

**WisdomTree
RESEARCH**

**THE DIVIDENDS OF A
DIVIDEND APPROACH**

Authored by: JEREMY SCHWARTZ CFA®, Global Chief Investment Officer



In the past three decades, exchange-traded funds (ETFs) have exploded onto the investment scene. New exchange-traded products are coming to the market all the time and although ETFs currently represent a much smaller piece of the investment pie than mutual funds, they are growing rapidly and often at the expense of mutual funds.

Globally, assets flowing into ETFs have grown significantly since the 2008 financial crisis, with the number of offerings more than doubling.¹ ETFs that trade in the U.S. marketplace target a wide array of regions, sectors, commodities, bonds, futures and other asset classes. Their numerous benefits, including easy diversification, low fees, tax efficiency and daily transparency of holdings,² have helped this investment vehicle to flourish.

As the ETF market grows, even more variety in product structures will likely follow. What all this means is that "passive versus active" may no longer be as meaningful a debate as it once was. The more critical question for index investors may be, what is the best way to index?

THE EFFICIENT MARKET?

The very first ETFs, and the majority of those that have followed, were based on market capitalization-weighted indexes. These indexes weight their individual components by their stock market capitalization (price per share times shares outstanding). While many academics and investment experts agree that price is not always the best estimate of a company's value, these indexes assume that it is.

While the evidence certainly shows that indexing is a smart approach to investing, the question remains: Is market cap-weighted indexing the best indexing method?

THE FIRST INDEXES

The Dow Jones Industrial Average was created in 1896. It featured 12 stocks and was price-weighted³ for ease of calculation. In 1957, the S&P 500 Index was developed; it was the first market cap-weighted index. The innovation from price weighting to market cap weighting was achieved by multiplying the price by the shares outstanding. This was done to represent the average return of all stocks in the index.

An important feature of both price-weighted indexes and market cap-weighted indexes is that they are specifically designed to have stocks ebb and flow in weight as their prices change. That is, stocks get more or less weight in the indexes as their prices go up or down—but there are no adjustment mechanisms to account for changes in relative value.

The Efficient Market Hypothesis claims that the market price of any security is always the best unbiased estimate of its true underlying value (i.e., its fundamental value) and that no other information that can be easily obtained will give a better estimate of the stock's fundamental value.

Taken a step further, this implies that market cap-weighted indexes deliver the highest expected returns given any level of risk and the lowest possible risk for any given return, making them "mean-variance efficient."

¹ Rachel Evans and Carolina Wilson, "How ETFs Became the Market," Bloomberg, 9/13/18.

² Ordinary brokerage fees apply; diversification does not eliminate the risk of experiencing investment losses; daily holdings for WisdomTree ETFs are available at wisdomtree.com.

³ An index in which component stocks are weighted by price. Higher-priced stocks therefore have a greater percentage impact on the index than lower-priced stocks.

In theory, portfolios that are mean-variance efficient, offer the optimal risk/return ratio regardless of an investor's risk tolerance. So, if the Efficient Market Hypothesis holds, any portfolio that does not weight individual stocks by market capitalization will not be mean-variance efficient and will not have these desirable risk/return characteristics. But what if markets are not always efficient?

THE NOISY MARKET HYPOTHESIS

While the Efficient Market Hypothesis has had tremendous influence in the finance profession, it is just one of several theories that seek to explain broad movements in stock prices. As with all theories, it is subject to challenge. There is persuasive evidence that markets are not always efficient and that stock prices can deviate from their fundamental values for many reasons. WisdomTree believes that stock price movements are better explained by the Noisy Market Hypothesis.

Conventional wisdom has long recognized that prices of speculative assets experience periods of irrational bubbles and frenzies that cause their prices to deviate widely from their fair value. Consider that if traders, such as momentum traders, speculate on the basis of past price movements or are motivated by rumors or incomplete or inaccurate information, then the prices of individual stocks will not always be efficient. Furthermore, investors and institutions often buy or sell shares for reasons unrelated to the valuation of the respective companies, sometimes for liquidity, fiduciary, tax or even emotional reasons. Consequently, the prices realized on these trades are often not representative of the best, unbiased estimate of the fundamental value of the shares.

MARKETS ARE SUSCEPTIBLE TO PRICING BUBBLES

It is all too easy for even the most prudent investors to become swept up in the emotions and excitement relating to certain market events, and that these euphoric periods can easily create irrational bubbles in the market.

WARREN BUFFETT ON MARKET INEFFICIENCY

Warren Buffett made his case for stock market mispricing when he wrote in 1984:

I'm convinced that there is much inefficiency in the market...When the price of a stock can be influenced by a "herd" on Wall Street with prices set at the margin by the most emotional person, or the greediest person, or the most depressed person, it is hard to argue that the market always prices rationally. In fact, market prices are frequently nonsensical.⁴

⁴ Warren E. Buffett, "The Superinvestors of Graham-and-Doddsville," Hermes, The Columbia Business School Magazine, 5/84.

JEREMY SIEGEL AND THE TECH BUBBLE

During the bubble of the late-1990s, technology stocks soared and their market values and weights in market capitalization-weighted indexes ballooned. In a March 2000, Wall Street Journal op-ed piece, Jeremy Siegel, then-Professor of Finance at the Wharton School, analyzed nine large-cap stocks with price-to-earnings ratios (P/E ratios) over 100.⁵ At that time, the market capitalization of these stocks (Cisco, AOL, Oracle, Nortel Networks, Sun Microsystems, EMC, JDS Uniphase, Qualcomm and Yahoo!) totaled \$1.621 trillion and represented 14% of the S&P 500.⁶

Based on the prices paid for these stocks in early 2000, investors were projecting that the stocks would dominate the market over the following decade and would be valued at two to three times the historical valuation of the S&P 500 Index. Despite these overvaluations, investors in a market cap index fund tracking the S&P 500 had no choice but to hold these stocks in proportion to their market value.

