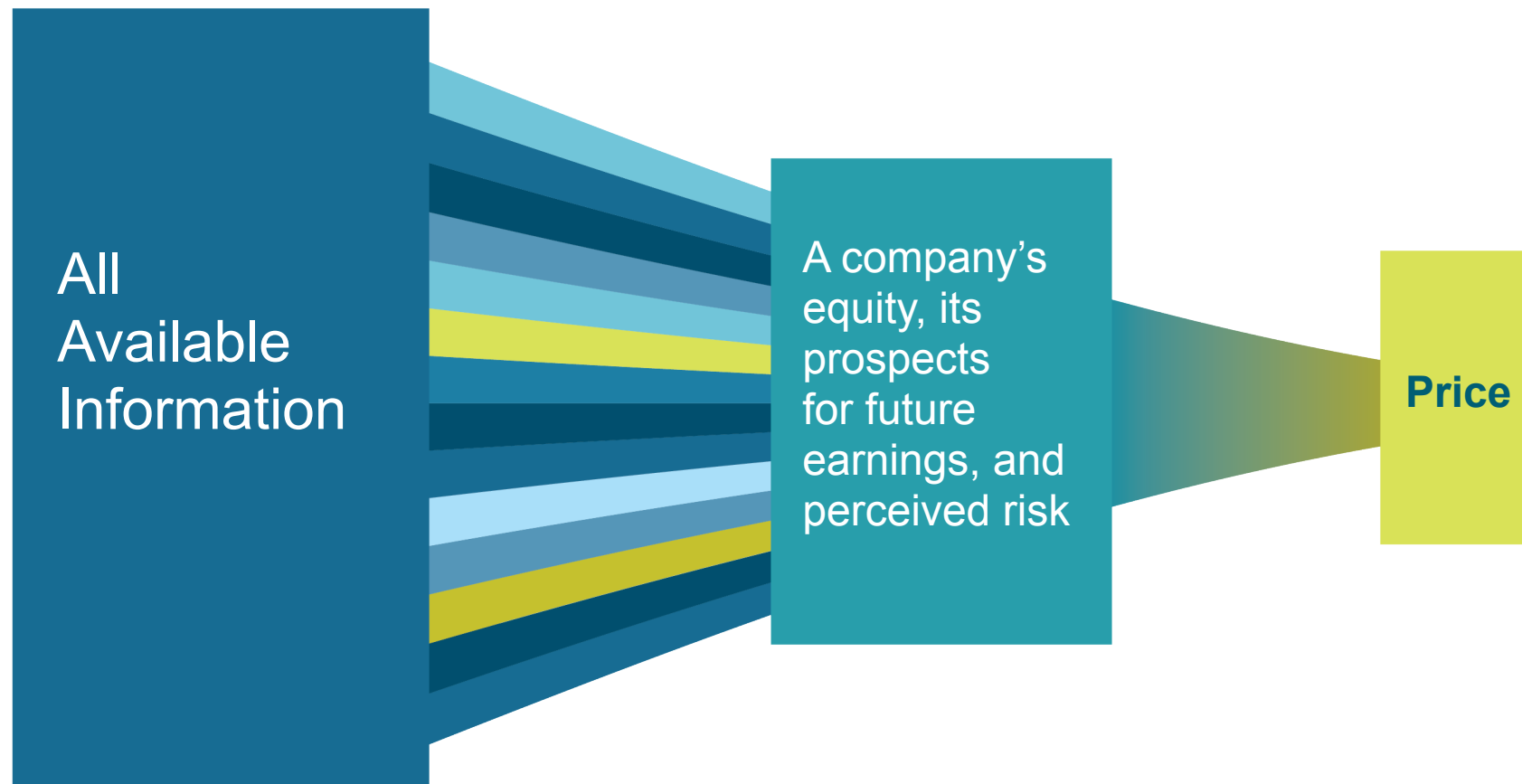


# What Affects a Stock's Current Price?



Given all information, a stock's current price reflects aggregate expectations about risk and return.

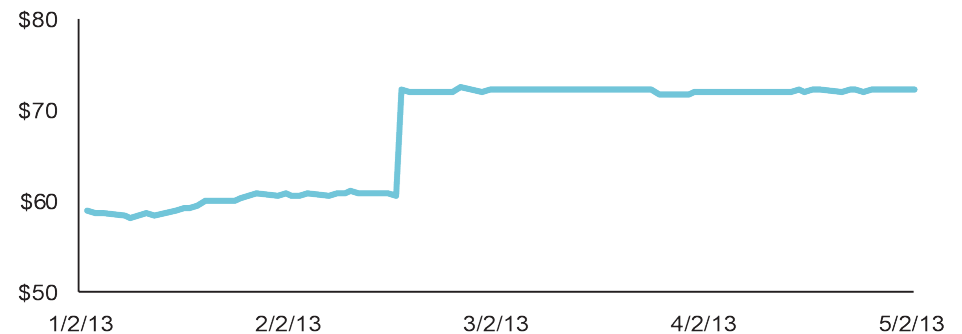
# Stock Prices Adjust Quickly

Heinz, 2/14/2013

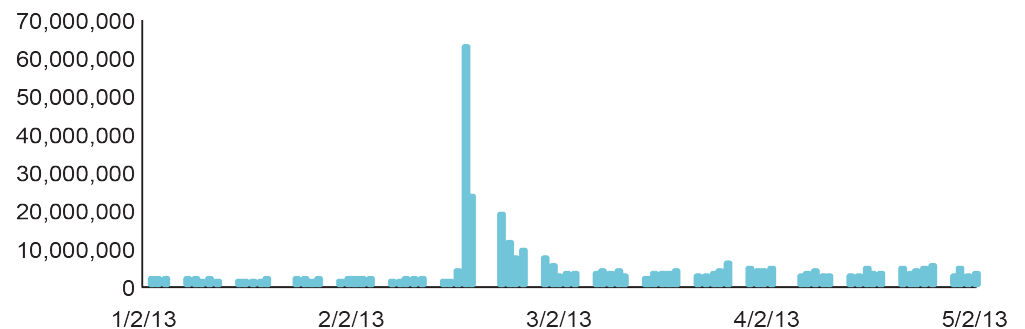
**“Heinz agrees to buyout by  
Berkshire Hathaway, 3G”**  
–*USA Today*, February 14, 2013

News travels quickly, and prices  
can adjust in an instant.

CLOSING PRICE



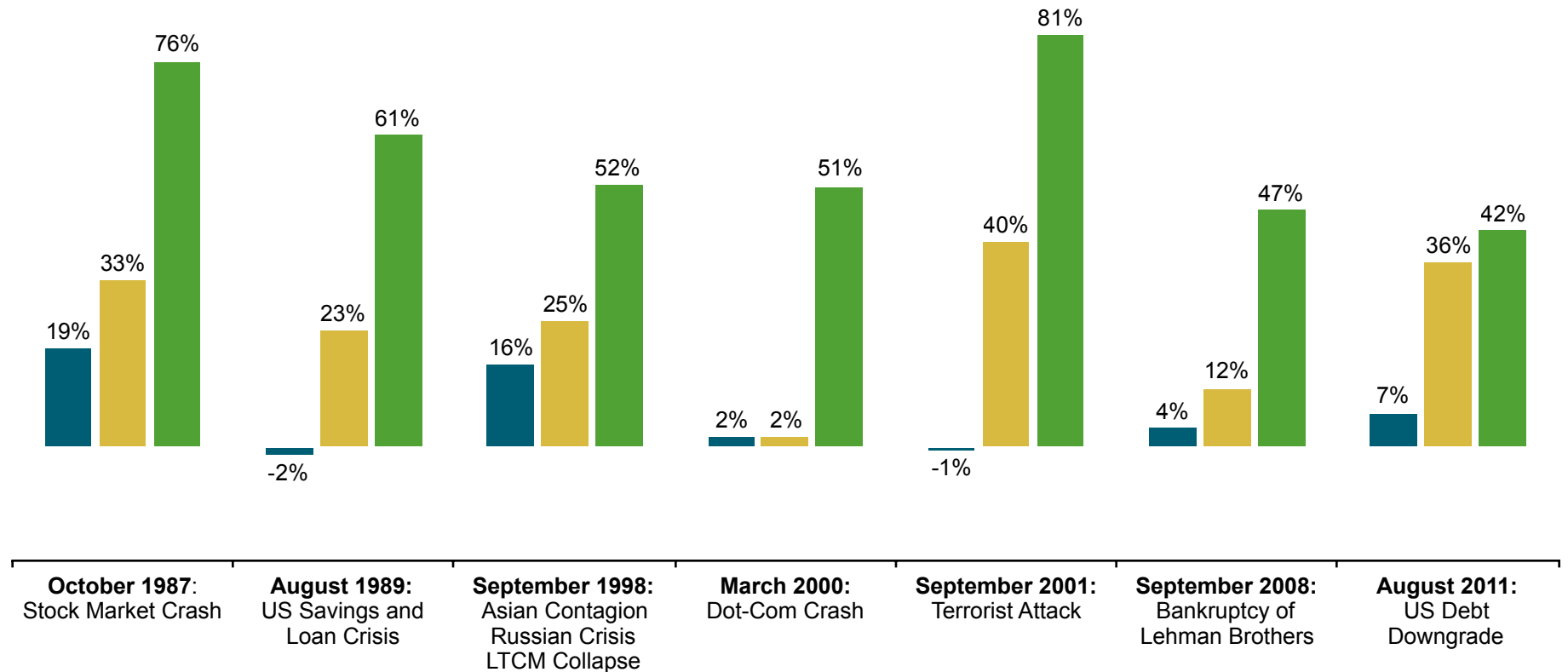
TRADE VOLUME



# The Market's Response to Crisis

Performance of a Balanced Strategy: 60% Stocks, 40% Bonds  
Cumulative Total Return

