

**WisdomTree  
RESEARCH**

# **CELEBRATING OVER 10 YEARS IN EMERGING MARKETS**

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We hear time and again that when venturing into emerging market equities, investors must utilize an active manager. These markets are less efficient, and therefore the expertise and flexibility of an active manager should lead to a greater potential value add across time.

Now that WisdomTree has been managing emerging market equity assets that track Indexes that began their live calculation more than 10 years ago, we believe our Index family has demonstrated how structured, disciplined, rules-based strategies tied to smart index construction can add value over traditional market cap-weighted indexes. In this paper, we will demonstrate:

**+ The Attractive Real-Time Performance of WisdomTree's Emerging Market Dividend Index Family:** From the inception of both the WT Emerging Markets Dividend & High Dividend Indexes, the MSCI Emerging Markets Index (MSCI EM Index) delivered a 3.66% average annual return. The MSCI Emerging Markets Value Index underperformed this figure, while the MSCI Emerging Markets Growth Index outperformed it. Notably, the WT Emerging Markets Dividend Index outperformed the MSCI EM Index by 52 basis points<sup>1</sup> per year for the decade, and the High Dividend strategy outperformed the MSCI EM Index by more than double this figure at 148 basis points per year, despite value lagging growth indexes from MSCI.<sup>2</sup>

From the inception two months later of the WT Emerging Markets SmallCap Dividend Index, the MSCI Emerging Markets Small Cap Index (MSCI EM Small Cap) delivered a 2.64% average annual return, and its value cut significantly outperformed. The WT Emerging Markets SmallCap Dividend Index added 272 basis points per year relative to the MSCI EM Small Cap and 113 basis points per year relative to the MSCI Emerging Markets Small Cap Value Index.<sup>3</sup>

**+ Risk:** While we saw the WT Indexes all outperform their market capitalization-weighted<sup>4</sup> benchmarks, it's even more notable that this was achieved with a lower risk level across the board, whether risk was measured on the basis of absolute standard deviation or relative beta<sup>5</sup> to a benchmark.

**+ Performance with Minimal Tracking Error Leads to Good Information Ratios:** One important story is how much tracking error is taken relative to the market in pursuit of alpha.<sup>6</sup> Our broadest emerging market dividend index has a tracking error of just 3.66% versus the MSCI EM Index, while the High Dividend Index, which is a yield- and value-oriented selection strategy, had a higher tracking error of 6.76%. While the High Dividend Index had a higher value added, its tracking error resulted in only a slightly higher information ratio than the broader EM Dividend Index.<sup>7</sup>

<sup>1</sup> Basis point: 1/100th of 1 percent.

<sup>2</sup> Sources: WisdomTree, Zephyr StyleADVISOR. Period from 5/31/07 to 4/30/18.

<sup>3</sup> Sources: WisdomTree, Zephyr StyleADVISOR. Period from 7/31/07 to 4/30/18.

<sup>4</sup> Market capitalization weighting: Market cap = share prices x number of shares outstanding. Firms with the highest values receive the highest weights in approaches designed to weight firms by market cap.

<sup>5</sup> Beta: Measure of the volatility of an index or investment relative to a benchmark. A reading of 1.00 indicates that the investment has moved in lockstep with the benchmark; a reading of -1.00 indicates that the investment has moved in the exact opposite direction of the benchmark.

<sup>6</sup> Alpha: Measure of risk-adjusted performance that compares how the constituents move relative to a benchmark.

<sup>7</sup> Sources: WisdomTree, Zephyr StyleADVISOR. Period from 5/31/07 to 4/30/18.

This paper will drill into how and why the WisdomTree Indexes were created. We will:

- + **Examine the philosophical and fundamental underpinnings for the creation of the WisdomTree Emerging Markets Dividend Indexes more than 10 years ago.**
- + **Deconstruct some of the critical factors that were most influential in determining periods of outperformance and underperformance relative to market capitalization-weighted benchmarks.**
- + **Conclude with how we think these strategies fit into what we believe to be an appropriate asset allocation framework today.**

### THE “NOISY MARKET HYPOTHESIS” & BUBBLE AVOIDANCE

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After reviewing WisdomTree’s proprietary Indexes more than a decade ago, Wharton finance Professor Jeremy Siegel developed a theory—the “Noisy Market Hypothesis”—that provides a rationale for why fundamentally weighted indexes may be able to add value over market capitalization-weighted indexes over time. Most of the time, markets are microefficient at digesting new information. However, widespread evidence exists that markets can become overextended in both overvaluing and undervaluing swathes of the market.

Market cap-weighted indexes, at the top of bubbles, become momentum-chasing vehicles; they assume the latest stock price, no matter how high, is the best estimate of a company’s fundamental value, and therefore lack any corrective mechanism that can reduce exposure to areas of the market where fundamentals cannot justify high stock prices.

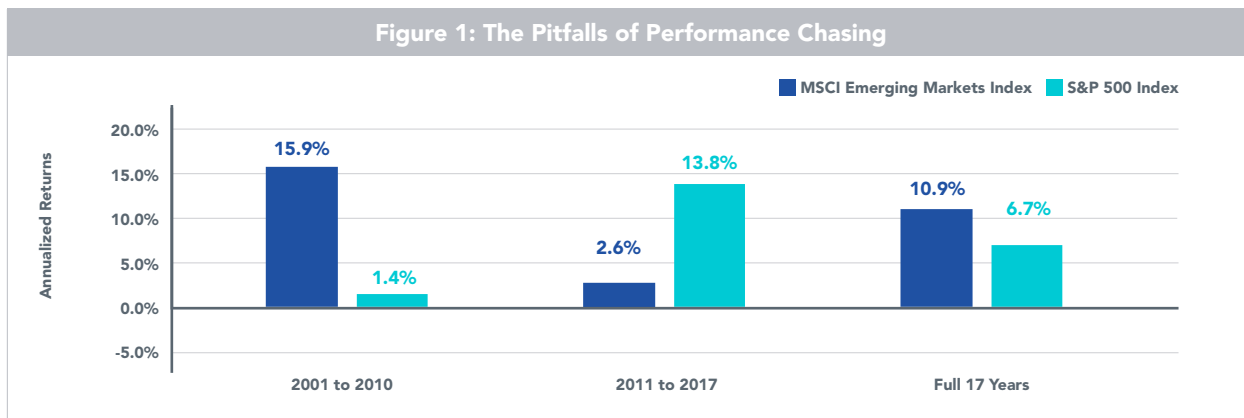
### DEVELOPING A VALUATION-SENSITIVE INDEXING APPROACH

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WisdomTree’s Jonathan Steinberg and Luciano Siracusano in the early 2000s were developing indexes during the aftershocks of the technology bubble. The two co-creators of WisdomTree’s original Indexes found in their research that rebalancing indexes with valuation sensitivity in mind could create a value-added experience by helping mitigate the impact of deflating market bubbles. Let’s look more closely at the background to varying index-based approaches before reviewing the real-time results of WisdomTree’s Emerging Markets Dividend Indexes.

**THE INHERENT PROBLEM OF EMERGING MARKETS**

The last 17 years in emerging market equities provide a window into investor psychology.



Source: Bloomberg, period from 12/31/00 to 12/31/17. You cannot invest directly in an index. Past performance is not indicative of future results.

- + From 2001 to 2010, many were focused on the paltry returns provided by the S&P 500 Index—1.4% per year! The immediate prior 10-year period (1991 to 2000) had seen returns of 17.5% per year for the S&P 500. Now, while U.S. stocks were faced with a tough decade from 2001 to 2010, emerging market equities delivered almost as strongly as U.S. equities had delivered the decade before—15.9% per year.
- + From 2011 to 2017, U.S. equities shifted back to global leaders, and most clients that we speak with today tell us that they know the outperformance of the U.S. over global markets has to end at some point. It's tough for them to allocate to emerging markets, which have underperformed by about 11% per year for the past seven years.

