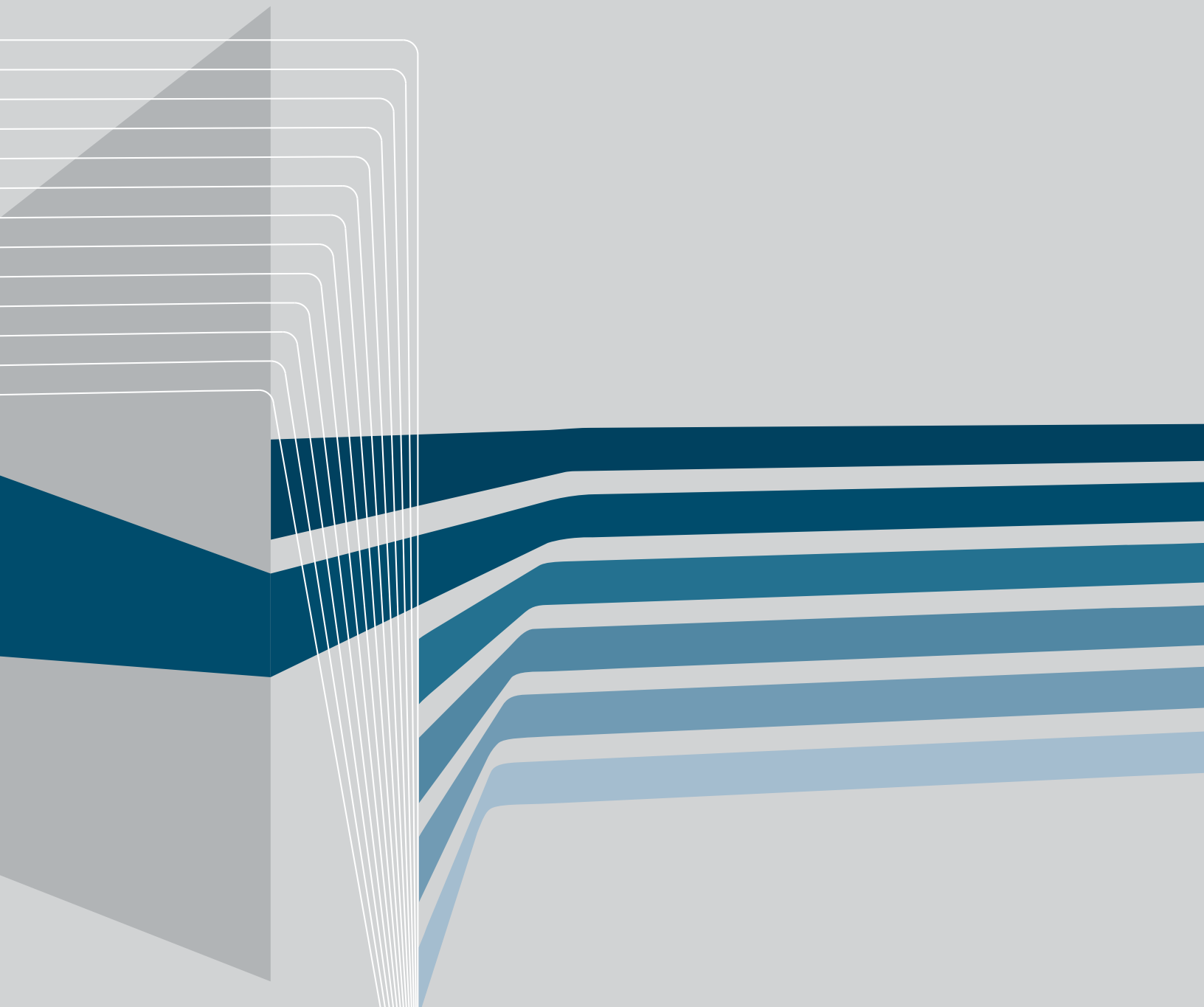


DIMENSIONAL FUND ADVISORS

# Putting Financial Science to Work



## Dimensional invests differently.

We build portfolios based on the science of capital markets. Decades of research guide the way.

