Expectations and Perceptions

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Brad Steinman, Vice President, Dimensional Fund Advisors, recently published an article highlighting the relationship between investors' expectations, their perceptions of investment results, and their degree of satisfaction.[1] He notes that satisfaction derives from investors perceiving results to be near or greater than expectations. This relationship highlights the importance of expectations and perceptions.

Expectations

Stocks have higher expected returns than safer investments like Treasury bills.

The financial markets reflect investors' perceived levels of uncertainty about anticipated cash flows for various securities through security prices. Lower prices relative to anticipated cash flows translate into higher expected returns. The higher expected returns for stocks offer investors compensation for assuming greater uncertainty about the level and magnitude of future cash flows relative to bonds and Treasury bills. The higher expected returns represent the equity risk premium.

A positive size, value, and profitability premium.

Market forces set the price of goods and services based on many factors, such as the costs of raw materials, labor, shipping, and advertising, as well as competition and perceived value. Consumers do not need to understand all the inputs to make an informed purchase. They look at the price relative to alternatives to determine if they should purchase the product. The lower the price or the more you get, either in quality or quantity, makes the purchase better.

Similarly, a stock's price reflects many inputs. Expectations about future profits, different types of risk, and investor preferences are a few examples. Fortunately, you do not need a model to understand these inputs or how they impact market prices. All available information should already be reflected in the price, which tells you something about expected returns. Both consumers and investors want to pay less and receive more.

Expected returns are a function of the price you pay and the cash flows that you presume to receive. Smaller and more profitable companies with lower relative prices have higher expected returns than larger and less profitable entities with higher relative prices. These relationships determine the size, value, and profitability premiums.

Expected premiums are positive, but not guaranteed.

Expected premiums are always positive, but realized premiums may be positive in some years and negative in others. You may even experience a negative premium for several years in a row. Exhibit 1

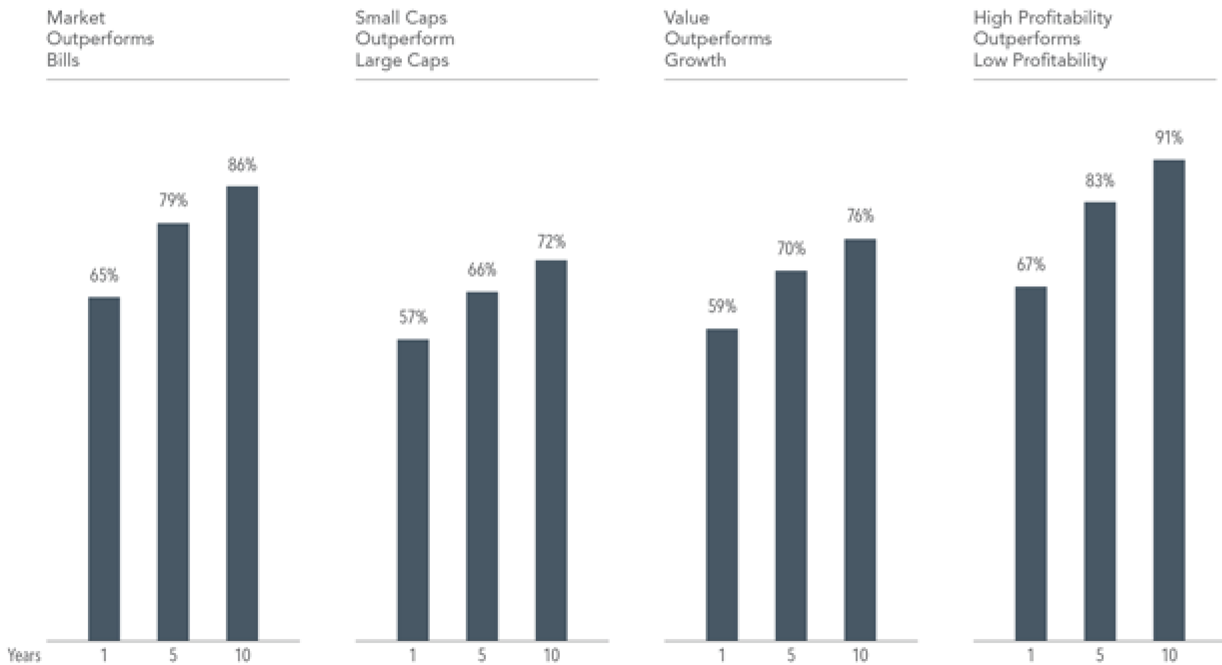
[1] Steinman, Brad, The Happiness Equation, Dimensional Fund Advisors, September 21, 2018

