

Generating Passive Alpha in the Core of a Portfolio

Analyzing the 10-Year Real-Time Results from WisdomTree's U.S. Earnings Indexes

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Ten years is a significant period. In June 2016, WisdomTree reached its first 10-year milestone when its original family of Dividend Indexes obtained a critical juncture of live performance history. In February 2017, the WisdomTree Earnings Index family also reached a 10-year anniversary. In this paper, we will:

- + Examine the philosophical and fundamental underpinnings for the creation of the WisdomTree fundamentally weighted¹ Indexes
- + Showcase the impressive performance track record generated
- + Indicate the factors² that we believe drove this performance
- + Conclude with how we think these strategies fit into the U.S. equity market context today

While many factor or "smart beta"³ indexes exist today, we emphasize that few have a full 10 years of live performance upon which to judge the effectiveness of their approaches. The results thus far indicate a capability to generate low-cost and passive alpha⁴ in the core building blocks of a portfolio.

THE "NOISY MARKET HYPOTHESIS" & BUBBLE AVOIDANCE

Wharton finance Professor Jeremy Siegel developed a theory—the "Noisy Market Hypothesis"—that provides rationale for why it is possible to develop indexes that can deliver added value over a market cap-weighted⁵ index. Most of the time, markets are micro-efficient⁶ at digesting new information. However, widespread evidence exists that markets can become overextended, allowing for bubbles⁷ to occur. Below, we show two of the great bubbles in recent history—U.S. technology in the late 1990s and Japan in the late 1980s. Market cap-weighted indexes, at the top of bubbles, become momentum⁸-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 prices.

¹ Fundamentally weighted: 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.

² Factors: Attributes that, based on fundamentals or share price behavior, are associated with higher returns.

³ Smart beta: A term for rules-based investment strategies that don't use conventional market cap weightings.

⁴ Passive alpha: Passive indexes take a rules-based approach with regular rebalancing schedules that are not changed due to market conditions, while alpha is a measure of risk-adjusted performance that compares how the constituents move relative to a benchmark.

⁵ Market cap weighted: Market cap = share price x number of shares outstanding. Firms with the highest values receive the highest weights.

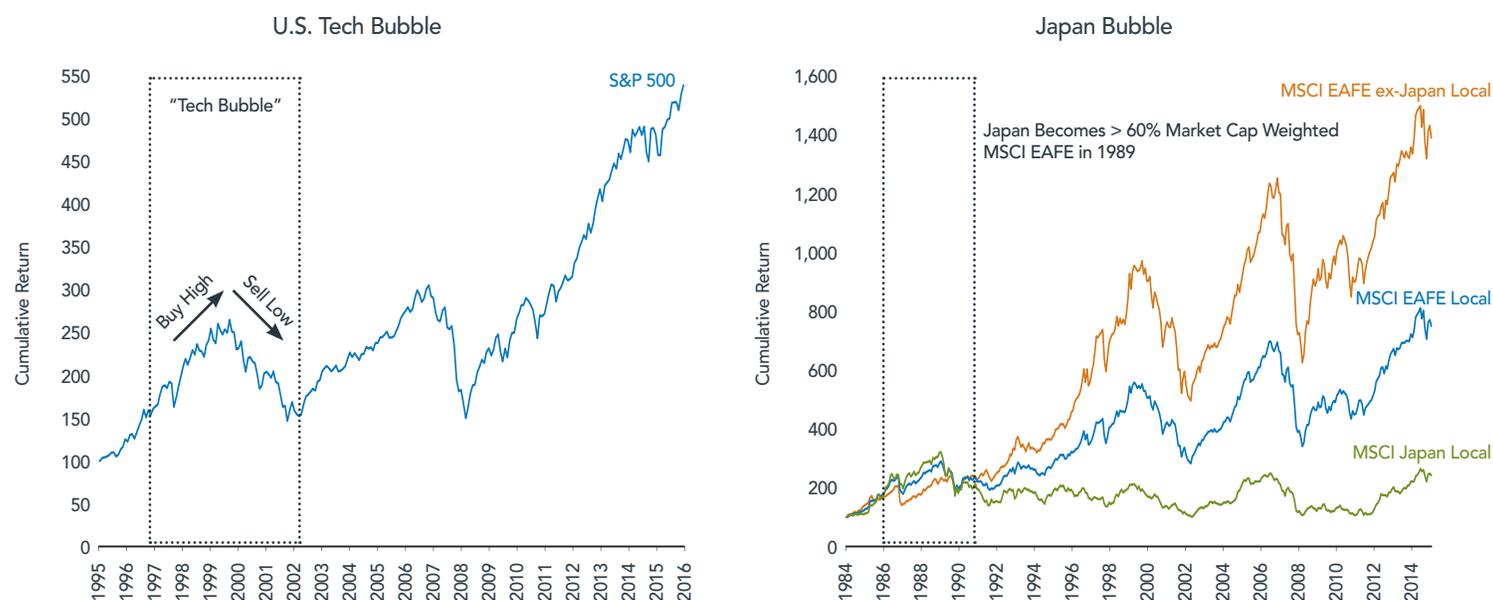
⁶ Efficient: Current share prices correctly reflect all available information about publicly traded firms and continually incorporate the emergence of new information on a nearly instantaneous basis; there are no bubbles, and firms are neither expensive nor inexpensive.

⁷ Bubble: When market participants drive stock prices above their "fair value" in relation to some system of stock valuation.

⁸ Momentum: Stocks characterized by high sensitivity to sentiment and perception of potential, with lower sensitivity to actual business operations.

Professor Siegel first became dissatisfied with market cap weighting during the tech bubble. He penned a Wall Street Journal article titled “Big Cap Tech Stocks Are a Sucker’s Bet”⁹ because he realized the 30% exposure the indexes had to technology could not be justified by a rational set of expectations. His research on value-oriented¹⁰ investment strategies—like sorting the market for low price-to-earnings (P/E) ratios¹¹—was one of his prescriptions in *The Future for Investors* for how to protect your portfolio from the drawdowns¹² that can occur after bubbles.

FIGURE 1: BUBBLES HAVE OCCURRED BEFORE



Sources: WisdomTree, Bloomberg, MSCI. U.S. Tech Bubble is for period 12/31/1995 to 12/31/2016. Japan Bubble is for period 12/31/1984 to 12/31/2016. You cannot invest directly in an index. Past performance is not indicative of future results.

DEVELOPING A VALUATION-SENSITIVE INDEXING APPROACH

Independently, 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 on 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 Indexes.

⁹ Source: Jeremy Siegel, “Big Cap Tech Stocks Are a Sucker’s Bet,” The Wall Street Journal, 3/14/00.

¹⁰ Value oriented: 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.

¹¹ 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.

