

# Considering Smart Beta

A Real-Time Update

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It's hard to attend an industry conference or read the financial press these days without encountering the term "smart beta," generally understood to mean indexing strategies that deviate from traditional capitalization-weighted exposures. When Towers Watson wrote in July 2013 that "somewhere between alpha and beta lies smart beta," the global consulting firm established a framework for evaluating such alternative approaches, breaking them out into four major categories: equally weighted; fundamentally weighted; volatility based; and factor-based indexes. In recent months, interest in smart-beta strategies has increased as new research has emerged. One study, conducted by Cass Consulting, a research-led consultancy service provided by Cass Business School, concluded that returns of traditional, market-capitalization-weighted indexes lagged various fundamentally weighted—or smart-beta—indexes by as much as 2 percent per year from 1969-2011.<sup>1</sup>

Instead of treading over a semantic sinkhole in an attempt to define smart beta, let me begin instead with a key distinction. Some smart-beta approaches are *tactical*, meaning they are designed to capitalize on certain market environments or best reflect specific investment themes, often using a slice of a market's investable opportunity set. Other smart-beta approaches are more *strategic*, meaning they can be used as part of an investor's *core* exposure to an asset class

more than \$20 trillion. This makes it broader than the S&P 1500. If WisdomTree weighted by market value, this index would probably generate returns very similar to the Russell 3000. What transforms the WisdomTree Earnings Index into America's broadest fundamentally weighted index is that, once a year, WisdomTree sets initial weights based on the earnings each company generated over the prior 12 months. For example, if Exxon generated \$40 billion in earnings, and all 2,000 companies together generated profits of \$1 trillion, Exxon's weight would be set at 4 percent at the annual rebalance—its share of the earnings stream of corporate America. Thereafter, component weights move with stock price movements in the market, until the next annual rebalance. We do this for each and every stock in our broad earnings index, and for companies included in the large-cap, midcap and small-cap indexes that are derived from it, where stocks are *selected* based on their market capitalization, and then *weighted* based on their earnings.

In Figure 1, you can see that all of WisdomTree's core earnings-weighted indexes generated higher returns than their comparable cap-weighted benchmark over the last one, three and five years, and since their respective inception in 2007. Not only were the returns higher, but so were the Sharpe ratios, a measure of risk-adjusted return. For the broad and large-cap indexes, the excess returns were mod-

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through bull and bear markets, and are meant to capture defined "risk premiums" to provide exposure to various factors that are believed to drive equity returns. This is the scope of the smart-beta discussion I would like to explore here: index-based approaches that investors can use in the core of their portfolios as alternatives to the traditional cap-weighted indexes. While cap-weighted indexes still stack up very well relative to the majority of active managers that try and often fail to beat them over time, the new test is harder: How do the traditional indexes compare from a risk and return perspective to other indexes that rebalance securities each year back to some measure other than market value?

This article attempts to answer that question and others using real-time risk and return data from WisdomTree's broadest indexes.

### **Broadest Fundamentally Weighted U.S. Index: WisdomTree Earnings Index**

Our broadest domestic benchmark is the WisdomTree Earnings Index, which includes virtually all profitable companies listed in the U.S. with market capitalizations greater than \$100 million. That simple selection screen—profitable companies—produces a starting universe of roughly 2,000 stocks with a combined market capitalization of

est (39-52 basis points per year since 2007), but they were achieved with lower volatility and lower beta than the cap-weighted counterpart, and with relatively low tracking error. In the mid- and small-cap categories, the excess returns were significantly higher, with annualized returns that exceeded their cap-weighted peers by approximately 500-600 bps over the most recent five-year period. Perhaps most notable, these returns since 2007 were achieved in an environment where growth stocks outperformed value stocks by 2-3 percentage points in each of the major size categories.

Evaluations of so-called smart-beta approaches that are limited to the most efficient market in the world (U.S. large-cap stocks) tell only part of the story. When we extend this analysis to different size cuts, and to international markets outside the U.S., we observe that the less efficient the asset class, the greater the potential to generate excess returns by switching to fundamental weighting.

Outside the U.S., WisdomTree typically weights markets based on cash dividends. Many don't realize this, but internationally, dividend-paying stocks could literally be considered the market. For example, about 97 percent of the weight in the MSCI EAFE Index consists of dividend-paying companies. That means WisdomTree can weight its developed-world DEFA index of approximately 2,200 dividend-

Figure 1

WisdomTree Earnings Weighted Indexes (Feb 1, 2007- March 31, 2014)											
Index	WT Index Inception	Average Annual Returns				Standard Deviation	Sharpe Ratio	Beta	Correlation	Tracking Error	Info Ratio
		1 Yr	3 Yrs	5 Yrs	Since WT Index Inception						
WT Earnings	1-Feb-07	23.33	15.51	22.45	6.87	17.02	0.35	0.97	0.99	1.97	0.27
Russell 3000		22.61	14.61	21.93	6.35	17.44	0.31	1.00	1.00	0.00	0.00
WT Earnings 500	1-Feb-07	22.64	15.38	21.40	6.42	16.51	0.33	0.98	1.00	1.69	0.23
S&P 500		21.86	14.66	21.16	6.03	16.84	0.30	1.00	1.00	0.00	0.00
WT Midcap Earnings	1-Feb-07	27.49	16.55	29.83	10.50	21.07	0.46	1.04	0.98	4.37	0.37
S&P 400 Midcap		21.24	13.37	24.86	8.90	19.92	0.40	1.00	1.00	0.00	0.00
WT SmCap Earnings	1-Feb-07	29.55	15.81	30.40	8.91	23.86	0.34	1.06	0.96	6.62	0.30
Russell 2000		24.90	13.18	24.31	6.95	21.60	0.28	1.00	1.00	0.00	0.00

Source: Zephyr StyleAdvisor. Past performance is not indicative of future results.

paying firms with some \$18 trillion in combined market capitalization by the cash dividends they've paid in the prior year, while ending up with a representative measure of developed-world stocks that correlates highly to the MSCI EAFE Index. Because we include companies with market caps as low as \$100 million in our DEFA index, we can also cut from that broad benchmark an international small-cap index to measure the returns of more than 1,200 small-cap companies with a total market capitalization of \$1.4 trillion.

