



Joint Retirement Plan Committee

Howard County Retirement Plans

April 26, 2018

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Emerging Markets Education

Introduction

- Emerging markets continue to present an attractive opportunity for high return potential and diversification benefits within an equity portfolio.
 - Continued Growth of Emerging Markets
 - Emerging markets have grown to represent 12% of the global equity market cap today, up from just 3% in December 31, 2000. Emerging markets investments provides exposure to new opportunities outside of the U.S., where 15% of companies comprise 81% of total U.S. market cap.
 - GDP growth in emerging market countries is strong, outpacing U.S. and Eurozone countries.
 - Earnings and revenue growth are also strong in emerging markets, versus U.S. markets.
 - Positive Impact of Currency
 - The relative cheapness of emerging market currencies may prove to be a tailwind, going forward.
 - Less Commodities Driven
 - While key resources still come from emerging markets (i.e. lithium, cobalt, palladium), emerging markets are less commodity driven today than they have been in the past. Instead they are relying more and more on service industry sectors like Information Technology and Financials.
 - Active Management Provides Excess Return Opportunities in Emerging Markets
 - Though active management fees in emerging market strategies are typically more expensive, top quartile managers average 280 bps in excess return over the MSCI Emerging Markets Index.

What Are Emerging Markets?

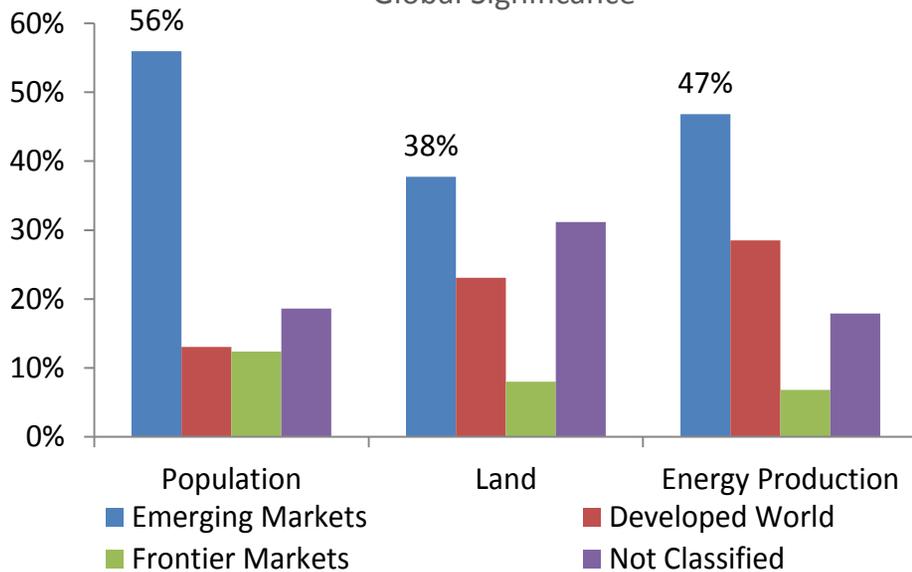
24 Countries Experiencing Rapid Growth and Industrialization



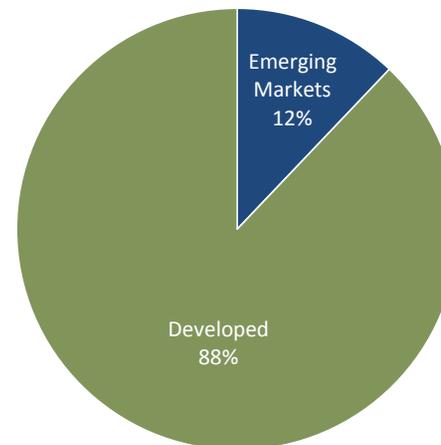
Blue Chip Emerging Markets Companies



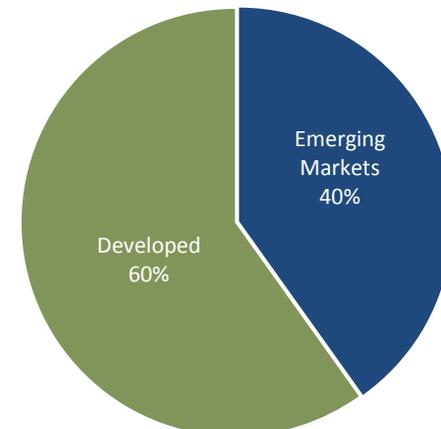
Global Significance



Emerging Markets Weight in MSCI ACWI Index

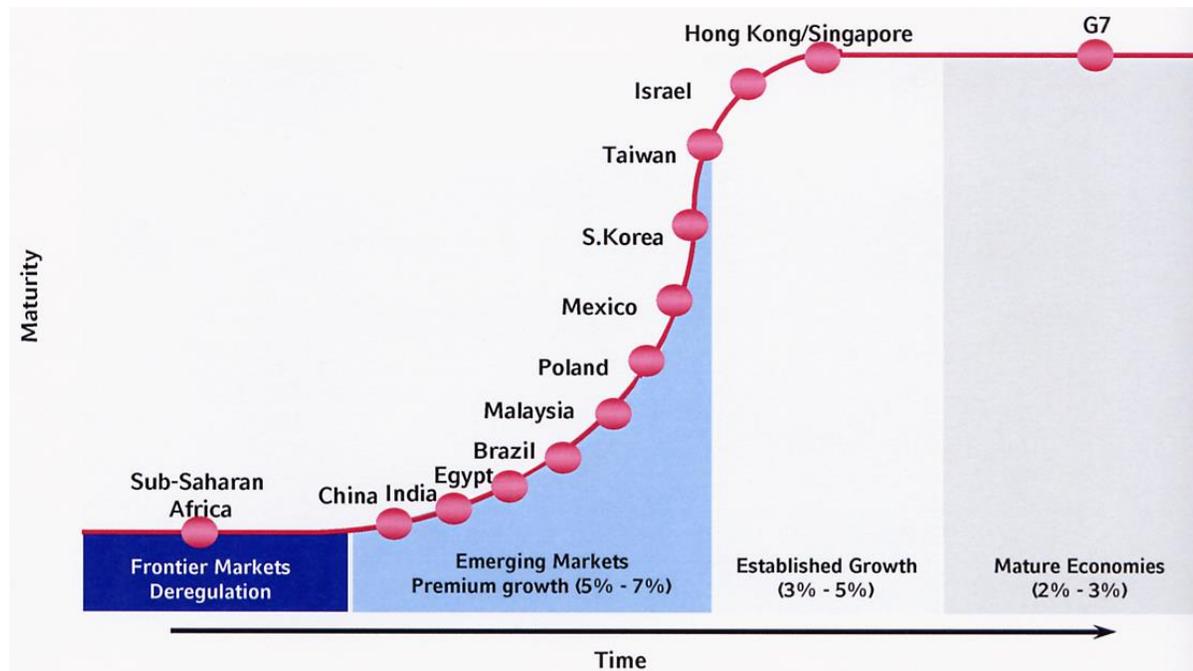


Emerging Markets Weight in World GDP



International Equity – Developed vs. Emerging Markets

An Emerging Market is simply the financial market of a developing economy.



PROS

- Growing economies – higher return potential
- Diversification benefits
- Expanded opportunity set
- Inefficient markets

CONS

- Political risk
- Economic risk
- Currency risk
- Higher management fees

Emerging and Frontier Market Countries

Emerging Market Countries

Country	Allocation in MSCI EM Index
Latin America	11.5%
Brazil	6.8%
Cayman Islands	0.0%
Chile	1.3%
Colombia	0.4%
Mexico	2.9%
Peru	0.0%
Asia	73.1%
China	29.6%
India	8.8%
Indonesia	2.2%
Korea	15.4%
Malaysia	2.4%
Philippines	1.1%
Taiwan	11.3%
Thailand	2.3%
Europe, Middle East, and Africa	15.0%
Czech Republic	0.2%
Egypt	0.1%
Greece	0.3%
Hungary	0.3%
Poland	1.3%
Qatar	0.6%
Russia	3.3%
South Africa	7.1%
Turkey	1.1%
United Arab Emirates	0.6%
Other	0.4%
Total	100.0%

Frontier Market Countries

Country
Americas
Argentina
Asia
Bangladesh
Sri Lanka
Vietnam
Europe, Middle East, and Africa
Croatia
Estonia
Lithuania
Kazakhstan
Romania
Serbia
Slovenia
Bahrain
Jordan
Kuwait
Lebanon
Oman
Kenya
Mauritius
Morocco
Nigeria
Tunisia
WAEMU

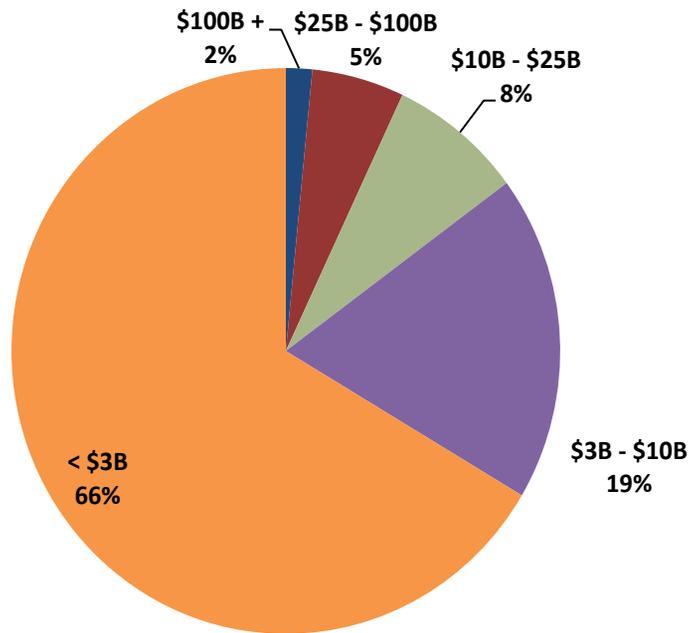
As of 12/31/2017.

The Western African Economic and Monetary Union (WAEMU) consists of the following countries: Benin, Burkina Faso, Ivory Coast, Guinea-Bissau, Mali, Niger, Senegal, and Togo.

The Opportunity Set—Concentration Of US Equity Market

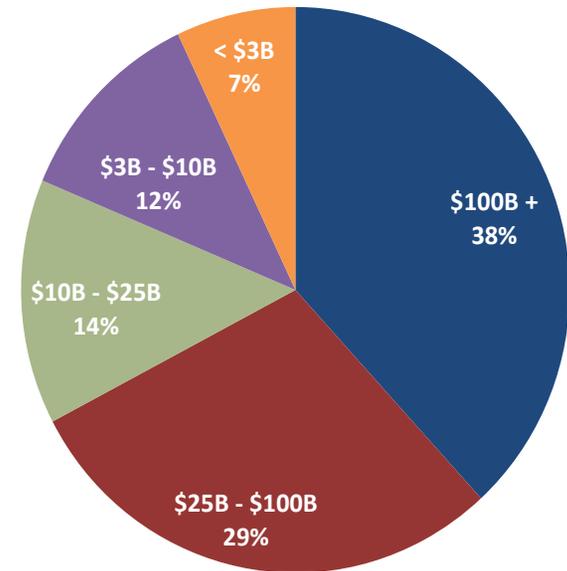
The value of the US stock market is concentrated in a relatively few, very large companies.