■ After 1 year ■ After 3 years ■ After 5 years



# A History of Market Ups and Downs

S&P 500 Index total returns in USD, January 1926–December 2019

Using a 10% threshold for downturns

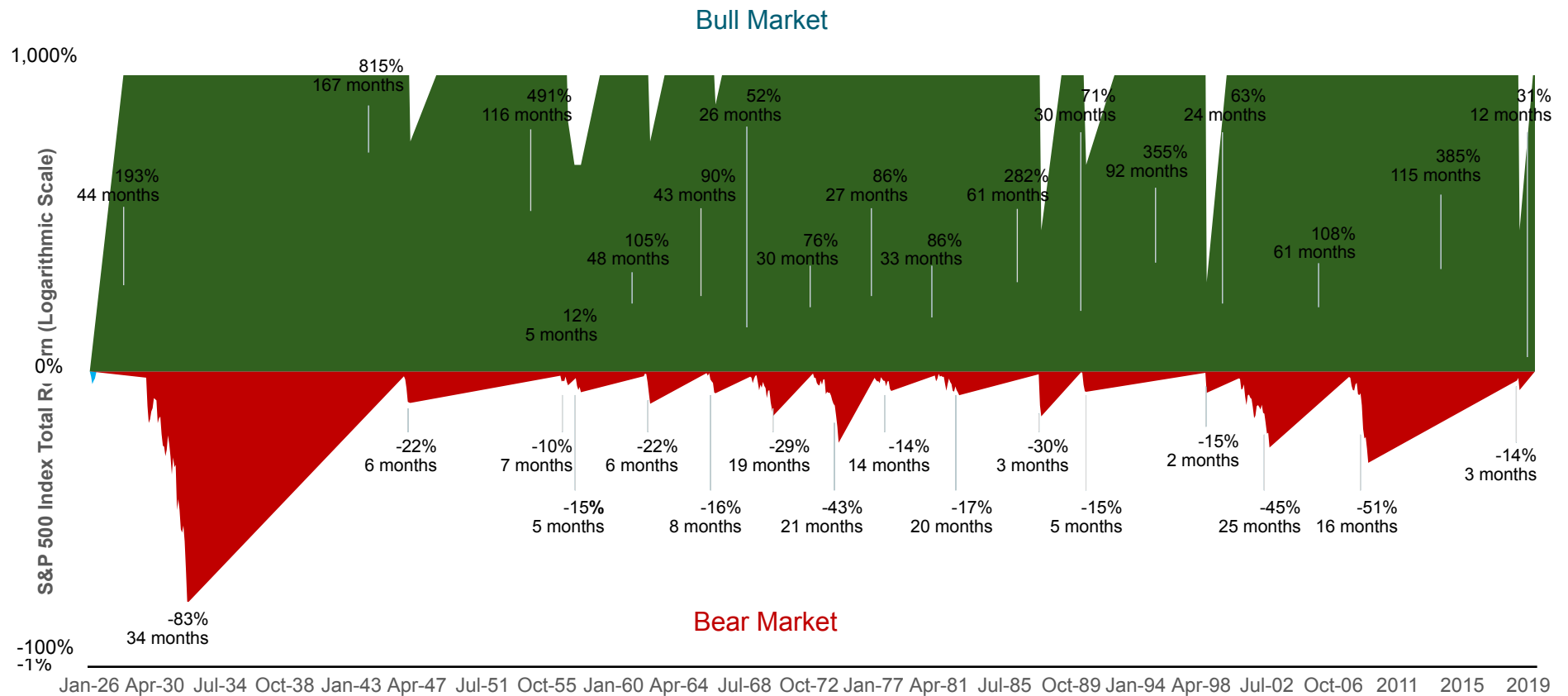


Chart end date is 12/31/2019, the last trough to peak return of 31% represents the return through December 2019.  
 Bear markets are defined as downturns of 10% or greater from new index highs. Bull markets are subsequent rises following the bear market trough through the next new market high. The chart shows bear markets and bull markets, the number of months they lasted and the associated cumulative performance for each market period. Results for different time periods could differ from the results shown.  
 Past performance is no guarantee of future results. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio.  
 Source: S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

# A History of Market Ups and Downs

S&P 500 Index total returns in USD, January 1926–December 2019

Using a 20% threshold for downturns

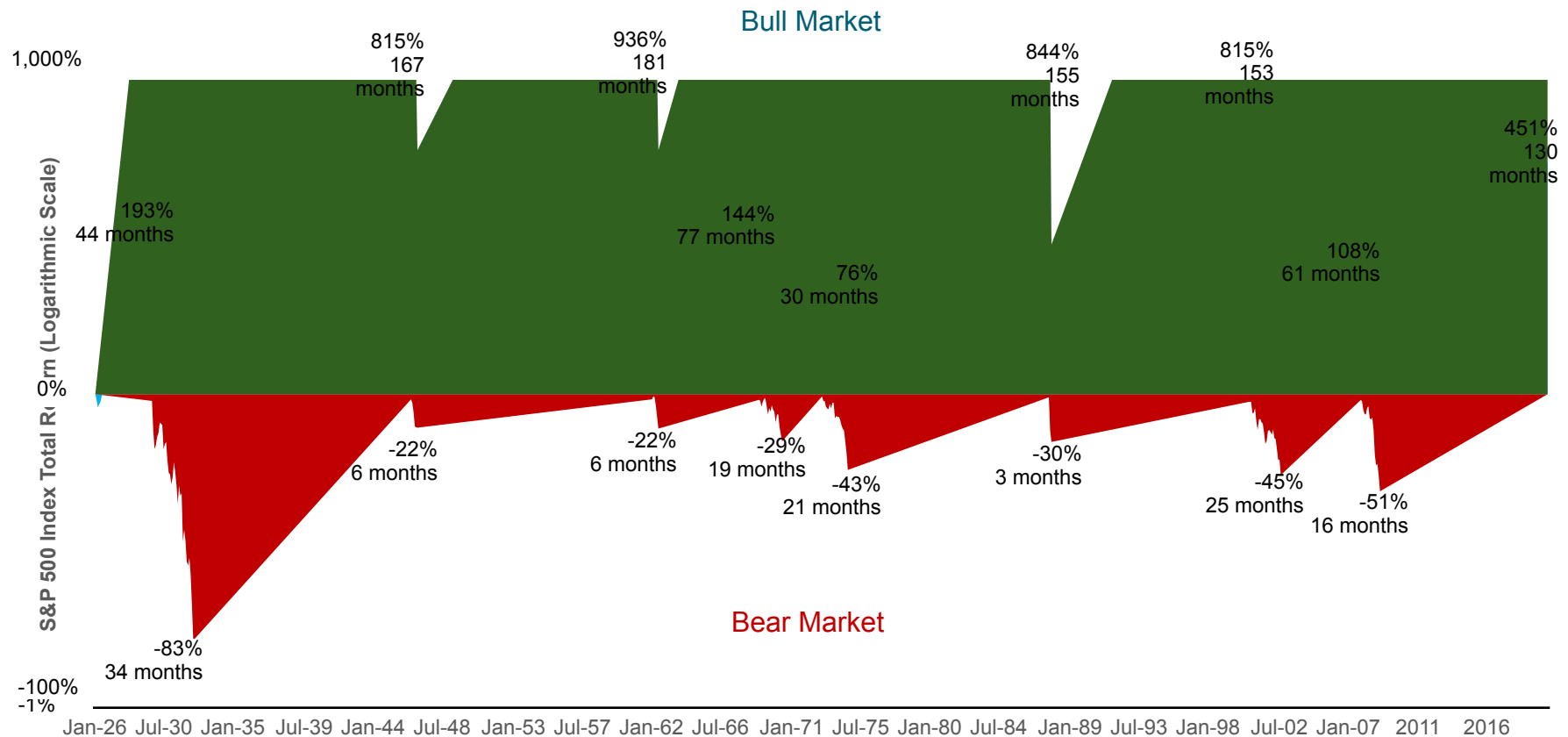
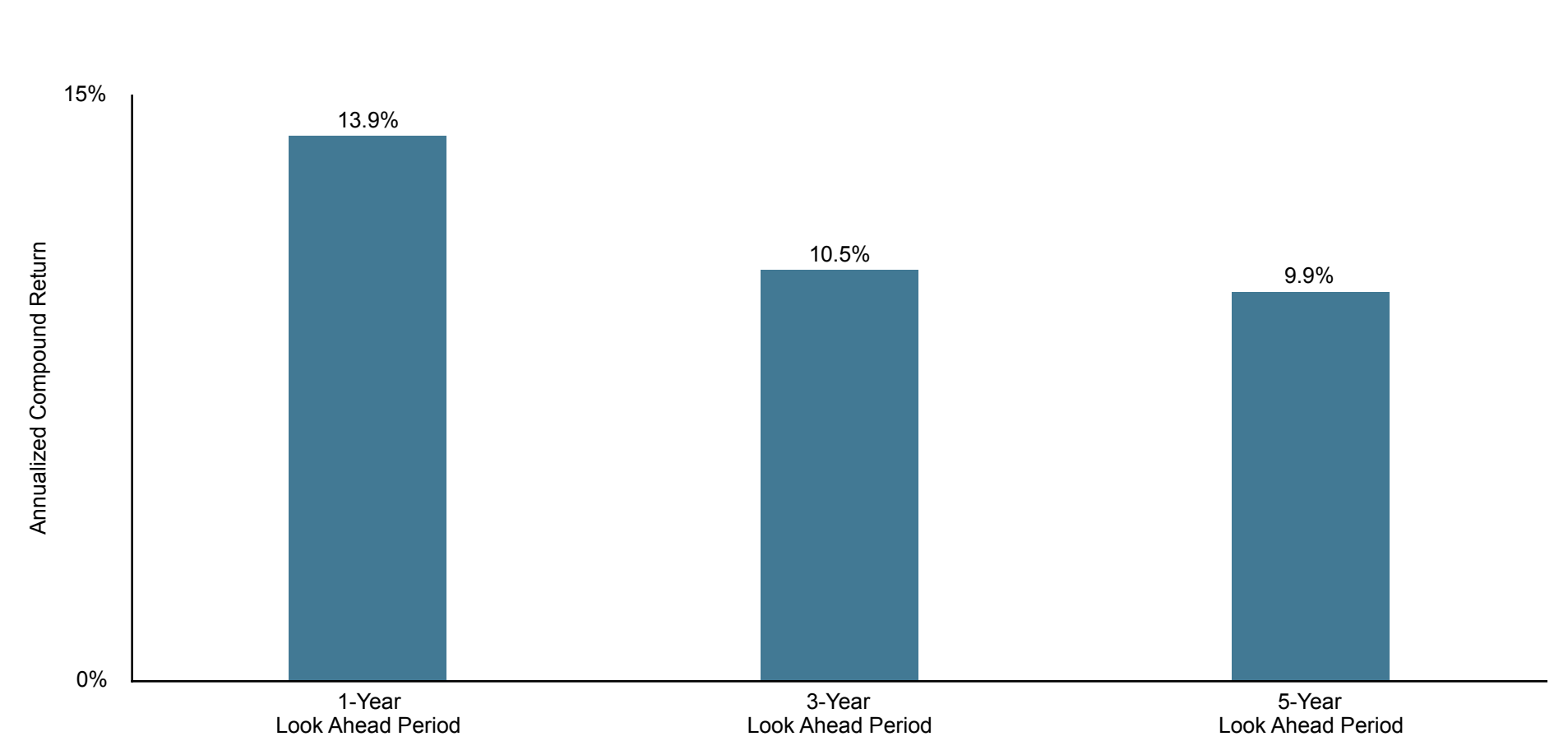