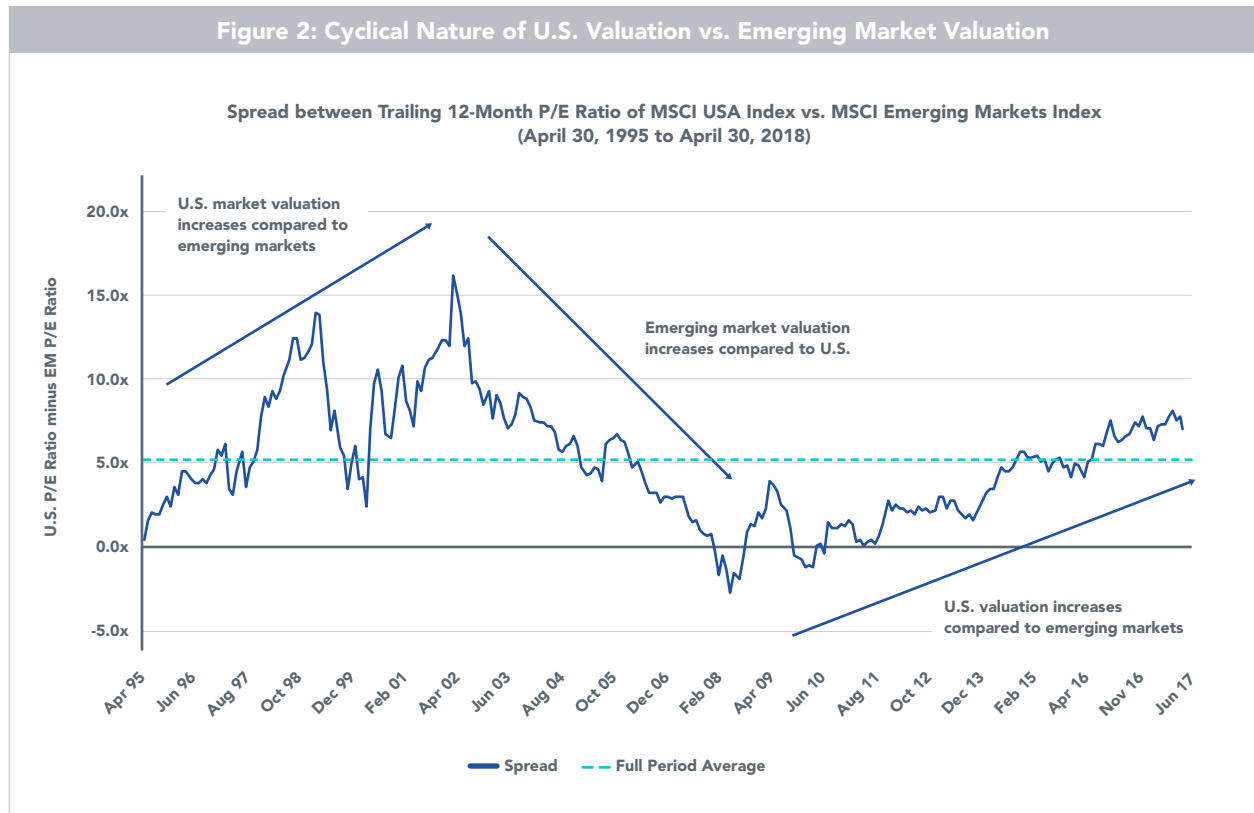
**The bottom line:** *Over this full period of 17 years, emerging market equities actually outperformed U.S. equities. Psychologically, it is difficult not to try to chase returns. It's also hard to hold volatile equity markets like emerging markets over full cycles. Finding a way to make it easier for investors to stay exposed to emerging market equities over a full market cycle was one of the reasons WisdomTree created its suite of emerging market dividend indexes.*

**PLACING TODAY’S EMERGING MARKET LANDSCAPE INTO HISTORICAL CONTEXT**

WisdomTree’s live performance history in emerging markets has come at a very interesting time. U.S. investors—when they allocate to a market other than the United States—often compare the performance to U.S. equities. The thought process: Anything that has underperformed the U.S. is seen as the “wrong choice” in a given allocation.

A more realistic way to consider emerging markets—which we know ahead of time will tend toward wide swings of both favorable and unfavorable relative performance against the U.S.—is based upon a foundation of valuation. There isn’t a way to know exactly whether emerging market equities will outperform U.S. equities ahead of time, but we can put valuation trends into a longer-standing historical context.

**The bottom line:** *Since markets today are so interconnected, relative valuation of one market against another ultimately will tend to be influential. At a certain point, when investors consider the risks of emerging market equities and compare to the risk of U.S. equities, they will see the relative difference in valuation equate the risks of the two markets. Once this occurs (though it is almost impossible to know with certainty), it becomes much easier to allocate incremental dollars to emerging markets.*



Source: FactSet, period from 4/30/1995 to 4/30/2018. Price-to-earnings (P/E) ratio: Share price divided by earnings per share. Lower numbers indicate an ability to access greater amounts of earnings per dollar invested. P/E ratio is the trailing P/E. You cannot invest directly in an index. Past performance is not indicative of future results.

- + **U.S. Equities Almost Never Trade at a Discount to Emerging Market Equities:** On average, the U.S. market has traded with a P/E ratio about 5 points higher than emerging markets over this period. Since the U.S. is a lower-risk market generally than emerging markets, this makes sense.
- + **During 2000–2002’s Technology-Focused Market Disruption, the P/E Spread Was 15.0x Higher in the U.S.:** The U.S. market grew very expensive during the technology market bubble in 2000. In a way, this sets a marker at a period where we know that U.S. equity valuation was extremely extended, and it would be difficult to foresee moving up to this level, absent a similarly stretched U.S. valuation experience.
- + **U.S. Relative Valuation vs. Emerging Markets Has Been Trending Up:** As of April 30, 2018, the P/E difference between the U.S. and emerging markets had expanded to 7.6x. Considering that the long-term average is close to 5.0x, this means we’re approximately 50% higher than this level today. While we don’t know exactly when or if emerging market equities will outperform the U.S., this does tend to provide less resistance to future, forward-looking returns of emerging market stocks.

#### WISDOMTREE’S FAMILY OF EMERGING MARKETS DIVIDEND-WEIGHTED INDEXES

On June 1, 2007—more than a full decade ago—WisdomTree launched its first Emerging Markets Dividend Indexes, and then followed with the WisdomTree Emerging Markets SmallCap Dividend Index on August 1, 2007. WisdomTree’s methodology is designed with the following attributes:

- + **Selection:** WisdomTree limits the selection of stocks only to those that pay regular cash dividends.
- + **Weighting:** Once a year, WisdomTree weights components based on the U.S. dollar value of cash dividends paid in the prior year.
- + **Valuation-Sensitive Rebalancing:** The rebalance itself seeks to avoid market bubbles by implementing a disciplined rebalancing mechanism of stocks and sectors based on relative value.
- + **Improvement in Risk-Adjusted Returns:** We will show how focusing on dividends has tended to lower volatility while improving returns measured against market capitalization-weighted benchmarks at various points over the live history.

Let’s examine how this is accomplished.

**WHAT IS THE DIVIDEND STREAM®?**

WisdomTree’s Emerging Markets *Dividend Stream* looks at the annual dividend cycle for emerging market companies with regular dividend policies on an annual basis, September 30 of each year.

**Figure 3: Top 10 WisdomTree Emerging Markets *Dividend Stream*® Weights**

| Company Name   | Country        | Sector                     | 2017 <i>Dividend Stream</i><br>(in U.S. dollars, billions) | 2017<br>Dividend Yield | Initial<br>Weight | Final<br>Weight |
|--|----------------|----------------------------|--|------------------------|-------------------|-----------------|
| Taiwan Semiconductor Manufacturing Co Ltd            | Taiwan         | Information Technology     | \$5.97   | 3.23%                  | 3.58%             | 3.98%           |
| Samsung Electronics Co                               | South Korea    | Information Technology     | \$5.02   | 1.73%                  | 3.22%             | 3.58%           |
| China Construction Bank Corp H Shares                | Hong Kong      | Financials                 | \$10.02  | 5.02%                  | 3.76%             | 2.89%           |
| Hon Hai Precision Industry Co Ltd                    | Taiwan         | Information Technology     | \$2.57   | 4.28%                  | 1.92%             | 2.14%           |
| China Mobile Ltd.                                    | Hong Kong      | Telecommunication Services | \$7.51   | 3.62%                  | 1.69%             | 1.86%           |
| Industrial and Commercial Bank of China Ltd H Shares | Hong Kong      | Financials                 | \$3.05   | 4.73%                  | 2.29%             | 1.76%           |
| Gazprom PJSC GDR                                     | United Kingdom | Energy                     | \$3.28   | 6.62%                  | 1.53%             | 1.70%           |
| Lukoil PJSC GDR                                      | United Kingdom | Energy                     | \$2.86   | 6.36%                  | 1.34%             | 1.48%           |
| Bank of China Ltd H Shares                           | Hong Kong      | Financials                 | \$2.11   | 5.11%                  | 1.60%             | 1.23%           |
| China Petroleum & Chemical Corp H Shares             | Hong Kong      | Energy                     | \$1.03   | 5.40%                  | 0.86%             | 0.95%           |
| <b>Total/Average</b>                                 |                |                            | <b>\$234.84</b>  | <b>46.10%</b>          | <b>100.00%</b>    | <b>100.00%</b>  |

Sources: WisdomTree, FactSet. Data as of the 9/30/17 index screening date. Universe includes the top 10 index weights as of the rebalance. You cannot invest directly in an index. Past performance is not indicative of future results.

