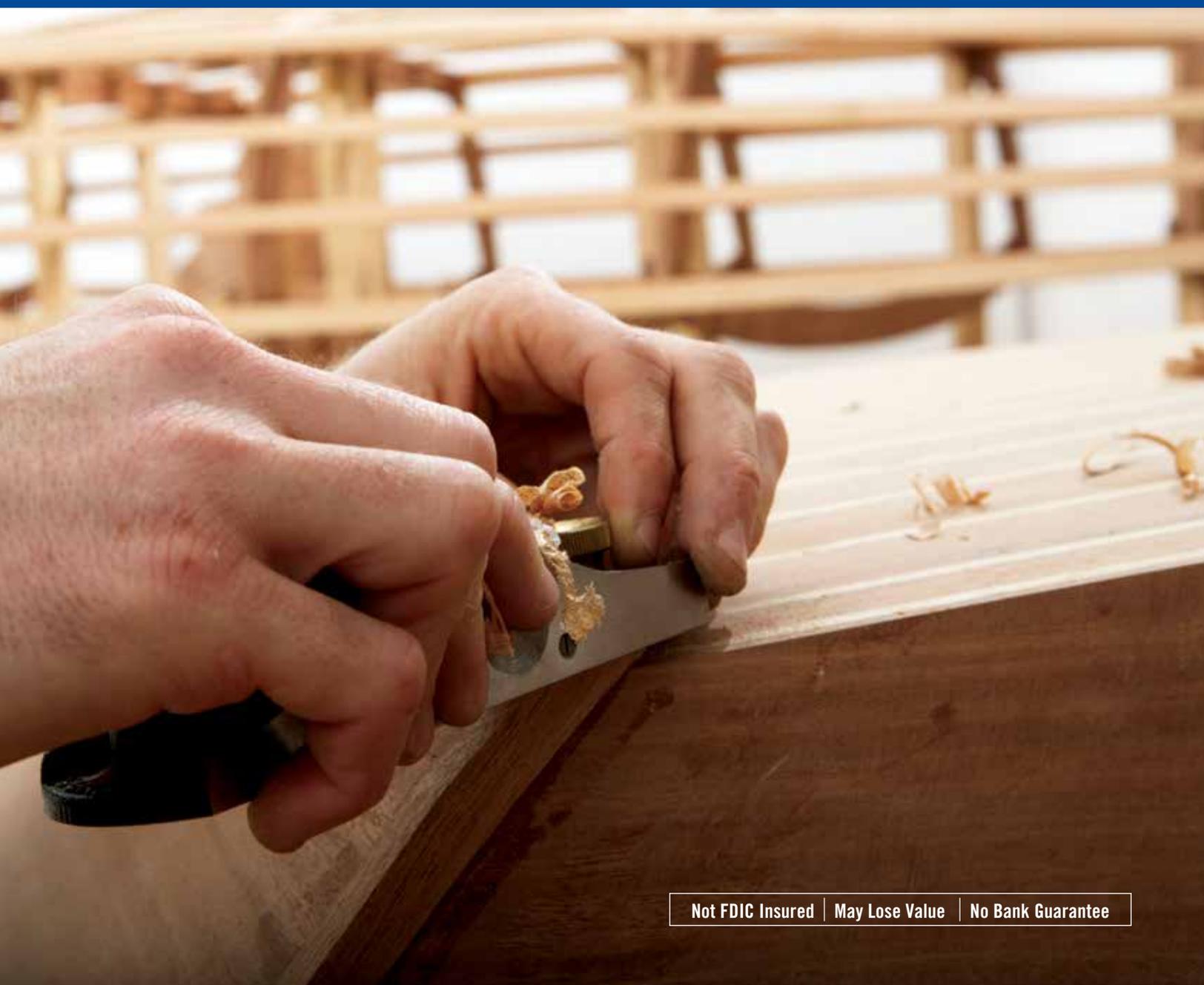


FRANKLIN TEMPLETON  
INVESTMENTS

Investor's Guide

# RetireMetrics®

BUILDING A RETIREMENT PORTFOLIO



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# Which Numbers Are You Looking At?