15% of US companies . . .



100% = 2,977 companies

. . . comprise 81% of US market capitalization.



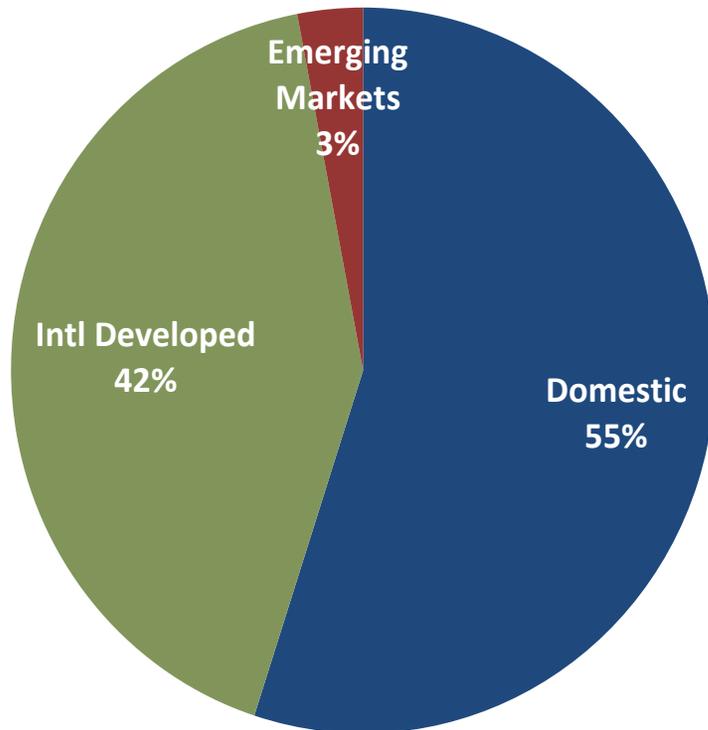
100% = \$25.9 Trillion

Source: Russell Index Profile Report

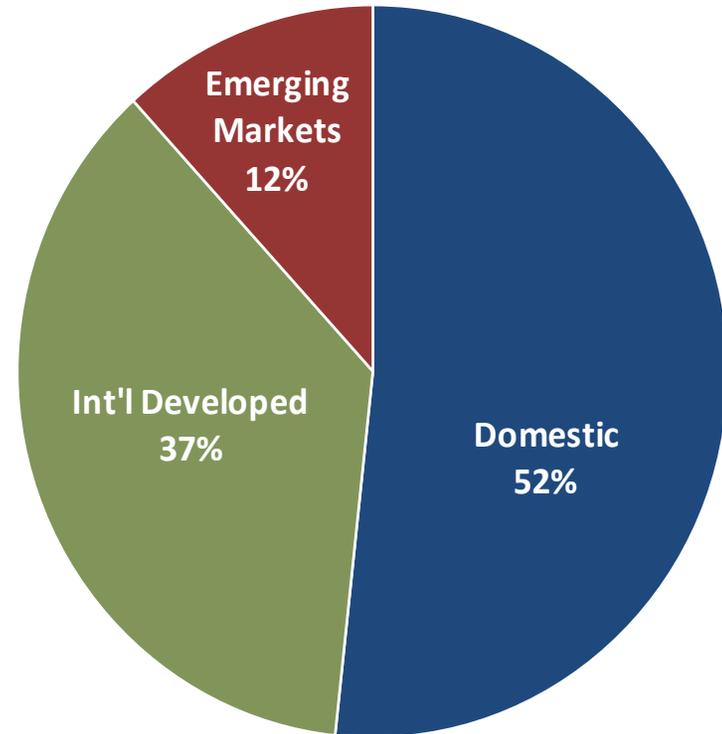
Evolution Of Global Equity Capitalizations

Since 2000, emerging markets have taken on a larger weight in the global equity market. A well diversified international equity allocation allows an investor to increase exposure to growth and opportunities that exist outside the US.

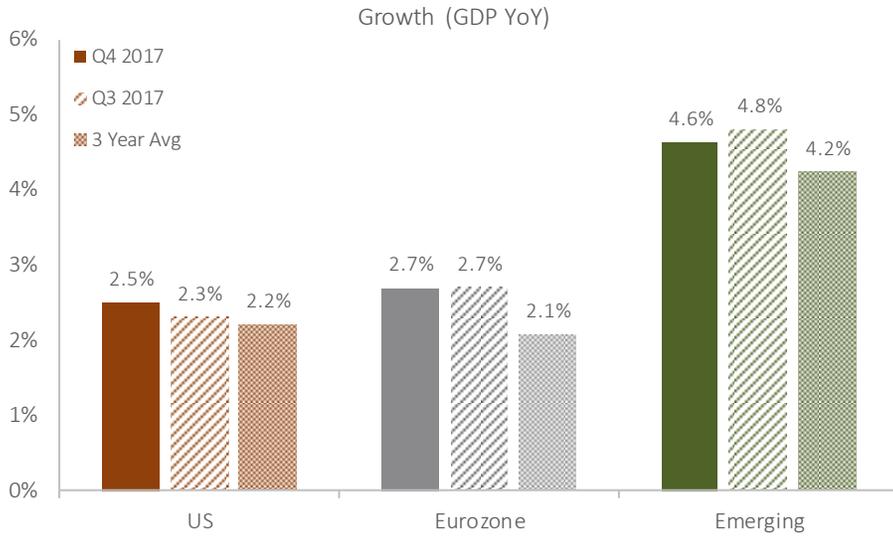
Global Equity Capitalizations
December 31, 2000



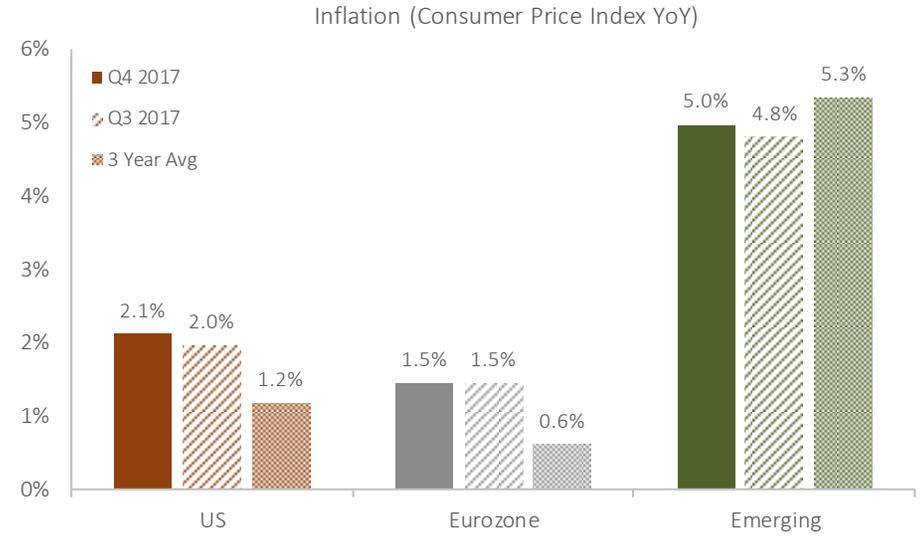
Global Equity Capitalizations
December 31, 2017



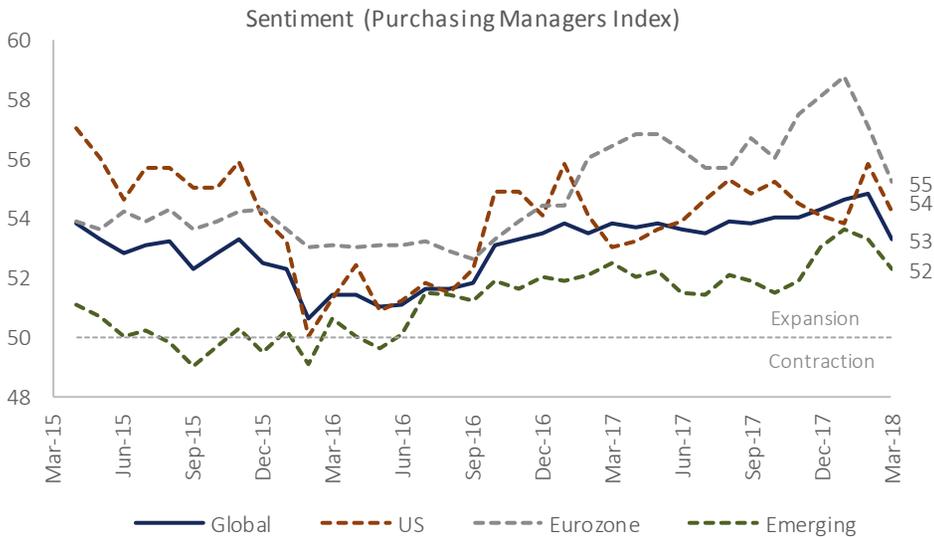
Economic Perspective



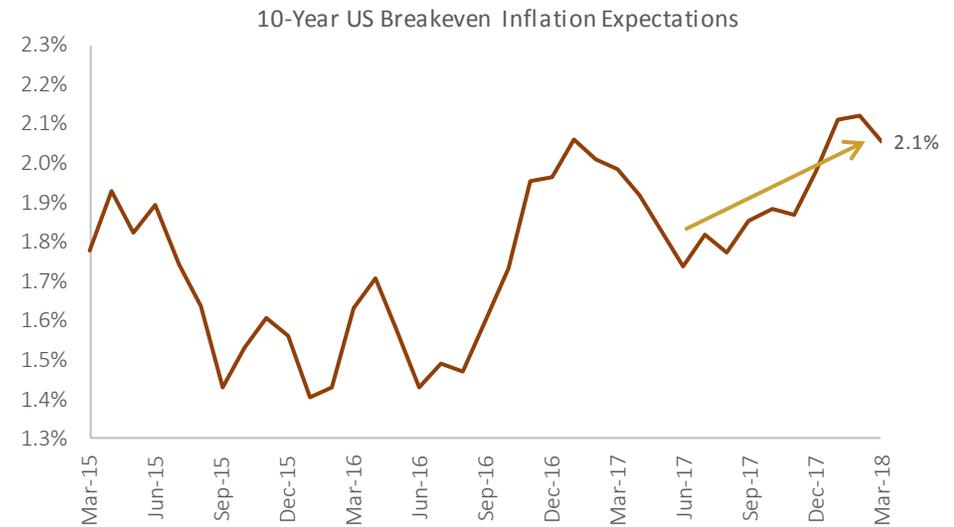
Growth rates are mostly unchanged QoQ; all regions are growing above trend.



Inflation has increased but remains subdued.



More timely measures of growth/sentiment have declined from very high levels.