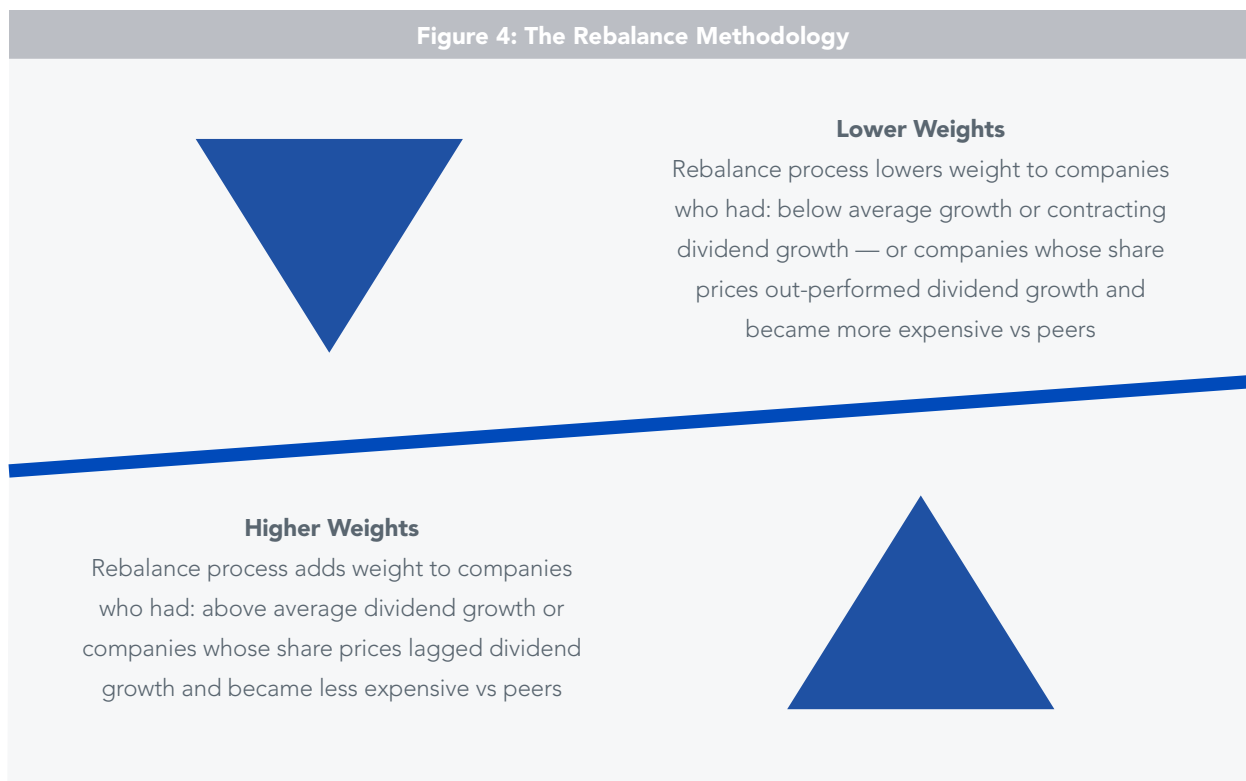
<sup>8</sup> *Dividend Stream*: References the WisdomTree Dividend Index universe. For each firm, the most current indicated dividend per share for each constituent is multiplied by the number of shares outstanding, and then the sum is taken for all constituent firms.

**HOW RELATIVE VALUE REBALANCING WORKS**

To understand how dividend-weighted indexes work, it's critical to think about the relationship between a firm's share price performance and the change in the *Dividend Stream*.

- + Falling Dividend Yields (Rising Price-to-Dividend Ratios) = More Expensive and Reduced Weight:** Companies whose stock prices increased compared to their peers but saw their dividend growth rates trail their peers would typically see reduced weight during WisdomTree's annual emerging markets rebalance. In a market capitalization-weighted index, however, a rising price relative to peers would lead to greater weight in the index.
- + Rising Dividend Yields (Falling Price-to-Dividend Ratios) = Less Expensive and Increased Weight:** Companies whose stock prices fell while their dividends were flat or grew would typically see increased weight in WisdomTree's Emerging Markets Dividend-weighted Indexes. In a market cap-weighted index, however, the lower price would result in a lower weight, due again to the change in market capitalization.

**Figure 4: The Rebalance Methodology**





**WISDOMTREE’S THREE EMERGING MARKETS DIVIDEND INDEXES**

In 2007, WisdomTree created three emerging market indexes that covered a broad cross-section of the market, a small-cap index and a value-oriented, high-dividend-yield index. The flow diagram and selection rules are described below.

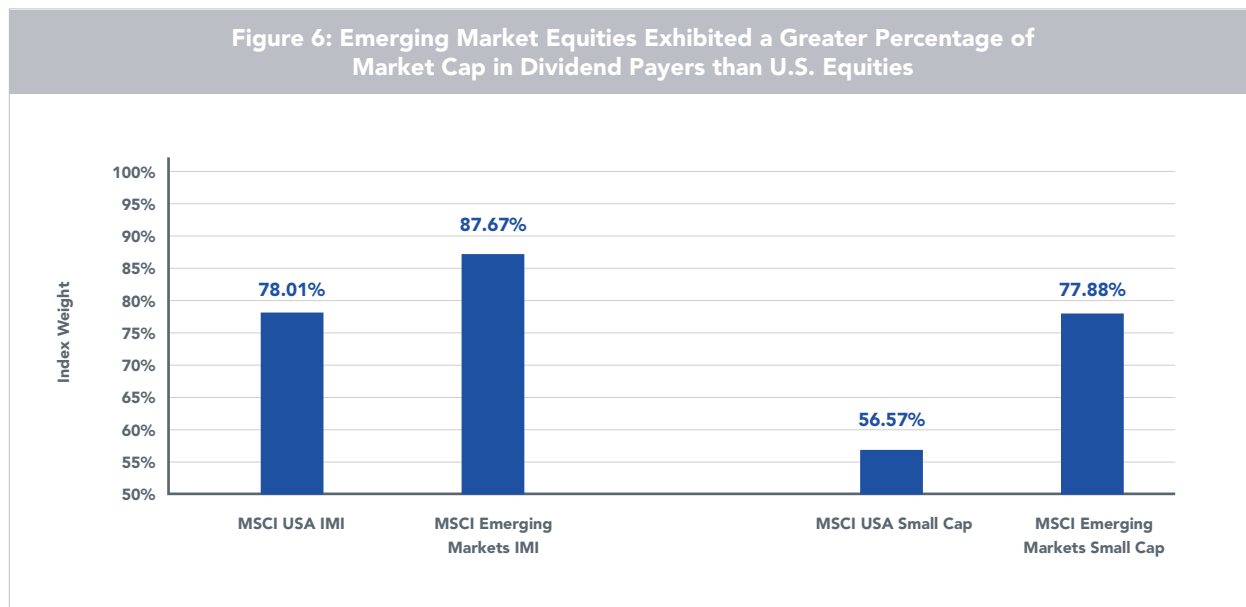
| Figure 5: Summary of WisdomTree Index Methodology for WisdomTree Emerging Markets Dividend-Weighted Indexes |   |               |   |
|---|---|---------------|---|
| Methodology   |   |               |   |
| <b>Eligible Universe</b>  | Companies must pay at least \$5 million in gross, regular cash dividends on shares of common stock and be incorporated in one of the following 17 emerging market nations: Brazil, Chile, China, Czech Republic, Hungary, India, Indonesia, South Korea, Malaysia, Mexico, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, Turkey. |               |   |
| <b>Liquidity</b>  | Component companies must meet minimum market cap and liquidity screens to be eligible. An additional calculated volume factor is also applied to help improve liquidity.  |               |   |
| <b>Weighting</b>  | The initial weight of a component in the Index is based on each component’s <i>Dividend Stream</i> (derived by multiplying the U.S. dollar value of the company’s annual gross dividend per share by the number of common shares outstanding for that company) divided by the <i>Dividend Stream</i> of the Index.                              |               |   |
| Focus   | Index Name  | No. of Stocks | Selection Criteria  |
| <b>Broad Market</b>   | WisdomTree Emerging Markets Dividend Index  | 1635          | All companies that pass the initial screening requirements are included in the Index.   |
| <b>High Yield</b>   | WisdomTree Emerging Markets High Dividend Index   | 510           | Securities ranking in the highest 30% by dividend yield within the WisdomTree Emerging Markets Dividend Index are selected for inclusion. Companies are deleted from the Index if their dividend yield ranking falls outside of the top 35% of companies at the annual rebalance. |
| <b>Small Cap</b>  | WisdomTree Emerging Markets SmallCap Dividend Index   | 972           | Securities ranking in the lowest 10% by market capitalization within the WisdomTree Emerging Markets Dividend Index are selected for inclusion. To be deleted, the market capitalization rank of securities must rise above the smallest 13% in the universe.                     |

Source: WisdomTree, with data as of 9/30/17 screening date. You cannot invest directly in an Index. Weights subject to change. Past performance is not indicative of future results.