Chart end date is 12/31/2019, the last trough to peak return of 451% represents the return through December 2019.  
 Bear markets are defined as downturns of 20% or greater from new index highs. Bull markets are subsequent rises following the bear market trough through the next new market high. The chart shows bear markets and bull markets, the number of months they lasted and the associated cumulative performance for each market period. Results for different time periods could differ from the results shown.  
 Past performance is no guarantee of future results. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio.  
 Source: S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.

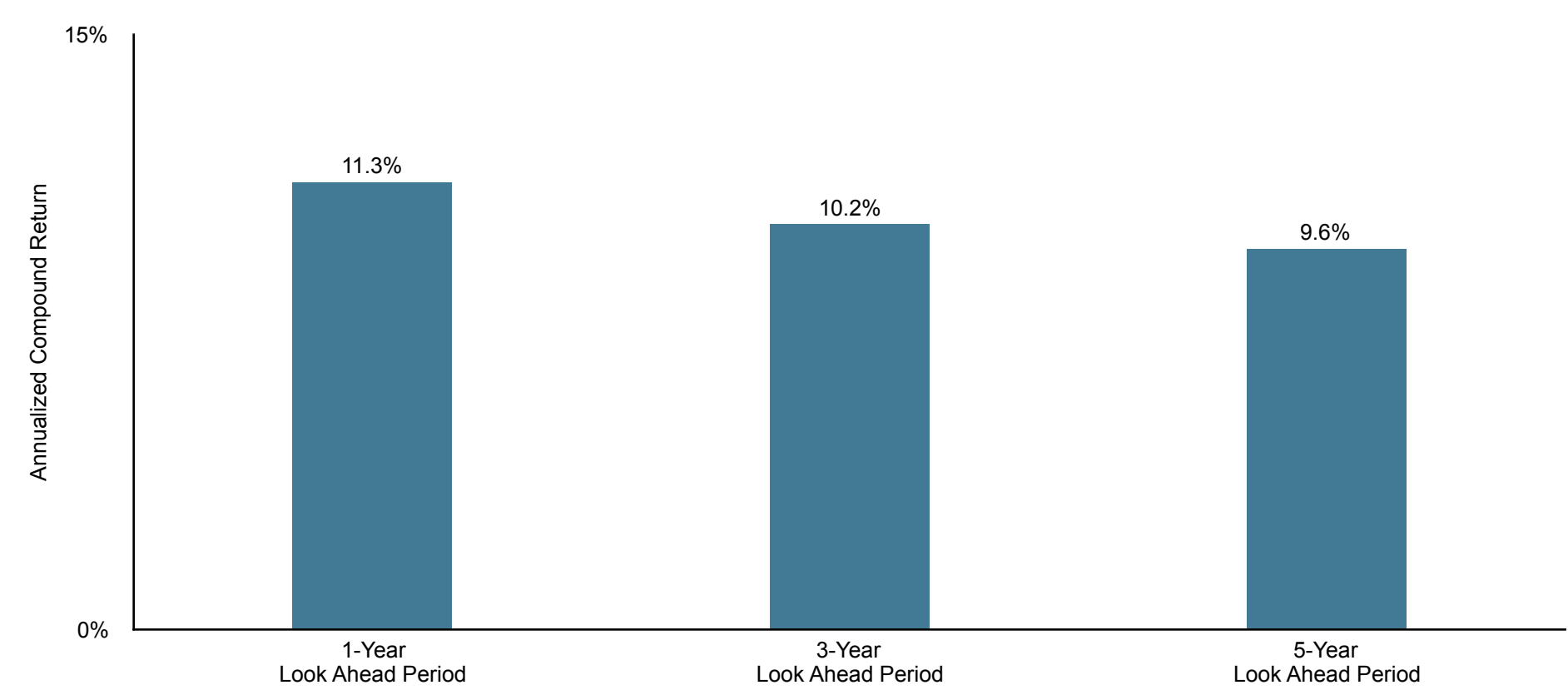
# Average Annualized Returns after New Market Highs

S&P 500, 1/1926–12/2019



# Average Annualized Returns after Market Decline of More than 10%

S&P 500, 1/1926–12/2019



In US dollars.  
Past performance is no guarantee of future results. Declines are defined as months ending with the market below the previous market high by at least 10%. Annualized compound returns are computed for the relevant time periods after each decline observed and averaged across all declines for the cutoff. There were 1,127 observation months in the sample. January 1990–present: S&P 500 Total Returns Index. S&P data © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. January 1926–December 1989: S&P 500 Total Return Index, Stocks, Bonds, Bills and Inflation Yearbook™, Ibbotson Associates, Chicago. For illustrative purposes only. Index is not available for direct investment; therefore, its performance does not reflect the expenses associated with the management of an actual portfolio. There is always a risk that an investor may lose money.