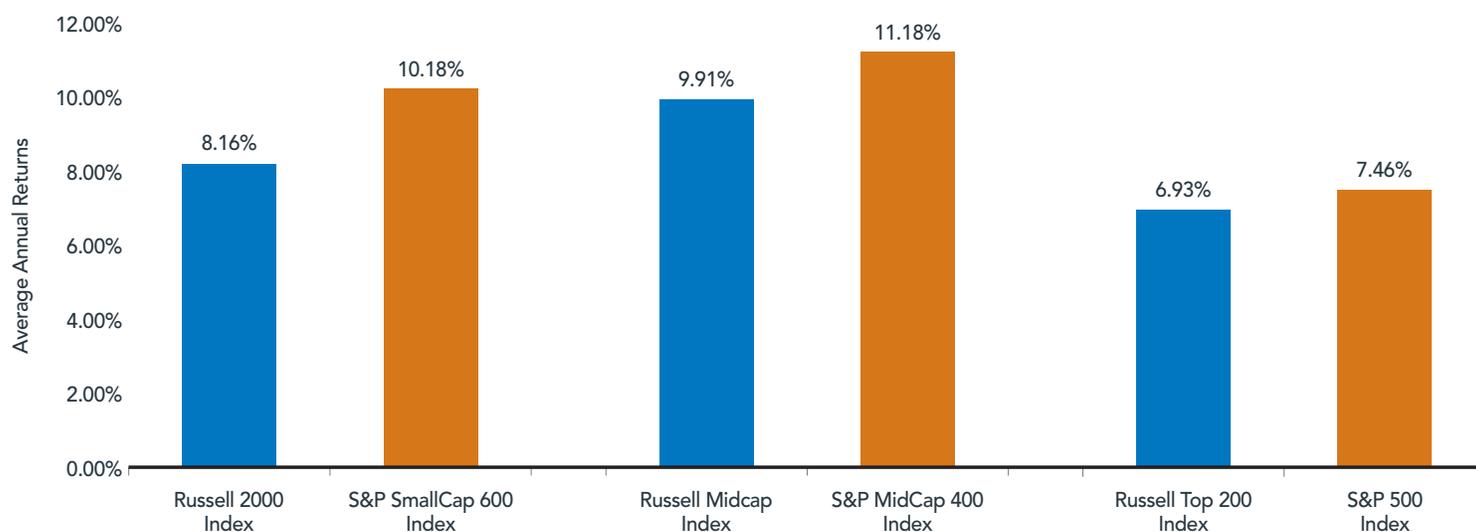
¹² Drawdowns: Periods of sustained negative trends of returns.

ALL INDEXES ARE NOT CREATED EQUALLY

One of the first notable observations in evaluating indexes is how, even from a market cap-weighted beta¹³ perspective, large differences in the returns to the U.S. market can arise depending on how you define “beta.”

Across time, S&P Indexes have tended to exhibit persistent outperformance compared to comparable Russell Indexes. We show the 20-year average annual returns in figure 2. While it is unlikely that the S&P will always outperform Russell, the consistent instances of long-run outperformance across large-, mid- and small-cap stocks, as well as the magnitudes, are enough to motivate research into why there are differences in returns even among traditional beta approaches.

FIGURE 2: OUTPERFORMANCE OF S&P OVER RUSSELL ACROSS LARGE CAPS, MID-CAPS AND SMALL CAPS



Sources: WisdomTree, Bloomberg, with data from 1/31/1997 to 1/31/2017, a 20-year period. You cannot invest directly in an index. Past performance is not indicative of future results.

+ Russell Methodology: The process begins with a very broadly inclusive approach defined by the Russell 3000E Index, which included 3,525 stocks as of December 31, 2016.¹⁴ The Russell Top 200 Index is created by selecting the largest 200 companies from this Index. Ranked by market capitalization, the Russell Midcap Index contains the 201st to 1,000th companies (therefore, 800 stocks). The Russell 2000 Index encompasses the 1,001st to 3,000th largest companies. Combined, the Russell Top 200 Index plus the Russell Midcap Index plus the Russell 2000 Index would equal the same constituents as the Russell 3000 Index. The Russell 3000E Index adds microcap stocks to the standard Russell 3000 Index.

+ S&P Methodology: An important difference in S&P’s methodology for determining stocks eligible for the S&P 500, S&P MidCap 400 and S&P SmallCap 600 Indexes is that “the sum of the most recent four consecutive quarters’ Generally Accepted Accounting Principles (GAAP)¹⁵ earnings (net income excluding discontinued operations) should be positive as should the most recent quarter.”¹⁶ Given that initial inclusion is in part determined by passing this “profitability test,” the S&P Indexes avoid more speculative companies right out of the gate.

¹³ 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.

¹⁴ Source: Russell 3000E Index factsheet as of 12/31/16.

¹⁵ Generally Accepted Accounting Principles (GAAP): Principles of accounting utilized in the U.S. that deal with different aspects and assumptions that are deemed acceptable in calculating the earnings of a firm.

¹⁶ “S&P U.S. Indices Methodology,” S&P Dow Jones Indices, 12/17.

We believe that this difference in selection explains the majority of the difference in long-term performance between the Russell Indexes and their comparable S&P Indexes covering the same market capitalization size segments. It also makes complete sense that the difference in annualized returns is larger between the S&P SmallCap 600 and the Russell 2000 Indexes than it is between the Russell Top 200 and the S&P 500 Indexes, as the proportion of speculative, unprofitable firms at any time would tend to be higher among small-cap stocks than large-cap stocks.

CRSP Methodology: While the CRSP Index series does not have a 20-year live track record we can audit, CRSP has gained greater recognition, largely due to Vanguard's adoption of the CRSP Indexes to serve as the basis for its passive approach. The eligible universe for the CRSP Indexes is similar in breadth to the Russell 3000E Index, having 3,562 companies as of December 31, 2016.¹⁷ From this Index, the CRSP U.S. Large Cap Index includes U.S. companies that make up the top 85% of the market cap, the CRSP U.S. Mid Cap Index comprises companies that fall between 70% and 85% of the market cap and the CRSP U.S. Small Cap Index comprises companies that fall between the bottom 2% and 15% of the market cap. It is notable that the CRSP Indexes discussed here have an inception date of March 31, 2011, making a long-term study of live performance results difficult. For this reason, we have omitted them from the 20-year average annual returns we display in figure 2.¹⁸

Critical Point: While CRSP and Russell represent the more broadly inclusive approaches, and while all three families weight constituents based on their market value, S&P's Indexes are different: They tend to exclude the more speculative, unprofitable segment of the market. We found this interesting as a potential risk¹⁹-control measure in a passive core index, and it was an element that we also built into our construction process for the Earnings Indexes.

WISDOMTREE'S FAMILY OF EARNINGS-WEIGHTED INDEXES

On February 1, 2007—more than a full decade ago—WisdomTree launched its earnings-weighted²⁰ family of Indexes. We will show how this methodology incorporates the following attributes:

- 1. Valuation-Sensitive Rebalancing:** The rebalance itself has potential to help provide a “bubble-avoidance vehicle” by implementing a disciplined rebalancing mechanism of stocks and sectors on the basis of relative value.
- 2. Quality²¹ Improvement:** Taking S&P's stance on financial viability in its index construction a step further, not only do the WisdomTree Indexes require profitability on initial inclusion but also on an ongoing basis at each annual rebalance. Furthermore, WisdomTree further differentiates its approach by weighting index components based on the earnings they've generated, rather than weighting stocks based on their market value.

¹⁷ Source: CRSP U.S. Total Market Index factsheet as of 12/31/16.

¹⁸ Sources: Respective CRSP U.S. Large Cap, Mid Cap and Small Cap Index factsheets as of 12/31/16.

¹⁹ Risk: Also “standard deviation,” which measures the spread of actual returns around an average return during a specific period. Higher risk indicates greater potential for returns to be farther away from this average.

²⁰ Earnings weighted: Earnings for all constituents in an index are added together, and individual constituents are subsequently weighted by their proportional contribution to that total.

²¹ Quality: Related to lower levels of debt, higher return on equity or greater stability of earnings.

WHAT IS THE "EARNINGS STREAM"?

WisdomTree's *Earnings Stream* utilizes the concept of "core earnings," which comes from a calculation done by Standard & Poor's. Specifically, the core earnings concept starts with income before extraordinary items and then makes adjustments²² in order to get closer to a measure of earnings from continuing, regular operations and away from one-time distortions brought on by extraordinary events.