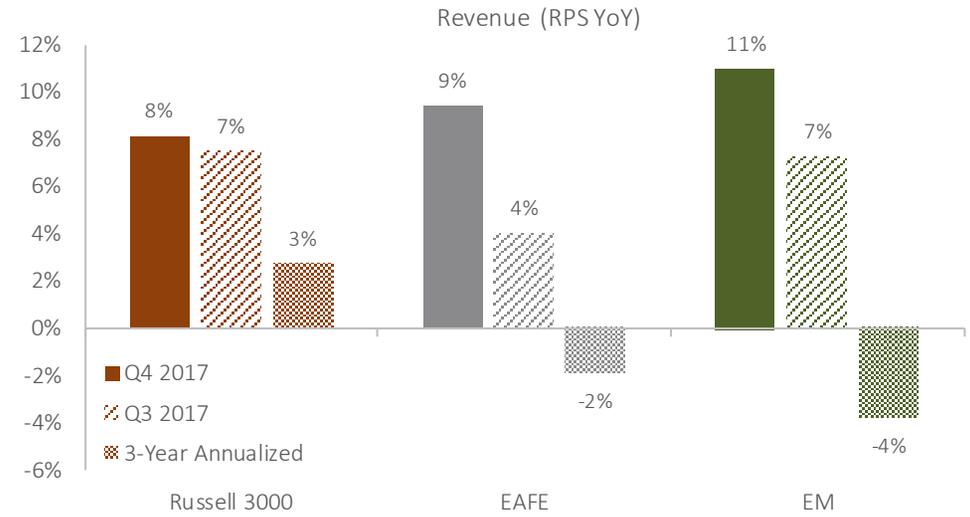
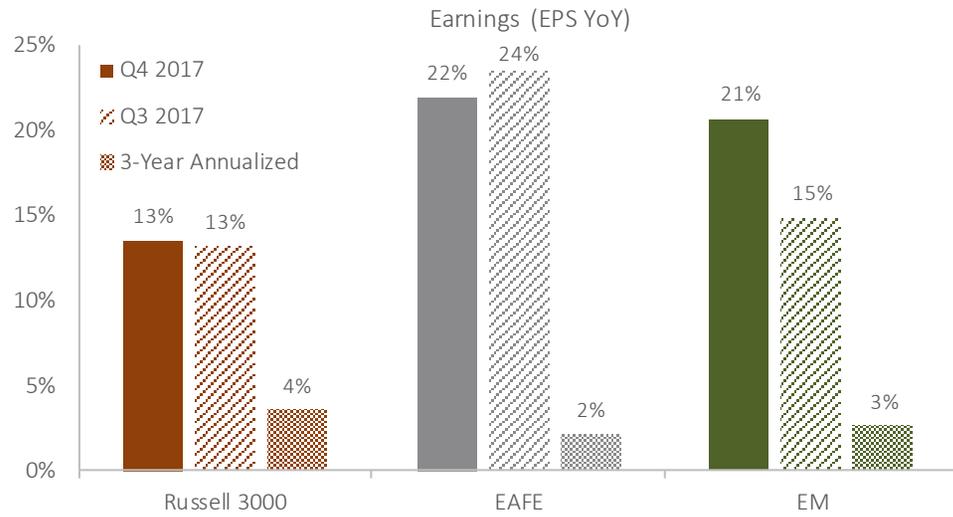


Inflation expectations have risen as the economy has picked up.

Sources: IMF International Financial Statistics

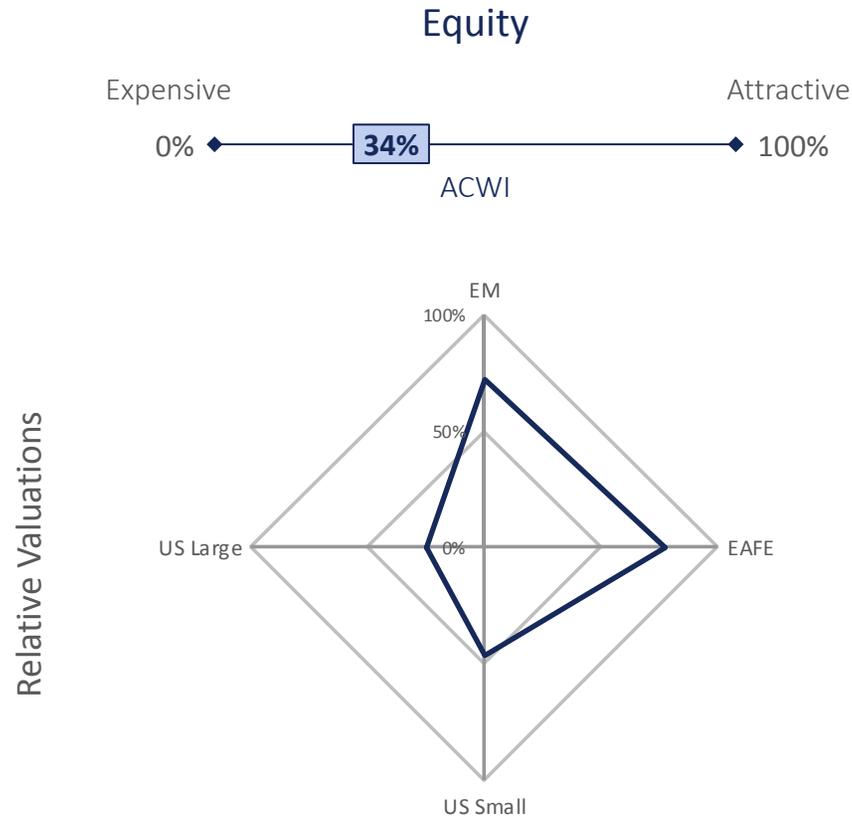
Equity Markets

Earnings growth, supported by improving revenue growth, remains elevated and is led by non-US markets.



Source: MSCI, Russell, AQR.

Asset Class Valuation Overview



Region	Current %	Last Qtr %
US Large	25%	24%
US Small	46%	48%
Int'l Developed	78%	69%
Emerging Markets	72%	74%

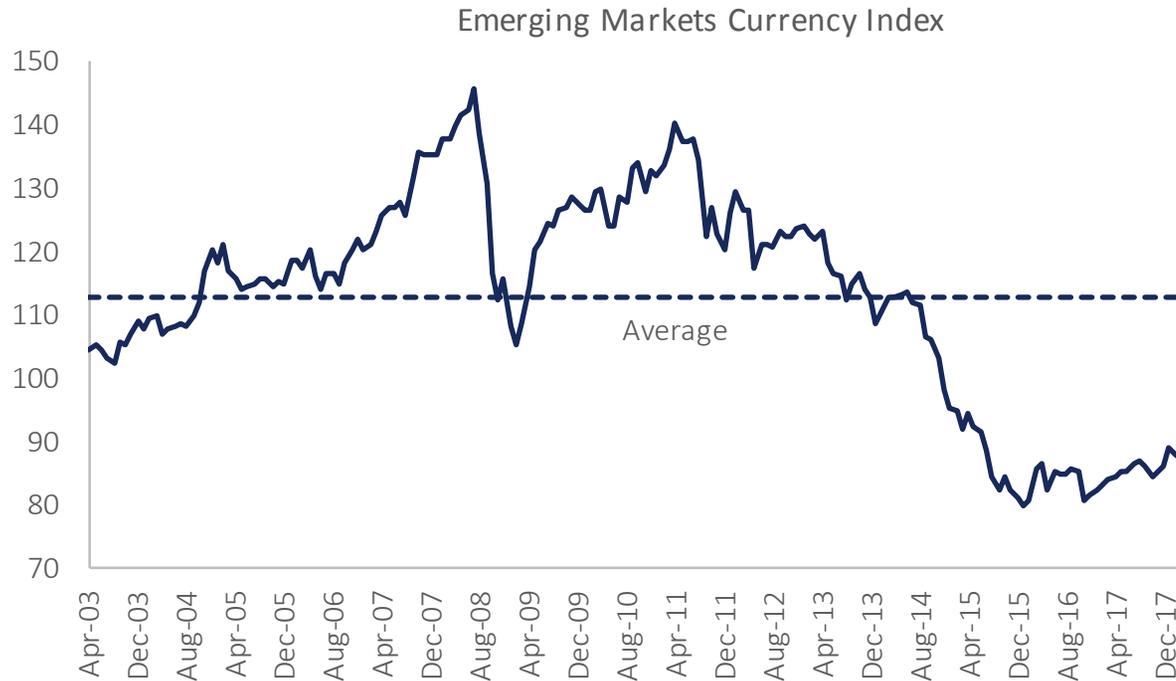
0% = Most Expensive 100% = Most Attractive
vs. trailing 20 years of observations

Equity: Utilizes cyclically adjusted P/E ratio for ACWI, and CAPE ratios relative to ACWI for relative valuations.

Fixed income: Utilizes yield to worst for the Bloomberg Barclays Aggregate, and option-adjusted spreads relative to the Bloomberg Barclays Aggregate for relative valuations.

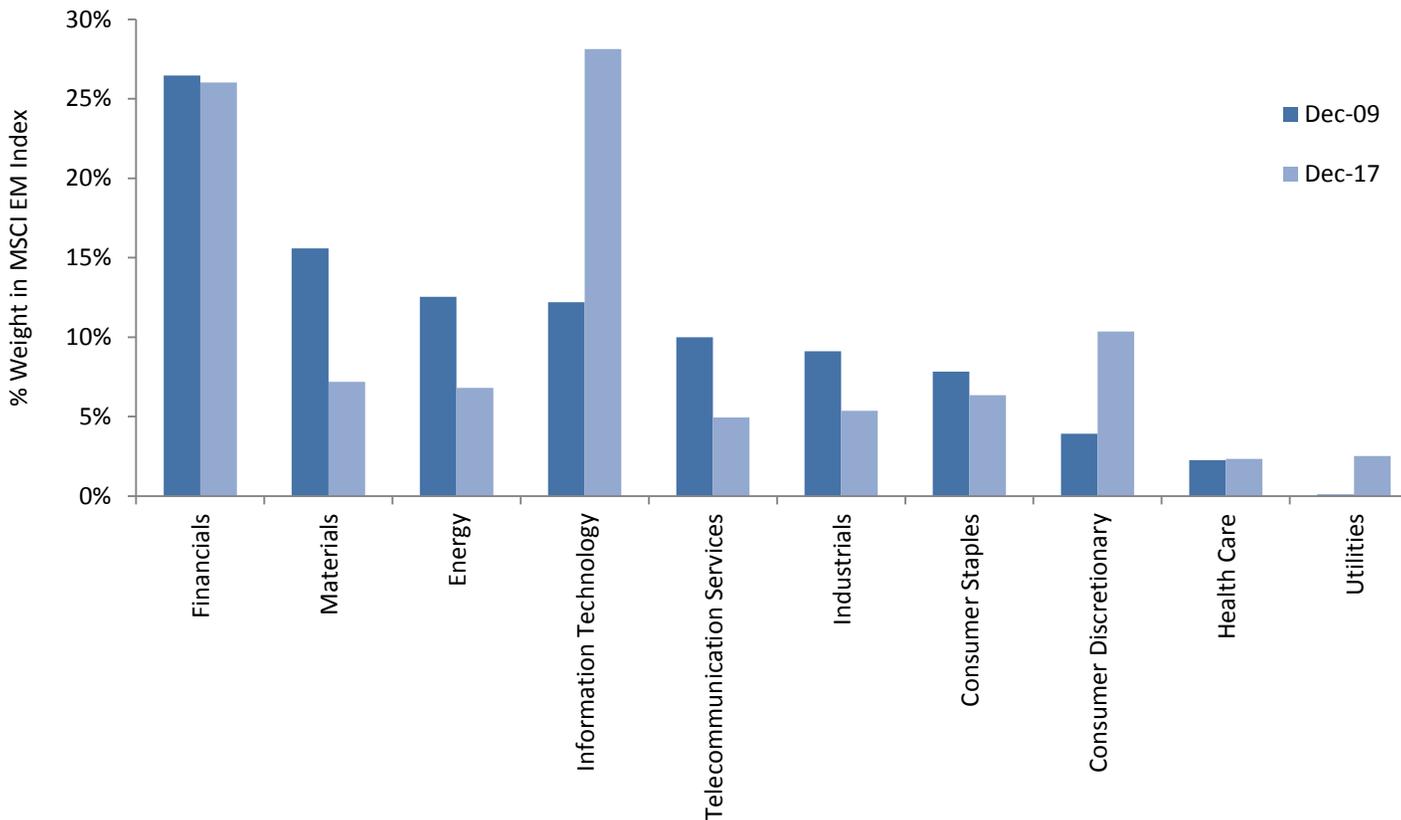
Currency Perspective

At current levels, currency/FX is expected to be a tailwind for EM equity performance, going forward.