For more than 35 years, we have helped investors pursue higher expected returns using a dynamic implementation process that integrates research, portfolio design, and portfolio management and trading. Through deep working relationships with leading financial economists, we apply academic insights to practical strategies in an effort to help investors benefit from what the capital markets offer.

Our goal is to deliver an outstanding investment experience to every client.

# Capital markets build wealth

## MARKETS WORK

Markets throughout the world have a history of rewarding investors for the capital they supply. Companies compete for investment capital, and millions of investors compete to find the most attractive returns. Markets quickly incorporate information from this competition into security prices.

Traditional investment approaches strive to beat the market by taking advantage of pricing “mistakes” and attempting to predict the future. Too often, these approaches prove costly and futile. Predictions go awry and managers may hold the wrong securities at the wrong time, missing the strong returns that markets can provide. Meanwhile, capital-based economies thrive—not because markets fail but because they succeed.

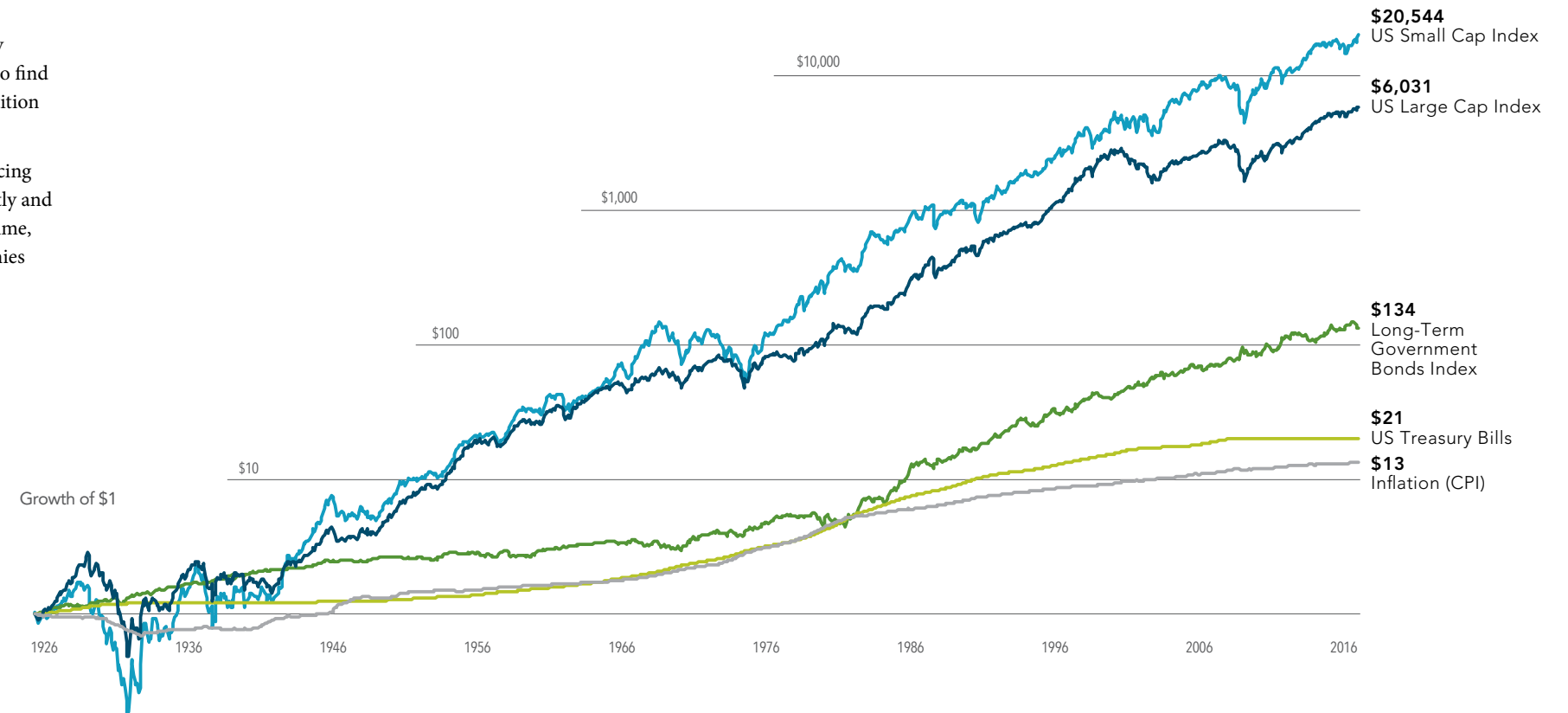
## INVESTING VS. SPECULATING

The futility of speculation is good news for the investor. It means prices for public securities are fair and that portfolio structure, not mispricing, explains differences in average returns. It is certainly possible to outperform markets, but not without balancing risks and costs against expected returns.

Financial research identifies the sources of investment returns. Dimensional provides the tools and experience to target these sources and help investors achieve their goals.

## A Picture of Growth

Investors need look no further than historical performance to see how markets have compensated investors.



For the period 1926–2016, the compound annual growth rate of return was 11.4% for the Small Cap Index, 10.0% for the Large Cap Index, 5.6% for the Long-Term Government Bonds Index, 3.4% for Treasury Bills, and 2.9% for Inflation (CPI). Small Cap Index is the CRSP 6–10 Index; Large Cap Index is the S&P 500 Index®; Long-Term Government Bonds Index is 20-year US government bonds; Treasury Bills are One-Month US Treasury bills; Inflation is the Consumer Price Index. CRSP data provided by the Center for Research in Security Prices, University of Chicago. The S&P data are provided by Standard & Poor’s Index Services Group. Bonds, T-bills, and inflation data © 2013 and earlier, Morningstar. All rights reserved. Underlying data is from the Ibbotson S&P Yearbook, by Roger G. Ibbotson and Rex A. Sinquefeld. Updated annually.

Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio. Securities of small companies are often less liquid than those of large companies; as a result, small company stocks may fluctuate relatively more in price. Compound returns have an assumed rate of return, are hypothetical, and are not representative of any specific type of investment. Standard deviation is one method of measuring risk and performance, and is presented as an approximation. Past performance is not a guarantee of future results.

Diversification does not eliminate the risk of market loss.

**INVESTMENT DIMENSIONS**

We consider a dimension to be a factor that explains differences in returns, demonstrates persistence through time and pervasiveness across markets, and is cost-effective to capture in diversified portfolios. These characteristics increase our confidence that returns observed in historical data may appear in the future. From capital markets research over the past 50 years, we have gained a powerful understanding of the dimensions that generate higher expected returns.

Much of what we have learned can be summarized in simple terms. First, stocks have higher expected returns than bonds. Relative performance among stocks largely depends on company size (small vs. large), relative price (value vs. growth), and profitability (high vs. low). When setting prices, markets effectively apply different discount rates to stocks to reflect differences in underlying risk. Company size, relative price, and profitability are variables—or dimensions—that allow us to identify differences in these discount rates.

# A powerful way to invest

In fixed income, two dimensions largely drive relative performance: term and credit. Longer-term bonds are more sensitive than shorter-term bonds to unexpected changes in interest rates. Bonds with lower credit quality have a greater risk of default than bonds with higher credit quality.

By considering how much of each equity and fixed income dimension to target, investors can adjust the total expected return profile of their portfolios and more easily build a strategy to support their investment goals.