# S&P 500 Total Return Index Highs

Percent of cases where index is higher after monthly closing high vs. any monthly closing level

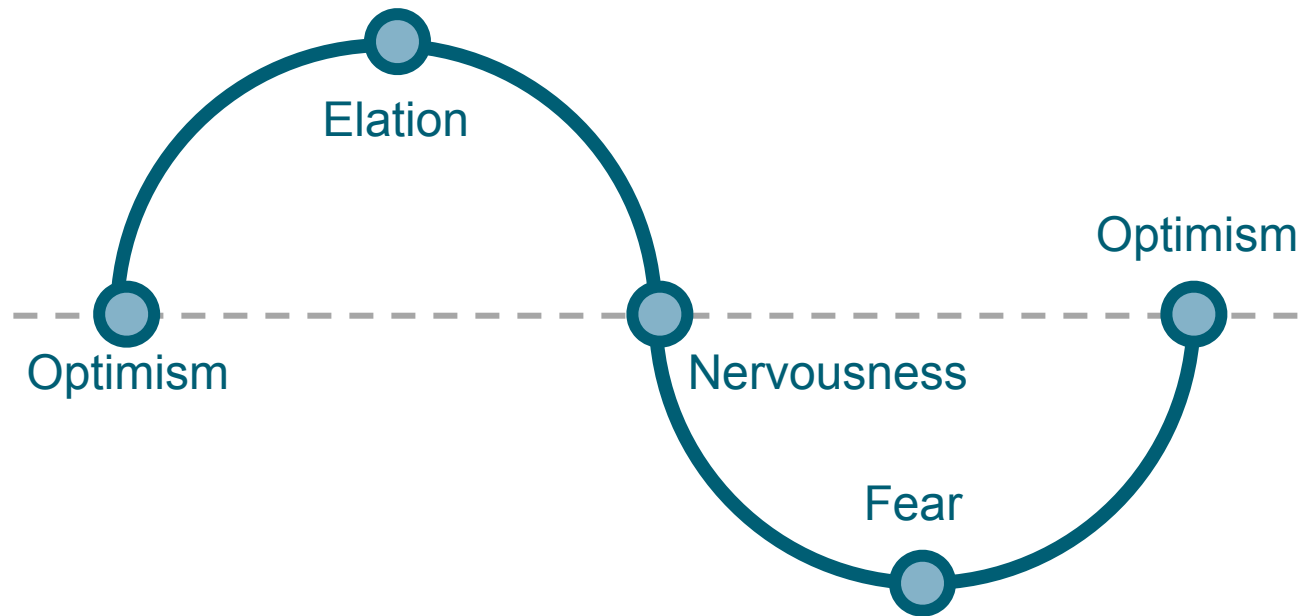
January 1926–December 2019

<b>Look-Ahead Period</b>	<b>Percent of Cases Where Index Was Higher (after new high)</b>	<b>Avg. Return (after new high)</b>	<b>Percent of Cases Where Index Was Higher (after any previous level)</b>	<b>Avg. Annualized Return (after any previous level)</b>
1 year	81.3%	13.9%	75.4%	12.3%
3 years	84.7%	10.5%	83.9%	10.6%
5 years	85.2%	9.9%	87.8%	10.1%

- 30% of monthly observations were new closing highs.
- Average returns were similar after a new monthly closing high or any previous monthly closing level.
- The percent of cases where the index was higher was similar after a new monthly closing high and after any previous monthly closing level.



# Many Investors Follow Their Emotions

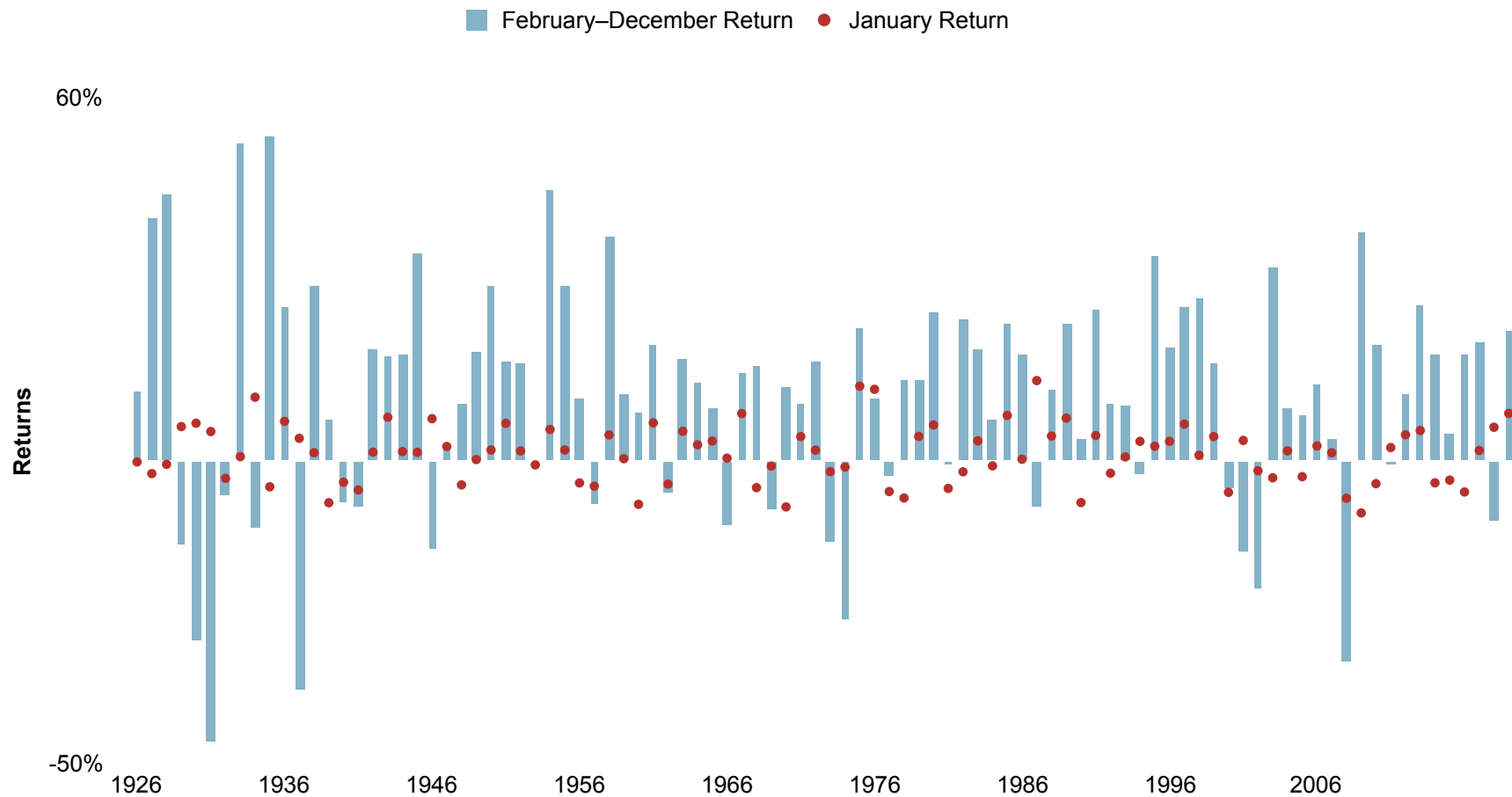


People may struggle to separate their emotions from their investment decisions.

Following a reactive cycle of excessive optimism and fear may lead to poor decisions at the worst times.

# January Return vs. Subsequent 11-Month Return of the S&P 500 Index

1926–2019



In US dollars. Returns are of the S&P 500 Index. © 2020 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. Past performance is not a guarantee of future results. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money. Even a long-term investment approach cannot guarantee a profit.

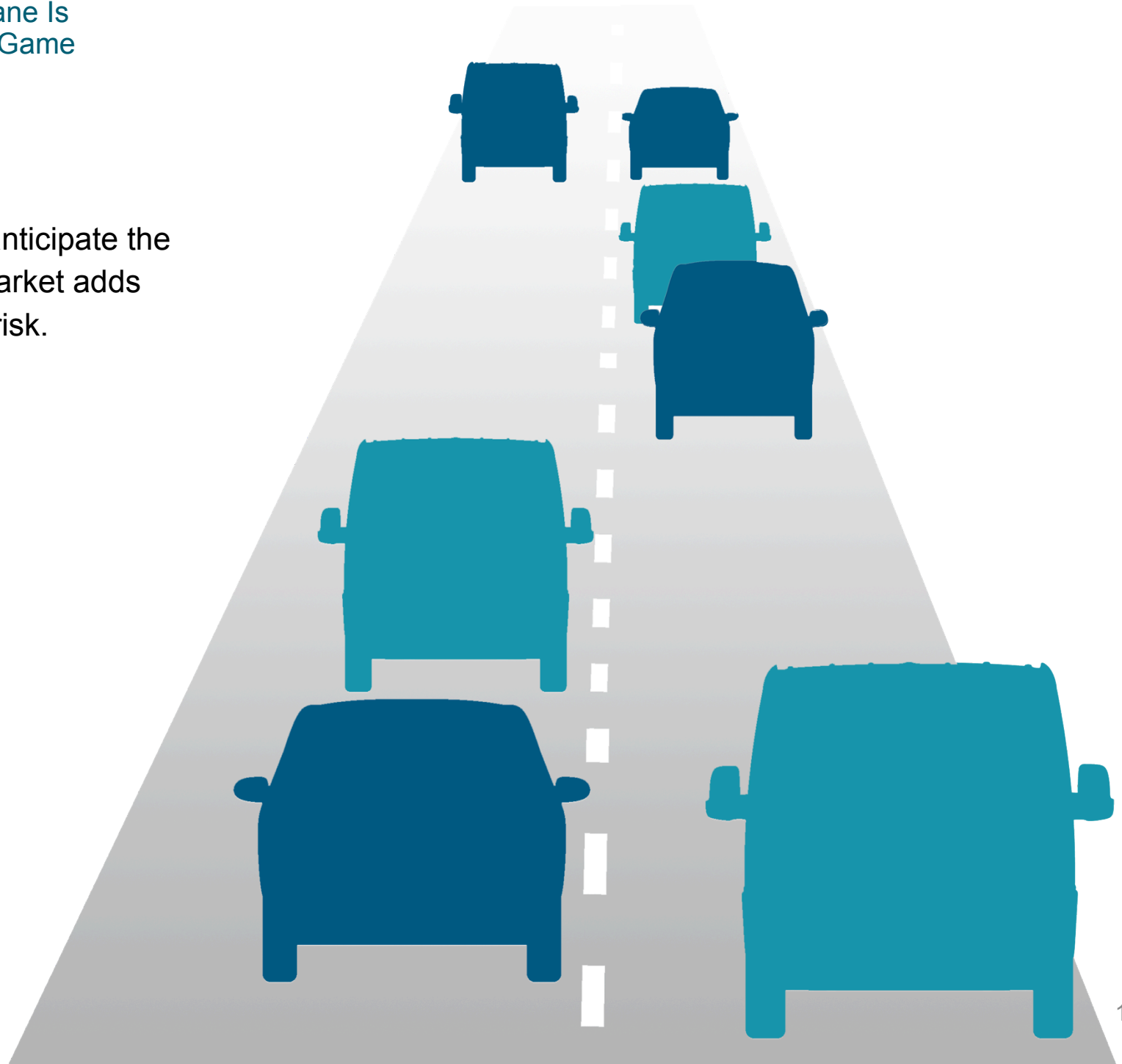
## The Importance of Long-Term Discipline