shows that the equity market outperforms Treasury bills in approximately 65% of the 1-year periods. The probability of small caps outperforming large caps over a 1-year period is 57%.

The probability of earning a positive premium increases with your time horizon. However, the premium is not guaranteed. Underperformance is possible over any time frame. Nobel laureate Paul Samuelson said, “In competitive markets there is a buyer for every seller. If one could be sure that a price will rise, it would have already risen.”

Exhibit 1: Estimated Probability of Outperformance

US Market



Probability of outperformance is computed using 100,000 simulations that bootstrap historical monthly returns from July 1926 to December 2017 for "Market Outperforms Bills" and "Value Outperforms Growth," from June 1927 to December 2017 for "Small Caps Outperform Large Caps," and from July 1963 to December 201 for "High Prof Outperforms Low Prof." Bootstrapping is a statistical method that relies on random sampling with replacement (i.e., each random sample from a datase is placed back into the sampling universe before the next sample is taken) to estimate properties of a sample statistic. The projections or other information generated by bootstrapped samples regarding the likelihood of various investment outcomes are hypothetical in nature, do not reflect actual investment results, and are not guarantee of future results. Results will vary with each use and over time. ***See "Disclosures and Index Descriptions" for additional important information and descriptions of indices used. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio.***

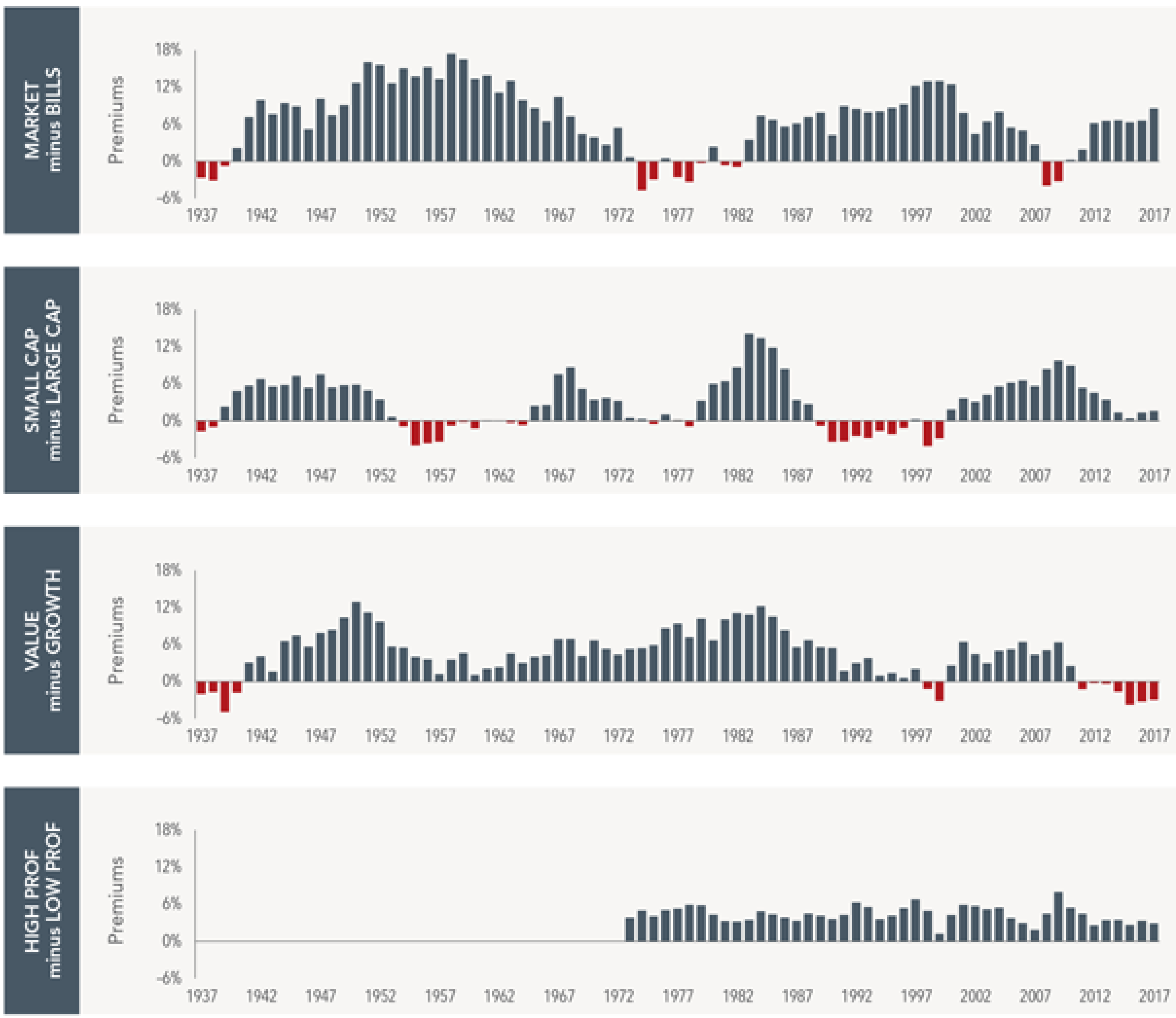
Perception

Perceptions of returns relative to expectations can determine the degree of satisfaction.

If an investor expects a positive value premium over all 10-year time horizons and this premium turns out to be negative, then the investor will be dissatisfied. However, Exhibit 2 shows that this expectation is unrealistic. The size and value premiums have not been positive over all 10-year periods. For example, the 10-year value premium has been negative over the past several years. The probability of a negative value premium over a 10-year time horizon is approximately 24%. Accepting this probability should reduce the dissatisfaction that an investor may feel about the most recent 10-year results.

Exhibit 2: Historical Observations of 10-Year Premiums