WEIGHTING FUNDAMENTALS MAY HELP WITH BUBBLES

If market prices for stocks are not always efficient, then market capitalization-weighted indexes will not necessarily be mean-variance efficient. Therefore, we believe it is possible that alternative weightings can give investors a higher return for the same level of risk, or even a lower level of risk for any given return.

While capitalization-weighted indexes typically assign index weights based on the market value of each company, fundamentally weighted indexes base constituents' initial weights on a measure of fundamental value, such as dividends. We believe a fundamental approach to weighting may make the most sense, as it can put more weight on securities that are considered undervalued (and that may outperform), while putting less weight on, or altogether avoiding, those that are considered overvalued (and that may underperform).

Consider the previously mentioned technology bubble example. Investors in funds that track indexes weighted by dividends would have been shielded from the bubble in the nine large-cap technology stocks that came to represent such a large piece of the S&P 500. This is because, with the exception of Nortel Networks, none of the nine tech companies paid dividends at that time. This example demonstrates how dividend-weighted indexes could have softened the impact of a bear market that devastated investor returns.

WISDOMTREE WEIGHTS BY DIVIDENDS

In our opinion, the evidence in favor of weighting by a fundamental, rather than market price, is overwhelming. But we do believe that passive strategies have historically delivered good results. We developed our equity Indexes with the objective of improving the passive approach, by anchoring companies to a less volatile measure than market price, such as a company fundamental. The fundamental we believe to be the strongest indicator of underlying value is the dividend.

⁵ P/E ratio equals the price of a stock divided by earnings per share. P/E ratios are intended to give an investor an idea of how much they are paying for a company's growth; the higher the P/E ratio, the more investors are paying to own the stock.

⁶ Jeremy J. Siegel, "Big-Cap Tech Stocks Are a Sucker Bet," The Wall Street Journal, 3/14/00. Only one of these stocks, JDS Uniphase, was not in the S&P 500 Index at the time; JDSU was added four months later, on 7/26/00, when its price was over 30% higher. Its closing price on 7/26/00 was \$135.94. By July 2005, the price had fallen to \$1.69.

There are many compelling economic and theoretical reasons for assigning index weights based on the aggregate value of cash dividends paid by component companies. Consider that:

- + Dividends have theoretical and empirical importance in determining stock values
- + Historically, dividends have provided the majority of the stock market's real return over time⁷
- + Dividends provide an objective measure, independent of accounting schemes and management judgment⁸
- + Paying dividends indicates that management is focused on increasing shareholder value
- + Investors, particularly baby boomers in the developed world, have an increasing long-term demand for income for a new phase of their life: retirement

We, therefore, believe that dividend-oriented indexes are important new benchmarks to gauge the performance of dividend stocks.

THE POWER OF DIVIDENDS

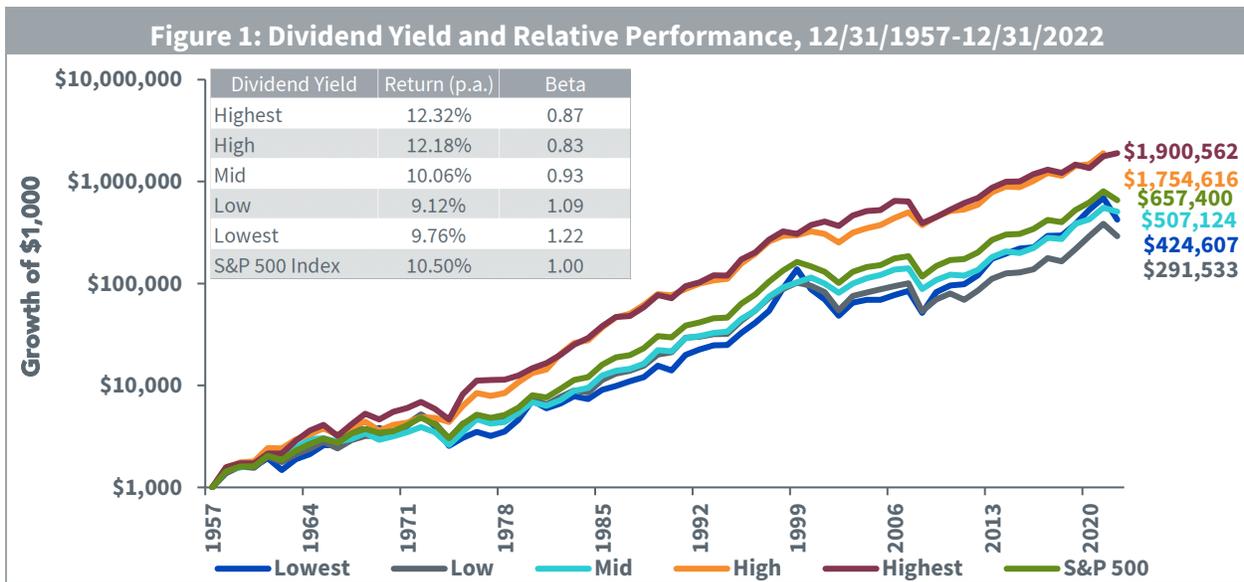
To demonstrate the power of dividends and their impact on performance, consider some research done by Professor Siegel in his 2005 book, *The Future for Investors*. Professor Siegel broke down the performance of the S&P 500 dividend-paying stocks into quintiles, illustrating that focusing on only those stocks that provided the highest levels of dividends had a dramatic impact on performance—and risk.