Commodities Perspective

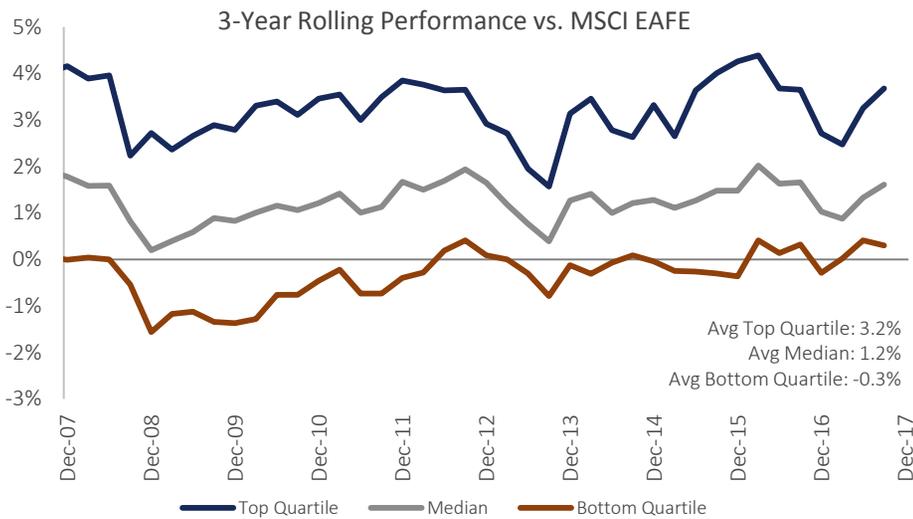
- Emerging markets are significantly less commodity-driven today than they have been historically.
 - The Materials and Energy sectors combine to make up 14% of the index today, versus nearly 30% in 2009.



Industry Excess Return Characteristics – International Equity

International Equity

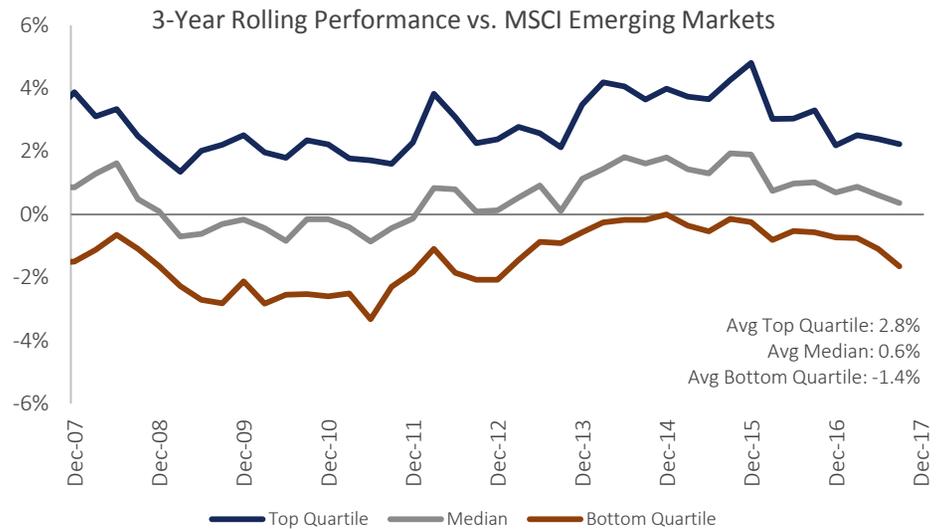
Developed International



	Median	Top Quartile
Average Alpha	120 bps	320 bps
Average Fee	60 bps	
Multiple of Fee	2.0x	5.3x
Index Fee	5 bps	

- The most substantial upside relative to the size of the active management fee. Manager selection is significant, as top quartile managers outperform median managers by 320 bps.

Emerging Markets



	Median	Top Quartile
Average Alpha	60 bps	280 bps
Average Fee	95 bps	
Multiple of Fee	0.6x	2.9x
Index Fee	20 bps	

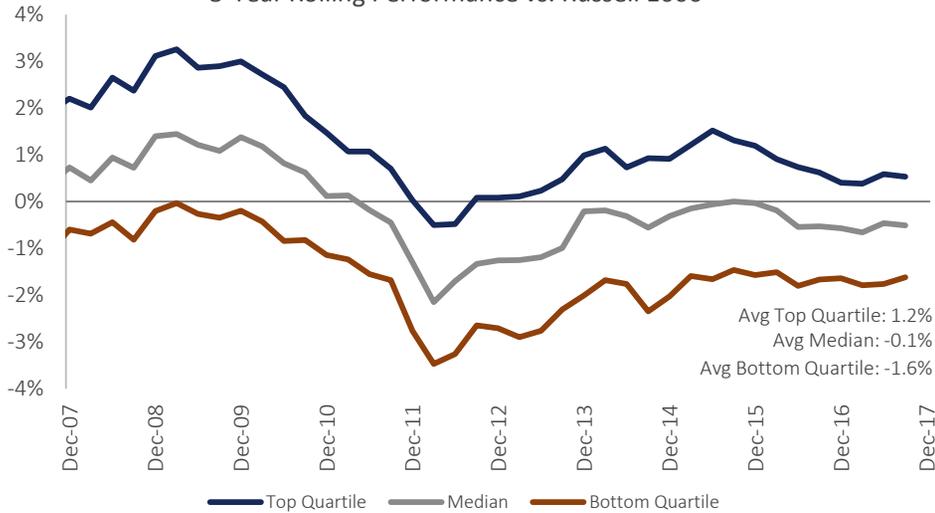
- Similar alpha pattern as developed international; top quartile managers outperform median managers by a significant margin.

Industry Excess Return Characteristics – Domestic Equity

Domestic Equity

Large Cap

3-Year Rolling Performance vs. Russell 1000

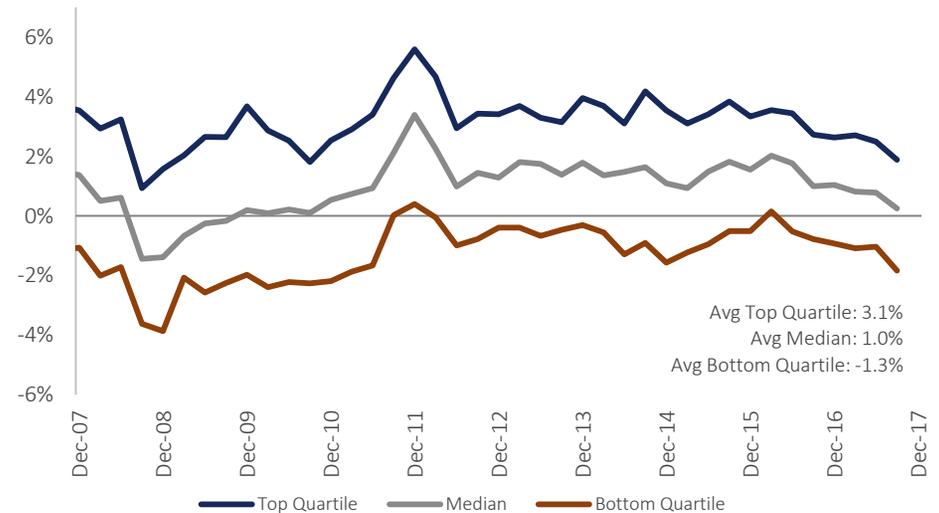


	Median	Top Quartile
Average Alpha	-10 bps	120 bps
Average Fee	52 bps	
Multiple of Fee	-0.2x	2.7x
Index Fee	2 bps	

- Historically, this is the most challenging asset class to garner excess return with active management, net of fees. Manager selection is certainly significant, as median managers tend to slightly underperform.

Small Cap

3-Year Rolling Performance vs. Russell 2000



	Median	Top Quartile
Average Alpha	100 bps	310 bps
Average Fee	80 bps	
Multiple of Fee	1.3x	3.9x
Index Fee	4 bps	

- While an expensive asset class, greater excess returns can be realized with active management, even net of fees.

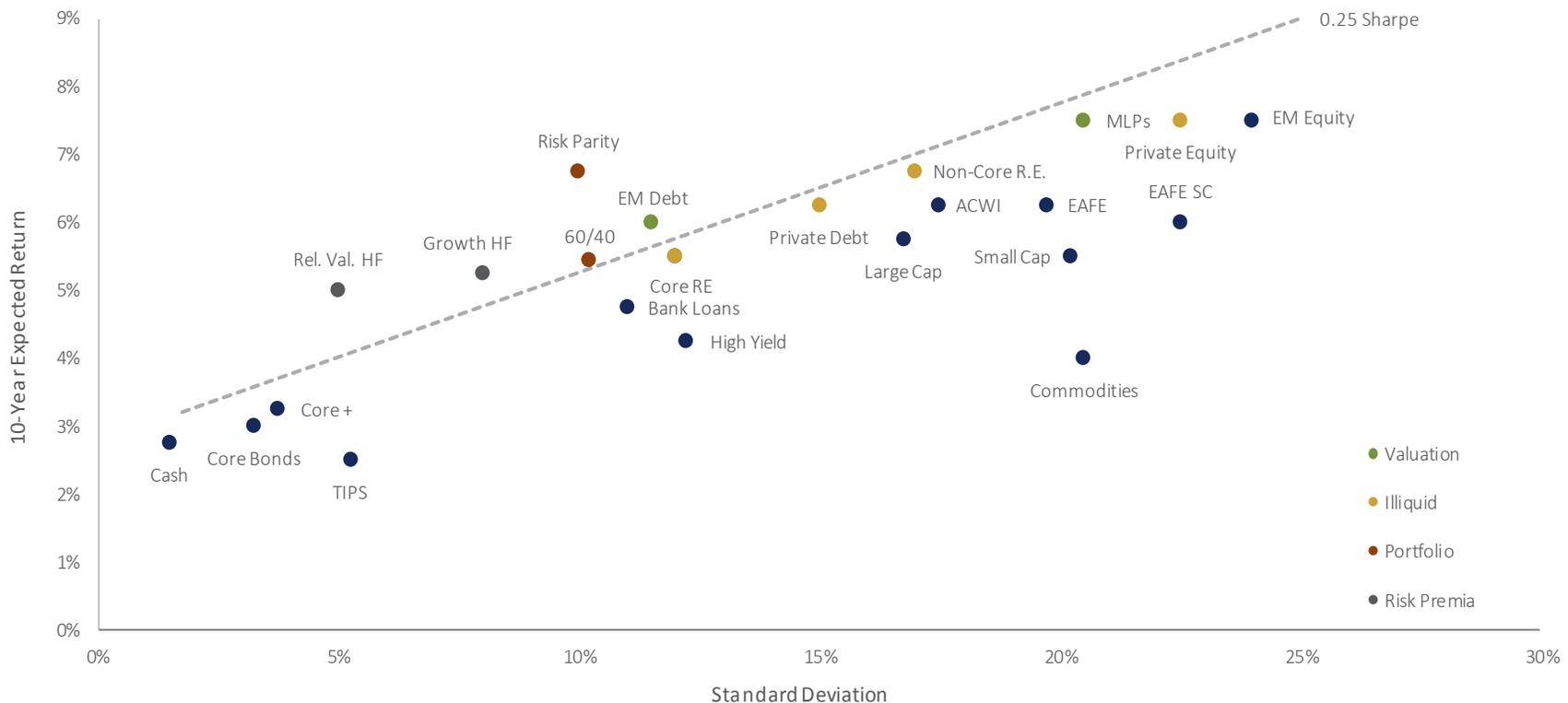
10-Year Market Return Assumptions

- Each quarter Summit publishes long-term (10-year) strategic capital market assumptions.
- While these assumptions are long-term by definition (one would not expect them to change frequently), there are times when market fundamentals move dramatically, thereby altering the expected performance for certain asset classes.
- For a complete rationale (for all assumptions) please refer to Summit's annual "Capital Market Assumption" publication (available at www.ssgstl.com).

