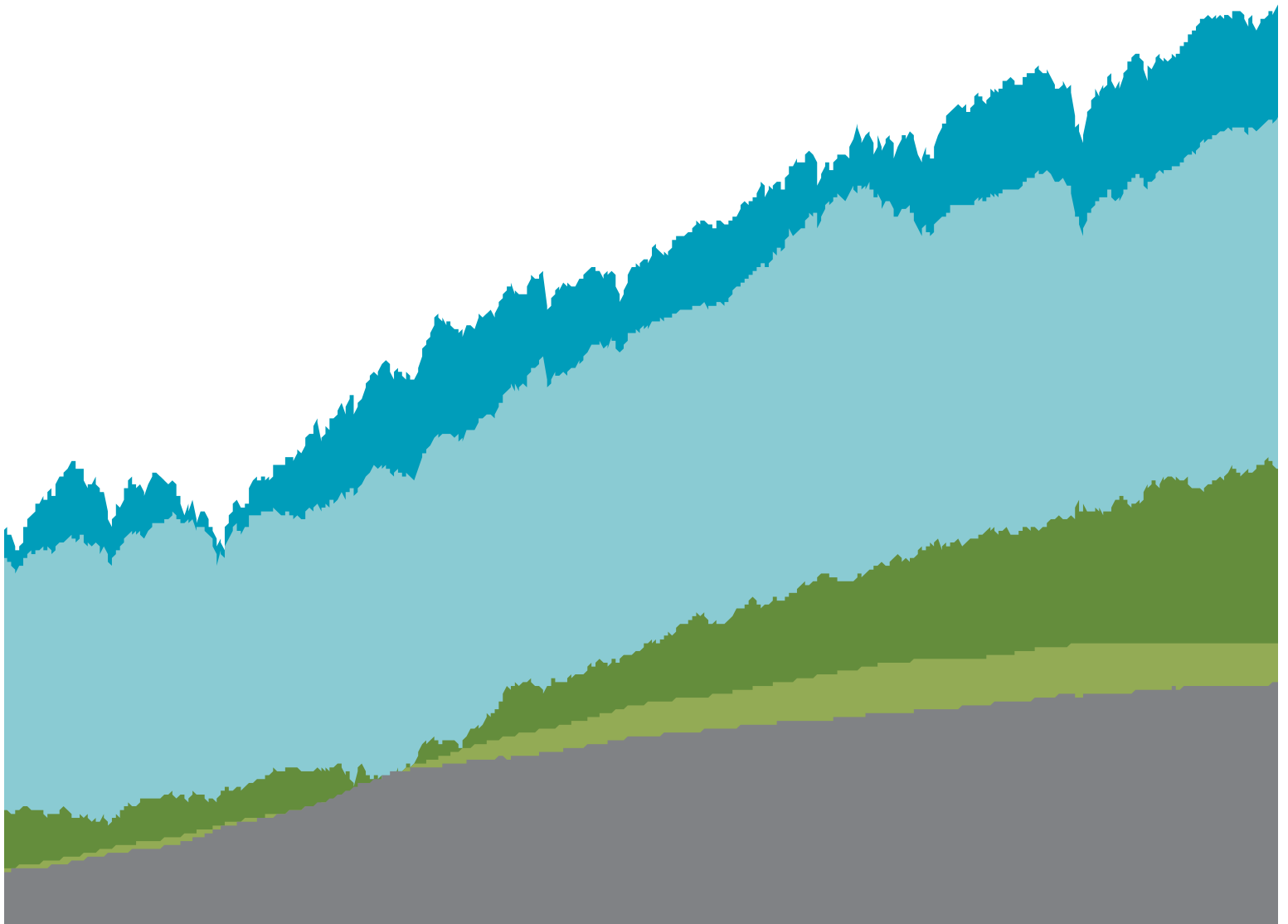


10 Powerful Investing Principles to Help Avoid Running Out of Money in Retirement

Make Smarter Decisions to Improve Your Odds of Success in Retirement



1 Embrace Market Pricing

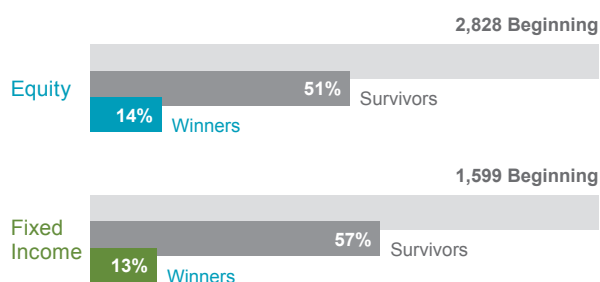
The market is an effective information-processing machine. Each day, the world equity markets process billions of dollars in trades between buyers and sellers—and the real-time information they bring helps set prices.



2 Don't Try to Outguess the Market

The market's pricing power works against mutual fund managers who try to outperform through stock picking or market timing. As evidence, only 14% of US equity mutual funds and 13% of fixed income funds have survived and outperformed their benchmarks over the past 15 years.

