



Quarterly Market Review First Quarter 2017



## **Quarterly Market Review**

First Quarter 2017

This report features world capital market performance and a timeline of events for the past quarter. It begins with a global overview, then features the returns of stock and bond asset classes in the US and international markets.

The report also illustrates the impact of globally diversified portfolios and features a quarterly topics.

### Overview:

Market Summary World Stock Market Performance World Asset Classes **US Stocks** International Developed Stocks **Emerging Markets Stocks** Select Country Performance Select Currency Performance vs. US Dollar Real Estate Investment Trusts (REITs) **Fixed Income** Impact of Diversification Quarterly Topics: Investment Shock Absorbers Investing: A World of Opportunity Appendix

## **Market Summary**

Index Returns

	US Stock Market	International Developed Stocks	Emerging Markets Stocks	Global Real Estate	US Bond Market	Global Bond Market ex US
1Q 2017		STO	СКЅ		BO	NDS
	5.74%	6.81%	11.44%	1.44%	0.82%	-0.35%
Since Jan. 2001						
Avg. Quarterly Return	1.9%	1.4%	3.0%	2.7%	1.2%	1.1%
Best Quarter	16.8% <b>Q2 2009</b>	25.9% <b>Q2 2009</b>	34.7% <b>Q2 2009</b>	32.3% <b>Q3 2009</b>	4.6% <b>Q3 2001</b>	5.5% <b>Q4 2008</b>
Worst Quarter	-22.8% <b>Q4 2008</b>	-21.2% <b>Q4 2008</b>	-27.6% <b>Q4 2008</b>	-36.1% <b>Q4 2008</b>	-3.0% <b>Q4 2016</b>	-3.2% <b>Q2 2015</b>

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: US Stock Market (Russell 3000 Index), International Developed Stocks (MSCI World ex USA Index [net div.]), Emerging Markets (MSCI Emerging Markets Index [net div.]), Global Real Estate (S&P Global REIT Index [net div.]), US Bond Market (Bloomberg Barclays US Aggregate Bond Index), and Global Bond ex US Market (Citi WGBI ex USA 1–30 Years [Hedged to USD]). The S&P data are provided by Standard & Poor's Index Services Group. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2017, all rights reserved. Bloomberg Barclays data provided by Bloomberg. Citi fixed income indices copyright 2017 by Citigroup.

### World Stock Market Performance

MSCI All Country World Index with selected headlines from Q1 2017



These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news.

Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2017, all rights reserved.

It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. Past performance is not a guarantee of future results.

## World Stock Market Performance

MSCI All Country World Index with selected headlines from past 12 months



These headlines are not offered to explain market returns. Instead, they serve as a reminder that investors should view daily events from a long-term perspective and avoid making investment decisions based solely on the news. Graph Source: MSCI ACWI Index [net div.]. MSCI data © MSCI 2017, all rights reserved.

It is not possible to invest directly in an index. Performance does not reflect the expenses associated with management of an actual portfolio. Past performance is not a guarantee of future results.



### World Asset Classes

First Quarter 2017 Index Returns (%)

Looking at broad market indices, emerging markets outperformed both US and non-US developed markets during the quarter. Real estate investment trusts (REITs) lagged their equity market counterparts.

The value effect was negative in the US, non-US, and emerging markets. Small caps outperformed large caps in emerging markets and non-US developed markets but underperformed in the US.



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\* Annualized

### US Stocks First Quarter 2017 Index Returns

The broad US equity market recorded positive absolute performance for the quarter.

Value underperformed growth indices across all size ranges.

Small caps underperformed large caps.

### Ranked Returns for the Quarter (%)



### World Market Capitalization—US



### Period Returns (%)

Asset Class 1 Year 10 Years\* 3 Years\* 5 Years\* Marketwide 9.76 7.54 18.07 13.18 Large Cap 17.43 9.99 13.26 7.58 Large Cap Value 5.93 19.22 8.67 13.13 Large Cap Growth 9.13 15.76 11.27 13.32 Small Cap 7.22 7.12 26.22 12.35 Small Cap Value 6.09 29.37 7.62 12.54 6.72 Small Cap Growth 23.03 12.10 8.05

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Marketwide (Russell 3000 Index), Large Cap (Russell 1000 Index), Large Cap Value (Russell 1000 Value Index), Large Cap Growth (Russell 1000 Growth Index), Small Cap (Russell 2000 Index), Small Cap Value (Russell 2000 Value Index), and Small Cap Growth (Russell 2000 Growth Index). World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. Russell 3000 Index is used as the proxy for the US market. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. MSCI data © MSCI 2017, all rights reserved.

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## International Developed Stocks

First Quarter 2017 Index Returns

In US dollar terms, developed markets outperformed the US equity market but underperformed emerging markets indices during the quarter.

Small caps outperformed large caps in non-US developed markets.

The value effect was negative across all size ranges in non-US developed markets.

ts. Small Cap Growth

### World Market Capitalization—International Developed

36%

International Developed Market \$16.7 trillion

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI World ex USA Index), Small Cap (MSCI World ex USA Small Cap Index), Value (MSCI World ex USA Value Index), and Growth (MSCI World ex USA Growth). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI World ex USA IMI Index is used as the proxy for the International Developed market. MSCI data © MSCI 2017, all rights reserved.