**A central element to WisdomTree’s value-added process is its rebalance process, which adjusts once a year for relative value.**

**HOW SELECTIVE ARE DIVIDEND-FOCUSED INDEXES IN EMERGING MARKETS?**

For many investors in the U.S., the U.S. equity market creates an important anchoring to a frame of reference. Since only 80% of the U.S. equity market capitalization is in dividend-paying stocks, many see that statistic and assume that the percentage of emerging market equities in dividend payers would have to be lower.



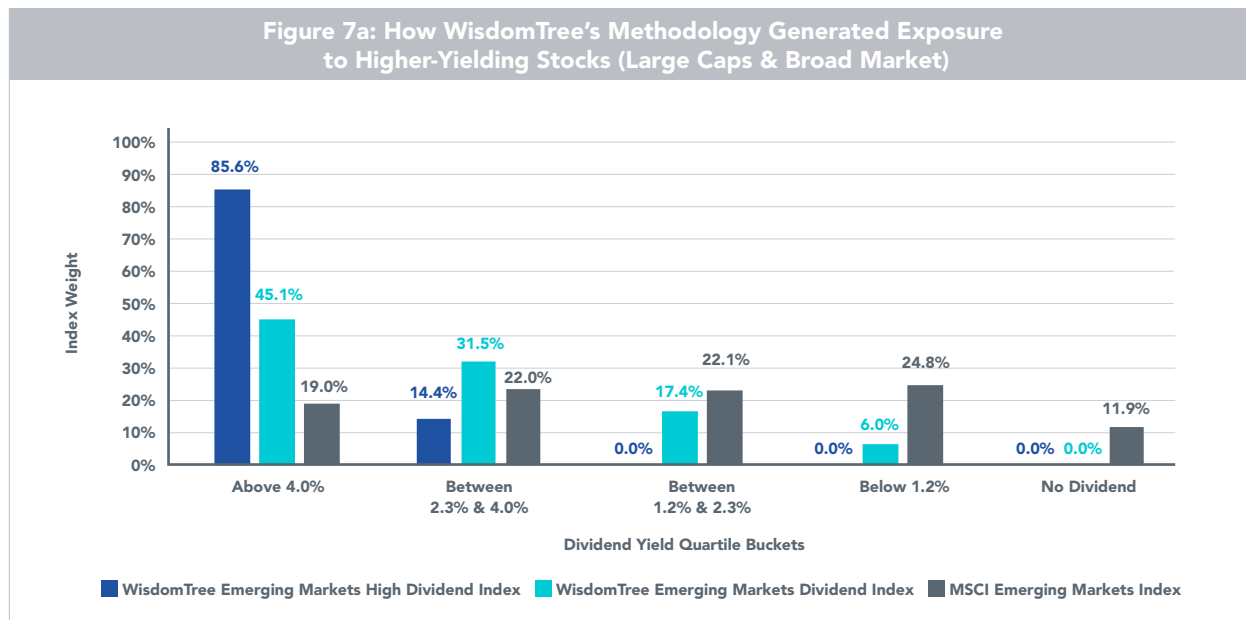
Sources: Bloomberg, MSCI. Data as of 4/30/18. You cannot invest directly in an index. Weights subject to change.

- + The MSCI USA Investable Market Index (MSCI USA IMI) had about 80% of the market cap in dividend payers, while the MSCI Emerging Markets Investable Market Index (MSCI Emerging Markets IMI) had nearly 90%.
- + The comparison is more stark in small caps. The MSCI USA Small Cap Index had about 60% of the market cap in dividend payers, while the MSCI Emerging Markets Small Cap Index had about 80% of the market cap in dividend payers.

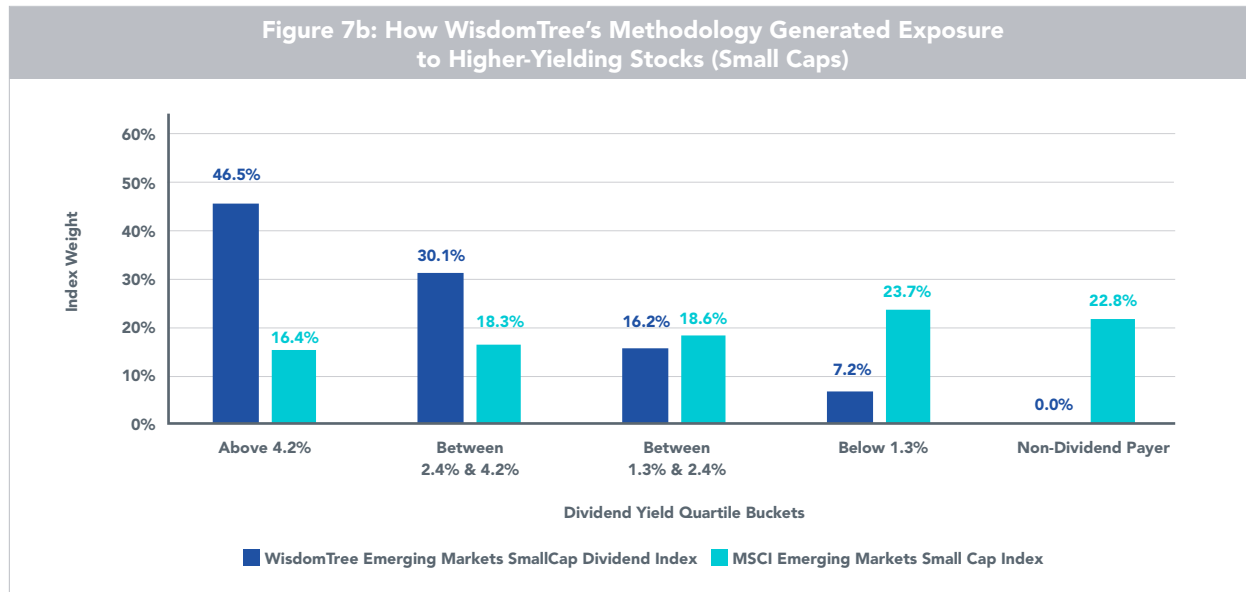
With the broad cross-exposure of dividend-paying stocks in emerging markets, there should be little concern that focusing on dividend-paying stocks unduly narrows the opportunity set in emerging markets.

**ANNUAL RESULT—RAISING THE DIVIDEND YIELD OF THE INDEX RELATIVE TO MARKET CAPITALIZATION WEIGHTING**

When one tilts weight away from market cap and toward dividend yields, mathematically one is taking a market cap weight and multiplying it by the dividend yield, which tends to raise the dividend yield of these indexes relative to a similar universe of market cap-weighted stocks. We can illustrate how this occurs in figures 7a and 7b—the dividend indexes tilt a greater proportion of the index weight to stocks with higher dividend yields.



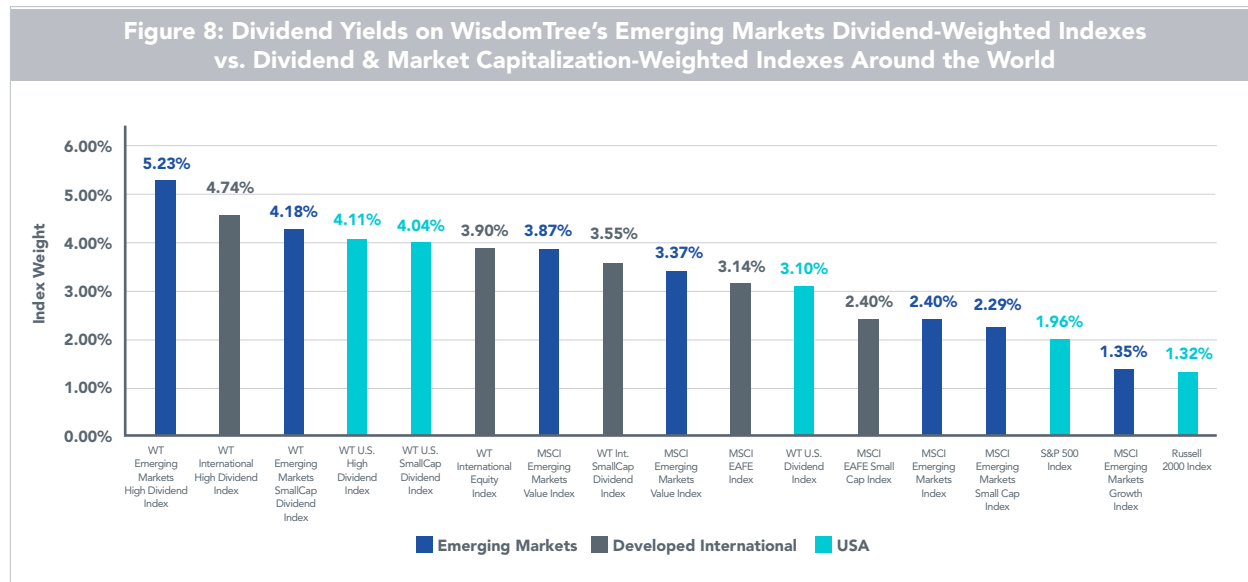
Sources: WisdomTree, Bloomberg, Standard & Poor’s. Data as of most recent index screening, 9/30/17. You cannot invest directly in an index. Weights subject to change.