As you can see in figure 1, the highest quintile outperformed the broad S&P 500 Index by over 1.8% per year, which turned into nearly 223% outperformance over time. And it did this with a lower beta.⁹ Even the second quintile outperformed the S&P 500 by over 1.6% per year, for a total of more than 196% outperformance over time, with less risk.

⁷ Siegel, *The Future for Investors*, 2005.

⁸ Siegel, *The Future for Investors*, 2005.

⁹ Beta is a measurement of a fund or index's trailing returns in relation to the overall market (or appropriate market index). Beta of 1: share price will typically move with the market; beta of more than 1: share price will typically be more volatile than the market; beta of less than 1: share price will typically be less volatile than the market. In the above example the market is defined as the S&P 500 Index.



Source: Siegel, The Future for Investors, 2005, with updates to 2022. Past performance does not guarantee future results. Does not represent the performance of any investment vehicle; provided for educational/illustrative purposes only. This information should not be considered investment advice. P.A.=Per Annum.

WISDOMTREE DIVIDEND EQUITY SELECTION CRITERIA

To be eligible for inclusion in a WisdomTree Dividend Index, a stock must pay regular cash dividends and meet daily trading volume criteria. Companies must also meet the following criteria as of the annual Index measurement date:

FIGURE 2

U.S.	Developed International
Pay a regular cash dividend	Paid minimum of \$5 million in regular cash dividends in the 12 months prior to screening date
Be ordinary common shares or shares of a REIT	Be ordinary common shares or shares of a REIT
Have a minimum market cap of \$100 million	Have a minimum market cap of \$100 million
Have median daily dollar volume of at least \$100,000 over the three months prior to screening	Have median daily dollar volume of at least \$100,000 over the three months prior to screening
The calculated volume factor (the average daily dollar volume for three months preceding the screening date/weight of security in each index) shall be greater than \$200 million to be eligible for each index	The calculated volume factor (the average daily dollar volume for three months preceding the screening date/weight of security in each index) shall be greater than \$200 million to be eligible for each index
Be incorporated in the U.S. and traded on a major exchange	Have traded minimum of 250,000 shares for each of the six months prior to screening

U.S.	Developed International
<p>Companies that fall within the bottom decile of a composite risk factor score, which is composed of an equally weighted score of the below two factors, are not eligible for inclusion</p> <p>1) Quality factor – determined by static observations and trends of return on equity (ROE), return on assets (ROA), gross profits over assets and cash flows over assets. Scores are calculated within industry groups</p> <p>2) Momentum factor – determined by stocks’ risk adjusted total returns over historical periods (6 and 12 months)</p> <p>Companies that fall within the top 5% ranked by dividend yield and also the bottom ½ of the composite risk factor score are not eligible for inclusion.</p> <p>Companies that fall within the top two deciles of the composite risk factor will have their dividend stream multiplied by 1.5 while all other dividends will remain unadjusted.</p>	<p>Companies that fall within the bottom decile of a composite risk factor score, which is composed of an equally weighted score of the below two factors, are not eligible for inclusion</p> <p>1) Quality factor – determined by static observations and trends of return on equity (ROE), return on assets (ROA), gross profits over assets and cash flows over assets. Scores are calculated within industry groups</p> <p>2) Momentum factor – determined by stocks’ risk adjusted total returns over historical periods (6 and 12 months)</p> <p>Companies that fall within the top 5% ranked by dividend yield and also the bottom ½ of the composite risk factor score are not eligible for inclusion.</p> <p>Companies that fall within the top two deciles of the composite risk factor will have their dividend stream multiplied by 1.5 while all other dividends will remain unadjusted.</p>

The complete WisdomTree Index Methodologies are available at WisdomTree.com/investments

WHAT ABOUT APPLE?

Unlike many dividend indexes, WisdomTree does not screen for backward-looking historical growth. Indexes that do screen for this type of dividend growth may limit their ability to capitalize on opportunities in younger dividend-paying sectors such as Information Technology.

For example, Apple, one of the largest companies in the world when ranked by market capitalization, reinstated its dividend in 2012—making it one of the largest dividend payers in the U.S. It’s worth noting that Apple will not be eligible for inclusion:

- + In the NASDAQ U.S. Dividend Achievers Select Index until 2023
- + In the S&P High Yield Dividend Aristocrats Index until 2033—10 years from now

In contrast, at the 2012 rebalance in December, Apple was included in the WisdomTree Dividend Indexes for the first time.

HOW WISDOMTREE WEIGHTS INDEXES BY DIVIDENDS

Weighting eligible companies in our Indexes by dividends, rather than by market cap, enables us to magnify the effect dividends have on performance. Each stock eligible for inclusion in an Index is weighted by its share of the *Dividend Stream*® (which is the sum of regular cash dividends paid by all the companies in the Index). Core dividend and high dividend indexes, excluding quality dividend growth indexes, adjust dividend stream weights based on the composite risk score. Companies ranking in the top two deciles of the composite risk score have their dividend stream increased by 1.5 times.

In addition, WisdomTree believes that weighting by dividends can potentially raise a portfolio's trailing 12-month dividend yield and provide increased income to investors. For example, in figure 3, the dividend-weighted portfolio of three stocks generated approximately 30% more dividend income and almost 1% of additional trailing 12-month dividend yield than the market cap-weighted option. What's more, it did this with the same three stocks and the same initial investment.