### Annualized Compound Returns (%)

	1926–2018	1965–1981	1982–2018
S&P 500 Index	9.99	6.33	11.30
One-Month US Treasury Bills	3.34	6.66	3.83

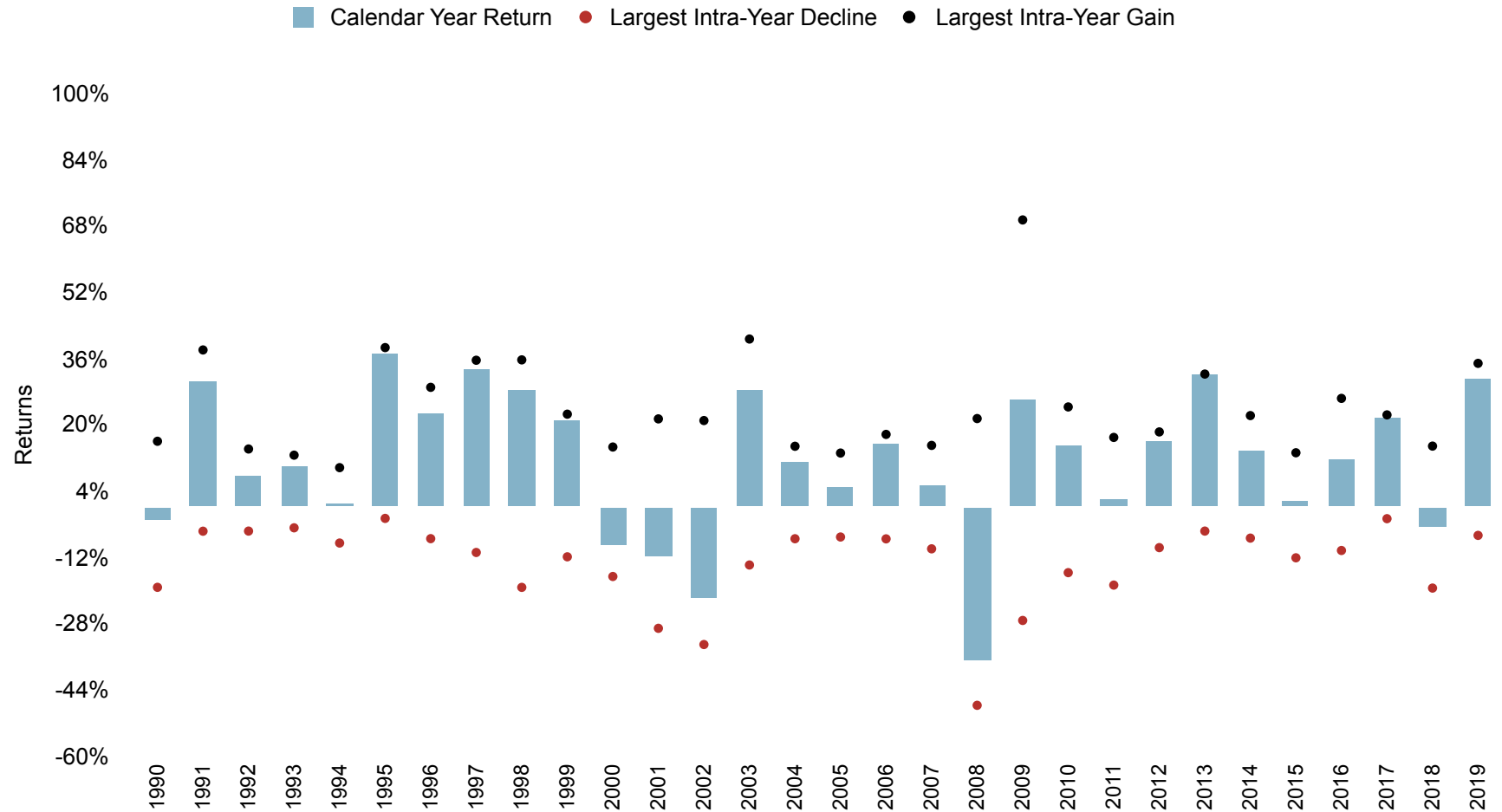
## Picking the Fastest Lane Is a Stressful Guessing Game

Likewise, trying to anticipate the  
movement of the market adds  
anxiety and undue risk.



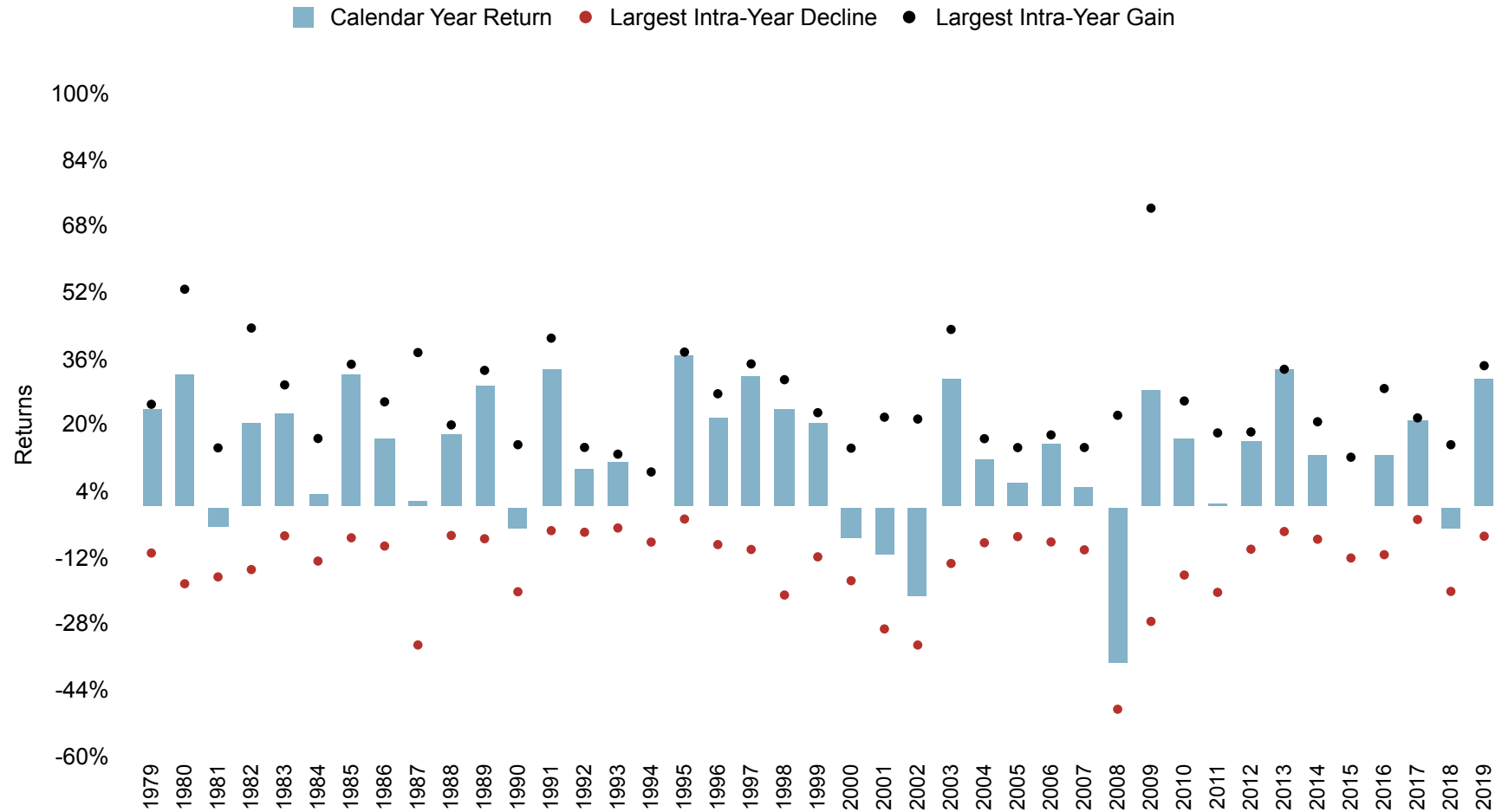
# US Large Cap Market Intra-year Gains and Declines vs. Calendar Year Returns