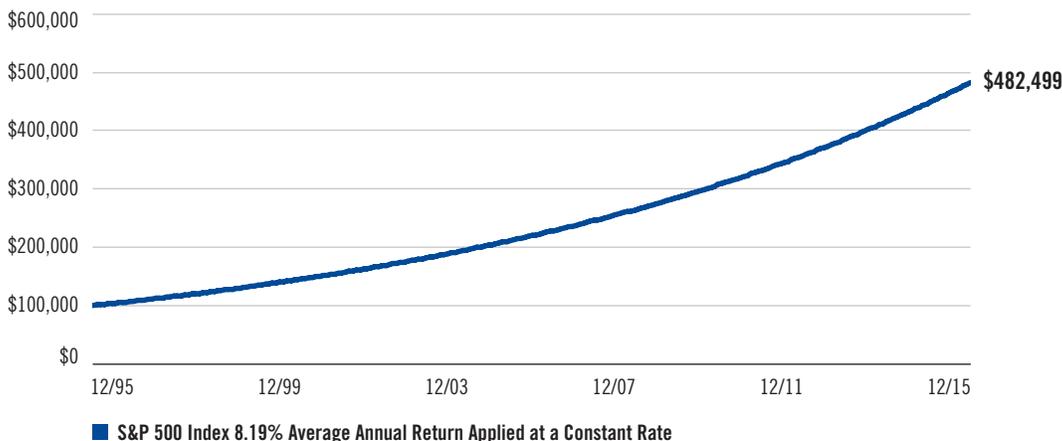
Many people deciding where to invest assets for the future consider historical data such as average annual total returns. But are standard performance measures the only ones that should guide your investments as you prepare to take retirement distributions? Are those numbers providing the full story?

Over the last 20 years, the S&P 500 Index provided an average annual total return of 8.19%<sup>1</sup>—performance that can seem reassuringly solid to the many investors who picture it as illustrated in the hypothetical graph below.

Many investors picture average annual returns unfolding this way<sup>1</sup>

## Hypothetical Growth of a \$100,000 Investment Based on the 8.19% Average Annual Return of the S&P 500 Index APPLIED AT A CONSTANT RATE<sup>1</sup>

20-Year Period Ending December 31, 2015



Of course, the problem with averages is that they come from a series of numbers—both higher *and* lower—that don't resemble the "average" very much. That's why a 8.19% average annual return can result from the more volatile stock market performance charted below.

What market performance REALLY looks like<sup>1</sup>

## Cumulative Total Return of a \$100,000 Investment in S&P 500 Index (Actual) vs. the Hypothetical Growth of a \$100,000 Investment Based on the 8.19% Average Annual Return of the S&P 500 Index APPLIED AT A CONSTANT RATE<sup>1</sup>

20-Year Period Ending December 31, 2015



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# When Volatility Cuts Deepest: Retirement

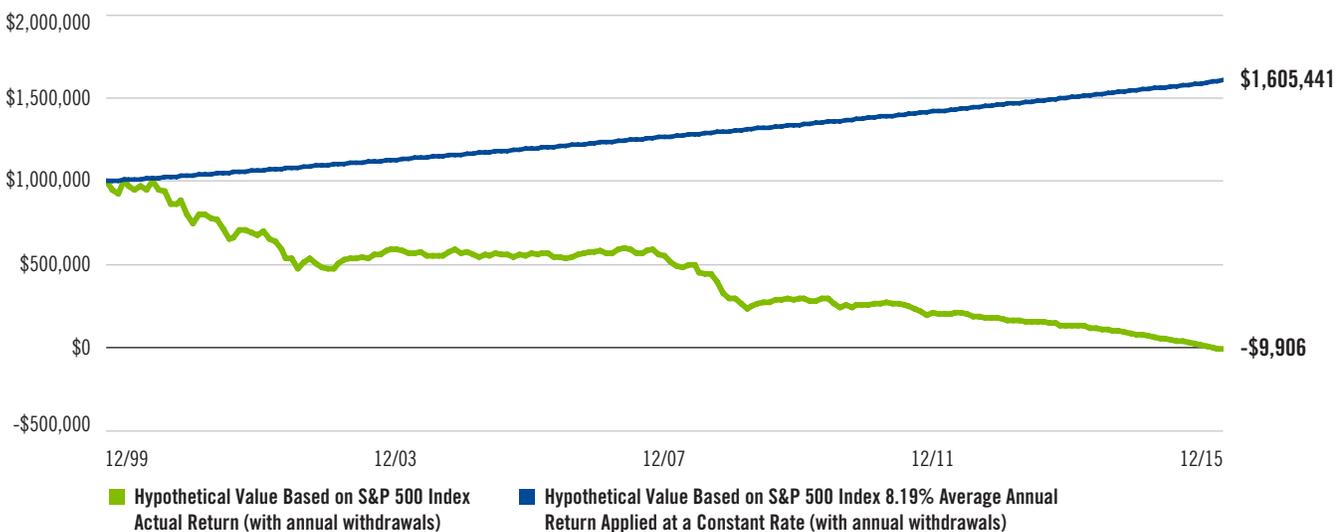
For many on the cusp of retirement, the idea of taking an initial withdrawal of an amount equal to 5% of the value of their investment portfolio during their first year of withdrawals, and adjusting that initial amount each year to account for inflation, seems prudent and reasonable. Depending on how their funds were invested, however, beginning this plan in 2000 could have produced an unwelcome surprise after market volatility took its toll.