I emphasize the size and breadth of these indexes to underscore how fundamentally weighting entire equity markets can create immense investment capacity that rivals some of the most-well-known cap-weighted indexes. As we saw in the U.S., when we weight these developed equity markets by dividends, rather than market value, both WisdomTree's broad market and small-cap indexes beat their comparable cap-weighted peers by 113-160 bps per year since 2006 (Figure 2). Again, this occurred over a time period when the EAFE Growth Index beat the EAFE Value Index by 131 bps on an annualized basis. Both WisdomTree indexes outperformed on a risk-adjusted basis, as denoted by the higher Sharpe ratio. Notably, in the small-cap space, an index of dividend-paying small-caps generated a lower beta than its comparable cap-weighted index, a departure from what we saw in the U.S.

Some investors don't normally associate emerging markets with dividend-paying stocks, but the truth is, in the emerging world, 96 percent of the weight of the MSCI Emerging Markets Index is in dividend-paying securities. WisdomTree has been tracking the performance of these 1000-1,200 dividend-paying stocks in the major emerging market countries since 2007. And again, after rebalancing the index annually based on the cash dividends companies have paid in the prior year, we have seen annualized outperformance: in the broad market, by 185 bps per year, relative to the MSCI Emerging Markets Index; in the small-cap segment, by 327 bps per year (Figure 3).

### Explaining Excess Returns

If the financial press had, over the past few years, more consistently and comprehensively reported that fundamentally weighted indexes had outperformed comparable cap-weighted indexes in these eight major asset classes, delving so deeply into the return data might not be necessary. But I believe this simple fact is not widely known. Moreover, these days, it's not enough to report the excess returns generated by the fundamentally weighted approach. Often the explanation for *why* the excess returns occurred is as important as *that* they occurred. The conventional critique of any excess returns produced by fun-

Figure 2

International Developed Returns (June 1, 2006 - March 31, 2014)											
Index	WT Index Inception	Average Annual Returns				Standard Deviation	Sharpe Ratio	Beta	Correlation	Tracking Error	Info Ratio
		1 Yr	3 Yrs	5 Yrs	Since WT Index Inception						
WT DEFA	1-Jun-06	19.56	7.74	16.28	4.59	20.10	0.17	1.01	0.99	2.14	0.53
MSCI EAFE		17.56	7.21	16.02	3.46	19.83	0.11	1.00	1.00	0.00	0.00
WT Int'l SmCap Div	1-Jun-06	22.63	11.47	22.46	6.82	20.51	0.27	0.95	0.99	3.24	0.49
MSCI EAFE SmCap		23.26	9.40	21.70	5.22	21.25	0.19	1.00	1.00	0.00	0.00

Source: Zephyr StyleAdvisor. Past performance is not indicative of future results.

Figure 3

Emerging Market Returns (June 1, 2007 - March 31, 2014)											
Index	WT Index Inception	Average Annual Returns				Standard Deviation	Sharpe Ratio	Beta	Correlation	Tracking Error	Info Ratio
		1 Yr	3 Yrs	5 Yrs	Since WT Index Inception						
WT Emrg Mkts Div	1-Jun-07	-5.25	-2.49	15.14	3.91	24.03	0.13	0.91	0.99	3.92	0.47
MSCI Emrg Mkts		-1.43	-2.86	14.48	2.06	26.31	0.05	1.00	1.00	0.00	0.00
WT Emrg Mkts SmCap Div	1-Aug-07	-5.55	-0.02	19.06	4.20	25.28	0.14	0.86	0.98	6.11	0.54
MSCI Emrg Mkts SmCap		0.40	-1.45	19.70	0.93	28.85	0.01	1.00	1.00	0.00	0.00

Source: Zephyr StyleAdvisor. Past performance is not indicative of future results.

damentally weighted indexes is that they're the result of hidden bets made on value or small-cap stocks. Sometimes the attacks on the fundamentally weighted approach are so monolithic, it's as if some association has been created—the defenders of cap-weighted orthodoxy (DOCOC)—to provide the talking points. One of my favorite lines is that the returns of broad-based fundamentally weighted indexes can be achieved simply by combining well-known large-cap value and small-cap indexes.

Let's examine some of these assertions, again using real-time data that compares the returns generated by the WisdomTree Earnings Index, to a composite index, 70 percent of which comprises the Russell 1000 Value and 30 percent of the Russell 2000 (Figure 4). As a reminder, from Feb. 1, 2007 through March 31, 2014, growth beat value: The Russell 3000 Growth Index outperformed the Russell 3000 Value Index by more than 3 percentage points per year. If the WisdomTree Earnings Index were merely a value index in disguise, how did it beat the Russell 3000 by 52 bps per year over that period? And if it were making a hidden bet on value and small-cap stocks, as the DOCOC so often insists, then why did its mythical "70-30" composite index underperform the earnings index by 150 bps a year during the same time frame? (If I had used the poorer-performing Russell 2000 Value Index over this period to make the point, the differentials would have been ever greater.)