FIGURE 3: THE DIFFERENCE DIVIDEND WEIGHTING MAKES

Company	Market Cap (Billions)	Dividend Stream (Billions)	Dividend Yield	Market Cap Weight	Investment	Dividend Income	Dividend Weight	Investment	Dividend Income
A	\$400.0	\$10.00	2.5%	50.00%	\$50,000	\$1,250	40.00%	\$40,000	\$1,000
B	\$200.0	\$3.00	1.5%	25.00%	\$25,000	\$375	12.00%	\$12,000	\$180
C	\$200.0	\$12.00	6.0%	25.00%	\$25,000	\$1,500	48.00%	\$48,000	\$2,880
TOTALS	\$800.0	\$25.00			\$100,000	\$3,125		\$100,000	\$4,060

Hypothetical illustration.

INCOME IS MORE IMPORTANT THAN EVER

As a greater number of investors than ever before plan for, and transition into, retirement, investments that generate income are increasingly critical to their success. But retirees are not the only clients who can benefit from income. These investments can also be used to help protect and even increase wealth.

But which investments can generate the highest levels of income? As demonstrated in figure 3, dividend weighting can dramatically increase dividend income and can also boost trailing 12-month dividend yield.¹⁰ In a low-yielding, low-return environment characterized by volatility and uncertainty, investments based on dividend-weighted indexes may help create much needed income for investors.

REBALANCING AND DIVIDEND GROWTH

In addition to the initial weighting mechanism, WisdomTree employs a rules-based rebalancing mechanism that adjusts relative weights based on the concept of relative value. We shift the weight away from stocks exhibiting lower rates of dividend growth (relative to their price performance) in order to focus on those companies that have achieved higher rates of dividend growth (relative to the same criteria). This weighting and rebalancing process is one way in which WisdomTree manages the valuation risk of its Indexes and consistently shifts weight toward firms exhibiting greater rates of dividend growth. Figure 4 outlines various scenarios for how weights change at the rebalance, based on each stock's relative price appreciation compared to its relative dividend growth. In general:

- + Companies whose stock prices increased relative to their peers while their dividend growth rates were lower than those of their peers, would typically see reduced weight in WisdomTree Indexes. In a market cap-weighted index, however, the primary driver of weight is the relative price change.

¹⁰ Trailing 12-month dividend yield can be defined as the dividends over the past year added up and then divided by the current share price.

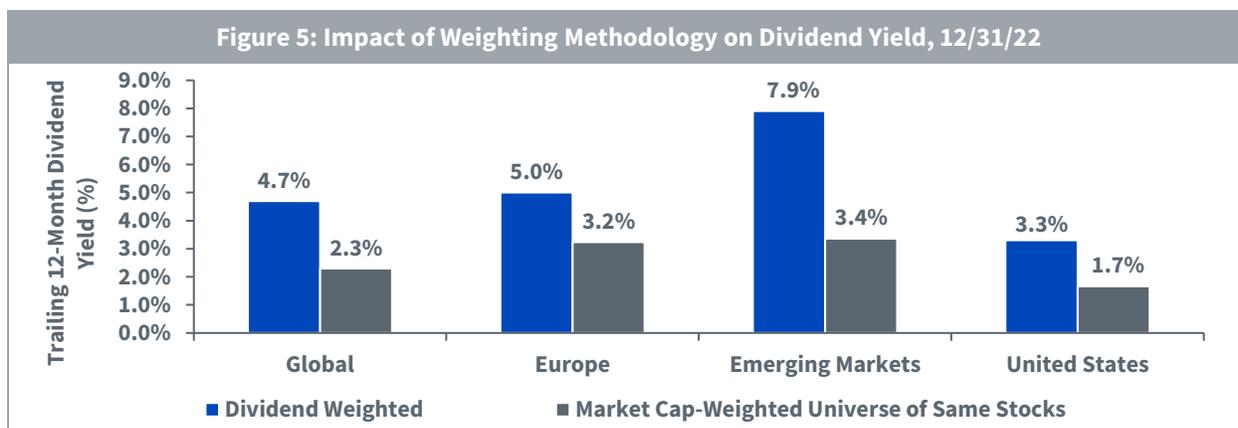
- + Companies whose relative stock prices fell while their dividends were flat or grew, would typically see increased weight in WisdomTree Indexes. In a market cap-weighted index, however, the lower price would result in a lower weight.

FIGURE 4: WISDOMTREE REBALANCING METHODOLOGY

Stock Price During Year	Dividend Change	Weight Change at Rebalance
Up	Up	Depends on which rose more
	Flat	Decrease
	Down	Decrease
Unchanged	Up	Increase
	Flat	Unchanged
	Down	Decrease
Fell	Up	Increase
	Flat	Increase
	Down	Depends on which fell more

Conventional investment wisdom suggests that stocks with below-average dividend yields are reinvesting their earnings into their businesses and that this reinvestment will spur higher dividend growth over time. WisdomTree's historical research casts doubt on this premise.

A dividend stream-weighted index that tilts weight to higher dividend yielding stocks naturally should have a higher dividend yield than a cap-weighted index. What did WisdomTree's research show? As figure 5 shows, shifting from market cap weighting to dividend weighting for the same basket of stocks increased the trailing 12-month dividend yields in each primary region of the world.



Source: WisdomTree, as of 12/31/22. Past performance does not guarantee future results.