Sources: WisdomTree, Bloomberg, Standard & Poor’s. Data as of most recent index screening, 9/30/17. You cannot invest directly in an index. Weights subject to change.

**THE GLOBAL DIVIDEND YIELD ROAD MAP CURRENTLY FAVORS EMERGING MARKETS**

In today’s world, where global central banks have tended to keep interest rates low for the better part of the past decade, dividend yields have become a greater and greater focal point for investors. Where are some of the highest dividend yields located? Emerging markets—particularly if one utilizes WisdomTree’s dividend-focused approaches to the region.



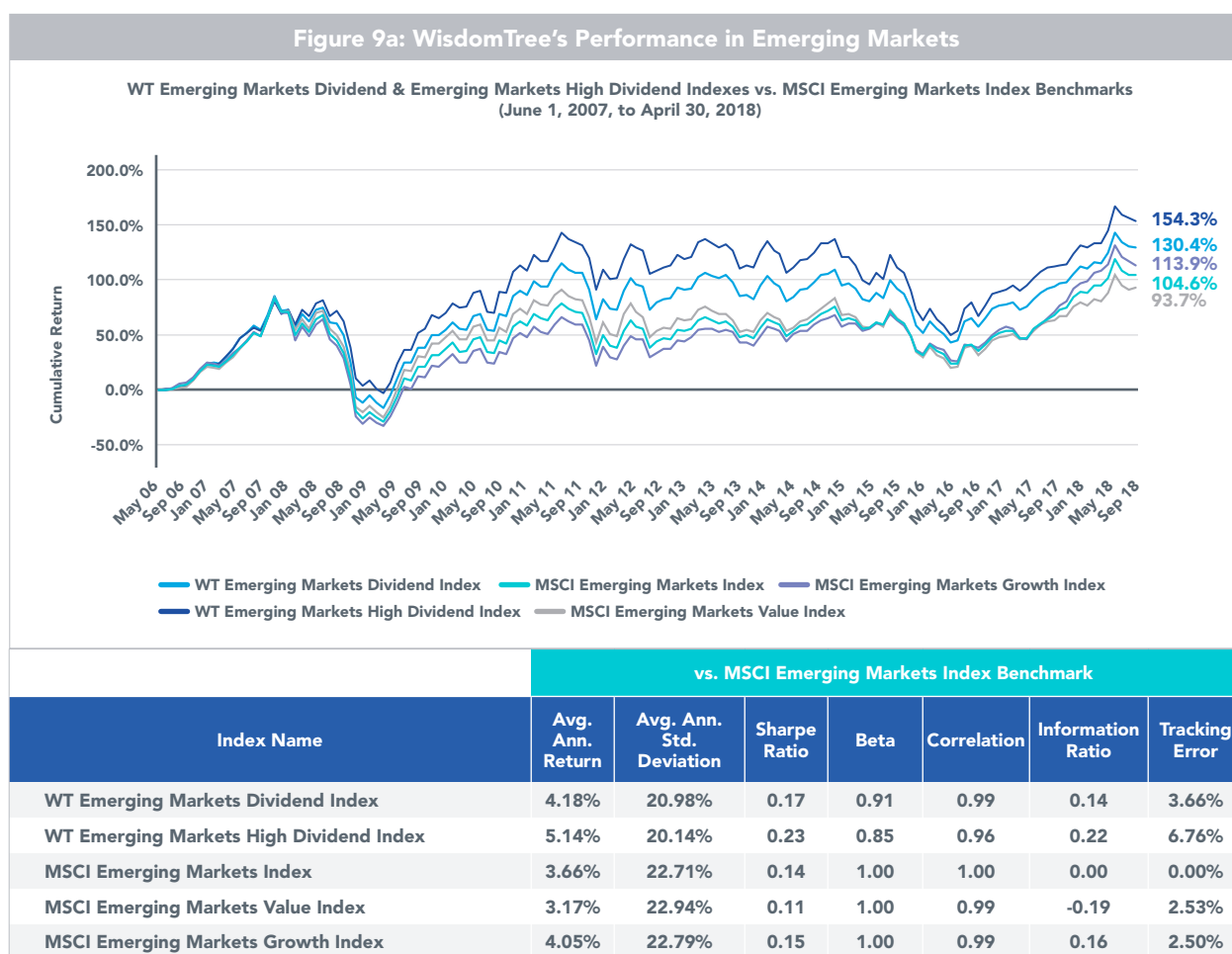
Source: Bloomberg, data as of 4/30/18. You cannot invest directly in an index. Weights subject to change. Past performance is not indicative of future results

- + S&P 500 Index Sets the Baseline at 1.96%:** As we have noted, a frequent initial approach is to place things in context with the S&P 500 Index.
- + Broad-Based Dividend Indexes:** The WT U.S. Dividend Index added over 100 basis points of yield above the S&P 500 Index—3.10%. The WT International Equity Index takes that 80 basis points further, to 3.90% (as compared to an MSCI EAFE Index at 3.14%). The WT Emerging Markets Dividend Index was close behind coming in at 3.87% (as compared to the MSCI Emerging Markets Index at 2.40%).
- + High Dividend Indexes:** The WT U.S. High Dividend Index added about 215 basis points to the S&P 500 Index, coming in at 4.11%. The WT International Equity High Dividend Index came in at 4.74%, while the WT Emerging Markets High Dividend Index came in at 5.23%. Given current conditions, we find the incremental yield advantage in emerging markets of particular interest.
- + SmallCap Dividend Indexes:** Small-cap equity indexes are not widely known destinations for those in search of dividend yield opportunities, partly because one of the most widely known U.S. small-cap equity benchmarks, the Russell 2000 Index, had a dividend yield of 1.32%, quite low. The impact of WT’s approach in the WT SmallCap Dividend Index of U.S. dividend payers is rather transformative, driving the dividend yield for a U.S. small-cap equity exposure to 4.04%. This was actually higher than the WT International SmallCap Dividend Index (3.55%), but not quite a match for the WT Emerging Markets SmallCap Dividend Index at 4.18%.

**WISDOMTREE INDEXES HAVE A LONG HISTORY IN EMERGING MARKET EQUITIES**

While the S&P 500 Index began its live history in 1957, the history of emerging market equity indexes is nowhere near as long, as the MSCI Emerging Markets Index began its live calculation only in 1988.

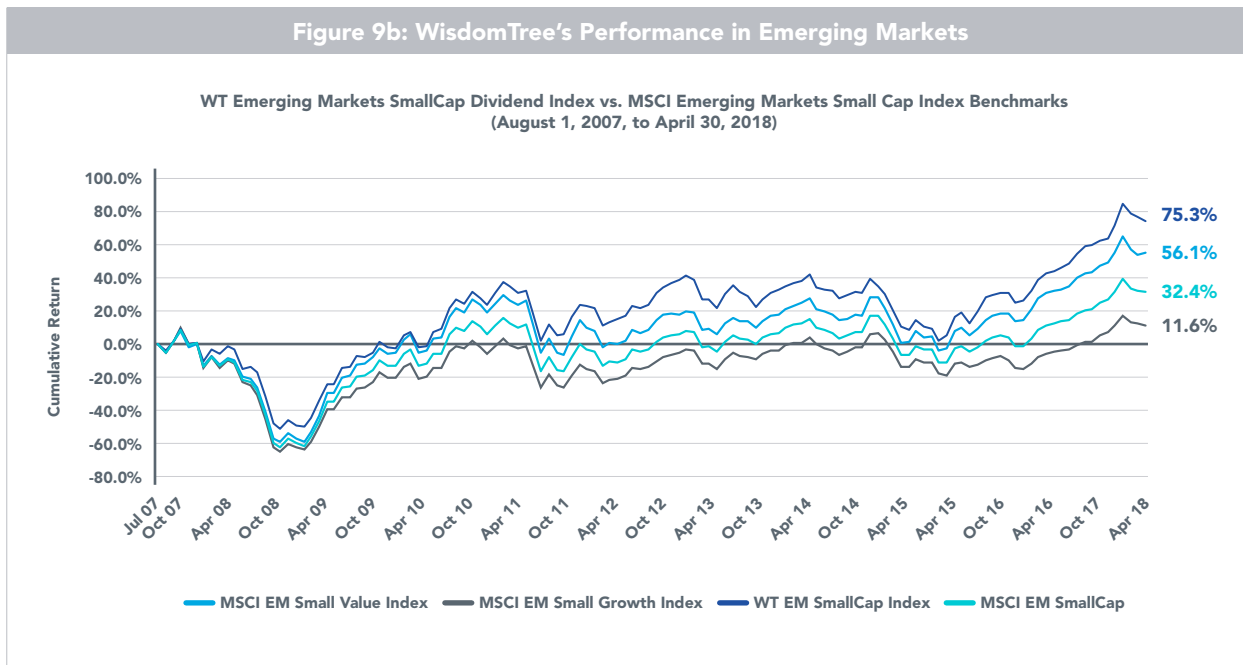
WisdomTree was among the earliest index developers to take a non-market capitalization-weighted, smart beta approach to emerging market equities, which began in the summer of 2007. The goal and rationale was simple, in that we believed in the potential to outperform the standard, market capitalization-weighted approaches while maintaining a very broad exposure with higher correlation.<sup>9</sup>