The answer is that this particular fundamentally weighted index does not exhibit any value tilt for this period. Nor does it exhibit any size tilt. As a matter of fact, the

WisdomTree Earnings Index (WTEI) has a slight large-cap tilt relative to the Russell 3000. If we were to allocate to the WisdomTree large- (WTPEPS), mid- (WTMEI) and small-cap (WTSEI) indexes in the same proportions as large, mid- and small-caps appear in the Russell 3000, we would have seen roughly 100 bps of incremental average annual performance ahead of the Russell 3000 for the nearly seven-year period ending Dec. 31, 2013. Figure 5 shows this return differential, and displays the exposures of the composite and the indexes to the "risk premia" that typically are cited as having some degree of explanatory power over equity returns. For this particular period of study, one can see that the WisdomTree Composite was able to generate higher returns with lower beta than the market, similar size exposure and a nearly negligible tilt toward the value factor.

Again, it may come as a surprise to some, but in many cases, fundamentally weighted indexes don't make a value or size "bet." It very much depends on which index you are examining. When WisdomTree's research team ran regressions on our core earnings- and dividend-weighted indexes in the U.S., it became clear that the only earnings-weighted index that had any sensitivity to the value factor was the small-cap earnings index. On the other hand, our dividend-weighted indexes were acutely sensitive to the value factor, indicating they can be excellent proxies for capturing the "value premium" that has been identified in the stock market (Figure 6).

When regressions were run to identify WisdomTree index sensitivity to the size factor (Figure 7), we found that our large-cap indexes exhibit no small-cap bias. In fact,

Figure 4

Fundamentally Weighted Indexes Beat The Market When Growth Beat Value (February 1, 2007 - March 31, 2014)											
Index	WT Index Inception	Average Annual Returns				Standard Deviation	Sharpe Ratio	Beta	Correlation	Tracking Error	Info Ratio
		1 Yr	3 Yrs	5 Yrs	Since WT Index Inception						
WT Earnings	1-Feb-07	23.33	15.51	22.45	6.87	17.02	0.35	0.97	0.99	1.97	0.27
Russell 1000 Value/2000*		22.59	14.33	22.56	5.37	18.76	0.24	1.06	0.99	3.00	-0.33
Russell 1000 Value		21.57	14.80	21.75	4.66	17.90	0.21	1.01	0.98	3.15	-0.54
Russell 2000		24.90	13.18	24.31	6.95	21.60	0.28	1.19	0.96	7.00	0.09
Russell 3000		22.61	14.61	21.93	6.35	17.44	0.31	1.00	1.00	0.00	0.00

Sources: WisdomTree, Zephyr StyleAdvisor (70/30 Blend). Past performance is not indicative of future results.

Figure 5

Building Exposure To The Market-Capitalization Size Spectrum					
Regression Period (Feb 2007-Dec 2013)	Market Factor	Size Factor	Value Factor	Momentum Factor	Average Annual Return
<b>78.4% WTEPS / 16.4% WTMEI / 5.2% WTSEI</b>	0.97	-0.04	0.03	-0.08	7.30%
<b>Russell 3000 Index</b>	1.01	-0.01	0.01	0.00	6.30%
<b>Russell 3000 Value Index</b>	0.98	-0.09	0.31	-0.01	4.50%
<b>Russell 3000 Growth Index</b>	1.04	0.05	-0.28	0.01	8.00%

Sources: WisdomTree, Bloomberg, Zephyr StyleAdvisor. Kenneth French Data Library. Period 2/1/2007-12/31/2013 due to full history of live performance of WisdomTree Earnings indexes. Past performance is not indicative of future results.

WisdomTree’s U.S. dividend-weighted large-cap indexes are typically *more* large-cap than some of the comparable cap-weighted indexes in the category. We attribute this mostly to WisdomTree’s selection process, which chooses companies for its large-cap indexes based on market capitalization. In the small-cap category, the WisdomTree SmallCap Earnings Index exhibited the greatest sensitivity to the size factor. We believe this index in particular provides more precise exposure to the small-cap portion of the U.S. equity market than does the Russell 2000.