10-Year Expected Asset Class Returns and Standard Deviations			
Asset Class	Expected Return	Standard Deviation	Manager Excess Return
Inflation (CPI)	2.00%	1.75%	
Cash	2.75%	1.50%	
Public Equity			
ACWI	6.25%	17.50%	0.50%
Large Cap	5.75%	16.75%	0.25%
Small Cap	5.50%	20.25%	0.75%
International Large Cap	6.25%	19.75%	0.75%
International Small Cap	6.00%	22.50%	0.75%
Emerging Markets	7.50%	24.00%	0.75%
Master Limited Partnerships (MLP)	7.50%	20.50%	0.75%
Private Assets			
Private Equity	7.50%	22.50%	1.00%
Private Debt	6.25%	15.00%	0.75%
Marketable Alternatives			
Growth Hedge Funds	5.25%	8.00%	0.75%
Risk Parity	6.75%	10.00%	0.00%
Fixed Income			
Core Fixed Income	3.00%	3.25%	0.25%
Core Plus Fixed Income	3.25%	3.75%	0.50%
Corporates	3.50%	6.00%	0.50%
Long Gov/Credit	3.50%	10.25%	0.25%
TIPS	2.50%	5.25%	0.00%
High Yield Bonds	4.25%	12.25%	0.25%
Bank Loans	4.75%	11.00%	0.50%
Emerging Market Debt	6.00%	11.50%	0.25%
Relative Value Hedge Funds	5.00%	5.00%	0.50%
Real Assets			
Core Real Estate	5.50%	12.00%	0.25%
Non-Core Real Estate	6.75%	17.00%	1.00%
Commodities	4.00%	20.50%	0.50%

Asset Class Expected Return and Risk

- Historically broad asset classes have achieved a Sharpe Ratio of roughly 0.25.
- Based on Summit's Capital Market Assumptions, asset classes or strategies that appear to offer outsized absolute or risk-adjusted returns can be categorized into four main categories:
 1. Valuation: Current prices compared to fundamentals suggest relatively high prospective returns.
 2. Illiquid: Extended lock-up periods allow investors access to premia unavailable in public markets.
 3. Portfolio: Diversification benefits from combining multiple asset classes or strategies into a single portfolio.
 4. Risk Premia: Strategies employ leverage, have the ability to short, and/or are able to access unique risk premia unavailable in public markets.



Develop/Implement Strategy—Style Performance Ranking

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Q4 2017	10 Yr ROR	20 Yr ROR
Best Performing ↑	EM 74.8%	EAFE 8.1%	Large Value 38.4%	Large Growth 23.1%	Large Value 35.2%	Large Growth 38.7%	EM 66.4%	Small Value 22.8%	Small Value 14.0%	Core Bonds 10.3%	EM 55.8%	EM 25.6%	EM 34.1%	EM 32.2%	EM 39.4%	Int. Treas. 11.4%	EM 78.5%	Small Growth 29.1%	Core Bonds 7.8%	EM 18.2%	Small Growth 43.3%	S&P 500 13.7%	Large Growth 5.7%	Small Value 31.7%	EM 37.3%	Large Growth 7.9%	Large Growth 10.0%	Small Value 8.6%
	EAFE 32.9%	Large Growth 2.7%	S&P 500 37.6%	S&P 500 23.0%	S&P 500 33.4%	S&P 500 28.6%	Small Growth 43.1%	Core Bonds 11.6%	Core Bonds 8.4%	Int. Treas. 9.6%	Small Growth 48.5%	Small Value 22.3%	EAFE 14.0%	EAFE 26.9%	Large Growth 11.8%	Core Bonds 5.2%	HY Bonds 58.2%	Small Cap 26.9%	Int. Treas. 6.6%	Small Value 18.1%	Small Cap 38.8%	Large Value 13.5%	S&P 500 1.4%	Small Cap 21.3%	Large Growth 30.2%	EM 7.4%	Small Growth 9.2%	Small Cap 7.9%
	Small Value 23.8%	S&P 500 1.3%	Large Growth 37.2%	Large Value 21.6%	Small Value 31.8%	EAFE 20.3%	Large Growth 33.2%	Int. Treas. 10.3%	Int. Treas. 8.2%	HY Bonds -1.4%	Small Cap 47.3%	EAFE 20.7%	Large Value 7.1%	Small Value 23.5%	EAFE 11.6%	HY Bonds -26.2%	Large Growth 37.2%	Small Value 24.5%	HY Bonds 5.0%	Large Value 17.5%	Small Value 34.5%	Large Growth 13.1%	Int. Treas. 1.2%	Large Value 17.3%	EAFE 25.0%	S&P 500 6.6%	Small Cap 8.7%	EM 7.8%
	Small Cap 18.9%	HY Bonds -1.0%	Small Growth 31.0%	Small Value 21.4%	Large Growth 30.5%	Large Value 15.6%	EAFE 27.3%	Large Value 7.0%	HY Bonds 5.3%	EM -6.0%	Small Value 46.0%	Small Cap 18.3%	Large Growth 5.3%	Large Value 22.2%	Int. Treas. 8.8%	Small Value -28.9%	Small Growth 34.5%	EM 18.9%	Large Growth 2.6%	EAFE 17.3%	Large Growth 33.5%	Core Bonds 6.0%	Core Bonds 0.6%	HY Bonds 17.1%	Small Growth 22.2%	Large Value 5.3%	S&P 500 8.5%	Large Value 7.4%
	Large Value 18.1%	Small Value -1.5%	Small Cap 28.4%	Small Cap 16.5%	Small Cap 22.4%	Core Bonds 8.7%	Small Cap 21.3%	Small Cap -3.0%	Small Cap 2.5%	Small Value -11.4%	EAFE 39.2%	Large Value 16.5%	S&P 500 4.9%	Small Cap 18.4%	Small Growth 7.1%	Small Cap -33.8%	EAFE 31.9%	Large Growth 16.7%	S&P 500 2.1%	Small Cap 16.3%	Large Value 32.5%	Small Growth 5.6%	EAFE -0.8%	S&P 500 12.0%	S&P 500 21.8%	Small Growth 4.6%	Small Value 8.2%	S&P 500 7.2%
	HY Bonds 17.1%	Small Cap -1.8%	Small Value 25.8%	HY Bonds 11.4%	Small Growth 12.9%	Int. Treas. 8.6%	S&P 500 21.0%	HY Bonds -5.9%	EM -2.4%	Large Value -15.5%	Large Value 30.0%	Small Growth 14.3%	Small Value 4.7%	S&P 500 15.8%	Core Bonds 7.0%	Large Value -36.9%	Small Cap 27.2%	Large Value 15.5%	Large Value 0.4%	S&P 500 16.0%	S&P 500 32.4%	Small Cap 4.9%	Small Growth -1.4%	Small Growth 11.3%	Small Cap 14.6%	EAFE 4.2%	HY Bonds 8.0%	Large Growth 6.9%
	Small Growth 13.4%	Int. Treas. -1.8%	HY Bonds 19.2%	Small Growth 11.3%	HY Bonds 12.7%	HY Bonds 1.9%	Large Value 7.4%	S&P 500 -9.1%	Large Value -5.6%	EAFE -15.7%	Large Growth 29.8%	HY Bonds 11.1%	Small Cap 4.6%	Small Growth 13.4%	S&P 500 5.5%	S&P 500 -37.0%	S&P 500 26.5%	HY Bonds 15.1%	Small Growth -2.9%	HY Bonds 15.8%	EAFE 22.8%	Small Value 4.2%	Large Value -3.8%	EM 11.2%	Large Value 13.7%	Small Cap 3.3%	Large Value 7.1%	HY Bonds 6.8%
	S&P 500 10.1%	Large Value -2.0%	Core Bonds 18.5%	EAFE 6.4%	Core Bonds 9.7%	Small Growth 1.2%	HY Bonds 2.4%	EAFE -14.0%	Small Growth -9.2%	Small Cap -20.5%	HY Bonds 29.0%	S&P 500 10.9%	Small Growth 4.1%	HY Bonds 11.9%	HY Bonds 1.9%	Large Growth -38.4%	Small Value 20.6%	S&P 500 15.1%	Small Cap -4.2%	Large Growth 15.3%	HY Bonds 7.4%	Int. Treas. 2.6%	Small Cap -4.4%	Large Growth 7.1%	Small Value 7.8%	Small Value 2.0%	Core Bonds 4.0%	Small Growth 6.7%
	Core Bonds 9.8%	Small Growth -2.4%	Int. Treas. 14.4%	EM 6.0%	Int. Treas. 7.7%	Small Cap -2.5%	Int. Treas. 0.4%	Large Growth -22.4%	S&P 500 -11.9%	S&P 500 -22.1%	S&P 500 28.7%	Large Growth 6.3%	HY Bonds 2.7%	Large Growth 9.1%	Large Value -0.2%	Small Growth -38.5%	Large Value 19.7%	EAFE 7.8%	Small Value -5.5%	Small Growth 14.6%	Int. Treas. -1.3%	HY Bonds 2.5%	HY Bonds -4.5%	Core Bonds 2.7%	HY Bonds 7.5%	HY Bonds 0.5%	Int. Treas. 2.7%	EAFE 5.2%
	Int. Treas. 8.2%	Core Bonds -2.9%	EAFE 11.6%	Int. Treas. 4.0%	EAFE 2.1%	Small Value -6.5%	Core Bonds -0.8%	Small Growth -22.4%	Large Growth -20.4%	Large Growth -27.9%	Core Bonds 4.1%	Core Bonds 4.3%	Core Bonds 2.4%	Core Bonds 4.3%	Small Cap -1.6%	EAFE -43.4%	Core Bonds 5.9%	Core Bonds 6.5%	EAFE -12.1%	Core Bonds 4.2%	Core Bonds -2.0%	EM -2.2%	Small Value -7.5%	Int. Treas. 1.1%	Core Bonds 3.5%	Core Bonds 0.4%	EAFE 1.9%	Core Bonds 5.0%
Large Growth 2.9%	EM -7.3%	EM -5.2%	Core Bonds 3.6%	EM -11.6%	EM -25.3%	Small Value -1.5%	EM -30.6%	EAFE -21.2%	Small Growth -30.3%	Int. Treas. 2.1%	Int. Treas. 2.0%	Int. Treas. 1.6%	Int. Treas. 3.5%	Small Value -9.8%	EM -53.3%	Int. Treas. -1.4%	Int. Treas. 5.3%	EM -18.4%	Int. Treas. 1.7%	EM -2.6%	EAFE -4.9%	EM -14.9%	EAFE 1.0%	Int. Treas. 1.1%	Int. Treas. -0.4%	EM 1.7%	Int. Treas. 4.1%	

As of 12/31/2017.