## Expectations vs. Reality Once Withdrawals Enter the Equation

This hypothetical example assumes an initial investment of \$1,000,000 and an annual withdrawal equal to 5%, or \$4,167 monthly payments, during the first year. The withdrawal amount increases 3% for each of the following calendar years.

### A Hypothetical Illustration: A Tale of Two Withdrawal Scenarios<sup>1</sup>

December 31, 1999–December 31, 2015



## Use RetireMetrics®

**RetireMetrics** are measures that can help you evaluate mutual funds for your investment portfolio for the distribution phase of your retirement, paying special attention to a fund's potential to add survivability to a portfolio that's distributing income. The three RetireMetrics discussed in this brochure are:



RetireMetric #1:  
**Standard Deviation**

Help match your mutual funds with your risk tolerance.



RetireMetric #2:  
**Correlation**

Help "mix and match" mutual funds to diversify your retirement portfolio.



RetireMetric #3:  
**Probability Analysis**

Help determine the likelihood that your income will last.

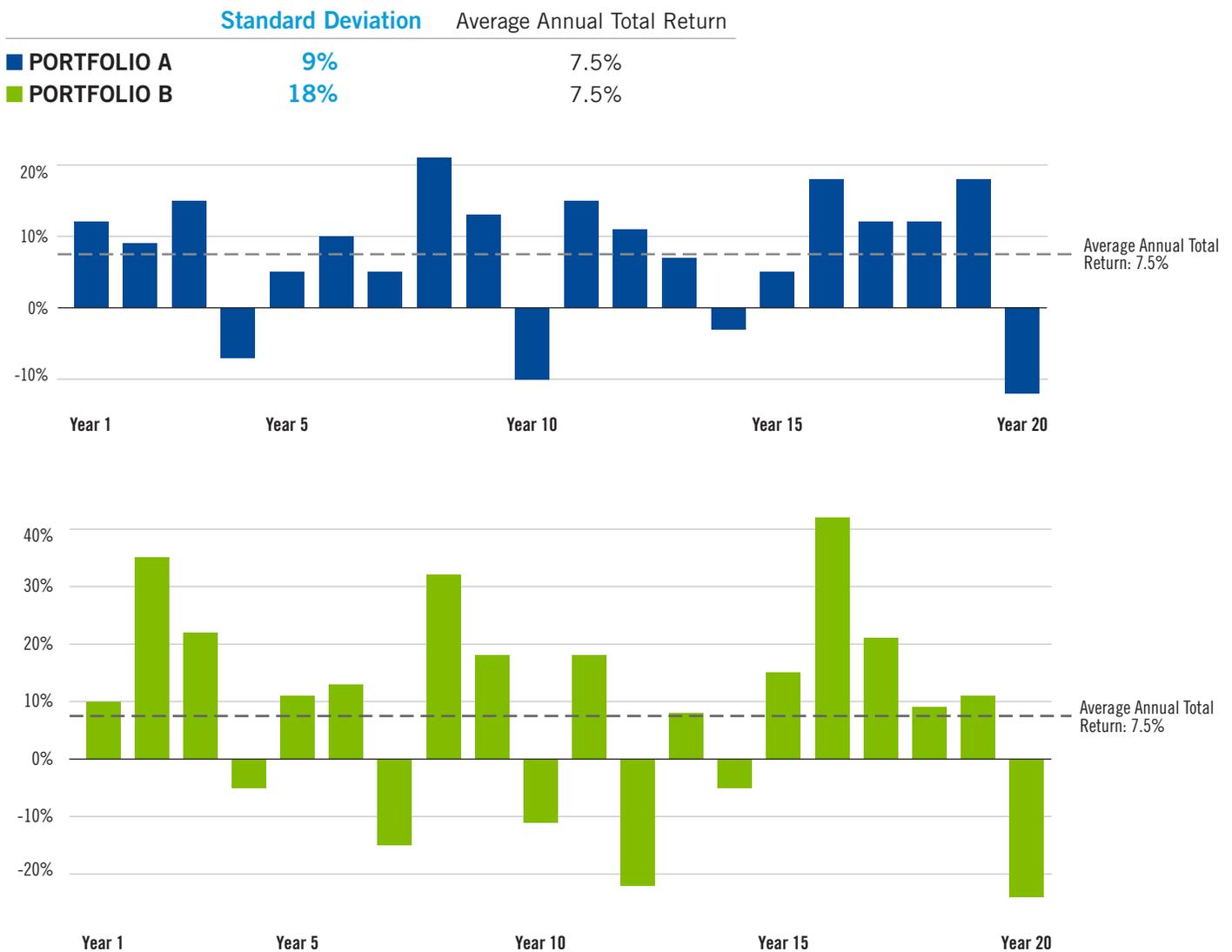


# Measuring the Upside & Downside of Volatility

Standard deviation measures the historical volatility of a mutual fund, giving investors a quick snapshot of the range of returns that compose a fund's average return. Lower standard deviation indicates a tighter band of returns and lower volatility. Higher standard deviation points to a broader range of returns and greater volatility. **For investors looking to take retirement distributions from a fund, it is especially important to consider this volatility measurement.**

## What Standard Deviation *Looks Like*<sup>3</sup>

The following hypothetical example compares two hypothetical portfolios. Both have the same average annual total return of 7.5% but different standard deviations. Which portfolio would you prefer?



3. Hypothetical illustration only—not indicative of actual performance of any Franklin Templeton fund.