### Moving Beyond The 3-Factor Model

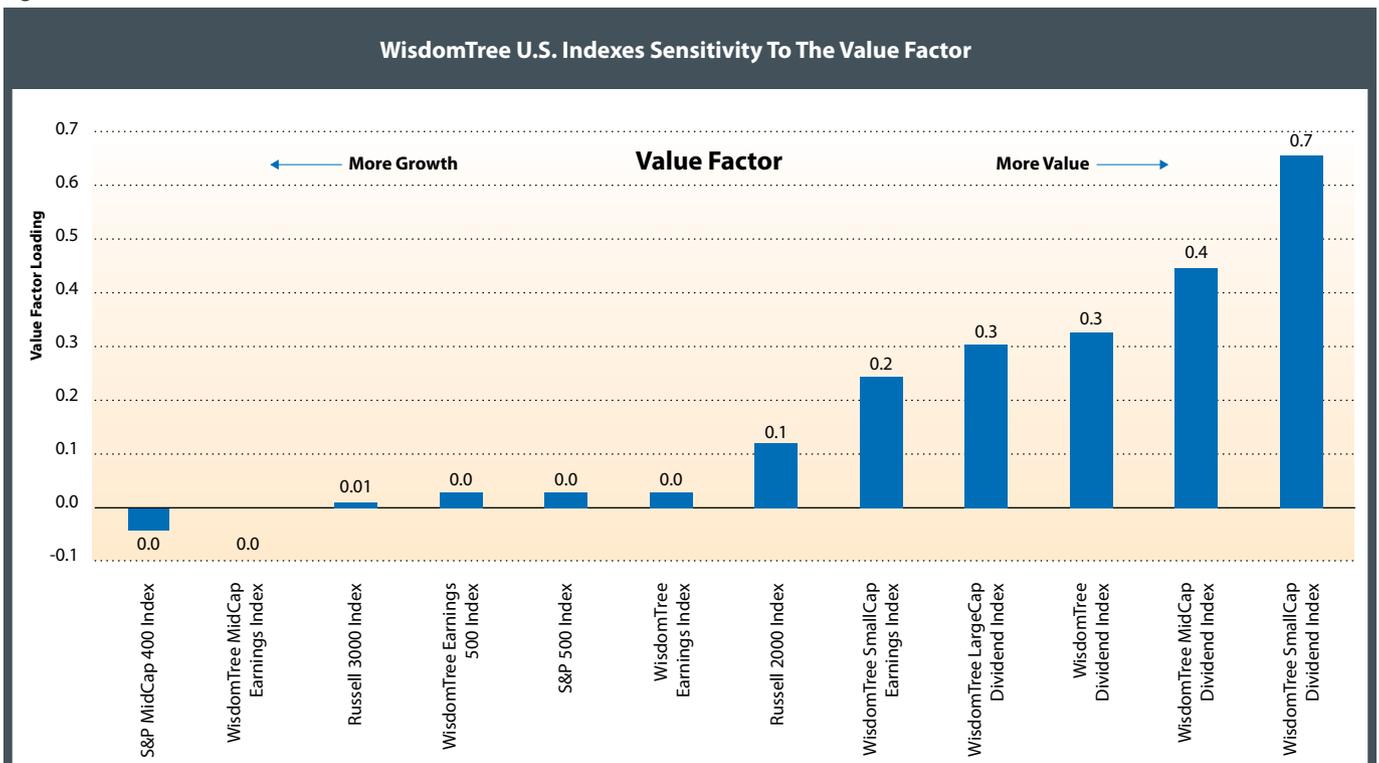
To recap, over the last seven to eight years, we have seen fundamentally weighted indexes generate excess returns in the U.S., developed and emerging worlds, often in environments where growth stocks beat value stocks. So how do we explain these excess returns, if they are not satisfactorily explained by beta, size, value or even momentum?

If one believes risk premia drive returns, one explanation could be that fundamentally weighted indexes are accessing another risk premium—or yet-to-be-discovered risk premia—to a degree the cap-weighted indexes are not. If one believes that ultimately the total return of any equity market can be deconstructed to three elements—the starting dividend yield, the growth of aggregate dividends and changes in valuation—then the answer may be that weighting by dividends or earnings creates a sustainable advantage in a plurality of these three elements over time relative to comparable cap-weighted indexes.

Let’s explore how these two separate explanations may converge around a simple word: profitability.

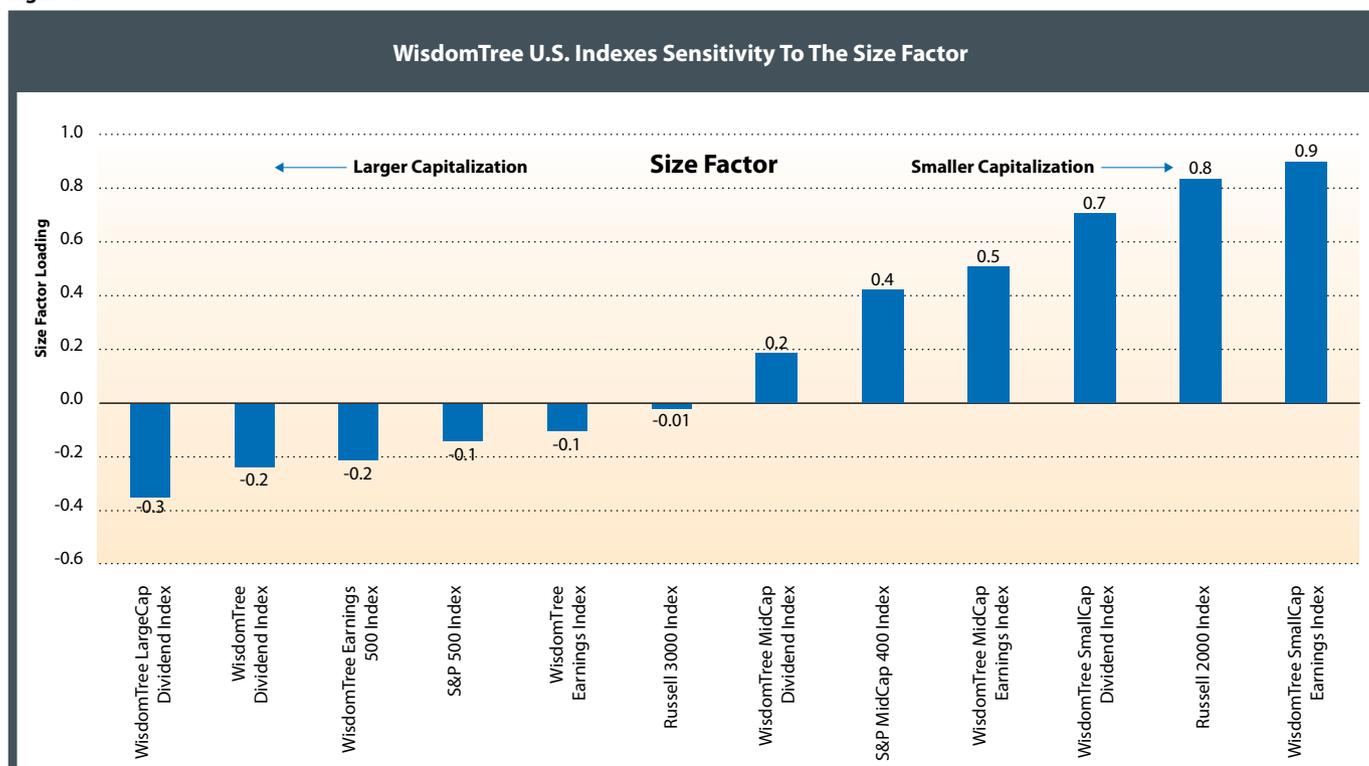
Intuitively, it’s not a leap to suggest that profits and profitability play a role in what we have observed. Companies need to be profitable to be weighted by earnings, and dividends are typically paid out of the retained earnings companies produce. Secondly, we know from history that