Emerging Markets Historical Performance – Active Management & Style

- Historically, value stocks have tended to outperform growth stocks since Index inception in January 2000.
 - However, this has not been the case recently and having a static allocation to value became a strong headwind.
- In addition to style performance, active management has consistently outperformed the MSCI EM-ND Index on all rolling 5-year periods.
 - The Index has never outperformed the median manager and has ranked in the bottom quartile of returns nearly 60% of the time.
- Given the active and style performance in emerging markets, an ideal structure would incorporate the following:
 - active management with a value bias
 - allocation to a core and/or growth mandate to offset those periods of value underperformance.

**MSCI EM Value vs. MSCI EM Growth Performance
Difference – Rolling 5 Year Periods**



**MSCI EM-ND Index Performance vs. Active EM
Universe – Rolling 5 Year Periods**



Universe returns are gross of fees.

Implementation Considerations

- There are seven different strategies that can be utilized by an emerging markets manager
- Summit recommends either a two or three manager style construct for the EM mandate as result of portfolio size and available strategies/managers



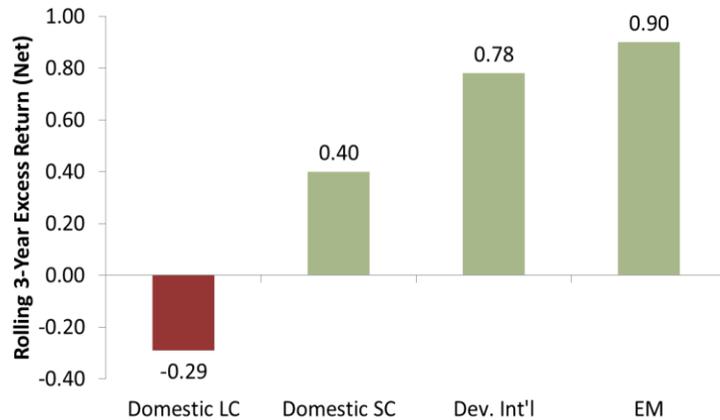
	Passive	Quantitative	Smart Beta (Multi-Factor)	Fundamental (Combined)	Activism	Regional /Sector	Top Down
Why do it?	<ul style="list-style-type: none"> Market Return Fees 	<ul style="list-style-type: none"> Know what you own Not cap focused Trading 	<ul style="list-style-type: none"> Index + Low Management Cost 	<ul style="list-style-type: none"> Inefficient Concentration Forward-looking 	<ul style="list-style-type: none"> Lack price discovery Effect change Create wide appeal 	<ul style="list-style-type: none"> Boots on the ground. Expertise 	<ul style="list-style-type: none"> Countries/Sectors/T hemes matter Diversified Alpha
Why not?	<ul style="list-style-type: none"> Momentum Alpha potential 	<ul style="list-style-type: none"> Factor-based Fees vs. alpha 	<ul style="list-style-type: none"> Muted alpha Backward bias 	<ul style="list-style-type: none"> Repeatability? Expensive 	<ul style="list-style-type: none"> Expensive Fit 	<ul style="list-style-type: none"> Complex Increased decision risk. 	<ul style="list-style-type: none"> Concentrated bets Penalty for wrong decision is high Repeatability?
Who?	<ul style="list-style-type: none"> Lowest Fee 	<ul style="list-style-type: none"> AJO SBH LSV 	<ul style="list-style-type: none"> Blackrock State Street AGFiQ 	<ul style="list-style-type: none"> RWC GQG Oaktree 	<ul style="list-style-type: none"> Kabouter Cartica Caravan 	<ul style="list-style-type: none"> INCA Constellation Edgbaston 	<ul style="list-style-type: none"> Carmignac Gestion Fisher Glovista
Consistency	Market	High	High	Mid	Mid	Low	Low
Excess Return	Low	Mid	Mid	High	High	High	High
Complexity	Low	Low	Low	Mid	Mid	High	High
Fees	Low	Low	Low	Mid	High	High	High

Thesis: Emphasize stock-picking to take advantage of structural opportunities under a risk controlled framework.

KEY CONSIDERATIONS/OPPORTUNITIES

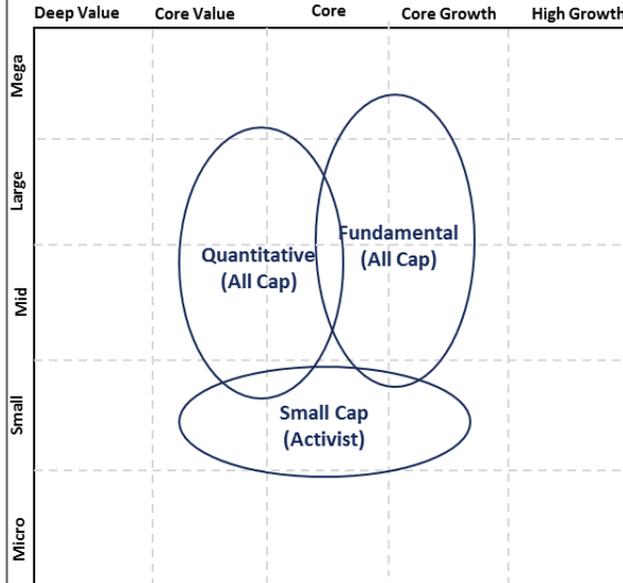
- **Volatile Asset Class** – 33% more volatile than developed.
- **Active Opportunity** – universe breadth, lack of coverage.
- **Layers of Risk** – social, political, regional, company.
- **Activism** – informational inefficiencies.
- **Growth** – attractive economic and demographic future.

ACHIEVING AN ATTRACTIVE RETURN PROFILE



- **Active management** – consistent/high alpha potential.
- **Style** – embrace long-term growth characteristics.
- **Size** – all cap implementation, quant/fundamental blend.
- **Quantitative Base** – control tracking error, retain alpha.
- **Fundamental** – forward-looking, bottom-up complement.
- **Activism** – effect outcomes, create opportunities.

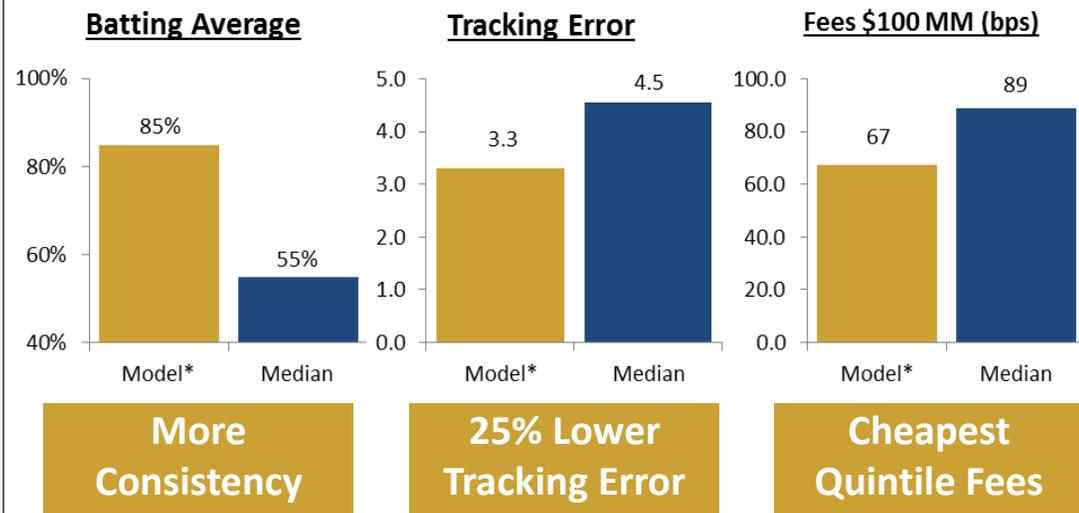
IMPLEMENTATION RECOMMENDATION



Conviction: High 8

Vs. MSCI EM	Expectations
Style	Core
Size	All Cap
Beta	Neutral
Tracking Error	300-500
Excess Return	150-250 (Net)
Up/Down	110%/100%

IMPLEMENTATION VS. OPPORTUNITY SET – 5 YEARS



Structural Considerations

■ Quantitative Manager

- Keep tracking error low in an already volatile asset class
 - Emerging markets are 33% more volatile than developed markets
- Garner consistent alpha (relative to the benchmark)
 - Double the number of listed companies in emerging markets than the US (21,200 vs. 10,600) with 1/3 less analyst on average per company (6 vs. 9 sell-side analysts)
- Performance-based fees available

■ Fundamental Manager

- Forward-looking, bottom-up complement to a quant manager
 - Managers here find portfolio opportunities by assessing macro head/tail winds, company financials and through discussions with management
- Higher tracking error given relative concentration of names
- Larger alpha potential (relative to quantitative models)
- Wide range of fees, but able to negotiate with scale

■ Activist Manager

- Activism/Discovery Premiums
 - 40% of small cap emerging names have no sell-side coverage.
 - Improve information – discovery premium.
 - Promote transactions– takeout premium.
- Ability to engage with relatively “unknown” companies
 - Activists can approach strong businesses that are relatively unknown in the market and aid with various aspects of their business model.
 - This “aid” can come in many forms – from partnering and helping with smaller investor relations to aggressive take-over attempts.
- Ability to repeat concept in current marketplace
 - Analyst coverage and quality of coverage continues to decline as banks cut costs (increasing breadth of opportunities)
 - Institutional coverage is limited (relative to large cap names)
- Fee premium – Higher than quantitative/fundamental, many structure fee as 2% and 20 bps (Summit option @ 150bps and lower).

DFA Emerging Markets All-Cap Value Equity Review

Executive Summary

DFA's Performance

- For the trailing 3-year period (as of 12/31/17), DFA has returned 9.9%, outperforming the benchmark by 76 bps and ranking at median versus peers. Over the more recent 1-year period, however, DFA has underperformed the benchmark by 272 bps, returning 34.6% versus the benchmark return of 37.3%.
- DFA's underperformance for the year can be largely attributed to their value exposure from their two factor approach, which is reliant on being more value tilted and smaller cap than the benchmark.
 - DFA's small cap bias has not been a large detractor.
 - Value outperformance versus growth has been significant. As of 12/31/2017, the MSCI EM Value Index returned 28.1%, 6.2%, and 1.8% over the trailing 1-, 3-, and 5-year periods respectively, whereas the MSCI EM Growth Index returned 46.8%, 11.9%, and 6.9%, over the same periods.