# Growth 7.47 1.27 5.48

Period Returns (%)

1		<i>'</i> )			Annuanzea
	Asset Class	1 Year	3 Years*	5 Years*	10 Years*
	Large Cap	11.93	0.35	5.38	1.13
	Small Cap	11.58	2.70	7.78	2.72
	Value	16.46	-0.67	5.19	0.31
	Growth	7.47	1.27	5.48	1.87



\* Annualized

## **Emerging Markets Stocks**

First Quarter 2017 Index Returns

In US dollar terms, emerging markets indices outperformed both the US and developed markets outside the US.

The value effect was negative among large cap stocks in emerging markets but positive among small cap stocks.

Small caps outperformed large caps.



### World Market Capitalization—Emerging Markets



Period Returns (%	6)		* Annualized							
Asset Class	1 Year	3 Years*	5 Years*	10 Years*						
Large Cap	17.21	1.18	0.81	2.72						
Small Cap	14.49	1.66	2.87	3.92						
Value	17.43	-0.10	-1.01	2.67						
Growth	17.08	2.37	2.54	2.69						

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Market segment (index representation) as follows: Large Cap (MSCI Emerging Markets Index), Small Cap (MSCI Emerging Markets Small Cap Index), Value (MSCI Emerging Markets Value Index), and Growth (MSCI Emerging Markets Growth Index). All index returns are net of withholding tax on dividends. World Market Cap represented by Russell 3000 Index, MSCI World ex USA IMI Index, and MSCI Emerging Markets IMI Index. MSCI Emerging Markets IMI Index used as the proxy for the emerging market portion of the market. MSCI data © MSCI 2017, all rights reserved.

## **Select Country Performance**

First Quarter 2017 Index Returns

In US dollar terms, Spain and Singapore recorded the highest country performance in developed markets, while Canada and Norway returned the lowest performance for the guarter. In emerging markets, India and Poland posted the highest country returns, while Greece and Russia returned the lowest performance.

14.02

### Ranked Developed Markets Returns (%)

Spain

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Country performance based on respective indices in the MSCI World ex US IMI Index (for developed markets), MSCI USA IMI Index (for US), and MSCI Emerging Markets IMI Index. All returns in USD and net of withholding tax on dividends. MSCI data © MSCI 2017, all rights reserved. UAE and Qatar have been reclassified as emerging markets by MSCI, effective May 2014.

Singapore 13.20 Hong Kong 12.45 Netherlands 11.12 Australia 10.57 Austria 9.49 Switzerland 8.72 Germany 8.71 Israel 8.41 Italy 8.41 Sweden 8.23 France 7.48 Portugal 7.20 Denmark 6.95 Belgium 6.08 Ireland 5.79 US 5.75 Finland 5.69 UK 5.21 Japan 4.89 New Zealand 4.88 Canada 2.77 Norway 0.34

Ranked Emerging Markets Returns (%)







## Select Currency Performance vs. US Dollar

First Quarter 2017

Most non-US developed markets currencies appreciated against the US dollar during the quarter, with the Israeli shekel and the Australian dollar experiencing the greatest appreciation. In emerging markets, the Mexican peso appreciated nearly 10%, while the Turkish lira depreciated almost 4%.



### Ranked Developed Markets (%)

### Ranked Emerging Markets (%)

Mexican peso (MXP)	9.38
Russian ruble (RUB)	8.35
South Korean won (KRW)	8.00
Taiwanese NT dollar (TWD)	6.22
Poland new zloty (PLZ)	5.36
Indian rupee (INR)	4.52
Thailand baht (THB)	4.21
Colombian peso (COP)	3.74
Peru new sol (PEI)	3.15
Brazilian real (BRC)	2.51
South African rand (ZAR)	1.99
Hungary forint (HUF)	1.42
Czech koruna (CZK)	1.39
Malaysian ringgit (MYR)	1.37
Chilean peso (CLP)	1.16
Indonesia rupiah (IDR)	1.10
Chinese yuan (CNY)	0.84
Egyptian pound (EGP)	0.44
Philippine peso (PHP)	-0.92
Turkish new lira (TRY)	-3.41



## Real Estate Investment Trusts (REITs)

First Quarter 2017 Index Returns

Real estate investment trusts (REITs) lagged their equity market counterparts.



### Total Value of REIT Stocks



Period Returns (%)				* Annualized
Asset Class	1 Year	3 Years*	5 Years*	10 Years*
US REITs	1.21	9.96	9.45	4.22
Global REITs (ex US)	-1.61	3.46	6.79	-0.39

Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Number of REIT stocks and total value based on the two indices. All index returns are net of withholding tax on dividends. Total value of REIT stocks represented by Dow Jones US Select REIT Index and the S&P Global ex US REIT Index. Dow Jones US Select REIT Index data provided by Dow Jones ©. S&P Global ex US REIT Index data provided by Standard and Poor's Index Services Group © 2017.



### Fixed Income First Quarter 2017 Index Returns

Interest rates were mixed across the US fixed income market during the first quarter of 2017. The yield on the 5-year Treasury note was unchanged, ending at 1.93%. The yield on the 10-year Treasury note decreased 5 basis points (bps) to 2.40%. The 30-year Treasury bond yield decreased 4 bps to 3.02%.