Figure 6



Sources: WisdomTree, Bloomberg, Zephyr StyleADVISOR. Kenneth French Data Library. Period 2/1/2007-12/31/2013 due to full history of live performance of WisdomTree Earnings indexes.

Figure 7



Sources: WisdomTree, Bloomberg, Zephyr StyleAdvisor, Kenneth French Data Library. Period 2/1/2007-12/31/2013 due to full history of live performance of WisdomTree Earnings indexes.

indexes that have included profitability screens as part of their initial selection process have generated higher returns over time than comparable indexes that haven't. For example, the S&P Midcap 400 Index (which requires companies be profitable at the time of inclusion) has outperformed the Russell Midcap Index (which doesn't) by 118 bps per year over the past 15 years. The S&P Small Cap 600 Index (which also includes the profitability screen) has beaten the Russell 2000 Index (which doesn't) by 219 bps on an annualized basis since March 31, 1999. It's possible other factors were at work, but these excess returns are consistent with profitability being a hidden driver of equity returns. In recent years, academics have been studying whether "profitability" or "quality" should be added to the list of possible "risk premia" to help explain returns that are not adequately explained by the use of three or even four factors. It would not surprise me if that new "return driver" ultimately resembles old-fashioned return on equity (ROE).

When we examine the aggregate portfolio characteristics of the WisdomTree Earnings indexes, we observe a "quality" advantage relative to the major cap-weighted indexes, if ROE and return on assets (ROA) can be viewed as proxies for quality.

We also see that in every instance in Figure 8, the WisdomTree index has an advantage with respect to earnings yield. This makes sense because rebalancing equity markets and weighting by earnings typically results in the WisdomTree earnings indexes exhibiting lower P/E ratios than comparable cap-weighted indexes. Having lower aggregate P/E ratios—or high earnings yields—may provide the WisdomTree indexes an advantage in capturing more of the market's change in valuation during periods

when P/E ratios expand or dividend yields decline. But higher earnings yields also give WisdomTree's earnings-weighted indexes an advantage in terms of earnings retention, as these indexes typically have starting dividend yields comparable to the market. (As a refresher: Dividend yield divided by earnings yield equals the "dividend payout ratio," and 1 minus the payout ratio indicates how much of the earnings generated by a company are retained.) Over time, if the WisdomTree earnings-weighted indexes have higher ROE *and* higher earnings retention, they should be able to generate faster dividend growth, as ROE multiplied by earnings retention is a good proxy for how fast a company—or an index—can increase dividend growth in the future.

When we deconstruct index returns over the past five years (Figure 9), we find exactly that. The WisdomTree SmallCap Earnings Index generated more than 609 bps of excess returns relative to its performance benchmark, the Russell 2000. Of that, 348 bps came from faster aggregate dividend growth, with another 255 bps coming from changes in valuation. With a starting dividend yield just 15 bps higher than that of the S&P MidCap 400, the WisdomTree MidCap Earnings Index grew aggregate dividends nearly 2 percentage points faster than its cap-weighted peer. An additional 290 basis points of excess return resulted from capturing more of the market's change in overall valuation.

Viewed through this prism, WisdomTree's core U.S. small- and midcap indexes may have outperformed traditional beta indexes because they did a better job accessing a "profitability" premium embedded in the market. As a reminder, stocks were not selected because they ranked

Figure 8

## Index Characteristics As Of 3/31/2014

	WT SmallCap Earnings	Russell 2000	WT Midcap Earnings	S&P Midcap 400	WT Earnings 500	S&P 500	WT Earnings Index	Russell 3000
<b>P/E Ratio</b>	16.40x	25.82x	16.64x	19.63x	14.61x	15.97x	14.81x	16.98x
<b>Long-Term Earnings Growth</b>	9.75%	10.92%	10.37%	9.70%	7.01%	8.16%	7.25%	8.45%
<b>Dividend Yield</b>	1.23%	1.35%	1.53%	1.41%	2.03%	1.94%	1.96%	1.83%
<b>Earnings Yield</b>	6.10%	3.87%	6.01%	5.09%	6.85%	6.26%	6.75%	5.89%
<b>Earnings Retention</b>	79.78%	65.18%	74.52%	72.39%	70.40%	68.95%	70.97%	68.85%
<b>ROE</b>	11.95%	9.70%	15.32%	14.24%	19.43%	18.15%	14.92%	12.14%
<b>ROA</b>	5.56%	4.29%	6.60%	5.89%	7.50%	7.00%	6.37%	5.04%
<b>Leverage</b>	2.15x	2.26x	2.32x	2.42x	2.59x	2.59x	2.34x	2.41x
<b>ROE x Earnings Retention</b>	9.53%	6.32%	11.42%	10.31%	13.68%	12.51%	10.59%	8.36%