Now let us review the impact an actual rebalance had on one of the WisdomTree Indexes. As figure 6 illustrates, as of the 2022 rebalance, the top 20 dividend payers in the WisdomTree U.S. Dividend Index:

- + Had grown their dividends by an average of 3.60% over the previous year
- + Had an average dividend yield of 2.82%

Figure 6: Top 20 Index Constituents in the WisdomTree U.S. Dividend Index, 11/30/2022

Ticker	Company Name	2021 Indicated DPS	2022 Indicated DPS	Shares outstanding (bn)	Dividend Stream (\$bn)	Dividend Yield	Dividend Action	Dividend Growth Rate
XOM	Exxon Mobil Corporation	\$3.52	\$3.64	4.12	\$14.99	3.29%	Raised	3.41%
AAPL	Apple Inc.	\$0.88	\$0.92	15.91	\$14.64	0.65%	Raised	4.55%
MSFT	Microsoft Corporation	\$2.48	\$2.72	7.45	\$20.28	1.13%	Raised	9.68%
CVX	Chevron Corporation	\$5.36	\$5.68	1.93	\$10.98	3.14%	Raised	5.97%
ABBV	AbbVie, Inc.	\$5.64	\$5.92	1.77	\$10.47	3.74%	Raised	4.96%
PFE	Pfizer Inc.	\$1.56	\$1.60	5.61	\$8.98	3.23%	Raised	2.56%
JNJ	Johnson & Johnson	\$4.24	\$4.52	2.61	\$11.82	2.57%	Raised	6.60%
JPM	JPMorgan Chase & Co.	\$4.00	\$4.00	2.93	\$11.73	2.93%	Unchanged	0.00%
KO	Coca-Cola Company	\$1.68	\$1.76	4.32	\$7.61	2.82%	Raised	4.76%
PM	Philip Morris International Inc.	\$5.00	\$5.08	1.55	\$7.88	5.19%	Raised	1.60%
MRK	Merck & Co., Inc.	\$2.76	\$2.92	2.54	\$7.40	2.68%	Raised	5.80%
PEP	PepsiCo, Inc.	\$4.30	\$4.60	1.38	\$6.34	2.52%	Raised	6.98%
CSCO	Cisco Systems, Inc.	\$1.48	\$1.52	4.11	\$6.24	3.15%	Raised	2.70%
UNH	UnitedHealth Group Inc	\$5.80	\$6.60	0.93	\$6.17	1.25%	Raised	13.79%
PG	Procter & Gamble Co	\$3.48	\$3.65	2.37	\$8.66	2.51%	Raised	5.00%
T	AT&T Inc.	\$2.08	\$1.11	7.13	\$7.91	5.84%	Cut	-46.63%
HD	Home Depot, Inc.	\$6.60	\$7.60	1.02	\$7.75	2.41%	Raised	15.15%
BAC	Bank of America Corp	\$0.84	\$0.88	8.02	\$7.06	2.38%	Raised	4.76%
BMJ	Bristol-Myers Squibb Co	\$1.96	\$2.16	2.13	\$4.59	2.73%	Raised	10.20%
MCD	McDonald's Corporation	\$5.52	\$6.08	0.73	\$4.45	2.24%	Raised	10.14%

Source: WisdomTree. Past performance does not guarantee future results. No representation is being made that any investment will achieve performance similar to those shown. All information is provided strictly for educational and illustrative purpose only. The information provided is not intended for trading purposes and should not be considered investment advice. Indicated dividend per share is most recently announced regular dividend policy over the next 12 months. Dividend growth rate is the year-over-year growth of dividends.

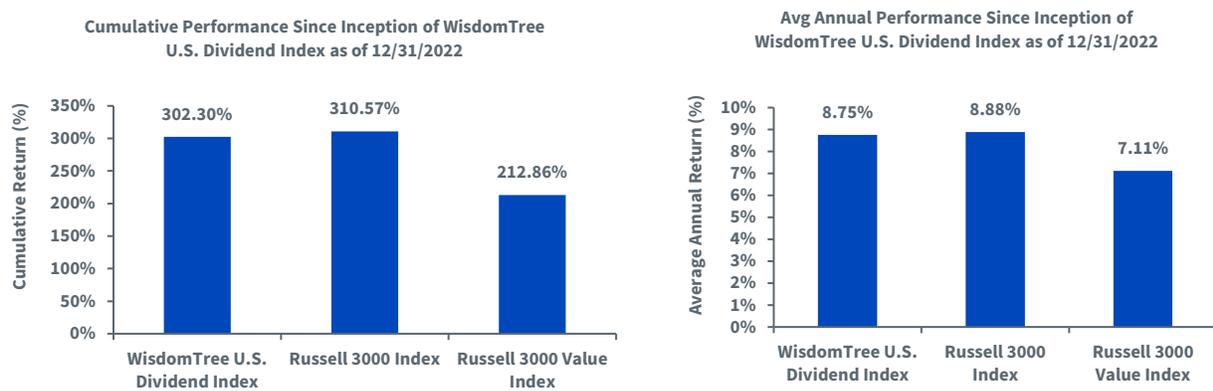
In our experience, annually reconstituting an Index not only changes the constituents and their weights but also has tended to benefit the Index characteristics in three notable ways:

- + The Index yield increased as weight shifted to companies with higher dividends and greater dividend yields
- + The Index experienced dividend growth at the rebalance for the same reason
- + Rebalancing "took money off the table" by reducing weight in the more speculative, volatile names, whose prices had appreciated more than fundamentals over the prior year