The yield on the 1-year Treasury bill rose 18 bps to 1.03%, and the 2-year T-note yield increased 7 bps to 1.27%. The yield on the 3-month T-bill increased 25 bps to 0.76%, while the 6-month T-bill yield rose 29 bps to 0.91%.

Looking at total returns, short-term corporate bonds gained 0.69% and intermediate-term corporate bonds gained 1.16%.

Short-term municipal bonds generated a total return of 1.20%, while intermediateterm municipal bonds returned 1.91%. Revenue bonds performed in line with general obligation bonds.



### Bond Yields across Issuers (%)



\* Annualized

### Period Returns (%)

### Asset Class 3 Years\* 5 Years\* 10 Years\* 1 Year Bloomberg Barclays Long US Govt. Bond Index -4.785.81 4.05 6.65 3.24 Bloomberg Barclays Municipal Bond Index 0.15 3.55 4.33 0.44 2.68 2.34 4.27 Bloomberg Barclays US Aggregate Bond Index Bloomberg Barclays US Corporate High Yield Index 16.39 4.56 6.82 7.46 Bloomberg Barclays US TIPS Index 1.48 2.03 0.97 4.24 BofA Merrill Lynch 1-Year US Treasury Note Index 0.56 0.39 0.35 1.31 BofA Merrill Lynch Three-Month US Treasury Bill Index 0.36 0.17 0.14 0.68 Citi World Govt. Bond Index 1–5 Years (hedged to USD) 0.64 1.38 1.38 2.54

One basis point equals 0.01%. Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect the expenses associated with the management of an actual portfolio. Yield curve data from Federal Reserve. State and local bonds are from the S&P National AMT-Free Municipal Bond Index. AAA-AA Corporates represent the Bank of America Merrill Lynch US Corporates, AA-AAA rated. A-BBB Corporates represent the Bank of America Merrill Lynch US Corporates, BBB-A rated. Bloomberg Barclays data provided by Bloomberg. US long-term bonds, bills, inflation, and fixed income factor data © Stocks, Bonds, Bills, and Inflation (SBBI) Yearbook<sup>™</sup>, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefield). Citi fixed income indices copyright 2017 by Citigroup. The BofA Merrill Lynch Indices are used with permission; © 2017 Merrill Lynch, Pierce, Fenner & Smith Incorporated; all rights reserved. Merrill Lynch, Pierce, Fenner & Smith Incorporated is a wholly owned subsidiary of Bank of America Corporation. The S&P data are provided by Standard & Poor's Index Services Group.

## Impact of Diversification

First Quarter 2017 Index Returns

These portfolios illustrate the performance of different global stock/bond mixes. Mixes with larger allocations to stocks are considered riskier but have higher expected returns over time.



### Period Returns (%) \* Annualized 10-Year STDEV<sup>1</sup> Asset Class 1 Year 3 Years\* 5 Years\* 10 Years\* 100% Stocks 15.69 5.65 8.97 4.56 17.01 75/25 11.67 4.35 6.80 3.84 12.75 50/50 2.99 4.60 2.93 8.50 7.76 25/75 3.96 1.58 2.36 1.83 4.24 100% Treasury Bills 0.26 0.11 0.08 0.56 0.36

1. STDEV (standard deviation) is a measure of the variation or dispersion of a set of data points. Standard deviations are often used to quantify the historical return volatility of a security or portfolio. Diversification does not eliminate the risk of market loss. **Past performance is not a guarantee of future results. Indices are not available for direct investment. Index performance does not reflect expenses associated with the management of an actual portfolio.** Asset allocations and the hypothetical index portfolio returns are for illustrative purposes only and do not represent actual performance. Global Stocks represented by MSCI All Country World Index (gross div.) and Treasury Bills represented by US One-Month Treasury Bills. Globally diversified allocations rebalanced monthly, no withdrawals. Data © MSCI 2017, all rights reserved. Treasury bills © Stocks, Bonds, Bills, and Inflation Yearbook<sup>™</sup>, Ibbotson Associates, Chicago (annually updated work by Roger G. Ibbotson and Rex A. Sinquefield).

### Ranked Returns (%)

### **Investment Shock Absorbers**

First Quarter 2017

Ever ridden in a car with worn-out shock absorbers? Every bump is jarring, every corner stomachchurning, and every red light an excuse to assume the brace position. Owning an undiversified portfolio can trigger similar reactions.

You can drive a car with a broken suspension system, but it will be an extremely uncomfortable ride and the vehicle will be much harder to control, particularly in difficult conditions. Throw in the risk of a breakdown or running off the road altogether, and there's a real chance you may not reach your destination.

In the world of investment, a similarly bumpy and unpredictable ride can await those with concentrated and undiversified portfolios or those who constantly tinker with their allocation.

Of course, everyone feels in control when the surface is straight and smooth, but it's harder to stay on the road during sudden turns and ups and downs in the

USA Small Cap Index (gross dividends). MSCI data copyright MSCI 2017, all rights reserved.