**STRUCTURE IS THE STRATEGY**

Successful investing means not only targeting dimensions that generate higher expected returns, but also managing risks that may needlessly compromise performance. Avoidable risks include holding too few securities, acting on market predictions in areas like interest rate movements, and relying solely on information from third-party analysts or rating services. To all these risks, diversification is an essential countermeasure. It lessens the impact of the random fortunes tied to individual securities and positions an investor to participate in the returns of broad economic forces.

Traditionally, managers do one of two things: They focus on picking individual securities, or they attempt to mimic the performance of arbitrary benchmarks.

Dimensional chooses a different path. We design strategies based on research rather than speculation or the need to track commercial indices. Dimensional builds portfolios along the dimensions that drive expected returns.

Diversification does not ensure a profit or protect against a loss in declining markets.

**Dimensions Matter**

Dimensions point to systematic differences in expected returns. Portfolios can be structured around these dimensions, which are sensible, backed by data, and cost-effective to capture in diversified portfolios.



**PURSUING DIMENSIONS IN COMPETITIVE MARKETS**

Research and portfolio design are the foundation of Dimensional investing. But long-term results also depend on our ability to execute strategies in competitive markets every day.

Portfolio management and trading are two vital components of implementation at Dimensional. A portfolio manager's main focus is to achieve consistent, broadly diversified exposure to the dimensions of higher expected returns while balancing risks, costs, and other tradeoffs that arise when pursuing those dimensions.

Dimensional also trades differently. Since we are pursuing the systematic performance of broad market dimensions, we can regard securities with similar

characteristics as close substitutes for one another. This affords flexibility in what securities to trade and when to trade them, resulting in more negotiating power. By staying patient when others are compelled to buy and sell, Dimensional can keep costs low and seek to improve results.

Dimensional's trading infrastructure, developed over more than three decades, enhances this opportunistic approach to trading. State-of-the-art desks around the world give us a formidable presence in financial markets, and such a large scale creates opportunities for cost-effective and lucrative trades.

The result: performance driven by a potent combination of philosophy and implementation.

1. Relative price as measured by the price-to-book ratio; value stocks are those with lower price-to-book ratios.

2. Profitability is a measure of current profitability, based on information from individual companies' income statements.

# Meeting **real-world** investment challenges

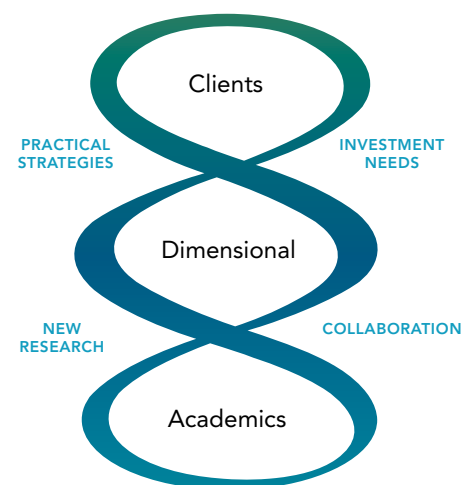
## A RESEARCH-DRIVEN APPROACH

Dimensional collaborates with leading financial academics to identify new ideas that may benefit investors. Our enduring philosophy and close ties to the academic community underpin our investing approach and form the foundation for new strategies.

Dimensional's strategies combine rigorous research into the underlying drivers of returns with efficient execution in complex markets. Our process is applied consistently across all strategies, and these strategies span asset classes and geographies to meet the diverse needs of investors worldwide.

## EXAMPLE: CORE STRATEGIES

An example of Dimensional's approach to investing is our core equity strategies. Each one targets stocks across the capitalization and style segments of a market (large and small, value and growth). But unlike conventional approaches, the strategies do not hold securities in their market-value proportions. We increase the relative weight of securities with higher expected returns, using information in market prices to identify them. Because the strategy architecture is seamlessly integrated and includes a full range of securities, the costs normally associated with rebalancing multiple portfolios are greatly reduced.