	Trailing Returns 12/31/17			Calendar Year Returns				
	1 Year	3 Years	5 Years	2017	2016	2015	2014	2013
DFA	34.1	9.5	4.2	34.1	20.0	-18.4	-3.8	-2.8
MSCI EM Growth	46.8	11.9	6.9	46.8	7.6	-11.3	-0.3	-0.2
MSCI EM	37.3	9.1	4.3	37.3	11.2	-14.9	-2.2	-2.6
MSCI EM Value	28.1	6.2	1.7	28.1	14.9	-18.6	-4.1	-5.1

- Performance for 4Q2017 was more positive, which helped to mitigate DFA's underperformance versus the benchmark. DFA returned 8.1%, while the benchmark returned 7.5%.
 - Small caps outperformed large in EM for the quarter, which meant that DFA's overweight to small cap stocks was a tailwind.
 - The portfolio's value tilt led to a higher allocation to materials and a lower allocation to telecommunications compared to the benchmark, as materials outperformed and telecommunications underperformed the overall benchmark.
 - Overall, DFA's value focus had minimal impact on relative performance versus the benchmark, for the quarter.

Recommendation

- Summit continues to believe that the DFA strategy is a good, low-cost, broad value exposure to Emerging Markets.
- Summit recommends that Howard County retain DFA, but complement it with one or more additional managers. This will result in a diversified core-like portfolio with value/quality tilts.
- This can be achieved by pairing the existing value-tilted DFA allocation with a quality core/growth strategy and/or a more dynamic, forward looking core strategy.

Emerging Markets All Cap Value Strategy

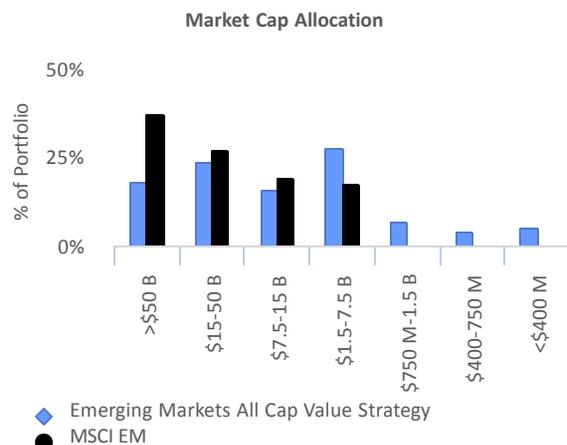
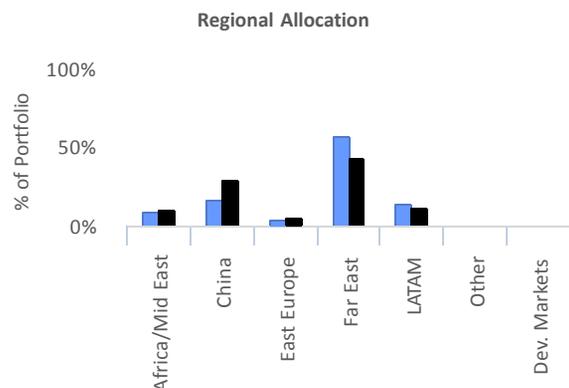
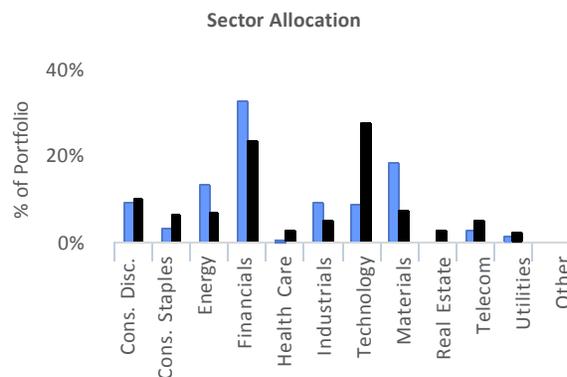
OVERVIEW

- Dimensional Fund Advisors (DFA) was formed in 1981 and remains employee controlled. Two of the firm's founders, David Booth and Rex Sinquefeld, continue to hold 51% of the total equity. The firm has grown substantially and now has a staff of over 1200. While Sinquefeld has retired, he remains a significant shareholder.
- The firm first began running portfolios with small capitalization stocks in 1986 and later expanded into international assets in the mid 1980s. The investment process was expanded to the emerging markets area in 1994 and was later introduced in this deeper value fund in 1998. Dimensional now manages an array of equity and fixed income products across a broad range of asset classes and geographic regions, all based on a single philosophy and implemented through an integrated, process-driven approach.
- The premise of the process is heavily rooted in research showing that high book-to-market (value) and smaller cap stocks have higher expected returns than larger cap, growth stocks, particularly in the emerging markets segment. Because their process is quantitative and structured in nature, there is no need for traditional fundamental research of companies. Within the last five years, Dimensional has added a profitability factor to supplement the value and size factors within all of their strategies.
- While the strategy remains overweighted to smaller cap, deeper value securities, the relative level of the factor tilt has decreased over the last several years. While the shift may limit future excess return potential, the product continues to provide cost effective, broad exposure to the emerging markets investment universe.

CHARACTERISTICS

	Product	Index*
Current # of Holdings	2371	863
Annual Turnover (LTM)	14.3%	--
Wgtd. Avg. Mkt. Cap	\$34,378	\$57,880
% Holdings In 10 Largest Stocks	18.5%	25.0%
Current P/E (12 mo Trailing)	11.4	17.6
Current P/B	1.0	1.8
Current Dividend Yield	2.4%	2.2%
# of Countries in Portfolio	19	25

*Index represents MSCI EM-ND



◆ Emerging Markets All Cap Value Strategy
● MSCI EM

FIRM

Founded	1981
City	Austin
State/Province	Texas
Total AUM (millions)	\$577,096
Total Employees	1211
Employee Owned	70%
Minority Ownership	0%

INVESTMENT TEAM

Portfolio Mgrs/Dual Role PMs	37
Portfolio Managers Avg Yrs Exp	13
Portfolio Managers Avg Yrs w/ Firm	10
Research Analysts	12
Analysts Avg Yrs Exp	12
Analysts Avg Yrs w/Firm	10
Traders	20
Traders Avg Yrs Exp	14
Traders Avg Yrs w/Firm	9

PRODUCT

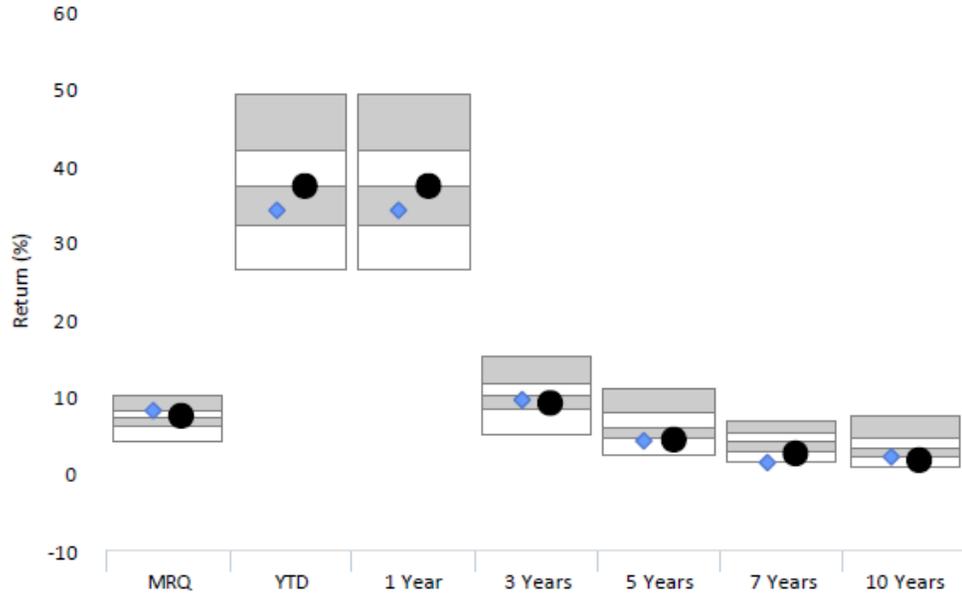
Inception Date	04/30/1994
Total AUM (millions)	\$27,553
Geographic Region	Global Emg Mkts
Market Cap	All Cap
Style	Value

FEES & VEHICLES

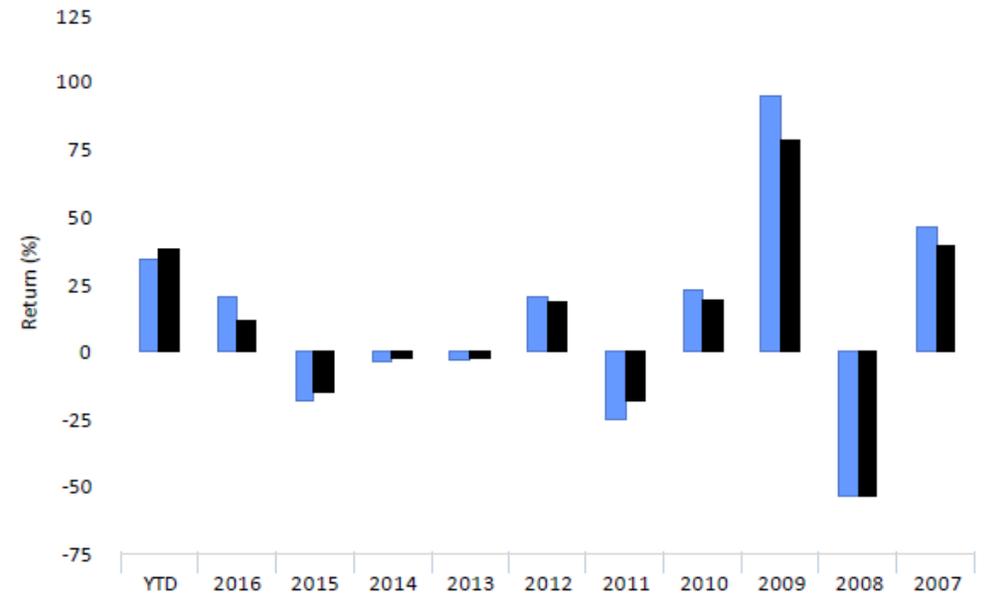
SA: Min. Invest. (millions)	--
SA: Fee on \$25 million (bps)	--
CF: Min. Invest. (millions)	\$1
CF: Fee on \$25 million (bps)	72
CF Type	--
MF: Min. Invest. (millions)	\$2
MF: Fee on \$25 million (bps)	57
Ticker	DFEVX