1. In US dollars. MSCI developed markets country indices (net dividends). MSCI data © MSCI 2017, all rights reserved.

market. For that reason, the smart thing to do is to diversify, spreading your portfolio across different securities, sectors, and countries. That also means identifying the right mix of investments (e.g., stocks, bonds, real estate) that aligns with your risk tolerance.

Using this approach, your returns from year to year may not match the top performing portfolio, but neither are they likely to match the worst. More importantly, this is a ride you are likelier to stick with.

Here's an example. Among developed markets, Denmark was number one in US dollar terms in 2015 with a return of more than 23%. But a big bet on that country the following year would have backfired, as Denmark slid to bottom of the table with a loss of nearly 16%.<sup>1</sup>

It's true that the US stock market (by far the world's biggest) has been a strong performer in recent years. But a decade before, in 2004 and 2006, it was the second worst-performing developed market in the world.<sup>1</sup>

Predicting which part of a market will do best over a given period is tough. US small cap stocks were

2. In US dollars. US Small Cap is the Russell 2000 Index. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes. International Small Cap is the MSCI World ex

Adapted from "Investment Shock Absorbers," Outside the Flags, February 2017. Dimensional Fund Advisors LP is an investment advisor registered with the Securities and Exchange Commission. All expressions of opinion are subject to

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among the top performers in 2016 with a return of more than 21%. A year before, their results looked relatively disappointing with a loss of more than 4%. International small cap stocks had their turn in the sun in 2015, topping the performance tables with a return of just below 6%. But the year before that, they were the second worst with a loss of 5%.<sup>2</sup>

If you've ever taken a long road trip, you'll know that conditions along the way can change quickly and unpredictably, which is why you need a vehicle that's ready for the worst roads as well as the best. While diversification can never completely eliminate the impact of bumps along your particular investment road, it does help reduce the potential outsized impact that any individual investment can have on your journey.

With sufficient diversification, the jarring effects of performance extremes level out. That, in turn, helps you stay in your chosen lane and on the road to your investment destination.

Happy motoring and happy investing.

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## Investing: A World of Opportunity

First Quarter 2017

When individual markets, especially home markets, perform relatively well over a recent stretch of time many investors stray from a more diversified and prudent investment strategy. That is a mistake.

Given the relatively strong performance of the S&P 500 since 2010 (see Page 17), many investors have questioned the need to diversify internationally. This is to be expected given behavioral biases, but abandoning a more prudent and well-diversified investment strategy is misled. After all, there are approximately 8,000 publicly traded companies that exist outside the U.S.; and those non-U.S. companies represent nearly half of all publicly traded companies in the world by value (see Pages 18 & 19).

We don't have to go back very far to find a period when U.S. companies performed miserably compared to foreign ones. For the 10-years ending Dec. 31, 2009, a well-diversified global portfolio would have doubled while the S&P 500 remained flat (see Page 20). This change of fortune can be seen repeatedly over time. The S&P 500 outperformed foreign markets during the 1990s (see Page 21), but foreign markets outperformed in both the 1970s and 1980s (see Pages 22 & 23). The fact of the matter is that we don't know which markets will outperform in any given period, so we should diversify broadly. Doing so will necessarily mean that our portfolio will behave differently than the Dow and S&P numbers we hear daily on various news channels, but it's a strategy that has paid off handsomely (see Page 24).

Again, times of extended recent outperformance of a home market such as the S&P 500 will test our resolve to remain globally diversified. However, when we step back and look at the data we find that a globally diversified portfolio has outperformed the S&P 500 85.3% of the time! (see Page 25)

Global diversification also dampens year-to-year volatility in returns. In some years the S&P 500 performs significantly better than a globally diversified one, but it also significantly underperforms in other years. A globally diversified portfolio, on the other hand, hasn't experienced the same level of extreme relative high or low wild relative performance, but has instead had relatively moderate year-to-year relative returns. You can see this graphically on Page 26 in that the global portfolio's (indicated by "G" boxes) relative performance drifts through the middle of the chart while S&P 500 annual returns tend to swing wildly around it. This has been the case in the past and there is no reason to expect the future will be any different.

Prudent investing requires time, patience, and a well thought out and diversified investment strategy. It also means that well-diversified portfolio won't have the best relative performance in any one year, but it won't have the worst either. Simply put, some "games" are best won by not losing. Investing is one of those.

Remember to control what you can and let go of what you can not. Develop a prudent well-diversified portfolio according to your time horizon and risk tolerance, minimize taxes and fees, and remain disciplined. Do not be tempted to chase returns as strategy is akin to "skating to where the puck was". Doing so will very likely cause you to miss opportunities. Your future financial stability is too important to take such unnecessary risk.



Performance: January 2010–December 2016





## There's a World of Opportunity in Equities

Percent of world market capitalization as of December 31, 2016



Data provided by Bloomberg. Market cap data is free-float adjusted and meets minimum liquidity and listing requirements. Many nations not displayed. Totals may not equal 100% due to rounding. For educational purposes; should not be used as investment advice. China market capitalization excludes A-shares, which are generally only available to mainland China investors.