FIGURE 3: LARGEST "CORE EARNERS" OF 2016

Company Name	2015 Earnings (\$ B)	2016 Earnings (\$ B)	Percentage of 2016 Earnings Stream	Price-to-Earnings Ratio
Apple Inc.	\$53.39	\$45.33	4.18%	13.1x
Berkshire Hathaway B	\$22.32	\$23.26	2.14%	8.7x
JP Morgan Chase & Co	\$24.35	\$21.34	1.97%	13.6x
Wells Fargo & Co	\$21.62	\$20.82	1.92%	12.8x
Alphabet Inc A	\$14.69	\$19.07	1.76%	12.0x
Microsoft Corp	\$15.30	\$16.87	1.56%	27.8x
Johnson & Johnson	\$14.81	\$16.51	1.52%	18.4x
Bank of America Corp	\$15.37	\$15.73	1.45%	13.7x
AT&T Inc	\$6.65	\$15.26	1.41%	15.6x
Gilead Sciences Inc	\$16.93	\$15.08	1.39%	6.5x
Sum/Average	\$205.43	\$209.26	19.29%	12.4x

Sources: WisdomTree, Standard & Poor's, with data as of the 11/30/16 index screening date. Universe includes the top 10 2016 generators of core earnings from within the WisdomTree Earnings Index. Differences in totals due to rounding. The total Earnings Stream for the WisdomTree Earnings Index as of the November 30, 2016 Index Screening Date was \$1,084.71 billion. You cannot invest directly in an index. Holdings subject to change.

- + Selection:** The most critical selection criterion for any of WisdomTree's Earnings Indexes is that a company must have positive core earnings, as defined by the sum of the quarterly core earnings for the four quarters prior to the annual screening date, which is November 30 of each year.
- + Weighting:** For each WisdomTree Earnings Index, one would be able to come to a sum of the core earnings for all constituents in that Index. Each company would then be weighted in accordance with its proportionate contribution to that total.
 - Example: In 2016, Apple had core earnings of slightly more than \$45.3 billion. Adding up the core earnings of the WisdomTree Earnings Index—WisdomTree's most broadly inclusive earnings index—we get approximately \$1.08 trillion. So 45.3 billion/1.08 trillion = approximately 4.2%, meaning that Apple contributed 4.2% of the total and would therefore get a 4.2% weight.
 - One of the benefits of weighting by earnings is that doing so typically lowers the PE ratio on the entire portfolio—by removing the role that stock multiples play in determining a company's market value. WisdomTree believes that investors en masse traditionally pay too much for future earnings, and that a systematic, rules-based way of rebalancing away from market sentiment can add value over time.

²² Specific adjustments include 1) implied option expenses, 2) gains or losses on sales of assets after taxes, 3) impairments of goodwill after taxes, 4) settlement after taxes, 5) reversal restructuring/acquisition after taxes, 6) core pension adjustments and 7) core post-retirement adjustments.

HOW RELATIVE VALUE REBALANCING WORKS

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

- + Rising P/E Multiples = Reduced Weight:** Companies whose stock prices increased compared to their peers but saw their earnings growth rates trail their peers would typically see reduced weight in WisdomTree Indexes at the annual rebalance. In a market cap-weighted index, however, the primary driver of weight is the relative price change driving a change in market capitalization.
- + Failing P/E Multiples = Increased Weight:** Companies whose stock prices fell while their earnings were flat or grew would typically see increased weight in WisdomTree earnings-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.

HOW BUBBLE AVOIDANCE BECOMES A NATURAL CONSEQUENCE

A consequence of weighting firms by earnings—thereby placing the highest weights in firms that delivered the greatest cumulative profits—is a lowering of the price-to-earnings ratio (or raising of the earnings yield²³) of the index compared to a similar market capitalization-weighted index. We indicate how this works in figure 4, which is a simplified hypothetical illustration.

FIGURE 4: AN ILLUSTRATION OF HOW WEIGHTING BY EARNINGS LOWERS THE P/E RATIO

Company	Market Cap (Millions)	Earnings Stream (Millions)	P/E Ratio	Market Cap-Weighted Approach			Earnings-Weighted Approach		
				Weight	Investment	P/E Ratio	Weight	Investment	P/E Ratio
A	200	40	5	17.39%	\$17,391		40.00%	\$40,000	
B	250	25	10	21.74%	\$21,739		25.00%	\$25,000	
C	700	35	20	60.87%	\$60,870		35.00%	\$35,000	
Totals	1150	100			\$100,000	11.50x		\$100,000	8.16x

Source: Hypothetical illustration from WisdomTree.

In the series of charts on the following pages, we show the historical consistency of this lower-P/E ratio approach across large-, mid- and small-cap indexes.

As we mentioned, we launched these Indexes a decade ago. In figures 5a, 5b and 5c, we indicate the P/E discount compared to a market cap-weighted universe meant to cover a comparable U.S. equity universe.

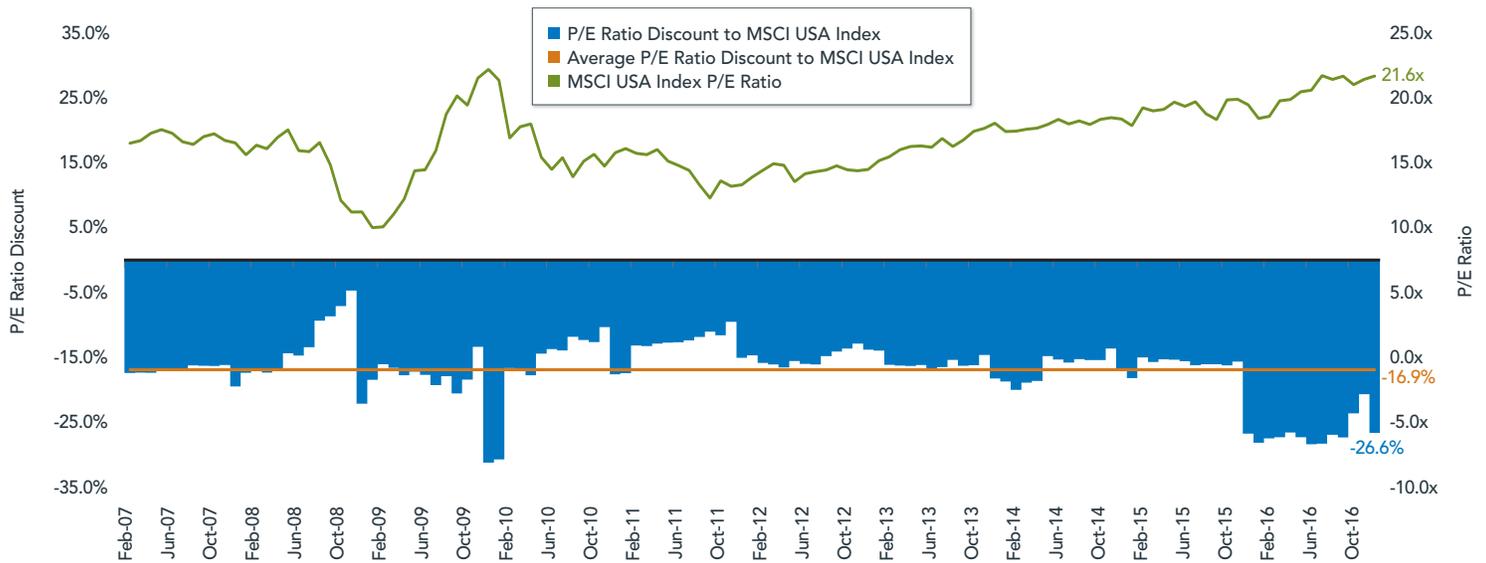
²³ Earnings yield: Earnings per share for the most recent 12-month period divided by the current market price per share. The earnings yield (which is the inverse of the P/E ratio) shows the percentage of each dollar invested in the stock that was earned by the company.