Sources: WisdomTree, Zephyr StyleADVISOR. Period from 6/1/07 to 4/30/18. Past performance is not indicative of future results. You cannot invest directly in an index. Index performance does not represent actual fund or portfolio performance. A fund or portfolio may differ significantly from the securities included in the index. Index performance assumes reinvestment of dividends but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in fund shares. Such fees, expenses and commissions could reduce returns. Sharpe ratio: Measure of risk-adjusted return. Higher values indicate greater return per unit of risk, specifically standard deviation, which is viewed as being desirable. Information ratio: A risk-adjusted return measure calculated by taking the excess return against the benchmark and dividing by the tracking error. Tracking Error: Refers to the difference in the return of a portfolio to its benchmark.

<sup>9</sup> Correlation: Statistical measure of how two sets of returns move in relation to each other. Correlation coefficients range from -1 to 1. A correlation of 1 means the two subjects of analysis move in lockstep with each other. A correlation of -1 means the two subjects of analysis have moved in exactly opposite directions.

Figure 9b: WisdomTree’s Performance in Emerging Markets



| Index Name                                   | vs. MSCI Emerging Markets Small Cap Index Benchmark |                          |              |      |             |                   |                |
|--|---|--------------------------|--------------|------|-------------|-------------------|----------------|
|  | Avg. Ann. Return                                    | Avg. Ann. Std. Deviation | Sharpe Ratio | Beta | Correlation | Information Ratio | Tracking Error |
| WT Emerging Markets SmallCap Dividend Index  | 5.36%   | 21.63%                   | 0.22         | 0.87 | 0.98        | 0.48              | 5.64%          |
| MSCI Emerging Markets Small Cap Index        | 2.64%   | 24.13%                   | 0.09         | 1.00 | 1.00        | 0.00              | 0.00%          |
| MSCI Emerging Markets Small Cap Value Index  | 4.23%   | 24.23%                   | 0.15         | 1.00 | 1.00        | 0.84              | 1.89%          |
| MSCI Emerging Markets Small Cap Growth Index | 1.03%   | 24.19%                   | 0.02         | 1.00 | 1.00        | -0.85             | 1.89%          |

Sources: WisdomTree, Zephyr StyleADVISOR. Period from 8/1/07 to 4/30/18. Past performance is not indicative of future results. You cannot invest directly in an index. Index performance does not represent actual fund or portfolio performance. A fund or portfolio may differ significantly from the securities included in the index. Index performance assumes reinvestment of dividends but does not reflect any management fees, transaction costs or other expenses that would be incurred by a portfolio or fund, or brokerage commissions on transactions in fund shares. Such fees, expenses and commissions could reduce returns.

Sharpe ratio: Measure of risk-adjusted return. Higher values indicate greater return per unit of risk, specifically standard deviation, which is viewed as being desirable. Information ratio: A risk-adjusted return measure calculated by taking the excess return against the benchmark and dividing by the tracking error. Tracking Error: Refers to the difference in the return of a portfolio to its benchmark.

Investment management and index development, of course, have many different definitions of “success,” but we can simplify the picture by focusing on three distinct categories:

**+ Performance:** From the inception of both the WT Emerging Markets Dividend and High Dividend Indexes, the MSCI Emerging Markets Index delivered a 3.66% average annual return. The MSCI Emerging Markets Value Index underperformed this figure, while the MSCI Emerging Markets Growth Index outperformed it. Notably, the WT Emerging Markets Dividend & High Dividend strategies both outperformed the MSCI Emerging Markets Index over this period, despite value lagging growth indexes from MSCI.

From the inception two months later of the WT Emerging Markets SmallCap Dividend Index, the MSCI Emerging Markets Small Cap Index delivered a 2.64% average annual return, and its value cut significantly outperformed. The WT Emerging Markets SmallCap Dividend Index added 272 basis points per year relative to the standard cut and 113 basis points per year relative to the MSCI Emerging Markets Small Cap Value Index.

**+ Risk:** While we saw the WT Indexes all outperform their market capitalization-weighted benchmarks, it’s even more notable that this was achieved with a lower risk level across the board, whether one measured risk on the bases of absolute standard deviation or relative beta to a benchmark.

**+ Correlation:** High correlation is important, in that if investors desire exposure to a particular piece of the asset allocation pie, they will want the variability in returns of any given access vehicle to behave similarly to the variability in returns for the given benchmark for that space. The lowest correlation was seen with the WT Emerging Markets High Dividend Index versus the MSCI Emerging Markets benchmark at 0.96, a very high figure.

## DECONSTRUCTING THE SOURCES OF EMERGING MARKET EQUITY RETURNS

There are many models that seek to explain how equity market returns are generated. Here we look at three particular drivers:

**+ Dividend Yield:** Specifically, this is the rate of average annual dividend reinvestment over the period. Starting at a high dividend yield (lower valuation) will tend to help in raising this component of the model.

**+ Dividend Growth:** This is the rate of average annual dividend growth over the period.

**+ Valuation Change:** This is the rate of average annual change in the price-to-dividend multiple (reciprocal of the dividend yield), and it seeks to measure the relationship between dividend levels and price levels—rising means prices are increasing faster than dividends; falling means prices are increasing slower than dividends.

Figure 10: Dividend Yield, Dividend Growth or Valuation Change—How Were Returns Generated?

| Total Return Deconstruction: June 1, 2008, to April 30, 2018   |   |                                   |                                    |                        |
|--|---|-----------------------------------|------------------------------------|------------------------|
| Index Name   | Avg. Ann. Rate of Dividend Reinvestment | Avg. Ann. Rate of Dividend Growth | Avg. Ann. Rate of Valuation Change | Avg. Ann. Total Return |
| WT Emerging Markets Index                                      | 3.46%                                   | -1.01%                            | 0.36%                              | 2.78%                  |
| WT Emerging Markets High Dividend Index                        | 4.59%                                   | -1.13%                            | 0.01%                              | 3.42%                  |
| MSCI Emerging Markets Index                                    | 2.39%                                   | 0.24%                             | -0.62%                             | 2.00%                  |
| MSCI Emerging Markets Value Index                              | 2.98%                                   | 0.34%                             | -2.06%                             | 1.20%                  |
| MSCI Emerging Markets Growth Index                             | 1.83%                                   | -0.84%                            | 1.71%                              | 2.71%                  |
| Total Return Deconstruction: August 1, 2008, to April 30, 2018 |   |                                   |                                    |                        |
| Index Name   | Avg. Ann. Rate of Dividend Reinvestment | Avg. Ann. Rate of Dividend Growth | Avg. Ann. Rate of Valuation Change | Avg. Ann. Total Return |
| WT Emerging Markets SmallCap Dividend Index                    | 3.60%                                   | -3.78%                            | 7.93%                              | 7.58%                  |
| MSCI Emerging Markets Small Cap Index                          | 2.11%                                   | 1.70%                             | 1.82%                              | 5.74%                  |
| MSCI Emerging Markets Small Cap Value Index                    | 2.64%                                   | 3.51%                             | 0.95%                              | 7.26%                  |
| MSCI Emerging Markets Small Cap Growth Index                   | 1.57%                                   | -0.69%                            | 3.29%                              | 4.19%                  |

Source: Bloomberg. You cannot invest directly in an index. Past performance is not indicative of future results.