## Market Capitalization of Global Stock Markets

January 1990–December 2016

											Weights					
			Number of Countries	Num	nber of Stocks	Tota	l Value	Decer	nber 31, 2(	016	Cha Previ	nge fror ous Yea	m ar	ı 01/90–12/16 r Average		
US			1		3,311	25.35	Trillion		54.2	0%		0.909	%	47.0	7%	
Develo	ped Markets ex	US	22		6,315	16.26	Trillion		34.7	6%	•	-1.169	%	46.2	7%	
Emergi	ng Markets		23		5,619	5.16	Trillion		11.0	4%		0.259	%	6.6	5%	
Total			46		15,245	46.78	Trillion		100.0	0%						
100% 80%									~	Er	nerging	Marke	ets			
60%					Interna Develo	ational oped										
40%		ha		Dom	nestic											
20%																
0% 19	90 1992	1994	1996	1998 20	000	2002	2004	2006	2008	2010	2012	2 2	014	2016		



Performance: January 2000–December 2009





Performance: January 1990–December 1999





Performance: January 1980–December 1989





Performance: January 1970–December 1979





Performance: January 1970–December 2016





### **Global Exposure to Higher Expected Returns**

Dimensional Equity Balanced Strategy Index minus S&P 500 Index

Annual: January 1970–December 2016

Date	1970	1971	1972	1973	1974 1	1975 1	1976 1	1977 1	978 1	979 1	980 19	981 19	982 198	83 198	4 1985	1986	1987 1	988 1	989 19	990 199	1 1992	1993	1994 1	1995 19	996 199	97 1998	1999	2000	2001 2	002 20	03 2004	2005	2006 2	007 20	008 2009	2010	J 201	1 2012	2 2013	2014 20	15 2016
1970	-3.8																																								
1971	4.0	12.4																																							
1972	4.7	9.3	6.2																																						
1973	2.5	4.7	1.0	-3.9																																					
1974	2.7	4.4	1.9	-0.3	3.5																																				
1975	4.2	5.9	4.3	3.7	7.7 '	12.0																																			
1976	4.6	6.1	4.9	4.5	7.5	9.5	7.0																																		
1977		8.7	8.1	8.5	11.8	14.7	16.1	25.9																						-							~ -				
1978	8.2	9.8	9.4	10.0	13.0	15.5	16.6	21.7 1	17.7																					I	he di	tter	ence	e is i	Posit	ive	85	.3%	of t	he tir	ne.
1979	7.7	9.1	8.6	9.0	11.3	12.9	13.2	15.3 1	10.3 :	3.4																															
1980	6.6	7.7	7.2	7.3	9.0	9.9	9.5	10.2	5.4 -	-0.3 -	-3.9																			Т	he di	iffer	ence	e is l	Nega	tiv€	ə 14	4.7%	6 of	the t	ime.
1981	7.0	8.0	7.6	7.8	9.3 1	10.2	9.9	10.4	6.9 :	3.5 3	3.6 1 <sup>.</sup>	1.5																							0						
1982	6.0	6.9	6.4	6.4	7.6	8.1	7.6	7.7	4.4	1.3 (	0.6 2	2.9 -	5.0																												
1983	6.3	7.2	6.7	6.8	7.9	8.4	8.0	8.1	5.4 :	3.1 3	3.0 5	5.4 2	2.5 10.	.6																											
1984	6.1	6.8	6.4	6.4	7.4	7.8	7.3	7.4	5.0 :		2.9 4	4.7 2	2.5 6.4	4 2.4																					V V	,	Diff	oron	co ic	nocitiv	<i>(</i> 0