WISDOMTREE INDEXES IN REAL TIME

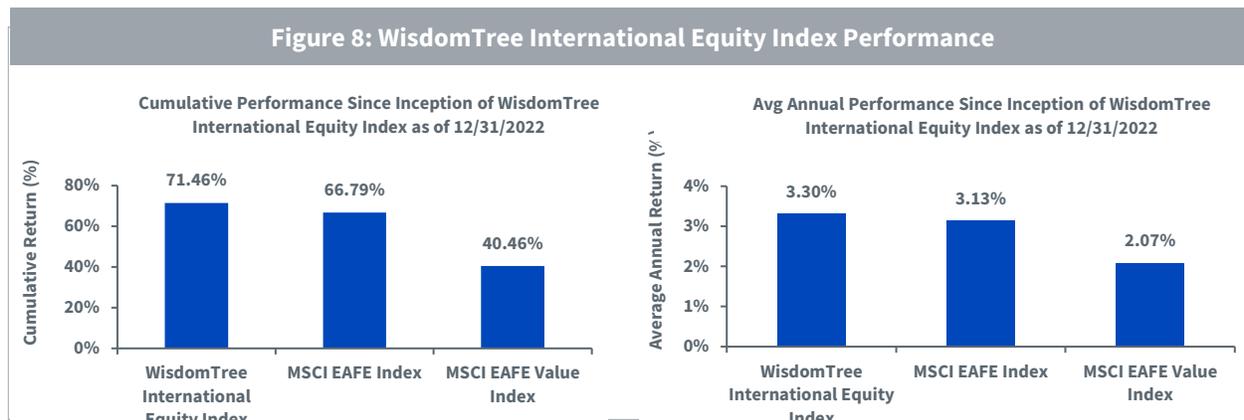
At WisdomTree, we believe that research and theories are valuable, but we also know the importance of measuring live performance. Since its inception on June 1, 2006, until December 31, 2022, a period in which growth has largely outperformed value, the WisdomTree U.S. Dividend Index outperformed the value variant of its comparable cap-weighted benchmark and modestly underperformed the core benchmark. Broadly inclusive dividend-focused strategies that weight constituents by cash dividends do tend to tilt toward the value style. This is especially so in the U.S., where constituents that are more apt to be considered growth companies are typically non-dividend payers and therefore may not be included. These firms would, however, be included in broadly-focused market capitalization-weighted indexes, like the Russell 3000 Index, which could do much to explain differences in performance over this particular period. Figure 7 details this performance.

Figure 7: WisdomTree U.S. Dividend Index Performance



Source: WisdomTree. Past performance does not guarantee future results. You cannot invest in an index. The Russell 3000 Index is the market cap-weighted benchmark for the WisdomTree U.S. Dividend Index and is meant to provide a broad indication of equity performance in the U.S.

WisdomTree's dividend approach has created a similar performance advantage in international markets. Since the June 1, 2006, inception of our broadest developed market international Index, the WisdomTree International Equity Index (through 12/31/2022), outperformed the MSCI EAFE Index—the de facto cap-weighted benchmark for the developed world outside the U.S.—by nearly 0.17% per year and 4.67% cumulatively. In international markets, as opposed to the U.S., a broader array of companies is likely to be dividend payers. This allows strategies that solely consider dividend payers to be naturally more inclusive relative to a broad, market capitalization-weighted benchmark like the MSCI EAFE Index. Figure 8 details this performance:



Source: WisdomTree. Past performance does not guarantee future results. You cannot invest in an index.

THE CREDIT CRISIS

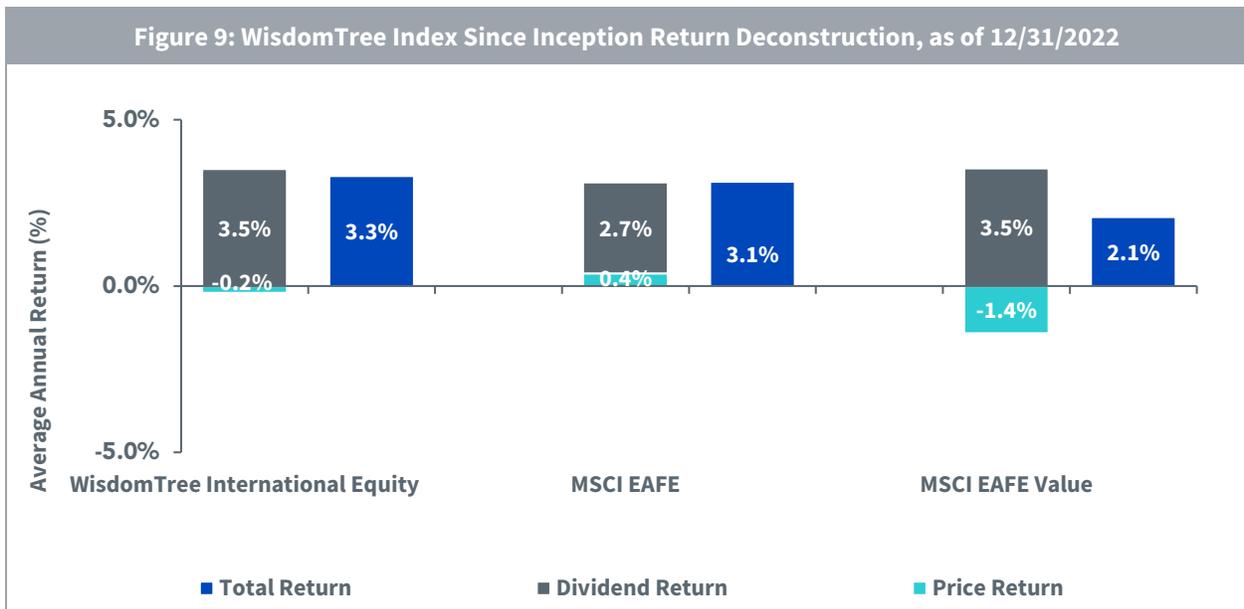
We would be remiss in reviewing the past 10 years without discussing the 2008 financial crisis. This credit crisis was fundamentally different than others discussed in this paper—and was truly an unprecedented event. In other crises, there was no fundamental support for the prices that led to market bubbles. In the credit crisis, however, many prices were supported by dividends that were quite real, but also simply unsustainable in an unparalleled financial environment. By rebalancing weight away from companies that reduced or discontinued their dividends, our WisdomTree Indexes performed as expected.