One of the important elements with this lower-P/E approach: The higher the market valuation multiples in a cap-weighted index, the greater the potential to lower the aggregate P/E ratio by earnings weighting the index. WisdomTree believes that starting with a valuation advantage—what we call owning the market at a more reasonable price—has contributed to the outperformance the WisdomTree earnings-weighted Indexes have delivered over the past decade.

We note that current valuations of the WisdomTree Earnings Index family, particularly in the large-cap space, are at some of the widest levels they've been since the Indexes were launched—indicating even greater potential for added value today than has existed during this 10-year history.

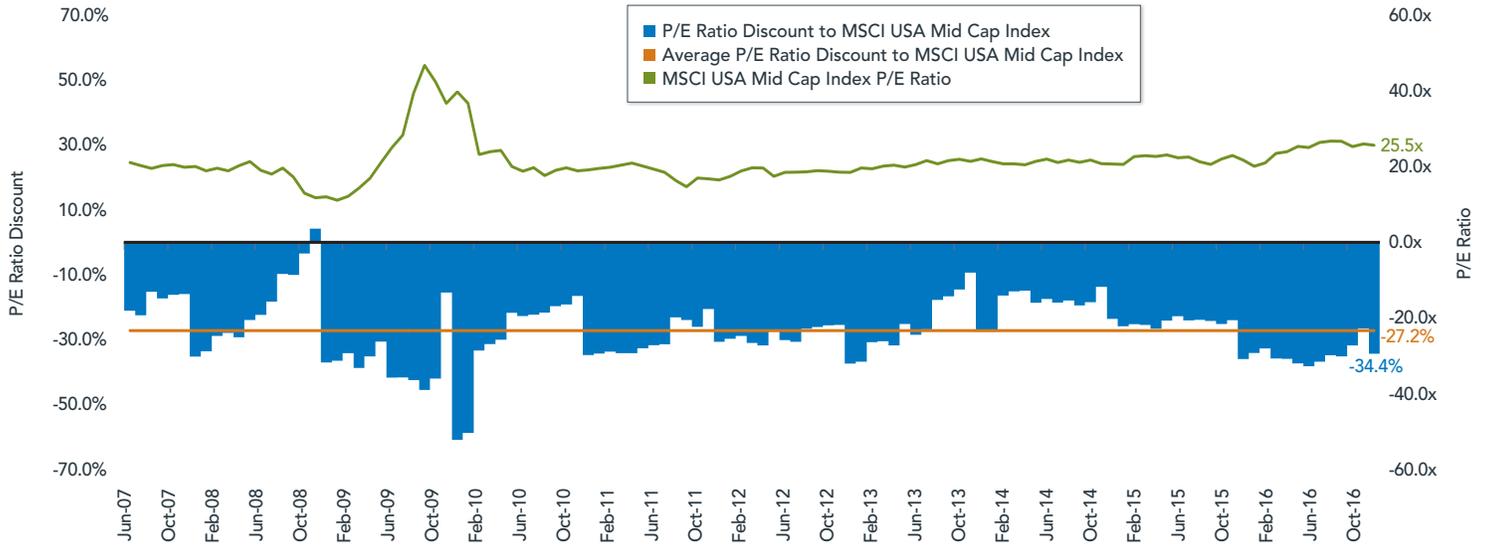
Small Caps Offered the Greatest Discount: Why is this? We noted earlier that in the small-cap space there would be the greatest proportion of firms with negative earnings over the prior 12 months. When firms in an index have negative earnings, the aggregate earnings per share for the index are lowered, and, absent any change in the Index price level, the P/E ratio is actually pushed up. WisdomTree's approach of eliminating firms with negative earnings tended to regularly introduce a lower P/E ratio.

FIGURE 5A: WISDOMTREE EARNINGS 500 INDEX P/E DISCOUNT



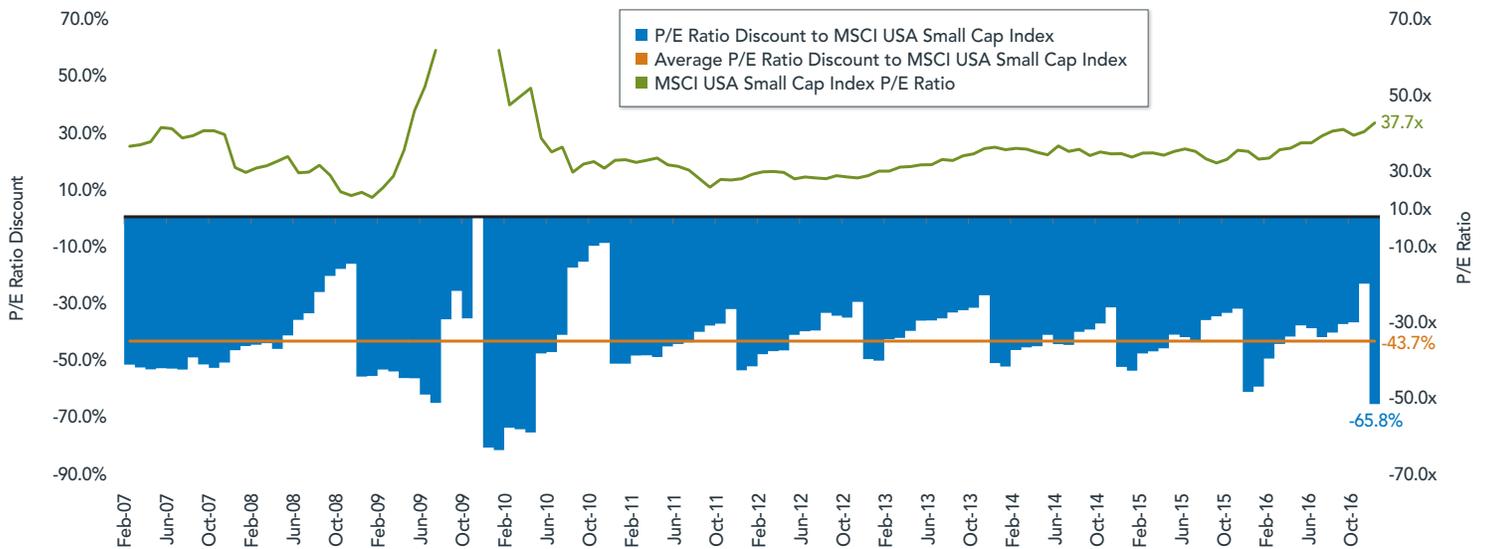
Sources: WisdomTree, MSCI, for the period 2/1/07 to 12/31/16. Past performance is not indicative of future results. You cannot invest directly in an index.

FIGURE 5B: WISDOMTREE MIDCAP EARNINGS INDEX P/E DISCOUNT



Sources: WisdomTree, MSCI, for the period 2/1/07 to 12/31/16. Past performance is not indicative of future results. You cannot invest directly in an index.