1985	6.0	6.7	6.3	6.3	7.2	7.5			5.0 :	3.2 3	3.2 4	4.7 3	3.1 5.9	9 3.6	4.8																				<u> </u>	<b>`</b>	Dilli	eren	66 12	positiv	/6
1986	6.2	6.9	6.5	6.6	7.4	7.7	7.4	7.4	5.5	4.1 4	4.2 5	5.6 4	4.4 6.9	9 5.7	7.4	10.1																			vv	,	D:#	aran			
1987	6.2	6.8	6.5	6.5	7.3	7.6	7.2	7.2	5.5	4.3 4	4.4 5	5.6 4	4.6 6.3	7 5.7	6.9	7.9	5.7																		۸.۸		DIII	eren	ceis	negat	ive
1988	6.4	7.0	6.7	6.8	7.5	7.8	7.5	7.5	6.0	4.9 5	5.0 6	6.2 5	5.5 7.3	3 6.7	7.8	8.8	8.1 1	0.6																							
1989	5.9	6.4	6.1	6.1	6.7	7.0	6.6	6.6	5.1	4.0	4.1 5	5.0 4	4.2 5.6	6 4.8	5.3	5.4	3.9	3.0 -	4.1																						
1990	5.0	5.5	5.1	5.0	5.6	5.7	5.3	5.2	3.8	2.7 2	2.6 3	3.3 2	2.4 3.4	4 2.4	2.4	1.9	-0.1	-2.0 -	7.7 -1	1.1																					
1991	4.7	5.1	4.8	4.7	5.2	5.3	4.9	4.8	3.4	2.4 2	2.3 2	2.9 2	2.1 2.9	9 2.0	1.9	1.4	-0.2 -	1.7 -	5.5 -6	6.1 -0.4	3																				
1992	4.6	5.0	4.7	4.6	5.0	5.1	4.7	4.6	3.3	2.4 2	2.3 2	2.8 2	2.1 2.8	8 2.0	1.9	1.5	0.1	1.0 -	3.7 -3	3.5 0.6	2.0																				
1993	5.2	5.6	5.3	5.2	5.7	5.8	5.5	5.4	4.2 :	3.4 3	3.4 4	4.0 3	3.4 4.1	1 3.5	3.6	3.5	2.6	2.1 (	).5 1	.6 6.3		18.8																			
1994	5.1	5.5	5.2	5.1	5.6	5.7	5.4	5.3	4.2 :	3.4 3	3.4 3	3.9 3	3.4 4.1	1 3.5	3.6	3.5	2.7	2.3 <sup>-</sup>	1.0 2	2.0 5.6	7.8	10.9	3.6																		
1995	4.2	4.5	4.2	4.1	4.5	4.6	4.2	4.1		2.2 2	2.1 2	2.5 1	1.9 2.4	4 1.8		1.4	0.5	-0.1 -	1.6 -1	1.2 1.0	1.4	1.2	-6.5 -	15.6																	
1996	4.0	4.3	4.0	3.9	4.2	4.3	3.9	3.8	2.7	1.9 1	1.8 2	2.2 1	1.6 2.1	1 1.5	1.4		0.2	-0.4 -	1.6 -1	1.3 0.5	0.7	0.4	-5.0	-9.1 -3	2.0																
1997	3.2	3.5	3.2	3.1	3.4	3.4	3.0	2.8	1.8	1.0 (	0.9 1	I.1 C	0.5 0.9	9 0.2	0.1	-0.3	-1.2	1.9 -	3.2 -3	3.0 -1.4	3 -2.0	-2.7	-7.5 -	10.9 -	8.5 -14	.5															
1998	2.2	2.4	2.0	1.9	2.1		1.6	1.4	0.3 -	-0.4 -	-0.6 -0	0.5 -	1.1 -0.	.9 -1.6	6 -1.9	-2.4	-3.4 -	4.1 -	5.5 -8	5.7 -4.9	-5.5	-6.7	-11.1 -	14.4 -1	14.0 -19	.5 -24.2															
1999		2.2	1.9	1.7	1.9	1.9	1.5	1.2	0.2 -	-0.5 -	-0.7 -0	0.5 -	1.2 -1.	.0 -1.6	6 -1.9	-2.4	-3.3	4.0 -	5.2 -8	5.3 -4.6	6 -5.1	-6.1	-9.7 -	12.1 -1	11.2 -14	.1 -13.8	-2.1														
2000	2.3	2.5	2.2		2.3	2.2	1.9		0.7	0.0 -	·0.1 C	0.0 -(	0.5 -0.	.3 -0.9	-1.1	-1.5	-2.2 ·	2.8 -	3.9 -3	3.8 -3.	1 -3.3	-4.0	-6.8	-8.5 -	7.0 -8.	2 -5.9	4.8	12.1													
2001	2.7	2.9	2.6	2.5	2.7	2.7	2.3		1.2 (	0.6 (	0.5 0	).7 (		4 -0.1	-0.3	-0.6	-1.2 -	1.7 -	2.6 -2	2.5 -1.0	6 -1.7	-2.1	-4.5	-5.6 -3	3.8 -4.	1 -1.4	7.7	12.9	13.8												
2002	2.9	3.2	2.9	2.8	3.0	3.0	2.7	2.5	1.7	1.0 (	0.9 1	1.2 0	0.7 1.0	0 0.5	0.4	0.2	-0.4 ·	- 8.0	1.6 -1	1.4 -0.4	5 -0.5	-0.8	-2.7	-3.5 -	1.6 -1.	5 1.3	8.9	12.8	13.2 1	2.5											