Source: WisdomTree

Past performance is not indicative of future results.

high for ROE or ROA, or were projected to have high earnings growth or high earnings retention. WisdomTree simply excluded unprofitable companies and weighted by earnings. This is important because this simple and systematic index methodology limits stock selection risk, helps to create a more representative barometer of the mid- and small-cap asset classes, and increases the investment capacity of the underlying index. By keeping the indexes broad, and allowing them to include stocks that would normally qualify for value, core and growth indexes, this methodology may also give each index a better chance to access and extract return premiums from a combination of risk factors based on its own internal logic, governed by relative valuation, rather than human intervention.

Put another way, the reason the WisdomTree SmallCap Earnings Index beat comparable small-cap core, value and growth indexes over the past seven years may well be because it did a better job of accessing the small-cap size premium, the value premium and the “profitability” premium, compared with indexes weighted by market value that are limited in their ability to do so because they never rebalance back to any measure of relative value. I believe this distinction goes to the heart of what makes smart-beta indexes fundamentally different from traditional cap-weighted indexes.

### An Old Truth Takes On A New Life

Smart-beta strategies may try to add value by providing more precise exposure to different risk premiums. But by changing the way indexes are weighted, they also seek to capitalize on a flaw that astute observers have argued afflicts the very heart of the cap-weighted index. If fundamentally weighted indexing has a father, it is the man who seeded the following thoughts in an interview published in Pension & Investments nearly a quarter century ago:

*“Stocks are not always fairly valued, at any given time there’ll be some stocks that sell below fair value and some that sell above fair value. The problem is finding which is which...The ones that are overvalued have more*

*capitalization than they would have if they sold at fair value and the ones that are undervalued have less capitalization. Therefore any cap-weighting scheme like an index fund will, almost by definition, mathematically over-weight the overvalued stocks and underweight the undervalued stocks. If you assume prices eventually will tend toward fair value, that would make an index fund a suboptimal portfolio. Our idea is to weight using another measure that is a better representation of the economic importance of the company.”<sup>2</sup>*

Robert Jones, former managing director and head of quantitative equities at Goldman Sachs, actually made the case for earnings-weighted strategies in 1990. To extend Jones’ example, relax for a moment. Close your eyes and imagine your favorite index. Visualize the stock prices that drive your index returns. See them levitating before you, suspended in midair, trying to align with the fair value of their underlying company, a value that can never be perfectly known except perhaps in hindsight. Now turn your attention to the cap-weighted mechanism itself, which acts like a magnetic field, magnetizing stock prices and market capitalizations. Watch as companies, sectors and countries with high market caps get pulled toward the top of the index and rewarded with larger weights, while those with smaller market caps get repelled toward the lower end, and diminished with lower weights.

Open your eyes and think about what that means. If there is any error in the stock price, a capitalization-weighted index has also magnetized that error, and incorporated it systematically into its index weights. By contrast, indexes that sever the link between stock price and weight—as equally weighted, fundamentally weighted and other smart-beta indexes do—will not systemically incorporate mispricing into component weights; instead, they will be randomly distributed. If this error lasts for months or years—which is often the case during stock bubbles—a capitalization-weighted index becomes the perfect weighting mechanism to capture the bubble in its entirety, magnifying risk for future investors.

Figure 9

Deconstruction Of Index Returns (March 31, 2009-March 31, 2014)					
	Starting Dividend Yield	Dividend Growth	Return From Valuation Changes	Total Return	Ending Dividend Yield
WisdomTree Earnings Index	3.37%	6.87%	12.21%	22.45%	1.90%
WisdomTree Earnings 500 Index	3.51%	6.04%	11.85%	21.40%	1.99%
WisdomTree MidCap Earnings Index	2.52%	11.66%	15.64%	29.83%	1.28%
WisdomTree SmallCap Earnings Index	2.31%	11.68%	16.41%	30.40%	1.14%
Russell 3000 Index	3.20%	6.52%	12.21%	21.93%	1.80%
S&P 500 Index	3.37%	6.32%	11.47%	21.16%	1.95%
S&P MidCap 400 Index	2.37%	9.75%	12.74%	24.86%	1.34%
Russell 2000 Index	2.25%	8.20%	13.86%	24.31%	1.20%

Source: WisdomTree. Past performance is not indicative of future results.

Common sense and our shared behavioral experience tell us that bubbles do occur, and therefore, that pricing error has existed and can exist.

Dogmatic devotees of efficient market theory may argue that bubbles are impossible because stock prices are always efficiently priced. But if our memories can extend to the tech, telecom and Internet mania in the U.S. of the late 1990s, or the euphoria demonstrated by those willing to pay 200 times for Japan’s dividend stream in the late 1980s, common sense and our shared behavioral experience tell us that such bubbles do occur, and therefore, that pricing error has existed and can exist. The subpar investment returns generated by the S&P 500 since March 2000 (4.2 percent) and by the MSCI EAFE Index since 1989 (5.1 percent) are the residue of that reality.