FIGURE 5C: WISDOMTREE SMALLCAP EARNINGS INDEX P/E DISCOUNT

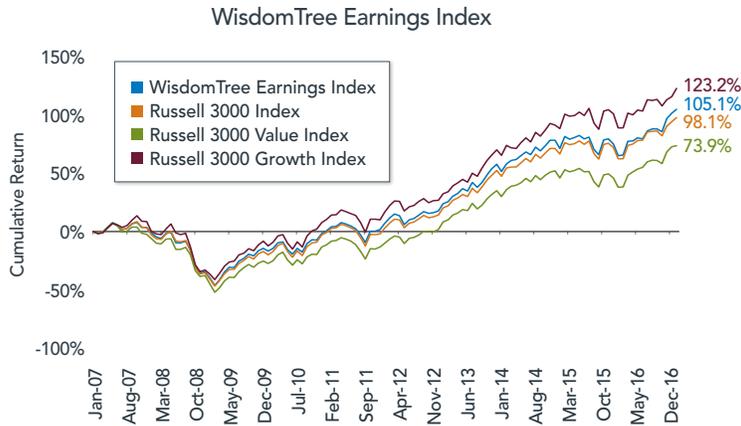


Sources: WisdomTree, MSCI, for the period 2/1/07 to 12/31/16. Past performance is not indicative of future results. You cannot invest directly in an index.

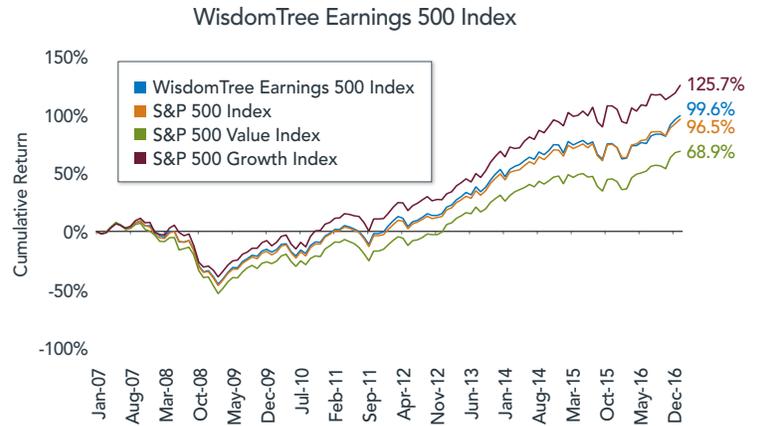
THE PROOF MUST BE IN THE PERFORMANCE

What we've seen in terms performance for WisdomTree's Earnings Indexes has been nothing short of astonishing. Over the last 10 years, each and every WisdomTree core earnings-weighted Index beat its comparable cap-weighted benchmark.

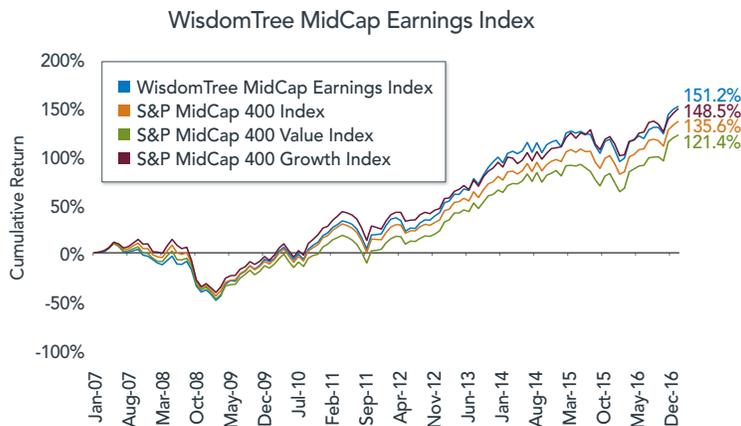
FIGURE 6: 10-YEAR RETURNS BEAT VALUE & CORE BENCHMARKS



Index Name	Avg. Ann. Return	Avg. Ann. Risk	Sharpe Ratio	Correlation to Russell 3000 Index
WisdomTree Earnings Index	7.45%	15.53%	0.43	0.99
Russell 3000 Index	7.07%	15.82%	0.40	1.00
Russell 3000 Value Index	5.69%	16.37%	0.30	0.98
Russell 3000 Growth Index	8.36%	15.81%	0.48	0.98



Index Name	Avg. Ann. Return	Avg. Ann. Risk	Sharpe Ratio	Correlation to S&P 500 Index
WisdomTree Earnings 500 Index	7.15%	15.09%	0.43	0.99
S&P 500 Index	6.99%	15.28%	0.41	1.00
S&P 500 Value Index	5.38%	16.51%	0.28	0.98
S&P 500 Growth Index	8.48%	14.79%	0.53	0.98



Index Name	Avg. Ann. Return	Avg. Ann. Risk	Sharpe Ratio	Correlation to S&P MidCap 400 Index
WisdomTree MidCap Earnings Index	9.65%	19.14%	0.47	0.98
S&P MidCap 400 Index	8.95%	18.06%	0.46	1.00
S&P MidCap 400 Value Index	8.27%	18.58%	0.41	0.99
S&P MidCap 400 Growth Index	9.53%	17.94%	0.49	0.99



Index Name	Avg. Ann. Return	Avg. Ann. Risk	Sharpe Ratio	Correlation to Russell 2000 Index
WisdomTree SmallCap Earnings Index	8.49%	22.08%	0.35	0.96
Russell 2000 Index	6.93%	20.14%	0.31	1.00
Russell 2000 Value Index	6.03%	20.28%	0.26	0.99
Russell 2000 Growth Index	7.73%	20.55%	0.34	0.99

Sources: WisdomTree, Bloomberg, with data from 2/1/07 (the first day of live calculation for the WisdomTree Earnings Indexes) to 1/31/17. You cannot invest directly in an index. 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. 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.

+ **Growth Beat Value:** Over this 10-year period, something that is immediately apparent—when looking at the total market, large caps, mid-caps or small caps—is that in each case the growth²⁴ index in that size segment outperformed the value index. Of course, the “core” index existed somewhere in between, as it would have included the full universe of both value and growth stocks.

- We just outlined how WisdomTree’s earnings strategies have a history of providing a P/E discount to comparable market capitalization-weighted benchmarks. Are these thereby in the “value” bucket? It’s an interesting question, and the performance results suggest that—even if there is a sensitivity to the value style—there is clearly something more going on that we will need to discuss later in this paper.

+ **Mid-Caps and Small Caps:** What’s particularly interesting here is that the WisdomTree MidCap and SmallCap Earnings Indexes actually outperformed not just the value and core benchmarks in their categories, but the growth benchmarks as well! What we know about this past decade is that growth was—by a significant margin—one of the strongest overall styles, and was therefore very tough to beat. The fact that this transpired while WisdomTree maintained a disciplined approach to valuation is, in a word, remarkable, given that growth strategies typically do not apply such a valuation-sensitive discipline.

HOW DID WISDOMTREE’S EARNINGS STRATEGIES GENERATE THIS IMPRESSIVE TRACK RECORD?

To answer this question, it is important to examine factor or risk premia. Investors searching for sustainable outperformance need to examine novel investment strategies in terms of the exposures they create to the premia that have traditionally been associated with explaining excess returns. Over the last 10 years, WisdomTree’s earnings-weighted strategies have generally tapped into:

1. The value premium, which is very intuitive given our earlier discussion about valuation discounts relative to market capitalization-weighted benchmarks.
2. The quality premium, which might seem less intuitive on its face, but has been no less important.

Then, when considering the WisdomTree MidCap and SmallCap Earnings Indexes, it’s also notable that the so-called “small cap” or “size” premium was accessed, at least in relation to the comparable market capitalization-weighted benchmarks that focus on the mid-cap and small-cap size segments of the market.

WisdomTree’s earnings family tends to be considered part of the core or blend category²⁵ when evaluated in various peer groups by firms such as Morningstar. That is because these Indexes include a broad cross-section of the market. But within that core part of the market are a few factor tendencies that also show up.