2003	3.4	3.6	3.3	3.3	3.5	3.5	3.2	3.1	2.3	1.7 1	1.6 1	I.9 1	1.5 1.8	8 1.4	1.3		0.6	0.3 -	0.3 -0	0.1 0.8	1.0	0.9	-0.7	-1.2 (	0.8 1.	2 4.0	10.8	14.3	15.0 1	5.7 18	.9										
2004	3.6	3.9	3.6	3.5	3.8	3.8	3.5	3.4	2.7	2.1 2	2.1 2	2.3 1	1.9 2.3	3 1.9	1.9		1.3	1.0 (	).4 C	).7     1.€	i 1.8	1.8	0.4	0.1 2	2.0 2.	5 5.2		14.0	14.5 1	4.7 15	.8 12.7										
2005	3.8	4.0	3.8	3.7	3.9	3.9	3.7	3.6	2.9	2.3 2	2.3 2	2.6 2	2.2 2.	5 2.2	2.2		1.6	1.4 (	).9 1	.2 2.1	2.3	2.3		0.8 2	2.6 3.	2 5.6	10.7	13.0	13.2 1	3.1 13	.3 10.6	8.4									
2006		4.1	3.9	3.8	4.1	4.1	3.8	3.7		2.6 2	2.5 2	2.8 2	2.4 2.8	8 2.4	2.4	2.3		1.8 1	1.3 1	.6 2.5	2.7	2.8	1.6	1.5 3	3.2 3.	7 5.9	10.5	12.4	12.4 1	2.2 12	.1 9.9	8.5	8.6								
2007	3.7	3.9	3.7	3.6	3.8	3.8	3.6	3.5	2.8	2.3 2	2.3 2	2.5 2	2.2 2.	5 2.1			1.6	1.4 1	I.0 1	.3 2.1	2.2	2.3	1.2	1.0 2	2.5 2.	9 4.9	8.7	10.1	9.9 9	9.2 8	6 6.1	4.0	1.9 -	4.4							
2008	3.5	3.6	3.4	3.3	3.6	3.6	3.3	3.2	2.5	2.1 2	2.0 2	2.2 1	1.9 2.3	2 1.9	1.8		1.4	1.1 (	).7 1	.0 1.7	1.8	1.8	0.8	0.6 1	1.9 2.	3 4.0	7.3	8.4	7.9			1.8	-0.3 -	4.5 -4	4.6						
2009	3.7	3.9	3.7	3.7	3.9	3.9	3.7	3.6	2.9	2.5 2	2.5 2	2.7 2	2.4 2.3	7 2.4	2.4	2.3	1.9	1.8 1	1.4 1	.7 2.4	2.6	2.6		1.5 2	2.9 3.	3 4.9	8.1	9.1	8.8 8	3.2 7.	6 5.8	4.5	3.5	1.9 5	.2 15.9						
2010	3.8	4.0	3.8	3.7	4.0	4.0	3.7	3.7		2.6 2	2.6 2	2.8 2	2.5 2.8	8 2.5	2.5	2.4	2.1	2.0 1	1.6 1	.9 2.6	2.8	2.8		1.9 3	3.1 3.	5 5.0	7.9	8.9	8.6 8	3.0 7.	5 5.9	4.8	4.1	3.1 5	.7 11.2	6.7					
2011	3.5	3.7	3.5	3.4	3.6	3.6	3.4	3.3	2.7	2.3 2	2.2 2	2.4 2	2.2 2.4	4 2.1			1.7	1.5 ′	1.2 1	.4 2.1	2.2	2.2	1.4	1.2 2	2.4 2.	7 4.1	6.6	7.4	7.0 6	5.3 5	6 4.1	2.9	2.0	0.7 2	.1 4.4	-0.9	) -8.(	o			
2012	3.5	3.7	3.5	3.4	3.6	3.6	3.4	3.3	2.7	2.3 2	2.3 2	2.5 2	2.2 2.4	4 2.2			1.7	1.6 ′	1.2 1	.5 2.1	2.2	2.2	1.4	1.3 2	2.4 2.	7 4.0	6.3	7.0	6.6	5.0 5		2.9	2.1		.2 4.0	0.3	-2.8	8 2.7			
2013	3.3	3.5	3.3	3.2	3.4	3.4	3.2	3.1	2.5	2.1 2	2.0 2	2.2 2	2.0 2.3	2 1.9	1.9	1.8	1.5	1.3 1	1.0 1	.2 1.8	1.9	1.9		1.0 2	2.0 2.	2 3.4	5.6	6.1	5.7 8	5.0 4.		2.0	1.2	0.2 1	.0 2.1	-1.0	) -3.5	5 -1.1	-4.8		
2014	3.1	3.2		2.9	3.1	3.1	2.9	2.8	2.2	1.8 1	1.8 2	2.0 1	1.7 1.9	9 1.6	1.6	1.5	1.2	1.0 (	).7 C	).9 1.4	1.5	1.5	0.7	0.6 1	1.5 1.	7 2.8	4.7	5.2	4.7		4 2.1	1.1	0.3	0.7 -0	).2 0.6	-2.2	-4.3	3 -3.0	-5.8	-6.8	
2015	2.9	3.1	2.9	2.8	2.9	2.9	2.7	2.6	2.1	1.7 ′	1.6 1	I.8 1	1.5 1.	7 1.4	1.4	1.3	1.0	0.8 (	0.5 0	).7 1.2	1.3	1.2	0.5	0.4 1	1.2 1.	4 2.4	4.2	4.6	4.1 3	3.5 2.	8 1.5	0.6	-0.2 ·	-1.1 -0	0.7 -0.1	-2.5	i -4.3	3 -3.3	-5.3	-5.5 -4	.2
2016	3.0	3.1	2.9	2.8	3.0	3.0	2.8	2.7	2.1	1.8	1.7 1	1.9 1	1.6 1.8	8 1.6	1.5	1.4	1.2	1.0 (	).7 C	).9 1.4	1.4	1.4	0.7	0.6 1	1.4 1.	6 2.5	4.3	4.7	4.2 3	3.6 3.	0 1.9	1.0	0.4	0.4 0	0.0	-1.4	+ -2.7	7 -1.6	-2.6	-1.9 0	.7 5.8