We noticed some very interesting things over this period, where overall total returns in the segment biased more toward larger market capitalization size were not very high:

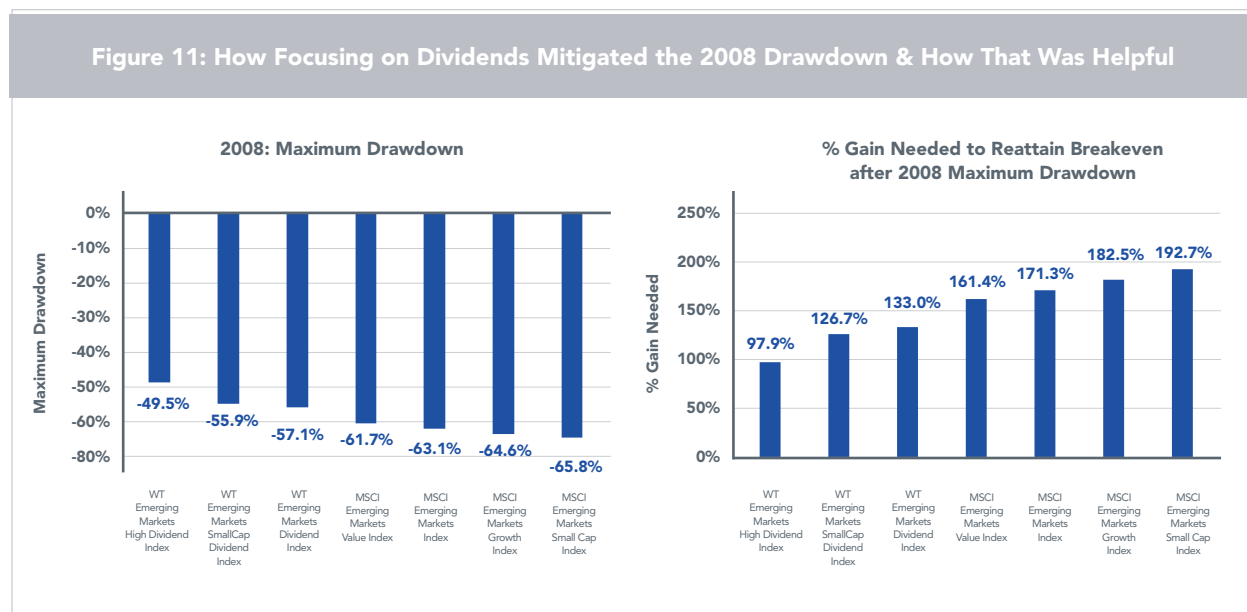
- + WisdomTree's outperformance (where it occurred) was largely driven by a much higher rate of average annual dividend reinvestment. This is at the core of the methodology, through selecting only dividend-paying stocks and then tilting weight toward those with higher dividend yields. On an annual basis, this figure would tend to be refreshed during WisdomTree's rebalance.
- + It was tough to find any dividend growth in emerging markets over this period. Since WT is tilting toward companies with higher dividends to start with, it is notable that the higher starting point can make it harder for the WT Indexes to showcase significant growth.
- + For the small caps (a two-month later starting date), the change in valuation was a relevant driver of total returns. This was also an important driver of the return differential for the WT Emerging Markets SmallCap Dividend Index over the MSCI market capitalization-weighted benchmarks.



**WHAT HAPPENED DURING THE 2008 "STRESS TEST"?**

While the global financial crisis of 2008–09 was frightening at the time, the data that it provided for indexes calculating in real time was invaluable. Many people might think that dividend-focused approaches would tend to go down less than the market during tough periods, but 2008 really tested that premise.

The key here lies in helping to bring levels back up to "even" after a big drawdown. The way that the math works, every percentage point of less downside return can be meaningful.



Sources: WisdomTree, Bloomberg. Period from 1/1/08 to 12/31/08. You cannot invest directly in an index. Past performance is not indicative of future results.

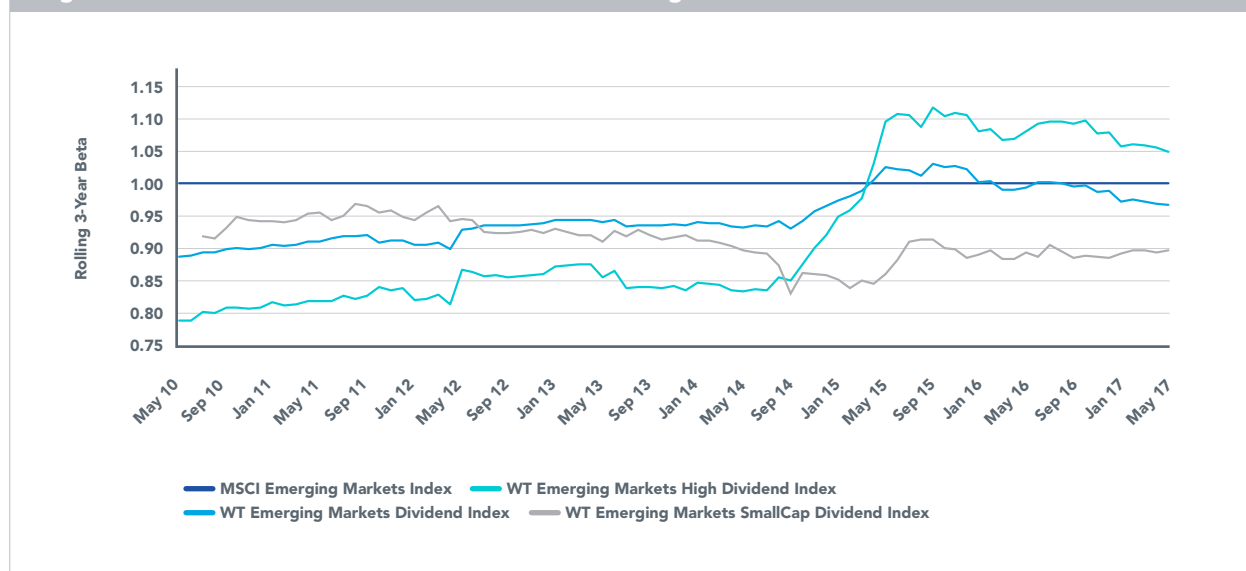
- + The MSCI Emerging Markets Small Cap Index had a maximum drawdown of 65.8% during 2008. What’s staggering is that this means it would need a return of 192.7% to return to its prior high-water mark. As we all know, waiting for 192.7% cumulatively in any equity market can take a lot of time (it would imply a near TRIPLING).
- + The WT Emerging Markets High Dividend Index had a maximum drawdown of 49.5% in 2008. Clearly, this is also significant, but a subsequent return of only 97.9% would be required to reattain the prior high-water mark—a big difference from 192.7%!

**IMPORTANT TO KNOW WHERE THE DIVIDENDS (& HIGH DIVIDEND YIELDS) ARE**

Over the years, one of the few constants in emerging market equity investing is change. Conditions will change. Growth rates will change. Market characteristics will change. One thing that changed a lot was where both large-cap *Dividend Streams* grew to be the largest and where dividend yields became the highest over WT’s live history in emerging markets.

- + During the 2012 rebalancing process, Russia’s equity market saw its dividend yields increase dramatically along with its cash *Dividend Streams*. This led from Russian stocks being fairly insignificant in WisdomTree’s Indexes to a significant over-weight. Also, the ruble tends to be one of the more volatile, commodity-sensitive currencies in emerging markets. While emotionally it may have been very difficult to take an over-weight exposure to Russia’s equities, one of the benefits of the process is that the rules operate independently of emotion.
- + A further consequence of this shift was an overall allocation to Energy and Materials that changed dramatically, again, particularly in the High Dividend Index. This is notable in that an index with an over-weight in these commodity-sensitive sectors may change its overall risk profile, as well as its sensitivity to movements in commodity prices.

**Figure 12: The Same Indexes with the Same Methodologies Can See Their Risk Profiles Shift Across Time**



Source: Bloomberg. Period from 5/31/07 to 4/30/18. You cannot invest directly in an index. Past performance is not indicative of future results

- + The WisdomTree Emerging Markets High Dividend Index was the strongest in its shift toward much higher weights in Russia as well as in the Materials and Energy sectors.