1990–2019



# US Market Intra-year Gains and Declines vs. Calendar Year Returns

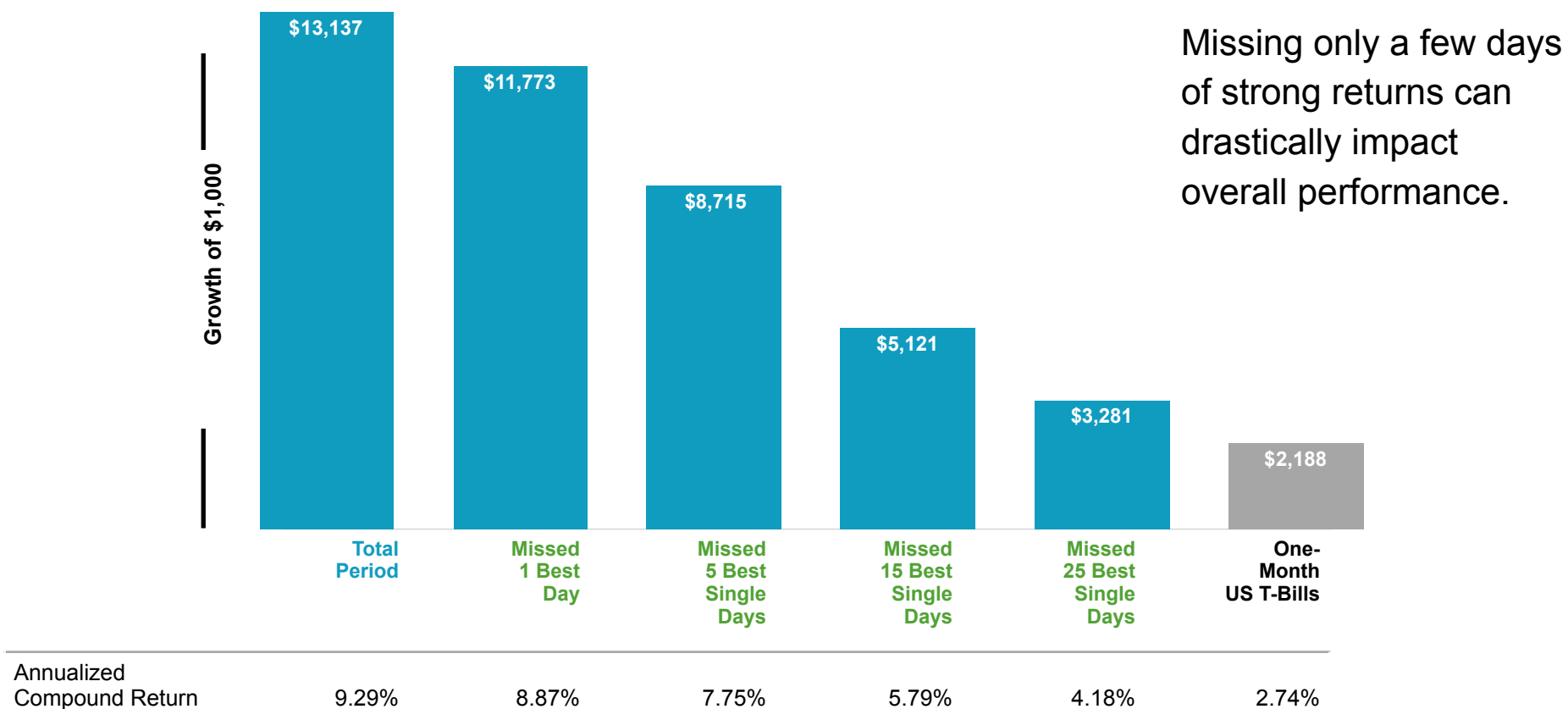
1979–2019



In US dollars. Data is calculated off rounded daily returns. US Market is the Russell 3000 Index. Largest Intra-Year Gain refers to the largest market increase from trough to peak during the year. Largest Intra-Year Decline refers to the largest market decrease from peak to trough during the year. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results. Values change frequently and past performance may not be repeated. There is always the risk that an investor may lose money. Even a long-term investment approach cannot guarantee a profit.