In US dollars. The 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 no guarantee of future results, and there is always the risk that an investor may lose money. Sources: Dimensional Index data compiled by Dimensional; the S&P data is provided by Standard & Poor's Index Services Group. See "Dimensional Equity Balanced Strategy Index Description" slides in the Appendix for more information.



### **Global Diversification: Managing Client Expectations**

Annual returns rankings of the Dimensional Equity Balanced Strategy Index and its component indices, 1970–2016





### Did diversification work?

- The S&P 500 did better than the globally diversified index 18 times.
- It did worse 29 times.

In US dollars. These indices are the current components of the Dimensional Equity Balanced Strategy Index as of 1994 – present. Indices are not available for direct investment and performance does not reflect expenses of an actual portfolio. Sources: Dimensional Index data. Indices are not available for direct investment and performance does not reflect expenses of an actual portfolio. Sources: Dimensional Indices are not available for direct investment and performance does not reflect expenses of an actual portfolio. Past performance in a guarantee of future results. The S&P data is provided by Standard & Poor's Index Services Group. See Appendix for Descriptions of Dimensional Indices.

# Appendix

### **Dimensional Equity Balanced Strategy Index Description**

Rebalanced monthly. The Dimensional Equity Balanced Strategy Index is comprised of commercial and Dimensional indices, 70% US equity indices, and 30% non-US indices. US: S&P 500, large cap value, small cap, small cap value, Dow Jones REIT; non-US: international value, international small cap and small cap value, emerging markets, and emerging markets value and small cap. Additional index information is available upon request.

Real Estate Strategy weighting allocated evenly between US Small Cap and US Small Cap Value prior to January 1978 data inception.

International Value weighting allocated to Fama/French International Value Index prior to January 1994 data inception, and evenly between International Small Cap and MSCI EAFE Index (net dividends) prior to January 1975 data inception. International Small Cap Value weighting allocated to International Small Cap prior to July 1981 data inception.

Emerging Markets weighting allocated to MSCI Emerging Markets Index (gross dividends) prior to January 1994 data inception, and evenly between International Small Cap and International Value prior to January 1988 data inception.

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 1985 data inception. For illustrative purposes only. The balanced strategies are not recommendations for an actual allocation.

Indices are not available for direct investment; their performance does not reflect the expenses associated with the management of an actual portfolio.

Rebalanced monthly. All performance results of the balanced strategies are based on performance of indices with model/backtested asset allocations; the performance was achieved with the benefit of hindsight; it does not represent actual investment strategies. 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.

Past performance is no guarantee of future results.

### **Descriptions of Dimensional Indices**

Dimensional US Large 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 Nasdag 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 for the Dimensional US Large 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 1975: Targets securities of US companies traded on the NYSE, NYSE MKT (formerly AMEX), and Nasdag Global Market with market capitalizations above the 1,000th-largest company whose relative price is in the bottom 20% of the Dimensional US Large Cap Index after the exclusion of utilities, companies lacking financial data, and companies with negative relative price.

**Dimensional US Small Cap Index** was created by Dimensional in March 2007 and is compiled by Dimensional. It represents a market-capitalization-weighted index of securities of the smallest US companies whose market capitalization falls in the lowest 8% of the total market capitalization of the Eligible Market. The Eligible Market is composed of securities of US companies traded on the NYSE, NYSE MKT (formerly AMEX), and Nasdaq Global Market. Exclusions: Non-US companies, REITs, UITs, and investment companies. From January 1975 to the present, the index also excludes companies 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. Source: CRSP and Compustat. The index monthly returns are computed as the simple average of the monthly returns of 12 sub-indices, each one reconstituted once a year at the end of a different month of the year. The calculation methodology for the Dimensional US Small Cap Index was amended on January 1, 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 Nasdag 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 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. Prior to January 1975: Targets securities of US companies traded on the NYSE, NYSE MKT (formerly AMEX), and Nasdaq Global Market whose relative price is in the bottom 25% of the Dimensional US Small Cap Index after the exclusion of utilities, companies lacking financial data, and companies with negative relative price.

**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.

### **Descriptions of Dimensional Indices**

**Dimensional International Small Cap Index** was created by Dimensional in April 2008 and is compiled by Dimensional. July 1981–December 1993: It Includes non-US developed securities in the bottom 10% of market capitalization in each eligible country. All securities are market capitalization weighted. Each country is capped at 50%. Rebalanced semiannually. January 1994–Present: 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. The index monthly returns are computed as the simple average of the monthly returns of four sub-indices, each one reconstituted once a year at the end of a different quarter of the year. Prior to July 1981, the index is 50% UK and 50% Japan. The calculation methodology for the Dimensional International Small Cap Index was amended on January 1, 2014, to include profitability as a factor in selecting securities for inclusion in the index.

Dimensional International Small Cap Value 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 1994: Created by Dimensional: 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.

**Dimensional Emerging Markets 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 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.

**Dimensional Emerging Markets Small Cap Index** was created by Dimensional in April 2008 and is compiled by Dimensional. January 1989–December 1993: Fama/French Emerging Markets Small Cap Index. January 1994–Present: Dimensional Emerging Markets Small Index Composition: Market-capitalizationweighted 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. The index monthly returns are computed as the simple average of the monthly returns of four sub-indices, each one reconstituted once a year at the end of a different quarter of the year. Source: Bloomberg. The calculation methodology for the Dimensional Emerging Markets Small Cap Index was amended on January 1, 2014, to include profitability as a factor in selecting securities for inclusion in the index.