²⁴ Growth: Characterized by higher price levels relative to fundamentals, such as dividends or earnings. Price levels are higher because investors are willing to pay more due to their expectations of future improvements in these fundamentals.

²⁵ Core/blend: Characterized by exposure spanning stocks exhibiting both value and growth attributes.

FIGURE 7: FACTOR LOADINGS OF THE WISDOMTREE EARNINGS INDEXES RELATIVE TO MARKET CAPITALIZATION-WEIGHTED UNIVERSES

Index Developer	Total Market						Mid-Cap					
	Index Name	Market	Size	Value	Quality	Momentum	Index Name	Market	Size	Value	Quality	Momentum
WisdomTree	WisdomTree Earnings Index	0.98	-0.07	0.07	0.09	-0.06	WisdomTree MidCap Earnings Index	1.03	0.52	-0.03	0.19	-0.16
FTSE-Russell	Russell 3000 Index	1.02	-0.01	0.00	0.03	0.00	Russell MidCap Index	1.07	0.26	-0.11	0.01	-0.05
	Russell 3000 Value Index	0.98	-0.04	0.27	0.00	0.00	Russell MidCap Value Index	1.03	0.24	0.14	0.07	-0.06
	Russell 3000 Growth Index	1.05	0.02	-0.26	0.05	0.00	Russell MidCap Growth Index	1.10	0.28	-0.36	-0.03	-0.05
Standard & Poor's	S&P 1500 Composite Index	1.01	-0.06	0.03	0.05	0.00	S&P MidCap 400 Index	1.04	0.43	-0.06	0.07	-0.01
	S&P 1500 Composite Value Index	0.98	-0.07	0.27	-0.06	-0.03	S&P MidCap 400 Value Index	1.01	0.45	0.10	0.08	-0.04
	S&P 1500 Composite Growth Index	1.03	-0.06	-0.20	0.16	0.03	S&P MidCap 400 Growth Index	1.06	0.41	-0.22	0.05	0.02
Index Developer	Large Cap						Small Cap					
	Index Name	Market	Size	Value	Quality	Momentum	Index Name	Market	Size	Value	Quality	Momentum
WisdomTree	WisdomTree Earnings 500 Index	0.97	-0.16	0.07	0.07	-0.04	WisdomTree SmallCap Earnings Index	0.97	0.92	0.21	0.25	-0.24
FTSE-Russell	Russell Top 200 Index	0.99	-0.22	0.04	0.05	0.01	Russell 2000 Index	1.02	0.84	0.05	-0.06	0.03
	Russell Top 200 Value Index	0.96	-0.25	0.31	-0.03	0.01	Russell 2000 Value Index	0.97	0.79	0.39	0.10	0.03
	Russell Top 200 Growth Index	1.03	-0.19	-0.21	0.12	0.02	Russell 2000 Growth Index	1.06	0.89	-0.29	-0.22	0.03
Standard & Poor's	S&P 500 Index	1.01	-0.14	0.03	0.05	0.00	S&P SmallCap 600 Index	0.98	0.83	0.14	0.18	0.01
	S&P 500 Value Index	0.98	-0.15	0.29	-0.08	-0.04	S&P SmallCap 600 Value Index	0.98	0.83	0.30	0.21	-0.02
	S&P 500 Growth Index	1.03	-0.13	-0.21	0.17	0.03	S&P SmallCap 600 Growth Index	0.99	0.83	-0.01	0.15	0.03

Sources: WisdomTree, Kenneth French Data Library, Bloomberg, with data for period from 2/1/07 to 1/31/17. You cannot invest directly in an index. Market refers to the Mkt-Rf factor, with larger numbers indicating greater sensitivity to movements of the market. Size refers to the "SMB" or "Small-minus-Big" factor, with larger positive numbers indicating greater loading to small-cap stocks. Value refers to "HML" or "High-minus-Low" in the context of book value to market value, with larger positive numbers indicating greater loading to value stocks. Quality refers to "RMW" or "Robust-minus-Weak" in the context of operating profitability, with larger positive numbers indicating greater loading to stocks with higher operating profitability. Momentum refers to "MOM," with larger positive numbers indicating greater exposure to stocks with recent positive performance trends.

- + Value:** Two interesting observations: First, the value loading of the earnings indexes don't quite match the value loadings of the value variants of the market capitalization-weighted indexes; second, the value loading of the WisdomTree MidCap Earnings Index actually tilts slightly toward the growth side of the spectrum.
- + Quality:** It is of particular interest to focus on the mid-cap and small-cap universes, as this is where a wider spectrum of profitable and unprofitable companies would reside. If one looks at the Russell MidCap, MidCap Value and MidCap Growth Indexes, there is lower loading to quality than what we see with the S&P MidCap 400, MidCap 400 Value and MidCap 400 Growth Indexes. The same is true when looking at the Russell 2000, 2000 Value and 2000 Growth Indexes versus the S&P SmallCap 600, SmallCap 600 Value and SmallCap 600 Growth Indexes. Yet, in both the mid-cap and small-cap cases, the highest loading to quality came from the WisdomTree MidCap Earnings and SmallCap Earnings Indexes, within each specified grouping. That is exactly what we mentioned earlier: Russell is very broadly inclusive, S&P requires a measure of proven profitability prior to initial inclusion and WisdomTree requires profitability on an ongoing basis.

- + **Size:** Where we believe it counts—specifically in the mid-cap and small-cap size segments—the WisdomTree Earnings Index exhibited a higher loading to the size premium than the other market capitalization-weighted Indexes.
- + **Momentum:** We mentioned earlier in this paper that companies whose share prices outperform the growth of their earnings typically see reductions in weight at the annual rebalance, while similarly companies whose earnings outperform their share prices typically see increased weight. This is the opposite of momentum, and we found it interesting to see negative loadings to momentum across the WisdomTree Earnings Indexes.

WHAT PREMIA EXPOSURES WERE REWARDED OVER THIS PERIOD?

Taking a step back, it's notable to indicate which premia garnered the greatest reward over this 10-year period.²⁶

- + **Market Exposure:** With the exception of the global financial crisis of 2008–09, there was a general upward trend to equities in the U.S. over this period. Exposure to the market was the strongest of the forces in figure 7.
- + **Size Exposure:** Small did outperform large, but the effect was not very significant. This would partly explain the advantage within the WisdomTree MidCap and SmallCap Earnings Indexes.
- + **Value Exposure:** Value actually underperformed—not a surprising point after what we saw in figure 6.
- + **Quality Exposure:** This was actually the second largest positive impact over this period—again, clearly a help to WisdomTree's MidCap and SmallCap Earnings Indexes relative to the market capitalization-weighted Indexes shown here in these same size segments.
- + **Momentum Exposure:** Over this period, momentum was actually the greatest negative impact and biggest drag on returns. This made WisdomTree's negative loading to this effect actually beneficial to returns.

Of course, these exposures and effects may change over time, but this was a very interesting initial 10-year period.

