

# FACTOR ATTRIBUTION: QUANTIFY YOUR PERFORMANCE

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As the investment world begins to accept equity [factors](#) such as [value](#), [quality](#), [momentum](#) and [low correlation](#) as best-practice investing, increasingly we find advisors attempting to measure their assets' factor exposure in ways that are familiar to them. [Regressions](#) are helpful, but they often represent an analysis that is unfamiliar, operating in a completely different universe than traditional performance attribution, for example. With this in mind, WisdomTree set its sights on creating a more familiar factor attribution framework.

For instance, a commonly used measurement for the quality factor is [return on equity \(ROE\)](#), which measures how efficiently a company captures profits based on shareholder investments. Below, we segmented the USA Equity universe into five ROE [quintiles](#), the first being the top 20% measured by ROE (representing the highest-quality segment of the market) and the fifth quintile being the bottom 20% (representing the lowest-quality segment). Not only does this allow for differentiation among the highest- and lowest-quality baskets of the U.S. equity market, but we can compare other indexes' overlap with these baskets and pinpoint where quality exposure helped or hurt historically. For example, let's look at the [WisdomTree U.S. Quality Dividend Growth Index \(WTDGI\)](#) versus the [S&P 500 Index](#).

## Quality Factor Attribution Using Return on Equity

Quality Factor Attribution Using Return on Equity, 4/30/13–10/31/17									
Category	Allocation	Selection	Interaction	Total Contribution	WisdomTree Weight	Benchmark Weight	Active Weight	WisdomTree Group Return	Benchmark Group Return
1st Quintile	0.29%	-0.03%	-0.03%	0.23%	42.13%	23.07%	19.06%	14.89%	15.02%
2nd Quintile	-0.13%	-0.08%	-0.08%	-0.28%	32.53%	21.07%	11.46%	12.11%	12.57%
3rd Quintile	0.03%	0.50%	-0.07%	0.45%	17.21%	18.65%	-1.44%	16.11%	13.70%
4th Quintile	0.10%	0.05%	-0.10%	0.05%	5.00%	16.46%	-11.46%	12.50%	12.51%
5th Quintile	0.23%	0.84%	-0.76%	0.31%	1.73%	14.38%	-12.65%	17.53%	11.60%
Negative ROE	-0.14%	-0.28%	0.20%	-0.23%	0.33%	2.31%	-1.98%	-6.06%	23.03%
Not Classified	-0.12%	-0.14%	0.22%	-0.04%	1.06%	4.06%	-3.00%	4.23%	16.00%
Total	0.25%	0.86%	-0.61%	0.50%	100.00%	100.00%	0.00%	14.05%	13.55%

Sources: WisdomTree, FactSet, as of 10/31/17. "Not classified" refers to those companies with negative common equity or missing data.

## How to Interpret Results: Row 1 Example

**Allocation:** WTDGI received 29 [basis points \(bps\)](#) of relative outperformance due to its corresponding percentage weight in the first ROE quintile versus the S&P 500.

**Selection:** WTDGI received 3 bps of relative underperformance due to its stock selection in the first ROE quintile versus the S&P 500.

**Interaction:** WTDGI received 3 bps of relative underperformance due to the interaction between allocation and selection in the first ROE quintile versus the S&P 500

**Total Contribution:** The stocks and weights of WTDGI attributable to the first ROE quintile of the market added 23 bps of relative outperformance versus the S&P 500.

**WisdomTree Weight:** An average 42.13% total WTDGI weight was in the first ROE quintile of the market.

**Benchmark Weight:** An average 23.07% total S&P 500 Index weight was in the first ROE quintile of the market.

**Active Weight:** WTDGI was 19.06% overweight in the first ROE quintile of the market relative to the S&P 500.

**WisdomTree Group Return:** The group of stocks in WTDGI within the first ROE quintile of the market returned 14.89%, while the aggregate S&P 500 Index returned 13.55%.

**Benchmark Group Return:** The group of stocks in the S&P 500 within the first ROE quintile of the market returned 15.02%, while the aggregate S&P 500 returned 13.55%.

### Commentary

Interestingly, the two largest differences in active weight came in the first and fifth quintiles; that is, WisdomTree's quality Index was 19% overweight in the highest-quality segment of the market and underweight 13% in the lowest-quality segment of the market. These allocation differences amounted to over 50 bps of excess return, highlighting the power of the quality factor and reminding investors it is not just about being long quality stocks, but also about avoiding allocations to "junkier" stocks. In [beta benchmarks](#), you will most likely find a more even allocation mix among these fundamental quintiles, whether you sort by [earnings yield](#), [dividend yield](#) or ROE, compared to a targeted earnings, [dividend](#) or, in this case, quality Index. More specifically, the S&P 500 had more than 30% weight dedicated to the two worst ROE quintiles of the U.S. equity market, whereas the WisdomTree Index possessed only 7% weight. This is why fundamental investing truly is a two-pronged approach, and why, since its inception, the WisdomTree U.S. Quality Dividend Growth Index has managed to get the better of the S&P 500 Index.

For standardized performance and the most recent month-end performance click [here](#) NOTE, this material is intended for electronic use only. Individuals who intend to print and physically deliver to an investor must print the monthly performance report to accompany this blog.

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## DEFINITIONS

**Factor** : Attributes that based on its fundamentals or share price behavior, are associated with higher return.

**Value** : 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. This term is also related to the Value Factor, which associates these stock characteristics with excess returns vs the market over time.

**Quality** : Characterized by higher efficiency and profitability. Typical measures include earnings, return on equity, return on assets, operating profitability as well as others. This term is also related to the Quality Factor, which associates these stock characteristics with excess returns vs the market over time.

**Momentum** : Characterized by assets with recent price increase trends over time. This term is also associated with the Momentum Factor which associates these stock characteristics with excess return vs the market over time.

**Low Correlation** : Characterized by assets that have a relatively lower correlation vs the market over time. This term is also associated with the Low Correlation Factor which associates these stock characteristics with excess returns vs the market over time.

**Regression analysis** : statistical process for estimating the relationships among variables. It helps one understand how the typical value of the dependent variable (Y- variable) changes when any one of the independent variables is varied, while the other independent variables are held fixed.

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

**Quintile** : One of the class of values of a variate which divides the members of and batch or sample into equal-sized subgroups of adjacent values or a probability distribution into distributions of equal probability.

**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.

**Basis point** : 1/100th of 1 percent.

**Beta benchmark** : Characterized by measuring the performance of a particular universe of equities without attempting to utilize selection and weighting to generate differences in performance relative to this universe.

**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.

**Dividend yields** : Refers to the trailing 12-month dividend yield. Dividends over the prior 12 months are added together and divided by the current share price. Higher values indicate more dividends are being generated per unit of share price.

**Dividend** : A portion of corporate profits paid out to shareholders.