### Bringing Research to Practice

Advancements in research and technology inform our investment strategies and help us stay responsive to evolving markets and client needs.

## EQUITY

1981

### Company Size

Dimensional offers investors diversified, cost-efficient access to small companies.

#### Implementation:

US Micro Cap (1981)  
US Small Cap (1986)  
Int'l Small Cap (1994)  
EM Small Cap (1996)

1992

### Relative Price

Fama/French research identifies market, size, and value factors as the principal drivers of equity returns.

#### Implementation:

US Small Cap Value (1992)  
US Large Cap Value (1992)  
Int'l Small Cap Value (1994)  
Int'l Value (1994)  
EM Value (1998)  
US Targeted Value (2000)

2004

### Total Market Solutions

Advancement in portfolio design provides value-added, efficient total market solutions that focus on dimensions of higher expected returns.

#### Implementation:

US Core Equity (2005)  
US Vector Equity (2005)  
Int'l Core Equity (2005)  
EM Core Equity (2005)  
Int'l Vector Equity (2008)

2012

### Profitability

Academic research identifies profitability as a dimension of higher expected returns in the equity markets.

#### Implementation:

US Large Cap Growth (2012)  
US Small Cap Growth (2012)  
Int'l Large Cap Growth (2012)  
Int'l Small Cap Growth (2012)  
US Large Cap Equity (2013)

## FIXED INCOME

1983

### Variable Maturity

Dimensional develops a term-aware approach designed to maximize expected returns within a short-term, high-quality, low-volatility range.

#### Implementation:

One-Year (1983)  
Short-Term Govt. (1987)  
Short-Term Municipal (2002)

1990

### Global Bond Diversification

Dimensional designs global bond strategies that pursue reduced volatility and increased expected returns.

#### Implementation:

Five-Year Global (1990)  
Two-Year Global (1996)  
Selectively Hedged Global (2008)

2006

### Inflation Protection

Dimensional builds strategies designed to provide protection against unexpected inflation.

#### Implementation:

Inflation-Protected Securities (2006)  
Short-Duration Real Return (2013)

2009

### Variable Credit

Dimensional develops diversified, risk-aware portfolios that seek higher expected returns and access to the entire range of non-secured investment grade credit.

#### Implementation:

Short-Term Extended Quality (2009)  
Intermediate-Term Extended Quality (2010)  
Investment Grade (2011)

## FUNDAMENTAL TO YOUR FINANCIAL PLAN

A financial plan based on the science of investing frees you to focus on what matters. Let markets work for you by taking advantage of sensible, well-diversified, low-cost portfolios backed by decades of research and practical experience. Your financial advisor can help create an investment plan for you.

For more information on investing  
with Dimensional, visit us online at  
[dimensional.com](https://dimensional.com).

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#### **Principal Risks of Investing**

The principal risks associated with an investment are fully described in the prospectus in the section called “Principal Risks.” The value of an investment will fluctuate based on economic, political, and stock-specific events, and there is a chance you will lose money. Small company stocks may fluctuate more in price than those of large companies. Stocks of non-US companies may also fluctuate due to these factors and expose investors to fluctuations in currency exchange rates. The stocks of companies in emerging markets are subject to additional risks due to the unstable nature of some governments and the small and illiquid nature of their securities markets. The use of derivatives to hedge specific risks may increase expenses, and there is no guarantee that a hedging strategy will work. Past performance is no guarantee of future results. Bonds are subject to market and interest rate risks, and availability.

There is no guarantee that the investment strategies presented will succeed. This information is intended to illustrate products and services available at Dimensional Fund Advisors, and the strategies do not necessarily represent the experience of other clients, nor do they indicate future performance. Investment results may vary. The investment strategies presented are not appropriate for every investor. Individual clients should review with their financial advisors the terms and conditions and risks involved with specific products or services. Diversification does not eliminate the risk of market loss.

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