WHAT'S BEHIND THE PERFORMANCE DIFFERENTIAL?

Dividends were a significant component of total returns in both U.S. and developed international markets:

- + Since inception, the dividend return has made up the majority of the total return differential between the WisdomTree International Equity Index and the MSCI EAFE Index¹¹.
- + Although the dividend return of the MSCI EAFE Value Index was similar to that of the WisdomTree International Equity Index, its lower price return dragged down the total return.

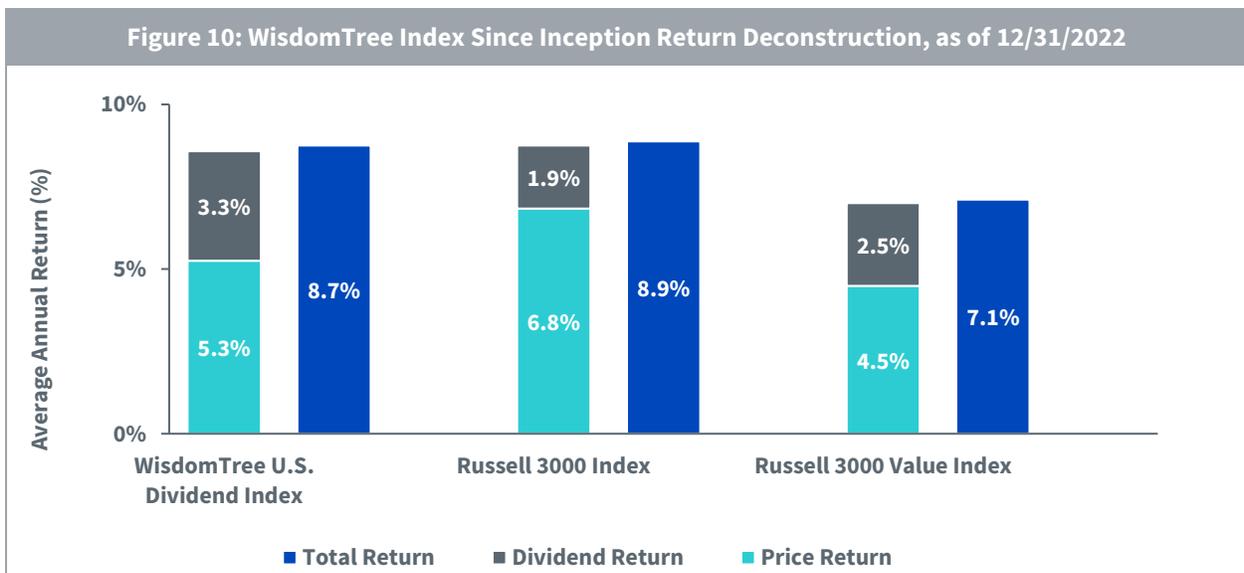
¹¹ The MSCI EAFE Index is the market cap-weighted benchmark for the WisdomTree International Equity Index and is meant to measure a broad indication of equity performance in developed international markets outside the U.S.



Source: WisdomTree. Past performance does not guarantee future results. You cannot invest in an index.

Since inception, the WisdomTree U.S. Dividend Index has delivered total returns similar to the Russell 3000 Index. The components of those returns, however, were very different:

- + Dividends made up a larger percentage of the WisdomTree U.S. Dividend Index's total return as its average annual dividend return was 1.4% higher per year.
- + The price return of the Russell 3000 Index, however, offsets its deficit in dividend returns over the period.



Source: WisdomTree. Past performance does not guarantee future results. You cannot invest in an index.

RISK DIFFERENTIAL

We believe our dividend-weighted Index methodology should lead to enhanced risk profiles compared to market capitalization-weighted indexes. In fact, since inception:

- + The WisdomTree U.S. Dividend Index has delivered lower beta and standard deviation¹² than the Russell 3000 Index, as well as the value variant of that index.
- + Within international markets, the beta and standard deviation of the WisdomTree International Equity Index were lower than that of the MSCI EAFE Value Index.

FIGURE 11:

Risk Statistics (June 1, 2006 – December 31, 2022)		
Index	Standard Deviation	Beta
WisdomTree U.S. Dividend Index	15.34%	0.94
Russell 3000 Index	16.21%	1.03
Russell 3000 Value Index	16.51%	1.02
S&P 500 Index	15.71%	1.00

Beta defined relative to the S&P 500 Index.

FIGURE 12:

Risk Statistics (June 1, 2006 – December 31, 2022)		
Index	Standard Deviation	Beta
WisdomTree International Equity Index	17.46%	0.99
MSCI EAFE Value Index	18.74%	1.05
MSCI EAFE Index	17.45%	1.00

Beta defined relative to the MSCI EAFE Index. Source: WisdomTree. Past performance does not guarantee future results. You cannot invest in an index.

¹² Standard deviation is the degree to which an index or fund's returns have fluctuated above or below the mean. A higher number indicates higher volatility.