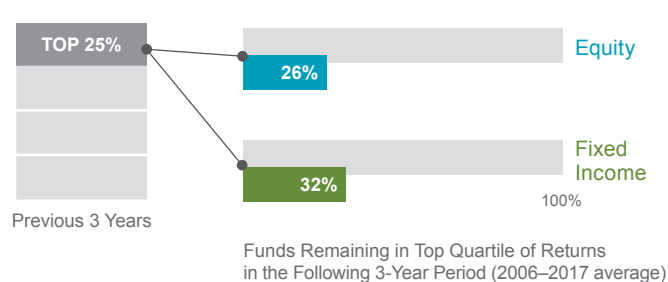
US-Based Mutual Fund Performance, 2003–2017



3 Resist Chasing Past Performance

Some investors select mutual funds based on their past returns. Yet, past performance offers little insight into a fund's future returns. For example, most funds in the top quartile (25%) of previous three-year returns did not maintain a top-quartile ranking in the following three years.

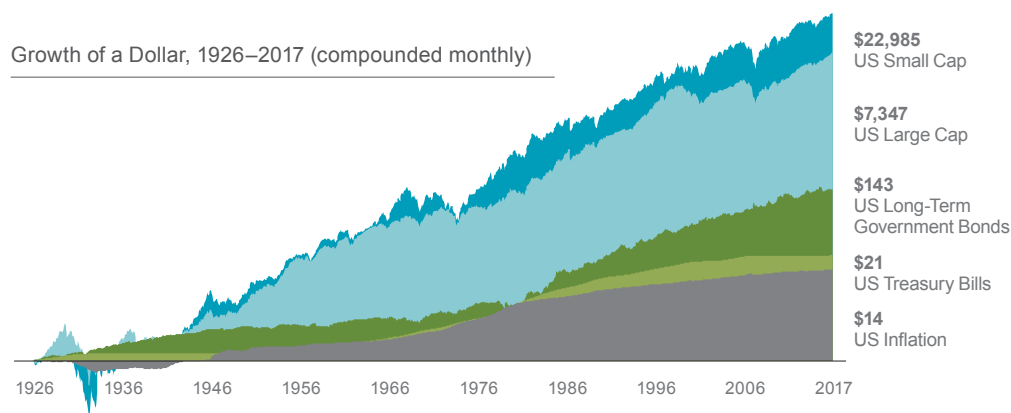
Percentage of Top-Ranked Funds That Stayed on Top



4 Let Markets Work for You

The financial markets have rewarded long-term investors. People expect a positive return on the capital they supply, and historically, the equity and bond markets have provided growth of wealth that has more than offset inflation.

Growth of a Dollar, 1926–2017 (compounded monthly)



5 Consider the Drivers of Returns

Academic research has identified these equity and fixed income dimensions, which point to differences in expected returns. Investors can pursue higher expected returns by structuring their portfolio around these dimensions.

Dimensions of Expected Returns

Equities

- **Market** (Equity premium—stocks vs. bonds)
- **Company Size** (Small cap premium—small vs. large companies)
- **Relative Price** (Value premium—value vs. growth companies)
- **Profitability** (Profitability premium—high vs. low profitability companies)

Fixed Income

- **Term** (Term premium—longer vs. shorter maturity bonds)
- **Credit** (Credit premium—lower vs. higher credit quality bonds)

6

Practice Smart Diversification

Holding securities across many market segments can help manage overall risk. But diversifying within your home market may not be enough. Global diversification can broaden your investment universe.

Home Market Index Portfolio



S&P 500 Index
1 country
505 stocks

Global Market Index Portfolio



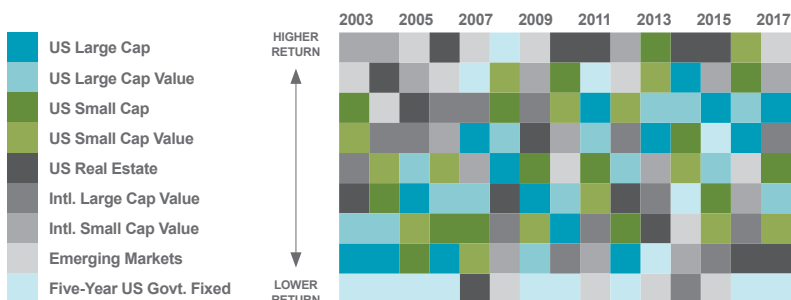
MSCI ACWI Investable Market Index (IMI)
47 countries
8,653 stocks

7

Avoid Market Timing

You never know which market segments will outperform from year to year. By holding a globally diversified portfolio, investors are well positioned to seek returns wherever they occur.

Annual Returns by Market Index



8

Manage Your Emotions

Many people struggle to separate their emotions from investing. Markets go up and down. Reacting to current market conditions may lead to making poor investment decisions.

Avoid Reactive Investing



9

Look Beyond the Headlines

Daily market news and commentary can challenge your investment discipline. Some messages stir anxiety about the future, while others tempt you to chase the latest investment fad. When headlines unsettle you, consider the source and maintain a long-term perspective.



10

Focus on What You Can Control

A financial advisor can offer expertise and guidance to help you focus on actions that add value. This can lead to a better investment experience.