**THE IMPACT OF IMPLEMENTING THE WISDOMTREE EMERGING MARKETS SMALLCAP DIVIDEND INDEX IN MODEL PORTFOLIOS**

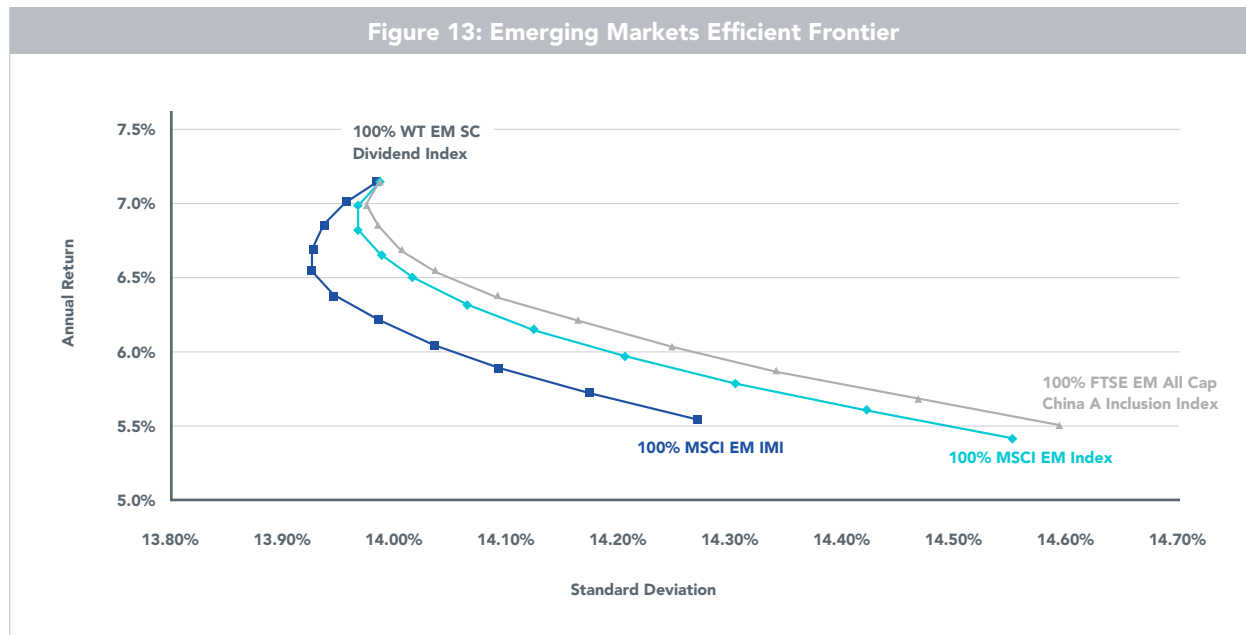
One of the interesting features about the WisdomTree Emerging Markets SmallCap Dividend Index (WTEMSC) is how consistently lower its volatility is relative to traditional large-cap indexes. The rolling three-year beta on the WisdomTree Emerging Markets SmallCap Dividend Index has been 0.91, and the since-inception number has been 0.87.

While U.S. investors associate going to small caps as increasing risk profiles, it is interesting that larger allocations to small caps can be made without increasing the risk profile. Given the return features of emerging market small caps and the diversification from country and sector blends, this may be one of most important Indexes WisdomTree developed in this universe.

A hypothetical blended portfolio of the MSCI Emerging Markets Investable Market Index with WTEMSC would have historically experienced increased returns and reduced volatility, regardless of the size of the allocation.

As shown in the chart below, for every additional 10% allocation that the WisdomTree Index represented, the risk and return profile of the portfolio was enhanced.

This also holds true when blending WTEMSC with the underlying indexes of the two largest U.S.-listed EM ETFs: the FTSE Emerging Markets All Cap China A Inclusion Index and the MSCI Emerging Markets Index.



Sources: WisdomTree, Zephyr StyleAdvisor. Data for the period 11/1/12 to 3/31/18. Past performance is not indicative of future results. You cannot invest directly in an index.

| Index   | Average Annual Total Returns as of 3/31/18 |         |         |          |
|---|--|---------|---------|----------|
|   | 1 year                                     | 3 years | 5 years | 10 years |
| WisdomTree Emerging Markets SmallCap Dividend Index   | 24.10%                                     | 10.65%  | 5.02%   | 6.59%    |
| MSCI Emerging Markets IMI Index                       | 24.08%                                     | 8.59%   | 4.93%   | 3.21%    |
| MSCI Emerging Markets Index                           | 24.93%                                     | 8.81%   | 4.99%   | 3.02%    |
| FTSE Emerging Markets All Cap China A Inclusion Index | 20.58%                                     | 7.14%   | 4.92%   | 3.10%    |

Sources: WisdomTree, Bloomberg, FactSet. Data since inception is 7/31/07 to 3/31/18. Past performance is not indicative of future results. You cannot invest directly in an index.

**CONCLUSION**

One of the growing topics in asset management is the development of factor indexes to improve on traditional market capitalization-weighted benchmarks. WisdomTree now has over 10-years of real-time results across three *Dividend Stream*-weighted indexes—a broad index, a high dividend index and a small-cap dividend index. Each of these incorporates a rules-based discipline to manage valuation risks and also instill a quality discipline to remove companies that do not have cash flows to pay dividends. We believe the success of the real-time track records shows that the conventional narrative—that an investor must use an active manager to capitalize on pricing inefficiencies and mispricing in emerging markets—is misguided and that index strategies can also be utilized to provide value-added enhancements over the market beta.

**Investors should carefully consider the investment objectives, risks, charges and expenses of the Funds before investing. To obtain a prospectus containing this and other important information, please call 866.909.WISE 9473 or visit [WisdomTree.com](http://WisdomTree.com) to view or download a prospectus. Investors should read the prospectus carefully before investing.**

There are risks associated with investing, including possible loss of principal. Foreign investing involves special risks, such as risk of loss from currency fluctuation or political or economic uncertainty. Funds focusing on a single sector and/or smaller companies generally experience greater price volatility. Investments in emerging, offshore or frontier markets are generally less liquid and less efficient than investments in developed markets and are subject to additional risks, such as risks of adverse governmental regulation and intervention or political developments. Due to the investment strategy of this Fund, it may make higher capital gain distributions than other ETFs. Please read the Fund's prospectus for specific details regarding the Fund's risk profile.

The [WisdomTree Emerging Markets Dividend Index](#) is a fundamentally weighted index that measures the performance of dividend-paying stocks selected from the following 17 emerging market nations: Brazil, Chile, China, Czech Republic, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Philippines, Poland, Russia, South Africa, Taiwan, Thailand and Turkey. The [WisdomTree Emerging Markets High Dividend Index](#) is a fundamentally weighted index that measures the performance of high-dividend-yielding stocks in the emerging markets. The [WisdomTree Emerging Markets SmallCap Dividend Index](#) is a fundamentally weighted index that measures the performance of primarily small-cap stocks selected from the WisdomTree Emerging Markets Dividend Index. The [WisdomTree International Equity Index](#) is a fundamentally weighted index that measures the performance of dividend-paying companies in the industrialized world, excluding Canada and the United States, that pay regular cash dividends and that meet other liquidity and capitalization requirements. The [WisdomTree International High Dividend Index](#) is a fundamentally weighted index that measures the performance of companies with high dividend yields selected from the WisdomTree International Equity Index. The [WisdomTree International SmallCap Dividend Index](#) comprises the dividend-paying companies from the small-capitalization segment of the WisdomTree International Equity Index. The [WisdomTree SmallCap Dividend Index](#) is a fundamentally weighted index measuring the performance of the small-capitalization segment of the U.S. dividend-paying market. The [WisdomTree High Dividend Index](#) is a fundamentally weighted index that measures the performance of companies with high dividend yields selected from the WisdomTree Dividend Index. The [WisdomTree Dividend Index](#) is a fundamentally weighted index that defines the dividend-paying portion of the U.S. equity market. The [MSCI Emerging Markets Index](#) is designed to measure equity market performance in global emerging markets. It is a float-adjusted market capitalization index that consists of indexes in 23 emerging economies. The [MSCI Emerging Markets Value Index](#) captures large- and mid-cap securities exhibiting overall value-style characteristics across 23 emerging market (EM) countries. The [MSCI Emerging Markets Growth Index](#) captures large- and mid-cap securities exhibiting overall growth-style characteristics across 23 emerging markets countries. The [MSCI Emerging Markets Small Cap Index](#) includes small-cap representation across 23 emerging markets countries. With 1,825 constituents, the Index covers approximately 14% of the free float-adjusted market capitalization in each country. The [MSCI Emerging Markets Small Cap Value Index](#) captures small-cap securities exhibiting overall value-style characteristics across 23 emerging markets countries. The [MSCI Emerging Markets Small Cap Growth Index](#) captures small-cap securities exhibiting overall growth-style characteristics across 23 emerging markets countries. The [MSCI USA Index](#) is designed to measure the performance of the large- and mid-cap segments of the U.S. market. The [MSCI USA Investable Market Index \(IMI\)](#) is designed to measure the performance of the large-, mid- and small-cap segments of the U.S. market. The [MSCI USA Small Cap Index](#) is designed to measure the performance of the small-cap segment of the U.S. equity market. The [MSCI Emerging Markets Investable Market Index \(IMI\)](#) captures large-, mid- and small-cap representation across 23 emerging markets countries. The [MSCI EAFE Index](#) is an equity index that captures large- and mid-cap representation across developed market countries around the world, excluding the U.S. and Canada. The [MSCI EAFE Small Cap Index](#) is an equity index that captures small-cap representation across developed market countries around the world, excluding the U.S. and Canada. The [S&P 500 Index](#) is an index of 500 stocks seen as a leading indicator of U.S. equities and a reflection of the performance of the large-cap universe, made up of companies selected by economists. The [Russell 2000 Index](#) comprises the smallest 2,000 companies in the Russell 3000 Index, representing approximately 8% of the Russell 3000 total market capitalization.

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