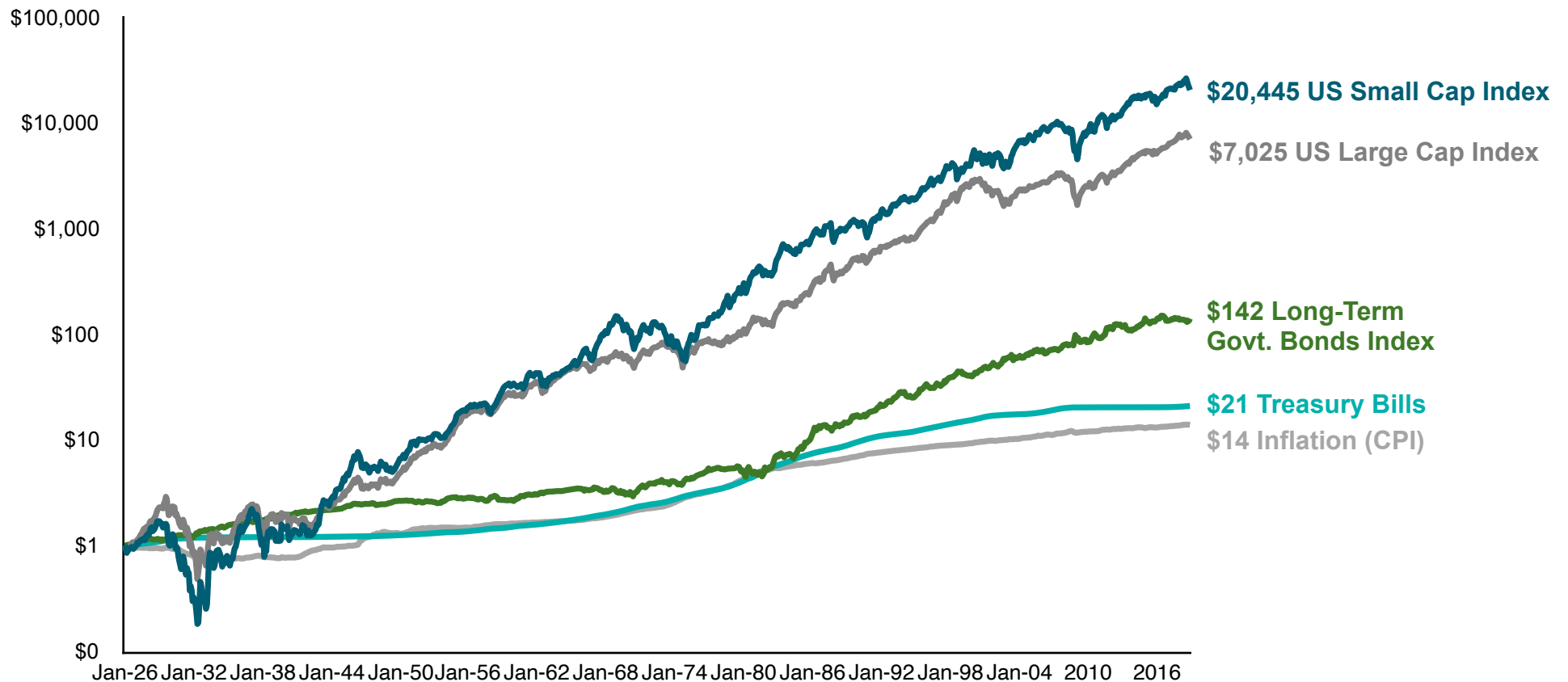
# Reacting Can Hurt Performance

Performance of the S&P 500 Index, 1990–2018



# The Capital Markets Have Rewarded Long-Term Investors

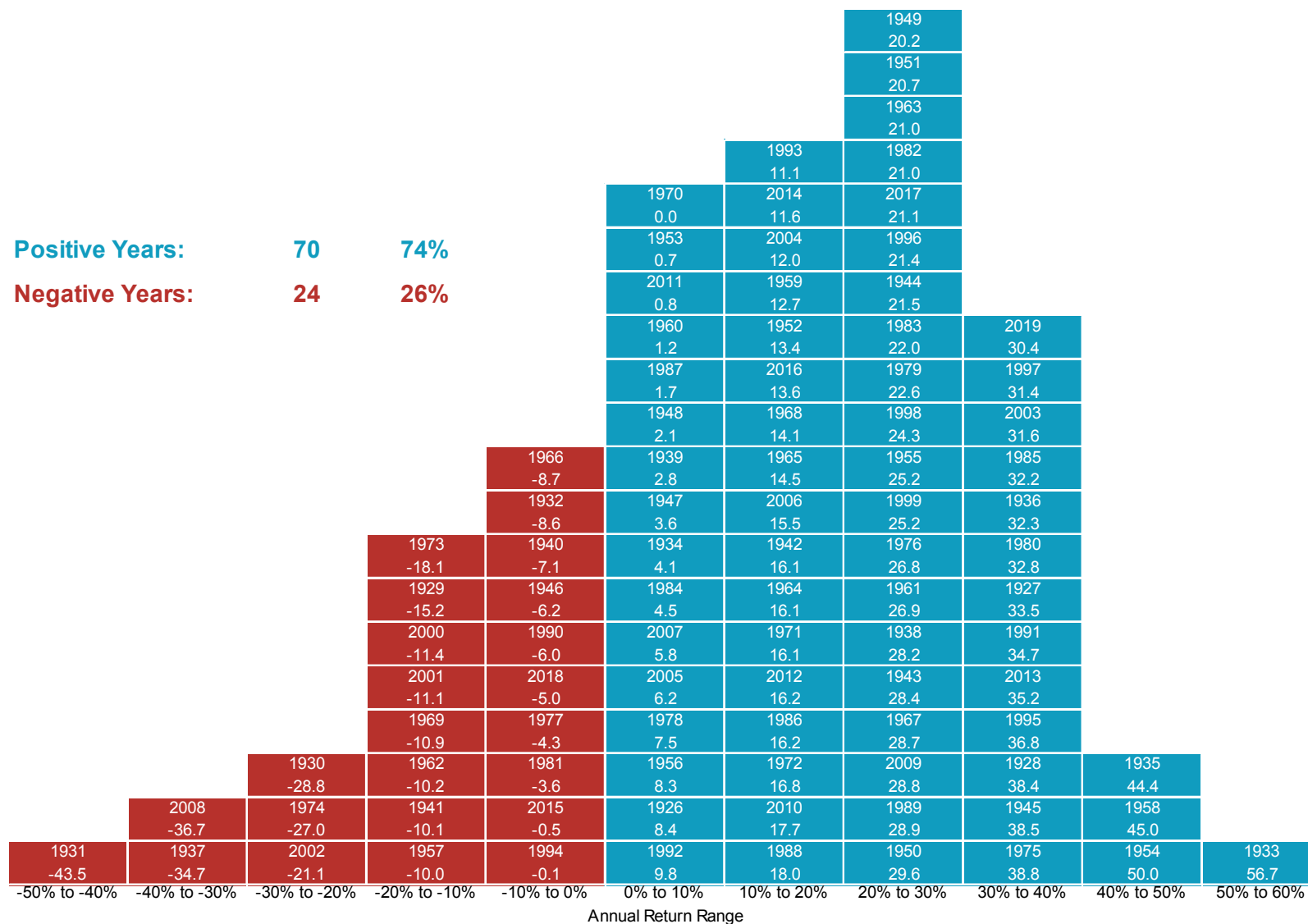
Monthly growth of wealth (\$1), 1926–2018





# Distribution of US Market Returns

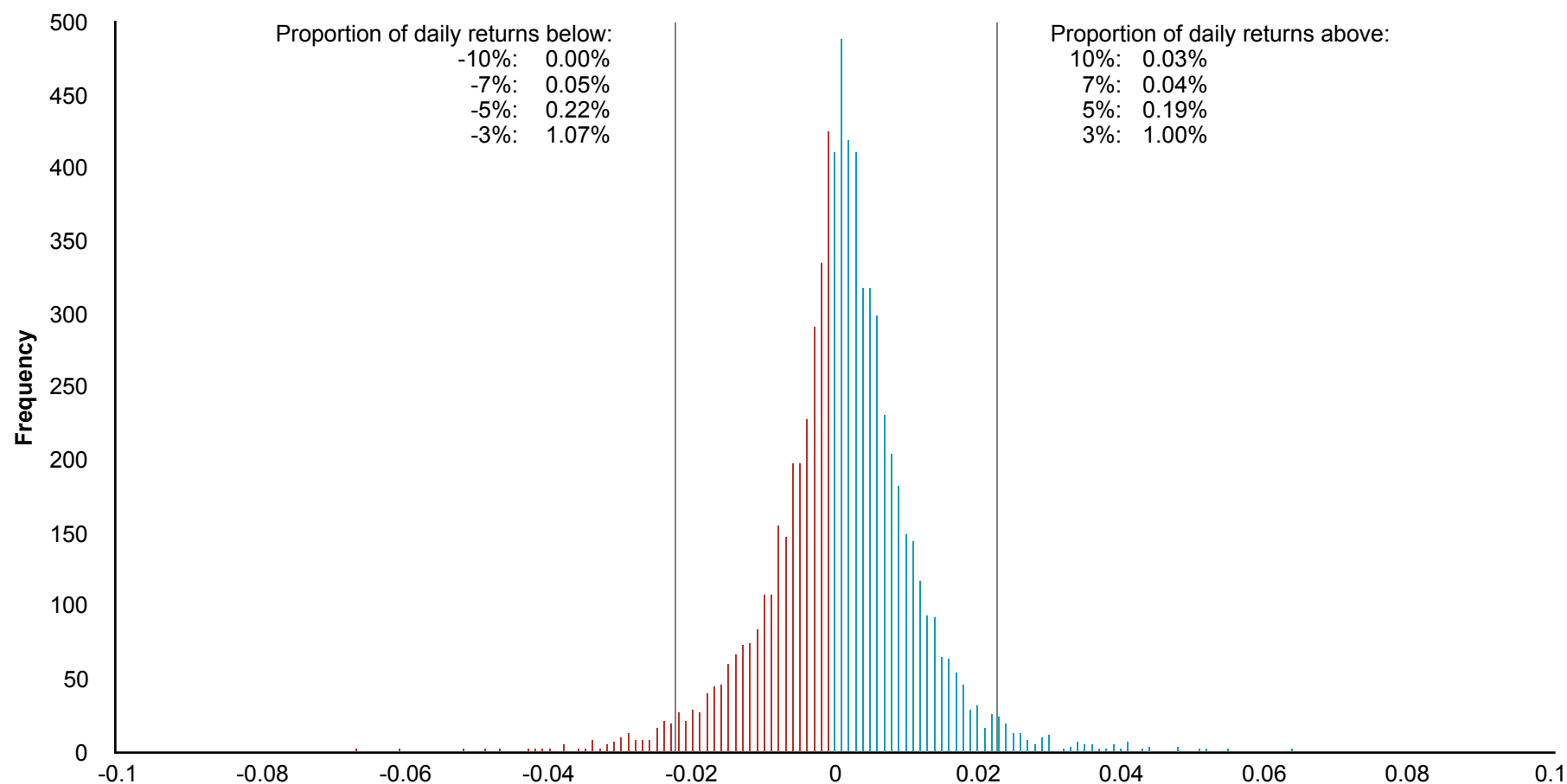
CRSP 1–10 Index returns by year  
1926–2019



In US dollars. CRSP data provided by the Center for Research in Security Prices, University of Chicago. The CRSP 1–10 Index measures the performance of the total US stock market, which it defines as the aggregate capitalization of all securities listed on the NYSE, AMEX, and NASDAQ exchanges. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

# Historical Distribution of US Large Cap Market's Daily Returns

Daily Total Returns: January 1990–December 2018



Gray lines show two standard deviations from mean (-2.17%, 2.26%), which is a statistical measurement of historical volatility that represents 95% of all outcomes. A volatile stock tends to have a higher standard deviation from the mean.