THE LONG-TERM EFFICACY OF THESE PREMIA

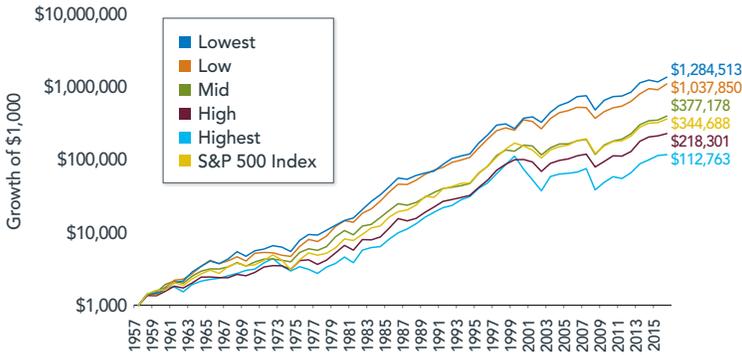
The value, quality and size effects are well-known, and WisdomTree is not the first to access or study them. In figure 8, we indicate:

- + **The Value Effect:** Specially, the impact of breaking the S&P 500 Index into quintiles of 100 stocks based on P/E ratios. The lowest and low P/E ratio quintiles outperformed both the market and the high and highest P/E ratio quintiles over the long run.
- + **The Quality Effect:** Here, we looked at the market broken into quintiles based on operating profitability. Higher operating profitability quintiles outperformed lower groupings.
- + **The Size Effect:** An aspect of the size effect that we find unique is that it can become very pronounced if you combine a focus on size with something else—such as value or quality. Size by itself hasn't been nearly as powerful over the long term.

²⁶ Source for all bullets to follow in this segment: Kenneth French Data Library, with period from 2/1/07 to 1/31/17.

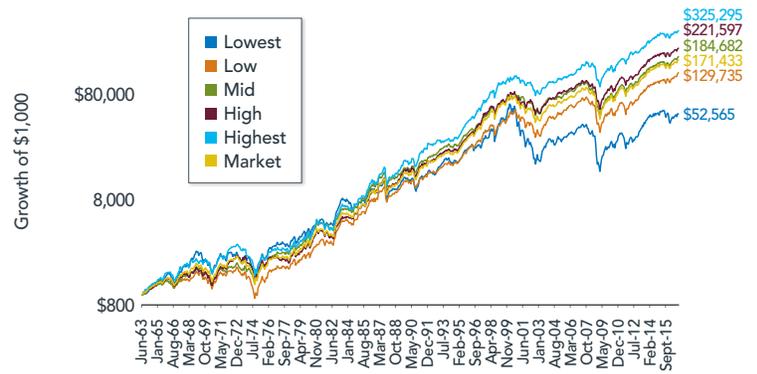
FIGURE 8: VALUE, QUALITY AND SIZE EFFECTS OVER THE LONG RUN

Cumulative Growth of \$1,000 Based on Relative P/E Quintiles (1957 - 2016)



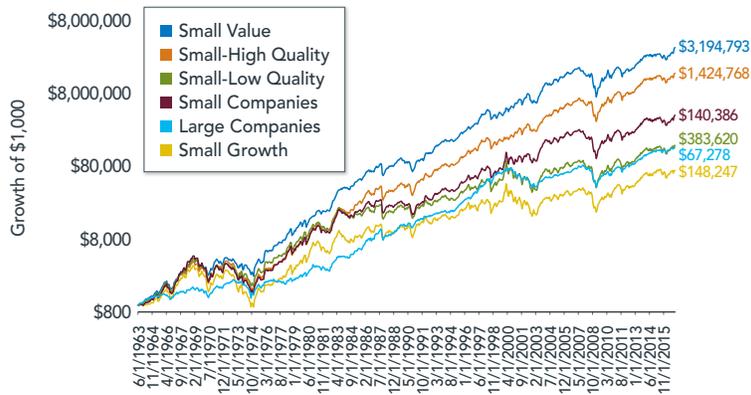
P/E Quintile	Return (p.a.)	Std. Dev (p.a.)
Lowest	12.90%	16.45%
Low	12.49%	15.93%
Mid	10.58%	15.43%
High	9.56%	15.42%
Highest	8.34%	19.40%
S&P 500 Index	10.41%	16.83%

The Quality Premium: Breaking the Market into Quintiles Based on Operating Profitability Annually



Operating Profitability Quintile	Return (p.a.)	Std. Dev (p.a.)
Lowest	7.68%	19.50%
Low	9.51%	15.66%
Mid	10.24%	14.89%
High	10.61%	15.28%
Highest	11.41%	15.32%
Market	10.08%	15.28%

Cumulative Growth of \$1,000 (June 30, 1963, to December 31, 2016)



Market Segment	Avg. Ann. Return	Avg. Ann. Std. Dev.
Small Value	16.27%	19.28%
Small-High Quality	14.53%	20.46%
Small Growth	8.18%	23.59%
Small-Low Quality	9.79%	22.74%
Small Caps-Broad	11.75%	21.72%
Large Caps-Broad	9.67%	14.61%

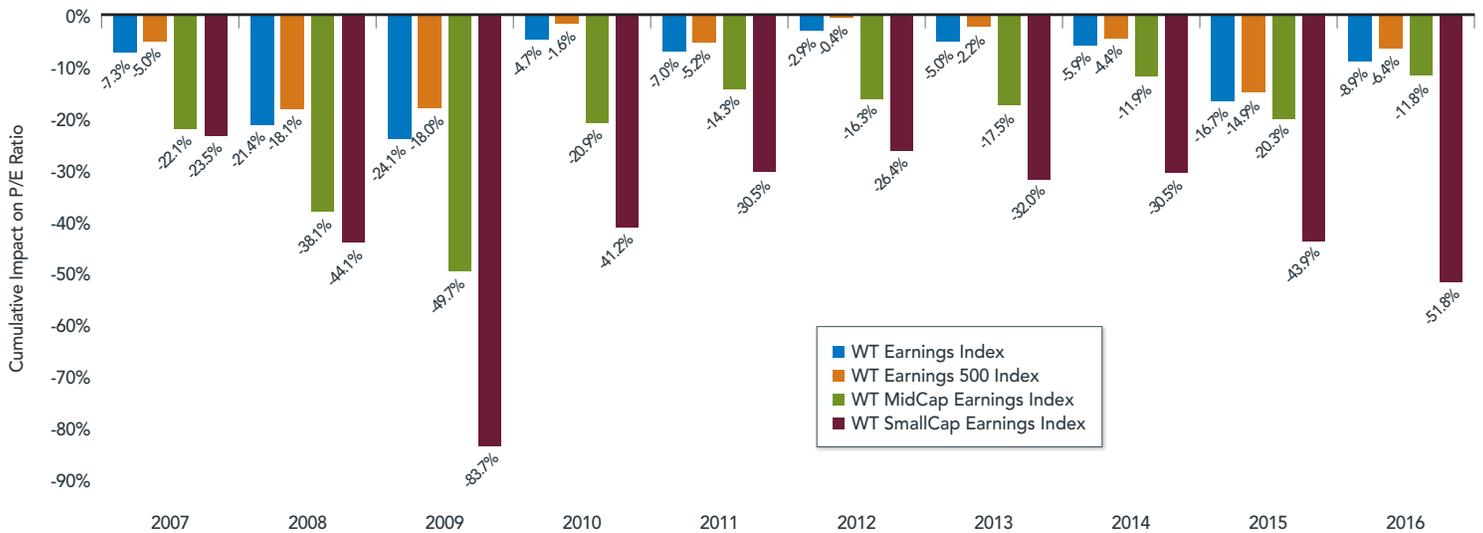
Sources: WisdomTree, Professor Jeremy Siegel's book The Future for Investors with updates to 12/31/2016 for the P/E ratio quintile chart, and start of 12/31/1957 for the value effect. Kenneth French Data Library from 6/30/1963 to 12/31/2016 for the quality effect, with period based on data availability. Kenneth French Data Library from 6/30/1963 to 12/31/2016 for the size effect. Past performance is not indicative of future results. You cannot invest directly in an Index.

THE LONG-TERM EFFICACY OF THESE PREMIA

What 10 Live Rebalances Have Shown

In order to effectively generate passive alpha in the core of a portfolio, the most critical element regards connecting the ongoing annual rebalancing process to the accessing of the premia which have been shown to outperform over long-term historical periods.