### Explore The Core

If you are not among the passively preoccupied and are just tuning into this “smart beta” debate, the discussion may seem a little unruly. On the one side stand the defenders of the tried-and-true indexing strategies that served investors well for several decades—the “cap-weighted” crowd. On the other, the “smart-beta” crowd: a cacophony of new voices, advocating what at times feels like active strategies, wrapped up in indexes, ranging from low volatility to high beta, momentum to quality, dividend yielders to dividends growers, equal-weighted to multifactor. With the media serving as a kind of Greek chorus, cautioning the buyer to beware, it’s easy to see how subtle distinctions can get lost in the shuffle.

New ideas deserve scrutiny. Certainly, the excess

returns described herein did not occur every year of every market we have measured. And while the significance of the excess returns described in this article still may need more time to provide statisticians with enough confidence to declare these “statistically significant” results, we believe the differentials are large enough to shake confidence in the notion that the cap-weighted approach is optimal.

But skepticism should also not cloud us from seeing the big picture.

If most active managers, after fees and expenses, fail to outperform the core beta benchmarks for most asset classes, the use of low-fee exchange-traded funds or index funds that provide such access can make a great deal of sense. But if the underlying capitalization-weighted indexes designed to provide the equity market’s beta returns are, on average, costing investors 1 to 2 percentage points each year, the implications for investors—in the U.S., Europe and Asia—are massive. If that is the “drag” created over time by traditional cap-weighted indexes—if a \$1 trillion mistake is being made at the heart of the global ETF industry—then, rather than trying to add excess return in the periphery of the portfolio with tactical strategies or active managers, investors may actually wish to “explore the core” of their portfolios in search of passively generated excess returns—or, at a minimum, a better kind of beta.

If it’s better and smarter, all the better. At the end of the day, better beta may be in the eye of the beholder.

### Endnotes

<sup>1</sup> Andrew Clare et al. “An Evaluation of Alternative Equity Indices Part 2: Fundamental Weighting Schemes,” Cass Business School, March 2013

<sup>2</sup> Source: “Earnings basis for weighting stock portfolios,” Interview with Robert Jones, Goldman Sachs Asset Management, Pension & Investments, Aug. 6, 1990.

## IMPORTANT INFORMATION

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, call 1-866-909-WISE (9473) or visit [wisdomtree.com](http://wisdomtree.com). Read the prospectus carefully before you invest.

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Dividends are not guaranteed and a company's future abilities to pay dividends may be limited. A company currently paying dividends may cease paying dividends at any time. Ordinary brokerage commissions apply.

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WIS006729 (6/2015)

## GLOSSARY

**Active Manager:** Portfolio managers who run funds that attempt to outperform the market by selecting those securities they believe to be the best.

**Alpha:** Measure of risk-adjusted performance that compares how the constituents move relative to a benchmark.

**Basis point (bps):** 1/100th of 1 percent.

**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.

**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 the opposite direction.

**Dividend Yield:** a financial ratio that shows how much a company pays out in dividends each year relative to its share price.

**Earnings Retention:** Proportion of a firm's earnings that are not paid out to shareholders in the form of a dividend but rather reinvested back into the business. Higher numbers indicate a greater percentage of earnings are being reinvested.

**Earnings Yield:** The earnings per share for the most recent 12-month period divided by the current market price per share. The earnings yield (which is the inverse of the P/E ratio) shows the percentage of each dollar invested in the stock that was earned by the company.

**Fundamental Weighting:** A type of equity index in which components are chosen based on fundamental criteria as opposed to market capitalization. Fundamentally weighted indexes may be based on fundamental metrics such as revenue, dividend rates, earnings or book value.

**Information Ratio:** A risk-adjusted return measure calculated by taking the excess return against the benchmark and dividing by the tracking error.

**Leverage:** Total assets divided by equity. Higher numbers indicate greater borrowing to finance asset purchases; leverage can tend to make positive performance more positive and negative performance more negative.

**Market Capitalization:** 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.

**Market Factor:** Any external agent that affects the demand for or the price of a good or service.

**Momentum:** The rate of acceleration of a security's price or volume.

**P/E Ratio:** Share price divided by earnings per share. Lower numbers indicate an ability to access greater amounts of earnings per dollar invested.

**Return on Assets:** Firm profits (after accounting for all expenses) divided by the firm's total assets. Higher numbers indicate greater profits relative to the level of assets utilized to generate them.

**Return on Equity:** Measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested.

**Risk Premia:** Equity investments are not risk free, but it is thought that investors buy stocks because the returns they expect are high enough to allow them to take the risk.

**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.

**Size Factor:** The amount of shares that are bid for and offered that can be seen by looking at the quote.

**Standard deviation:** Measure of how widely an investment or investment strategy's returns move relative to its average returns for an observed period. A higher value implies more "risk", in that there is more of a chance the actual return observed is farther away from the average return.

**Tracking Error:** A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark.

**Value Factor:** Characterized by lower price levels relative to fundamentals, such as earnings or dividends. Prices are lower because investors are less certain of the performance of these fundamentals in the future.

**Volatility/Standard Deviation:** A measure of the dispersion of actual returns around a particular average level.

## INDEX DEFINITIONS

**MSCI EAFE Index:** Captures large and mid cap representation across 21 of 23 Developed Markets (DM) countries around the world, excluding the US and Canada. All securities in the index are classified in the Financials sector as per the Global Industry Classification Standard.

**MSCI EAFE Growth Index:** Market capitalization-weighted subset of stocks within the MSCI EAFE Index that have higher share prices relative to their earnings or dividends per share.

**MSCI EAFE Small Cap Index:** A free float-adjusted market capitalization equity index that captures small-cap representation across developed market countries around the world, excluding the U.S. and Canada.