- Create an investment plan to fit your needs and risk tolerance.
- Structure a portfolio along the dimensions of expected returns.
- Diversify globally.
- Manage expenses, turnover, and taxes.
- Stay disciplined through market dips and swings.

DISCLOSURES

Exhibit 1: In US dollars. Source: Dimensional, using data from Bloomberg LP. Includes primary and secondary exchange trading volume globally for equities. ETFs and funds are excluded. Daily averages were computed by calculating the trading volume of each stock daily as the closing price multiplied by shares traded that day. All such trading volume is summed up and divided by 252 as an approximate number of annual trading days.

Exhibit 2: The sample includes funds at the beginning of the 15-year period ending December 31, 2017. Each fund is evaluated relative to the Morningstar index assigned to the fund's category at the start of the evaluation period. So, if, for example, a fund changes from Large Value to Large Growth during the evaluation period, then its return will still be compared to the Large Value category index. Surviving funds are those with return observations for every month of the sample period. Winner funds are those that survived and whose cumulative net return over the period exceeded that of their respective Morningstar category index.

Exhibit 3: This study evaluated fund performance persistence over rolling periods from 2001 through 2017. Each year, funds are sorted within their category based on their previous three-year total return. Those ranked in the top quartile (25%) of returns are evaluated over the following three-year period. The chart shows the average percentage of top-ranked equity and fixed income funds that kept their top ranking in the subsequent period.

Source (Exhibits 2 and 3): US-domiciled open-end mutual fund data is from Morningstar and Center for Research in Security Prices (CRSP) from the University of Chicago. Index funds and fund-of-funds are excluded from the sample. Equity fund sample includes the Morningstar historical categories: Diversified Emerging Markets, Europe Stock, Foreign Large Blend, Foreign Large Growth, Foreign Large Value, Foreign Small/Mid Blend, Foreign Small/Mid Growth, Foreign Small/Mid Value, Japan Stock, Large Blend, Large Growth, Large Value, Mid-Cap Blend, Mid-Cap Growth, Mid-Cap Value, Miscellaneous Region, Pacific/Asia ex-Japan Stock, Small Blend, Small Growth, Small Value, and World Stock. Fixed income fund sample includes the Morningstar historical categories: Corporate Bond, High Yield Bond, Inflation-Protected Bond, Intermediate Government, Intermediate-Term Bond, Muni California Intermediate, Muni California Long, Muni Massachusetts, Muni Minnesota, Muni National Intermediate, Muni National Long, Muni National Short, Muni New Jersey, Muni New York Intermediate, Muni New York Long, Muni Ohio, Muni Pennsylvania, Muni Single State Intermediate, Muni Single State Long, Muni Single State Short, Short Government, Short-Term Bond, Ultrashort Bond, and World Bond. See Dimensional's "Mutual Fund Landscape 2018" for more detail. Index data provided by Bloomberg Barclays, MSCI, Russell, FTSE Fixed Income LLC, and S&P. Bloomberg Barclays data provided by Bloomberg. MSCI data © MSCI 2018, all rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. FTSE fixed income indices © 2018 FTSE Fixed Income LLC. All rights reserved. S&P data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

Exhibit 4: In US dollars. US Small Cap is the CRSP 6–10 Index. US Large Cap is the S&P 500 Index. Long-Term Government Bonds is the IA SBBI US LT Govt TR USD. Treasury Bills is the IA SBBI US 30 Day TBill TR USD. US Inflation is measured as changes in the US Consumer Price Index. CRSP data is provided by the Center for Research in Security Prices, University of Chicago. S&P data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Long-term government bonds and Treasury bills data provided by Ibbotson Associates via Morningstar Direct. US Consumer Price Index data is provided by the US Department of Labor Bureau of Labor Statistics.

Exhibit 5: Relative price is measured by the price-to-book ratio; value stocks are those with lower price-to-book ratios. Profitability is a measure of current profitability, based on information from individual companies' income statements.

Exhibit 6: Number of holdings and countries for the S&P 500 Index and MSCI ACWI (All Country World Index) Investable Market Index (IMI) as of December 31, 2017. S&P data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. MSCI data © MSCI 2018, all rights reserved. International investing involves special risks such as currency fluctuation and political instability. Investing in emerging markets may accentuate these risks.

Exhibit 7: In US dollars. US Large Cap is the S&P 500 Index. US Large Cap Value is the Russell 1000 Value Index. US Small Cap is the Russell 2000 Index. US Small Cap Value is the Russell 2000 Value Index. US Real Estate is the Dow Jones US Select REIT Index. International Large Cap Value is the MSCI World ex USA Value Index (gross dividends). International Small Cap Value is the MSCI World ex USA Small Cap Value Index (gross dividends). Emerging Markets is the MSCI Emerging Markets Index (gross dividends). Five-Year US Government Fixed is the Bloomberg Barclays US TIPS Index 1–5 Years. S&P and Dow Jones data © 2018 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2018, all rights reserved. Bloomberg Barclays data provided by Bloomberg. Chart is for illustrative purposes only.