PERFORMANCE VERSUS ACTIVE MANAGERS

As discussed previously, there is an inherent value bias involved when weighting an index according to the dividend stream, especially in the U.S. While we believe our Indexes can serve as benchmarks for core parts of a portfolio allocation, in that we look to include all regular dividend payers in particular equity markets, there are a number of analysts, including Morningstar, who classify the Indexes in the value category.

When comparing the WisdomTree Dividend Indexes to the universe of managers¹³ in the value category, their performance is particularly strong:

- + Since inception (through 12/31/22), the WisdomTree U.S. Dividend Index has beaten approximately 92% of the 521 peers in its category.
- + The Index outperformed 93% of managers on a 15-year basis.

The WisdomTree International Equity Index has outperformed 88% of the managers in its category since its inception.

FIGURE 13: MORNINGSTAR UNIVERSE: LARGE-CAP VALUE, PERCENTAGE OF PEER GROUP BEATEN

Category: Morningstar Large Cap Value						
6/1/2006 - 12/31/2022						
	1-Year	3-Year	5-Year	10-Year	15-Year	Entire Analysis Period
WisdomTree U.S. Dividend Index	70%	67%	87%	91%	93%	92%
Russell 3000 Index	1%	52%	88%	96%	94%	93%
Russell 3000 Value Index	27%	28%	34%	51%	52%	48%
Number of Managers	1223	1153	1097	819	600	521
Category: Morningstar Foreign Large Cap Value						
6/1/2006 -12/31/2022						
	1-Year	3-Year	5-Year	10-Year	15-Year	Entire Analysis Period
WisdomTree International Equity Index	59%	26%	53%	73%	75%	88%
MSCI EAFE Index	12%	51%	80%	85%	79%	85%
MSCI EAFE Value Index	84%	46%	42%	50%	47%	44%
Number of Managers	360	330	307	181	118	95

Source: Morningstar. Past performance does not guarantee future results. You cannot invest in an index. Entire Analysis Period is from 6/1/2006 through 12/31/2022.

¹³ Refers to portfolio managers who actively make investment decisions in an effort to maximize return.

CONCLUSION

Investment managers and investors alike are always looking for better ways to invest. We believe indexing is highly efficient, and that ETFs have a number of benefits that make them a wise investment vehicle. But as history has shown us time and again, price is not always the best indicator of value.

So why do so many indexes—and the ETFs based on them—take a market cap-weighted approach?

If you can accept that markets are not always efficient, you can appreciate the value of the WisdomTree Indexing methodology. Our dividend approach has proven itself for more than 15 years—a period that included significant market events—outperforming most comparable cap-weighted benchmarks and active managers, and with less risk. We believe our approach offers investors the potential to:

- + Protect their portfolios during market bubbles
- + Benefit from higher dividend growth
- + Reduce portfolio risk
- + Better generate income during retirement
- + Take a wise approach to equity investing

Visit WisdomTree.com/investments for more information on our approach.

Investors should carefully consider the investment objectives, risks, charges and expenses of the Fund before investing. To obtain a prospectus containing this and other important information, please call 866.909.9473 or visit WisdomTree.com/investments 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 currency, political and economic risk. Funds focusing on a single country, sector and/or funds that emphasize investments in smaller companies may experience greater price volatility. Investments in emerging markets, real estate, currency, fixed income and alternative investments include additional risks. Please see prospectus for discussion of risks.

Dividends are not guaranteed, and a company currently paying dividends may cease paying dividends at any time.

References to specific securities and their issuers are for illustrative purposes only and are not intended to be, and should not be interpreted as, recommendations to purchase or sell such securities.

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. WisdomTree, its affiliates and their independent providers are not liable for any informational errors, incompleteness or delays or for any actions taken in reliance on information contained herein.

Additional Index information is available at www.wisdomtree.com.

The MSCI information may only be used for your internal use, may not be reproduced or re-disseminated in any form and may not be used as a basis for or component of any financial instruments or products or indexes. None of the MSCI information is intended to constitute investment advice or a recommendation to make (or refrain from making) any kind of investment decision and may not be relied on as such. Historical data and analysis should not be taken as an indication or guarantee of any future performance analysis, forecast or prediction. The MSCI information is provided on an “as is” basis and the user of this information assumes the entire risk of any use made of this information. MSCI, each of its affiliates and each entity involved in compiling, computing or creating any MSCI information (collectively, the “MSCI Parties”) expressly disclaims all warranties. With respect to this information, in no event shall any MSCI Party have any liability for any direct, indirect, special, incidental, punitive, consequential (including loss profits) or any other damages. (www.msci.com)

The WisdomTree U.S. Dividend Index measures the performance of the dividend-paying segment of the U.S. stock market. The WisdomTree International Equity Index measures the performance of the dividend-paying segment of the developed world outside the U.S. and Canada and represents equity markets in 21 countries. The S&P 500 Index is a capitalization-weighted index of 500 stocks selected by the Standard & Poor’s Index Committee designed to represent the performance of the leading industries in the U.S. economy. The Russell 3000 Index measures the performance of the 3,000 largest U.S. companies based on total market capitalization. The Russell 3000 Value Index measures the performance of value stocks in the Russell 3000 Index. The MSCI EAFE Index is a market cap-weighted index composed of companies representative of the developed market structure of developed countries in Europe, Australasia and Japan. The MSCI EAFE Value Index measures the performance of value stocks in the MSCI EAFE Index.

WisdomTree Funds are distributed by Foreside Fund Services, LLC, in the U.S.

Jeremy Schwartz is a registered representative of Foreside Fund Services, LLC.

© 2023 WisdomTree, Inc.