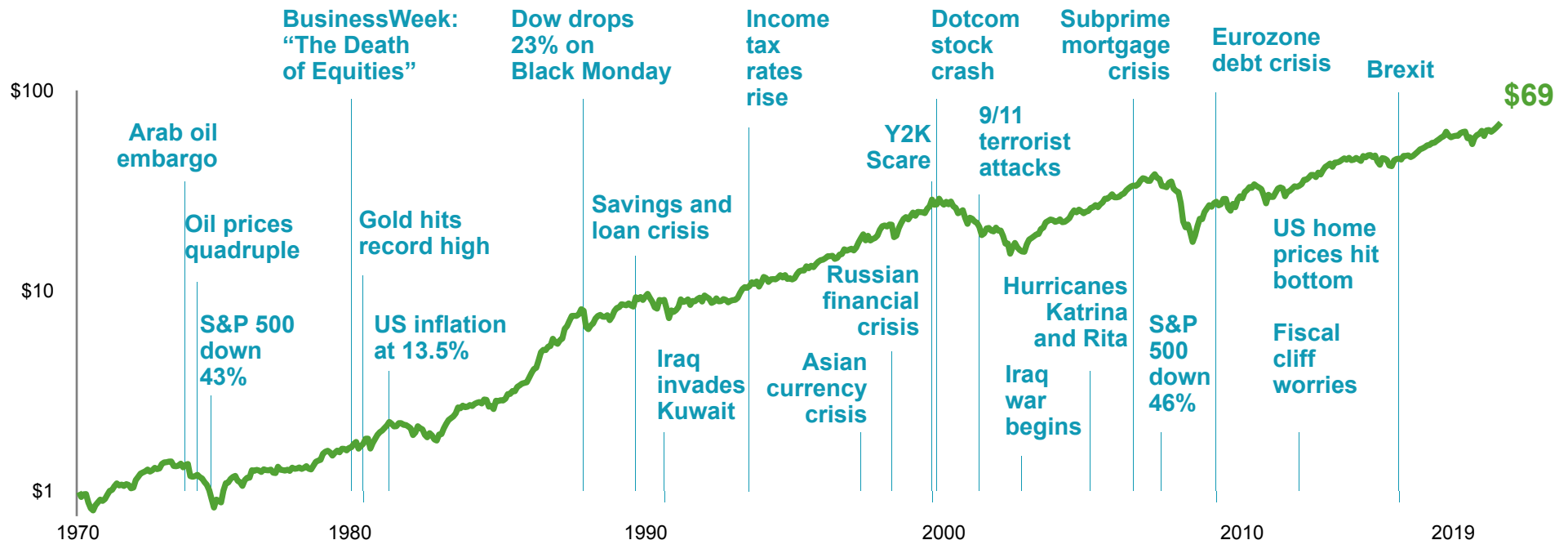
# The Impact of Volatility

Impact on a Hypothetical \$100,000 Portfolio

	Year 1 Return	Year 2 Return	Average Return	Compound Return	Value at End of Year 2
Portfolio 1	50%	-50%	0%	-13.4%	\$75,000
Portfolio 2	10%	-10%	0%	-0.5%	\$99,000

# Markets Have Rewarded Discipline

Growth of a dollar—MSCI World Index (net dividends), 1970–2019



A disciplined investor looks beyond the concerns of today to the long-term growth potential of markets.

# Focus on What You Can Control

- 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.

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.

# Appendix

# Balanced Strategy Disclosure and Index Descriptions

**There is no guarantee investment strategies will be successful. Investing involves risks including possible loss of principal.**

The model's performance does not reflect advisory fees or other expenses associated with the management of an actual portfolio. There are limitations inherent in model allocations. In particular, model performance may not reflect the impact that economic and market factors may have had on the advisor's decision making if the advisor were actually managing client money. The balanced strategies are not recommendations for an actual allocation.

International Value represented by Fama/French International Value Index for 1975–1993. Emerging Markets represented by MSCI Emerging Markets Index (gross dividends) for 1988–1993. Emerging Markets weighting allocated evenly between International Small Cap and International Value prior to January 1988 data inception. Emerging Markets Small Cap represented by Fama/French Emerging Markets Small Cap Index for 1989–1993. Emerging Markets Value and Small Cap weighting allocated evenly between International Small Cap and International Value prior to January 1989 data inception. Two-Year Global weighting allocated to One-Year prior to January 1990 data inception. Five-Year Global weighting allocated to Five-Year Government prior to January 1990 data inception.

**Dimensional US Large Cap Value Index** is compiled by Dimensional from CRSP and Compustat data. The index targets securities of US companies traded on the NYSE, NYSE MKT (formerly AMEX), and Nasdaq Global Market with market capitalizations above the 1,000th-largest company whose relative price is in the bottom 30% of the Dimensional US Large Cap Index after the exclusion of utilities, companies lacking financial data, and companies with negative relative price. The index emphasizes securities with higher profitability, lower relative price, and lower market capitalization. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: non-US companies, REITs, UITs, and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to March 2007. The calculation methodology was amended in January 2014 to include profitability as a factor in selecting securities for inclusion in the index.

**Dimensional US Small Cap Index** is compiled by Dimensional from CRSP and Compustat data. Targets securities of US companies traded on the NYSE, NYSE MKT (formerly AMEX), and Nasdaq Global Market whose market capitalization falls in the lowest 8% of the total market capitalization of the eligible market. The index emphasizes companies with higher profitability. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: non-US companies, REITs, UITs, and investment companies. The index has been retroactively calculated by Dimensional Fund Advisors and did not exist prior to March 2007. The calculation methodology was amended in January 2014 to include profitability as a factor in selecting securities for inclusion in the index.

**Dimensional US Small Cap Value Index** is compiled by Dimensional from CRSP and Compustat data. Targets securities of US companies traded on the NYSE, NYSE MKT

(formerly AMEX), and Nasdaq Global Market whose relative price is in the bottom 35% of the Dimensional US Small Cap Index after the exclusion of utilities, companies lacking financial data, and companies with negative relative price. The index emphasizes securities Sources and Descriptions of Data with higher profitability, lower relative price, and lower market capitalization. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: non-US companies, REITs, UITs, and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to March 2007. The calculation methodology for the Dimensional US Small Cap Value Index was amended in January 2014 to include direct profitability as a factor in selecting securities for inclusion in the index.

**Dimensional International Marketwide Value Index** is compiled by Dimensional from Bloomberg securities data. The index consists of companies whose relative price is in the bottom 33% of their country's companies after the exclusion of utilities and companies with either negative or missing relative price data. The index emphasizes companies with smaller capitalization, lower relative price, and higher profitability. The index also excludes those companies with the lowest profitability and highest relative price within their country's value universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: REITs and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to April 2008. The calculation methodology for the Dimensional International Marketwide Value Index was amended in January 2014 to include direct profitability as a factor in selecting securities for inclusion in the index.

# Balanced Strategy Disclosure and Index Descriptions

**Dimensional International Small Cap Index** (January 1990–present): The index is compiled by Dimensional from Bloomberg securities data. Market-capitalization-weighted index of small company securities in the eligible markets excluding those with the lowest profitability and highest relative price within the small cap universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: REITs and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to April 2008. The calculation methodology for the Dimensional International Small Cap Index was amended in January 2014 to include direct profitability as a factor in selecting securities for inclusion in the index. July 1981–1989: Created by Dimensional, the index includes securities of MSCI EAFE countries in the bottom 10% of market capitalization excluding the bottom 1%. All securities are market capitalization weighted. Each country is capped at 50%; rebalanced semiannually.

**Dimensional International Small Cap Value Index** (January 1990–present): The index is defined as companies whose relative price is in the bottom 35% of their country's respective constituents in the Dimensional International Small Cap Index after the exclusion of utilities and companies with either negative or missing relative price data. The index also excludes those companies with the lowest profitability within their country's small value universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: REITs and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to April 2008. The calculation methodology for the Dimensional International Small Cap Value Index was amended in January 2014 to include direct profitability as a factor in selecting securities for inclusion in the index. Prior to January 1990: Created by Dimensional, the index includes securities of MSCI EAFE countries in the top 30% of book-to-market by market capitalization conditional on the securities being in the bottom 10% of market capitalization, excluding the bottom 1%. All securities are market-capitalization weighted. Each country is capped at 50%; rebalanced semiannually.

**Dimensional Emerging Markets Index** is compiled by Dimensional from Bloomberg securities data. Market-capitalization-weighted index of all securities in the eligible markets. The index has been retroactively calculated by Dimensional and did not exist prior to April 2008. Exclusions: REITs and Investment Companies.

**Dimensional Emerging Markets Small Cap Index** (January 1994–present): The index is compiled by Dimensional from Bloomberg securities data. The index is a market-capitalization-weighted index of small company securities in the eligible markets excluding those with the lowest profitability and highest relative price within the small cap universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: REITs and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to April 2008. The calculation methodology for the Dimensional Emerging Markets Small Index was amended in January 2014 to include profitability as a factor in selecting securities for inclusion in the index. Prior to January 1994: Fama/French Emerging Markets Small Cap Index.

**Dimensional Emerging Markets Value Index** (January 1994–present): The index is compiled by Dimensional from Bloomberg securities data. The index consists of companies whose relative price is in the bottom 33% of their country's companies after the exclusion of utilities and companies with either negative or missing relative price data. The index emphasizes companies with smaller capitalization, lower relative price, and higher profitability. The index also excludes those companies with the lowest profitability and highest relative price within their country's value universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Exclusions: REITs and investment companies. The index has been retroactively calculated by Dimensional and did not exist prior to April 2008. The calculation methodology for the Dimensional Emerging Markets Value Index was amended in January 2014 to include profitability as a factor in selecting securities for inclusion in the index. Prior to January 1994: Fama/French Emerging Markets Value Index.