Emerging Markets All Cap Value Strategy

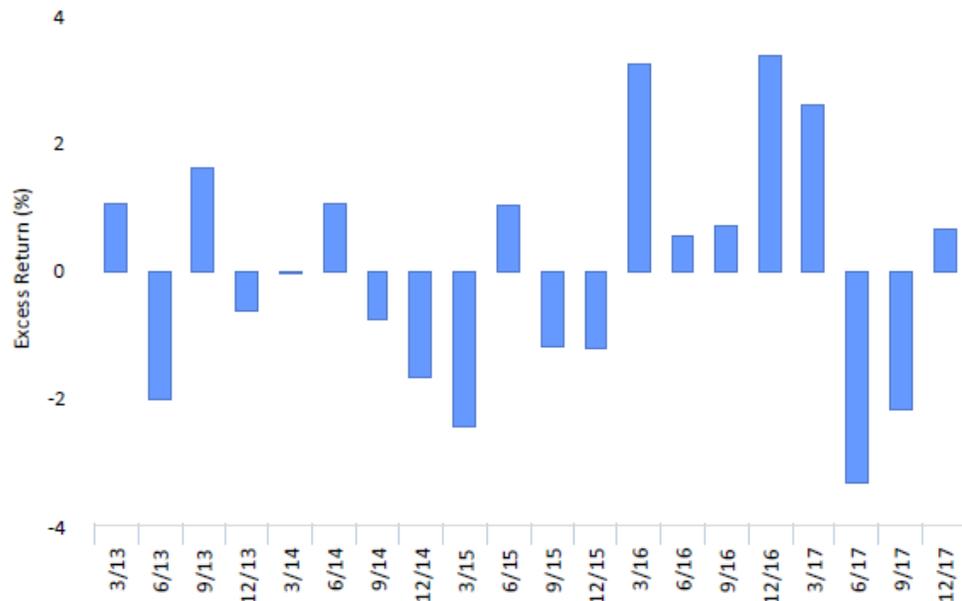
UNIVERSE RETURN RANK



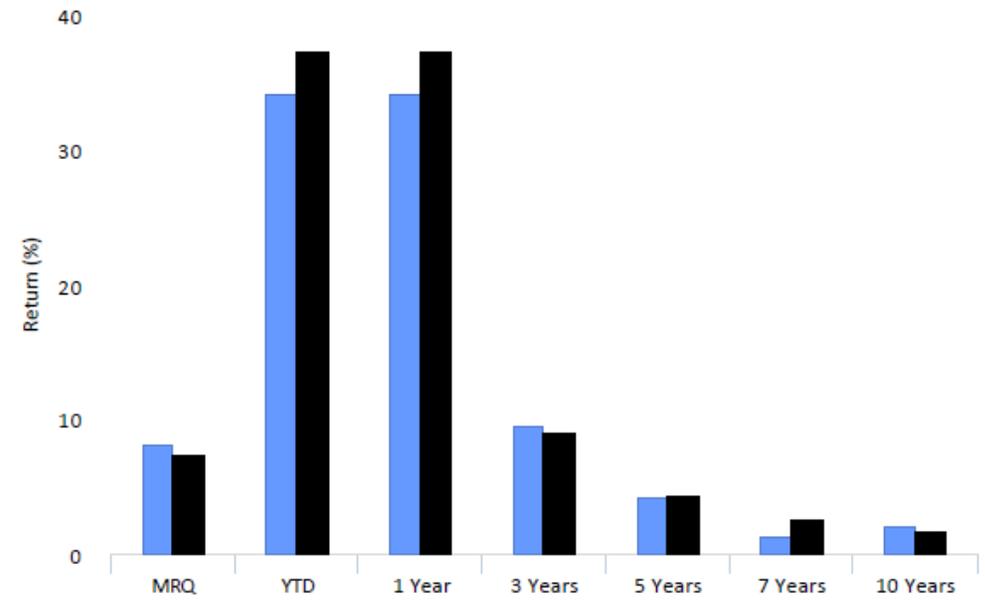
CALENDAR YEAR RETURNS



QUARTERLY EXCESS RETURN



ANNUALIZED RETURNS



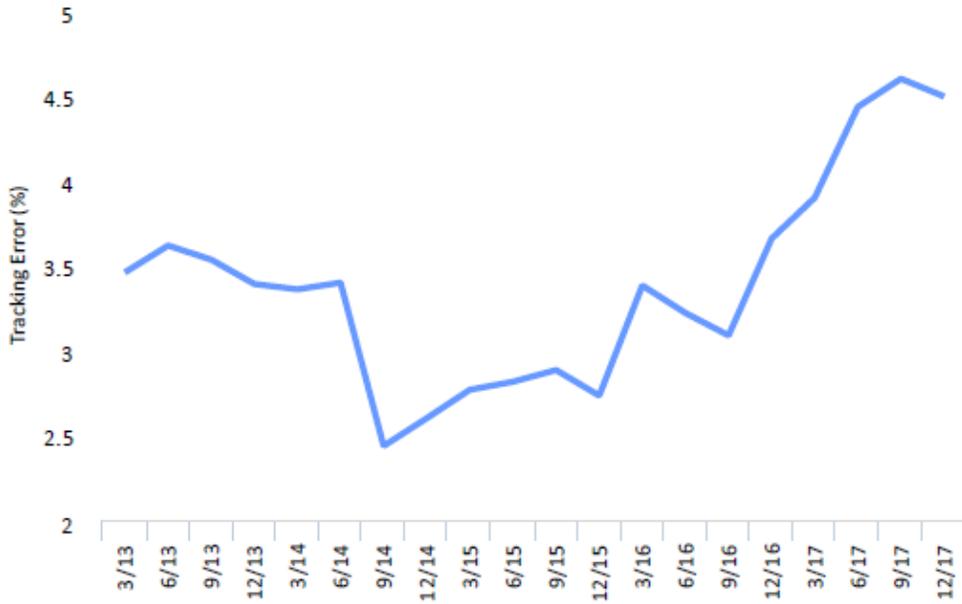
As of 12/2017

◆ Emerging Markets All Cap Value Strategy
● MSCI EM

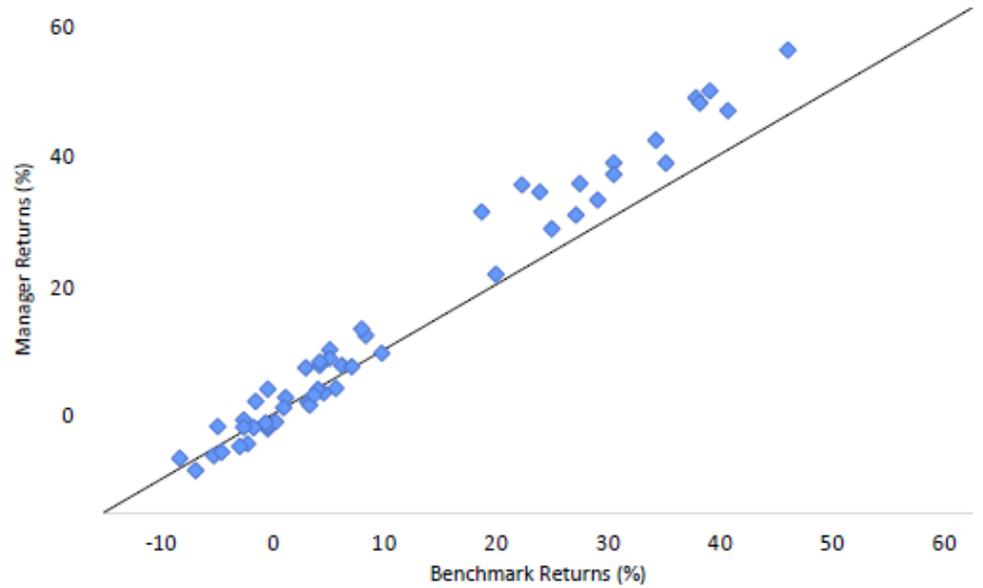
Emerging Markets All Cap Value Strategy

Dimensional Fund Advisors LP

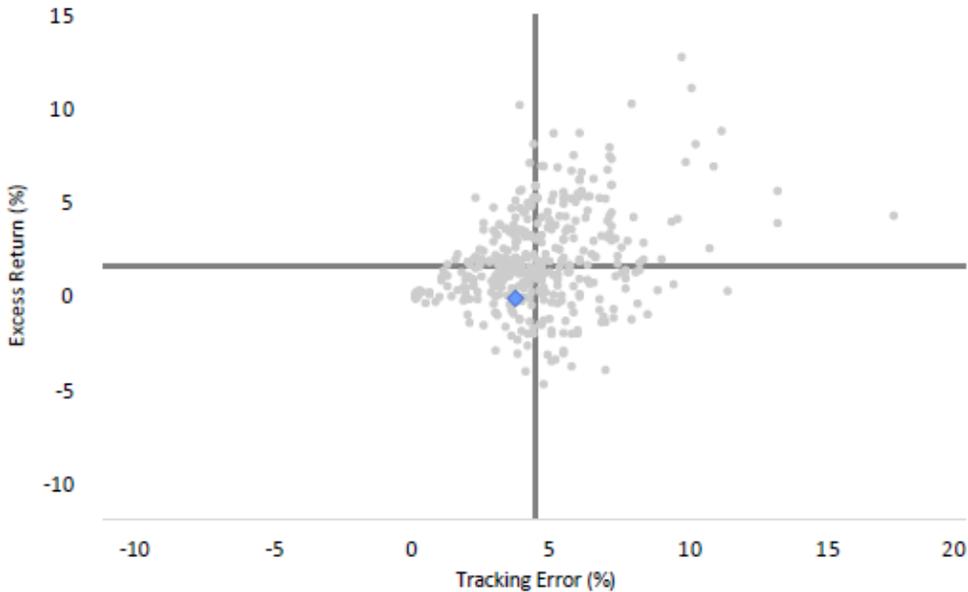
ROLLING 3-YEAR TRACKING ERROR



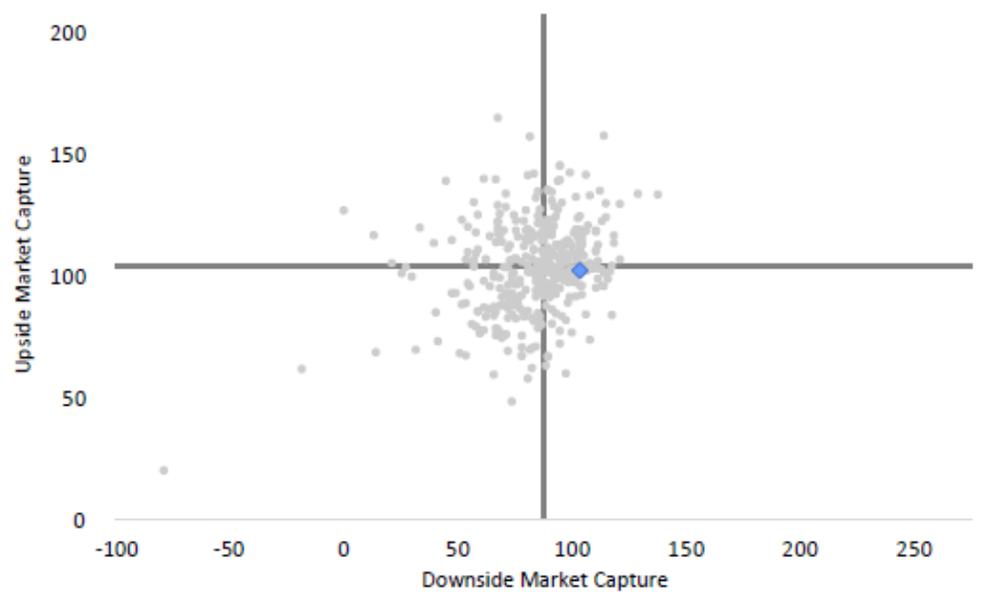
SINCE INCEPTION ROLLING 3-YEAR RETURNS



5-YEAR EXCESS RETURN VS. TRACKING ERROR



5-YEAR UPSIDE VS. DOWNSIDE



ROLLING 3-YEAR RETURNS-BASED STYLE ANALYSIS



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Summary statistical data such as standard deviation (risk), Sharpe ratio, and tracking error is calculated using industry-standard methodology. Details regarding these calculations are available upon request.