Equity, size, relative price, and profitability: US Markets



Information provided by Dimensional Fund Advisors LP. In US dollars. 10-year rolling premiums are computed as the difference in the 10-year annualized compound return between indices. Indices used for the premium calculations are represented in the prior exhibit containing returns of the premiums and the disclosure. ***See "Disclosures and Index Descriptions" for additional important information. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Past performance is no guarantee of future results.***

Lengthy periods of underperformance often produce disappointment because investors obviously prefer higher rather than lower returns. Nonetheless, disappointment should not turn into anger or regret if you know in advance that periods like these will occur and you recognize that you can not predict them.

Instead of regretting periods of underperformance, which might cause you to abandon a well-designed investment plan, try to lean into the outcome. Embrace it by considering that if positive premiums were absolutely certain, even over periods of 10 years or longer, then you should not expect those premiums to materialize going forward. In a well-functioning capital market, competition would drive down expected returns to the levels of other low-risk investments, such as short-term Treasury bills. Risk and return are related.

The Unpredictable Nature of Premiums

The fourth quarter of 2016 demonstrates how realized premiums can change quickly, unpredictably, and with a large magnitude. For the 1-year period ending October 31, 2016, the Russell 1000 index of large cap stocks and the Russell 2000 small cap index returned 4.26% and 4.11% respectively, producing a -0.15% size premium. Shifting the calendar forward by two months to December 31, 2016 produces realized returns of 12.05% for large cap and 21.31% for small cap stocks over the previous year. The 1-year small cap premium rose from -0.15% to +9.26% by merely shifting the start and end dates by two months.

Your satisfaction as an investor depends on your perception of events relative to expectations. Accepting the unpredictable nature of premiums can improve your satisfaction. Proper expectations alongside the appropriate perceptions can help you stay the course and may improve your wealth and well-being.

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