# Are You Diversifying or Just Duplicating?

Peanut butter and jelly. Sonny and Cher. Sometimes items that appear quite different, can work well together. This may be the case when determining how best to combine different mutual funds. Most investors know that diversification should guide their choices. The idea behind diversification is simple—spread your money across different asset classes in an effort to reduce risk. But asset classes that seem different may perform more alike than many people would have guessed.

Correlation takes a deeper look at diversification. It measures how two investments have historically moved in relation to each other. If they tend to perform in tandem, they are more correlated. If one typically zigs when the other zags, they are less correlated.

## The Risk of Similarity between Indexes

Correlation is the statistical measure of the degree to which the movements of two variables are related:

1.00 = perfect positive correlation

0.00 = no correlation

-1.00 = perfect negative correlation

Correlations for the 10-Year Period Ended December 31, 2015<sup>4</sup>

	SMALL CAP STOCKS	LARGE CAP STOCKS	FOREIGN STOCKS	FOREIGN SMALL CAP STOCKS	TAX-FREE BONDS	U.S. BONDS	GLOBAL BONDS
SMALL CAP STOCKS	1.00	0.91	0.80	0.79	0.06	-0.03	0.07
LARGE CAP STOCKS	0.91	1.00	0.90	0.84	0.10	0.04	0.16
FOREIGN STOCKS	0.80	0.90	1.00	0.96	0.13	0.13	0.33
FOREIGN SMALL CAP STOCKS	0.79	0.84	0.96	1.00	0.13	0.13	0.32
TAX-FREE BONDS	0.06	0.10	0.13	0.13	1.00	0.53	0.26
U.S. BONDS	-0.03	0.04	0.13	0.13	0.53	1.00	0.67
GLOBAL BONDS	0.07	0.16	0.33	0.32	0.26	0.67	1.00

Diversification does not ensure a profit or protect against a loss.

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Past performance does not guarantee future results.

## The Challenge: Generating Income for Life

Even well-diversified portfolios face challenges with changing and unpredictable market conditions. In retirement, you want your investment portfolio to weather those forces *and* provide an income stream. How can you test an investment portfolio to account for thousands of possible scenarios? You can use probability analysis, also referred to as Monte Carlo simulation to help with this.