FIGURE 9: ACCESSING THE VALUE EFFECT: P/E RATIO WAS REDUCED IN ALL INSTANCES AT THE ANNUAL REBALANCE FOR 10 YEARS



Sources: WisdomTree, Standard & Poor's, with data as of the annual rebalancing process, specifically the change from 11/30 of each year to 12/31 of each year. While the rebalancing actually occurs the Monday following the third Friday in December after 11/30 of each year, looking at these two monthly data points does capture the appropriate impact on the P/E ratio. You cannot invest directly in an index.

- + 40 Instances of P/E Ratio Reduction:** Four Indexes. Ten rebalances. Forty total instances of P/E reduction. While this would not always be the case, the historical record does show an ongoing, consistent focus back toward managing valuation risk.
- + Interesting Organization by Size Cut:** In every single year, the following relationship holds true: The large caps (WT Earnings 500 Index) see a drop in P/E ratio. The mid-caps (WT MidCap Earnings Index) see the P/E ratio drop by more than the large caps. The small caps (WT SmallCap Earnings Index) see the P/E ratio drop by more than the mid-caps.
 - Why have small caps tended to see the greatest P/E reduction? The answer, as we've mentioned before, lies in the fact that negative earnings are most prevalent in this size segment. Simply eliminating these firms at a regular interval causes a lowering of the P/E ratio of the Index. Large caps represent the opposite case because this would be where, on a size basis, negative earnings are least prevalent.

REFRESHING THE QUALITY & SIZE EFFECTS

We believe that the relative value aspect of the rebalance, shown in figure 9, is the most intuitive—as we stated earlier leading to adding exposure to stocks whose share prices had underperformed their earnings and taking exposure from stocks whose share prices had outperformed their earnings. Additionally:

- + **Quality:** The removal of firms with negative earnings does show up in lowering the P/E ratio in figure 9—particularly in the small-cap segment. If one were to look at other metrics such as return on equity or return on assets, this would show up in a regular raising of these more quality-oriented metrics at a regular frequency. It's all tied into the same profitability requirement built into the ongoing Index methodology.
- + **Size:** Again, it's critical to note that this is more important moving into the mid-cap and small-cap segments. We can state that in nearly every rebalance in the WisdomTree MidCap Earnings Index and SmallCap Earnings Index, we saw that the weighted average market capitalization size exposure was reduced. While this presents an interesting data point, it's more notable conceptually in that there is a discipline built into the methodology that would directly combat any drift upward in the market capitalization spectrum that would come from holding a small-cap stock in a small-cap strategy as it grew and became a mid-cap stock, as one example.

CONCLUSION

We conclude with the same theme upon which we started 10 years ago—that WisdomTree's Earnings strategies have the potential to provide passive alpha in the core of a portfolio. The greatest benefit of these approaches has been the consistency of the methodology. This has been the driver of a fairly impressive track record—inclusive of the 2008–09 global financial crisis—and over time we believe that it has potential to continue accessing the factors that drove the results over this first live decade.

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. Investors should read the prospectus carefully before investing.

There are risks associated with investing, including possible loss of principal. Funds focusing their investments on certain sectors and/or smaller companies may be more vulnerable to any single economic or regulatory development. This may result in greater share price volatility. Please read a Fund's prospectus for specific details regarding a Fund's risk profile.

WisdomTree Earnings Index: A 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 in 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 comprises the 500 largest companies ranked by market capitalization in the WisdomTree Earnings Index. WisdomTree MidCap Earnings Index: A 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 Earnings Index: A fundamentally weighted index that measures the performance of earnings-generating companies in the small-capitalization segment of the U.S. stock market. The Index comprises the companies in the bottom 25% of the market capitalization of the WisdomTree Earnings Index after the 500 largest companies have been removed. Russell 3000 Index: Measures the performance of the 3,000 largest U.S. companies based on total market capitalization. Russell 3000 Value Index: Measures the performance of the broad value segment of the U.S. equity value universe. It includes those Russell 3000 Index companies with lower price-to-book ratios and lower forecasted growth values. Russell 3000 Growth Index: Measures the performance of the Russell 3000 Index constituents with growth characteristics. Russell 3000E Index: Measures the full investable universe of equities in the U.S. market, including large caps, mid-caps, small caps and micro caps. S&P 1500 Composite Index: The index is designed to represent the performance of the U.S. equity market, which combines three indexes, the S&P 500, S&P MidCap 400 and S&P SmallCap 600. S&P 1500 Composite Value Index: Very broadly inclusive market capitalization-weighted index of large-cap, mid-cap and small-cap stocks, tilting toward the value style. S&P 1500 Composite Growth Index: Very broadly inclusive market capitalization-weighted index of large-cap, mid-cap and small-cap stocks, tilting toward the growth style. Russell Top 200 Index: A market capitalization-weighted measure of the performance of the 200 largest companies in the Russell 1000 Index. Russell Top 200 Value Index: Market capitalization-weighted index of the 200 largest stocks, tilted toward the value style. Russell Top 200 Growth Index: Market capitalization-weighted index of the 200 largest stocks, tilted toward the growth style. S&P 500 Index: A market capitalization-weighted benchmark of 500 stocks selected by the Standard & Poor's Index Committee, designed to represent the performance of the leading industries in the United States economy. S&P 500 Value Index: A market capitalization-weighted benchmark designed to measure the value segment of the S&P 500 Index. S&P 500 Growth Index: A market capitalization-weighted benchmark designed to measure the growth segment of the S&P 500 Index. 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. Russell Midcap Value Index: Measures the performance of the mid-cap value segment of the U.S. equity universe. It includes those Russell Midcap Index companies with lower price-to-book ratios and lower forecasted growth values. Russell Midcap Growth Index: Measures the performance of the mid-cap growth segment of the U.S. equity universe. It includes those Russell Midcap Index companies with higher price-to-book ratios and higher forecasted growth values. S&P MidCap 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 ongoing basis. S&P MidCap 400 Value Index: Provides investors with a measure of the performance of the value segment of the S&P MidCap 400 Index. S&P MidCap 400 Growth Index: Provides investors with a measure of the performance of the growth segment of the S&P MidCap 400 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 2,000 of the smallest securities based on a combination of their market cap and current index membership. Russell 2000 Value Index: Measures the performance of the 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 2000 Growth Index: Measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 Index companies with higher price-to-book ratios and higher forecasted growth values. S&P SmallCap 600 Index: A 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. S&P SmallCap 600 Value Index: A market capitalization-weighted measure of the performance of small-cap value equities within the United States, with constituents required to demonstrate profitability prior to gaining initial inclusion. S&P SmallCap 600 Growth Index: A market capitalization-weighted measure of the performance of small-cap growth equities within the United States, with constituents required to demonstrate profitability prior to gaining initial inclusion. MSCI USA Index: Designed to measure the performance of the large- and mid-cap segments of the U.S. market. MSCI USA Mid Cap Index: Designed to measure the performance of mid-cap stocks in the U.S. market. MSCI USA Small Cap Index: Designed to measure the performance of small-cap stocks in the U.S. market. CRSP U.S. Total Market Index: A market capitalization-weighted measure of all-cap companies representing nearly 100% of the investable equity market in the United States. CRSP U.S. Large Cap Index: Measures the large-cap size segment of the CRSP investable universe. CRSP U.S. Mid Cap Index: A market capitalization-weighted measure of the performance of mid-cap equities in the United States. CRSP U.S. Small Cap Index: A market capitalization-weighted measure of the performance of small-cap equities in the United States.

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