**MSCI EAFE Value Index:** Market capitalization-weighted subset of stocks within the MSCI EAFE Index that have lower share prices relative to their earnings or dividends per share.

**MSCI Emerging Markets Index:** a broad market cap-weighted Index showing performance of equities across 21 emerging market countries defined as "emerging markets" by MSCI.

**MSCI Emerging Markets Small Cap:** Includes small cap representation across 21 Emerging Markets countries. The small cap segment tends to capture more local economic and sector characteristics relative to larger Emerging Markets capitalization segments.

**Russell 1000 Value Index:** A measure of the large-cap value segment of the U.S. equity universe, selecting from the Russell 1000 Index.

**Russell 2000 Index:** measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 is a subset of the Russell 3000 Index representing approximately 10% of the total market capitalization of that index. It includes approximately 2000 of the smallest securities based on a combination of their market cap and current index membership.

**Russell 2000 Value Index:** measures the performance of small-cap value segment of the U.S. equity universe. It includes those Russell 2000 Index companies with lower price-to-book ratios and lower forecasted growth values.

**Russell 3000 Index:** Measures the performance of the 3,000 largest U.S. companies based on total market capitalization.

**Russell 3000 Growth Index:** Measures the performance of the Russell 3000 Index constituents with growth characteristics.

**Russell 3000 Value Index:** Measures the performance of the Russell 3000 Index constituents with value characteristics.

**Russell Mid Cap Index:** The Russell Midcap Index measures the performance of the mid-cap segment of the U.S. equity universe. The Russell Midcap is a subset of the Russell 1000 Index. It includes approximately 800 of the smallest securities based on a combination of their market cap and current index membership.

**S&P 500 Index:** Market capitalization-weighted benchmark of 500 stocks selected by the Standard and Poor's Index Committee designed to represent the performance of the leading industries in the United States economy.

**S&P Mid Cap 400 Index:** provides investors with a benchmark for mid-sized companies. The index covers over 7% of the U.S. equity market, and seeks to remain an accurate measure of mid-sized companies, reflecting the risk and return characteristics of the broader mid-cap universe on an on-going basis.

**S&P Small Cap 600 Index:** Market capitalization-weighted measure of the performance of small cap equities within the United States, with constituents required to demonstrate profitability prior to gaining initial inclusion.

**WisdomTree DEFA Index:** The Index measures the performance of dividend paying stocks outside financials sector. It is comprised of the 10 largest stocks selected by float adjusted market capitalization in each sector except financials, selected from a universe of Chinese companies with at least \$1 billion of float-adjusted market capitalization.

**WisdomTree Dividend Index:** Measures the performance of dividend-paying companies incorporated in the United States that pay regular cash dividends and meet WisdomTree's eligibility requirements. Weighted by indicated cash dividends.

**WisdomTree Earnings Index:** Fundamentally-weighted index that measures the performance of earnings-generating companies within the broad U.S. stock market.

**WisdomTree Earnings 500 Index:** A fundamentally weighted index that measures the performance of earnings-generating companies within the large-capitalization segment of the U.S. Stock Market. Companies in the index are incorporated and listed in the U.S and have generated positive cumulative earnings over their most recent four fiscal quarters prior to the index measurement date. The index is comprised of the 500 largest companies ranked by market capitalization in the WisdomTree Earnings Index.

**WisdomTree Emerging Markets Dividend Index:** A cash dividend-weighted Index measuring the performance of dividend-paying equities incorporated within emerging markets.

**WisdomTree Emerging Markets SmallCap Dividend Index:** A subset of the WisdomTree Emerging Markets Dividend Index measuring the performance of the smallest firms by market capitalization weighted by cash dividends.

**WisdomTree International SmallCap Dividend Index:** A fundamentally weighted index measuring the performance of the small-capitalization segment of the US dividend-paying market. The Index is comprised of the companies that compose the bottom 25% of the market capitalization of the WisdomTree Dividend Index after the 300 largest companies have been removed. The index is dividend weighted annually to reflect the proportionate share of the aggregate cash dividends each component company is projected to pay in the coming year, based on the most recently declared dividend per share.

**WisdomTree LargeCap Dividend Index:** Measures the performance of the 300 largest companies in the WisdomTree Dividend Index ranked by market capitalization. Weighting is by indicated cash dividends.

**WisdomTree MidCap Dividend Index:** A fundamentally weighted index that measures the performance of the mid-capitalization segment of the U.S. dividend-paying market. The Index comprises the companies that constitute the top 75% of the market capitalization of the WisdomTree Dividend Index after the 300 largest companies have been removed. The index is dividend weighted annually to reflect the proportionate share of the aggregate cash dividends each component company is projected to pay in the coming year, based on the most recently declared dividend per share.

**WisdomTree MidCap Earnings Index:** Fundamentally-weighted index that measures the performance of the top 75% of the market capitalization of the WisdomTree Earnings Index after the 500 largest companies have been removed.

**WisdomTree SmallCap Dividend Index:** A fundamentally weighted index measuring the performance of the small-capitalization segment of the U.S. dividend-paying market. The Index comprises the companies that constitute the bottom 25% of the market capitalization of the WisdomTree Dividend Index after the 300 largest companies have been removed. The Index is dividend weighted annually to reflect the proportionate share of the aggregate cash dividends each component company is projected to pay in the coming year, based on the most recently declared dividend per share.

**WisdomTree SmallCap Earnings Index:** measures the performance of earnings-generating companies within the small-capitalization segment of the U.S. Stock Market. The index is comprised of the companies in the bottom 25% of the market capitalization of the WisdomTree Earnings Index after the 500 largest companies have been removed.