The table below shows probability analysis results for five hypothetical portfolios, assuming different initial withdrawal rates. The simulation assumes that the initial withdrawal amount is increased annually by 3%. The percentages represent the historical probability of the portfolios to sustain withdrawals for the 30-year period ended December 31, 2015. These hypothetical examples may help you determine if your retirement distribution expectations and your investment portfolio construction are aligned.

### Consider These Sample Investment Portfolios

**Probability of Sustaining Withdrawals over the 30-Year Period Ended December 31, 2015 with the Annual Withdrawal Amount Increased by 3% Each Year<sup>5</sup>**

Asset Allocations	INITIAL WITHDRAWAL RATE			
	3%	4%	5%	6%
 <ul style="list-style-type: none"> <li>■ U.S. Bonds ..... 100%</li> </ul>	>95%	89%	61%	31%
 <ul style="list-style-type: none"> <li>■ U.S. Stocks ..... 100%</li> </ul>	>95%	>95%	88%	75%
 <ul style="list-style-type: none"> <li>■ U.S. Stocks ..... 60%</li> <li>■ U.S. Bonds ..... 40%</li> </ul>	>95%	>95%	89%	71%
 <ul style="list-style-type: none"> <li>■ U.S. Stocks ..... 30%</li> <li>■ U.S. Bonds ..... 30%</li> <li>■ International Stocks ..... 30%</li> <li>■ Global Bonds ..... 10%</li> </ul>	>95%	>95%	91%	71%
 <ul style="list-style-type: none"> <li>■ Cash ..... 100%</li> </ul>	>95%	>95%	<5%	<5%

**IMPORTANT:** The Monte Carlo projections or other information generated by Zephyr Associates, Inc., regarding the likelihood of various investment outcomes are hypothetical in nature and should not be considered investment advice. They do not reflect actual investment results and are not guarantees of future results.

**ASSET CLASS INDEXES USED:** **Cash:** P&R 90-Day U.S. Treasury (1969–12/31/15); **U.S. Stocks:** S&P 500 Index (1955–12/31/15); **U.S. Bonds:** Ibboston U.S. Long-Term Corporate Bond Index (1955–12/31/15); **Global Bonds:** Citigroup World Government Bond Index (1985–12/31/15); **International Stocks:** MSCI EAFE Index (1970–12/31/15). Indexes are unmanaged and one cannot invest directly in an index. **Past performance does not guarantee future results.**

5. Source: Zephyr Associates, Inc.

## DISCLOSURE INFORMATION

It's important to remember, the preceding Monte Carlo simulation uses historical data for asset classes, including arithmetic mean (return), standard deviation (risk) and correlation, to estimate a range of possible outcomes. **Past performance does not guarantee future results.** Note that other investments not considered may have characteristics similar or superior to those being analyzed.

Each Monte Carlo simulation generates randomized scenarios consistent with the historical characteristics of the asset classes. The simulation survival rates (probability of a portfolio supporting withdrawals over the indicated periods with a positive balance at the end of the period) are based on 10,000 simulations of possible market scenarios. These projections are only estimates based on the simulations and assumptions and do not guarantee or predict future investment results.

There can be no assurance that the simulation survival rates will be achieved or sustained. Actual results will vary and may be better or worse than the probabilities indicated, which only present a range of possible outcomes based on the simulations and assumptions. Consequently, it may be prudent for you to be more conservative with your withdrawal rates, especially early in retirement, given the unpredictable nature of market performance.

This type of Monte Carlo simulation also assumes that the distribution of returns is normal. A normal distribution means that returns are concentrated near the average (arithmetic mean) and decrease in frequency as the distance from the average increases. Should actual returns not follow this pattern, results may vary significantly.

Results may also significantly vary over time and each time the simulation is run.

This simulation does not take into account taxes on withdrawals, nor early withdrawal penalties.

Indexes are unmanaged, include reinvestment of dividends and, as they are unmanaged, do not include any fees and expenses. A mutual fund, or other managed account, will include investment management fees and other expenses, which will reduce returns. One cannot invest directly in an index. These calculations are based on a limited collection of asset classes and some of these asset classes may have relatively short histories.

Other asset classes may be more appropriate for your individual situation.

Periods of significant market volatility may increase the chances that actual results will differ, possibly significantly, from the examples provided.



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