The 'Evidence' In 'Evidence-Based Investing' Is Very Hard to Find

By Rafael Resendes
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(A Photo/Mark Lennihan)

A trend among investment managers is to focus on "evidence-based" investing, which boils down to adopting strategies that have strong empirical support and ideally a strong theoretical foundation to avoid spurious results. Unfortunately, it is quite common for investment strategy results to offer compelling performance when studied "in-sample" (data or time-period of the original research), but that perform poorly out-of-sample (data or time-period not of the original research). Researchers Campbell Harvey, Yan Liu and Hequing Zhu (HLZ) 2016 argue that so many variables get tested to explain stock returns that by sheer luck many will have convincing empirical evidence "in-sample." They go on to say that the cleanest way to evaluate research is through out-of-sample testing. They admit that unfortunately, few investment studies deliver on such standards.

No research or researcher is immune from being held accountable to in/out-of-sample effects. Some event are much larger in hindsight than they originally seem. The Fama/French 1992 3-Factor Model, and the introduction of the "value factor" was such an event. In an investment management context, it ranked somewhere between Elvis Presley and The Beatles appearing on The Ed Sullivan Show. Essentially this work birthed the Quantitative Value Investing field, which has given rise to numerous investment management firms utilizing this research and its derivative insights. The premise to this work is simple: identify companies trading at a high ratio of book value to market value (i.e., cheap based on book value), hoping that enough of these cheap companies are also undervalued so that overall, the portfolio rises faster than the market in general.
It is easy to understand why this work changed investing history. Across the investment industry, there is an insatiable demand for objective, easy to calculate metrics which are applicable across firms and outperform the market. In other words, everyone is looking for a unicorn. The returns to the Fama French “Value Factor” were prodigious, and book to price is easy to calculate across firms. It’s also easy to measure objectively.

Finance found its unicorn. From 1963 to 1991, the period covered in the 1992 paper, it seemed as though the “value factor” was a money machine. Portfolios formed of companies scoring highest on the value factor during this period CRUSHED the overall market. However, and this is important as it plagues virtually all investment studies, these theoretical results took place “in-sample,” or during the period of the study. Until Dr. Brown creates the time-traveling DeLorean, no one will ever experience the stellar returns implied from this research, as the out-of-sample results were very different.

The actual experience of investors buying portfolios formed of companies scoring highest on the “value factor” since 1992 have significantly underperformed the original research, and Large-Cap portfolios formed on this strategy significantly underperformed the market; leading Fama/French to expand their model to 5 factors in 2015. Put another way, evaluated out-of-sample, the “value factor” was not a unicorn, but maybe a tired plough horse. This highlights the importance of HLZ’s argument, that the best way to evaluate the efficacy of investment research is through a long-term out-of-sample review. In a world where computing power and financial databases are virtually free, it is too easy to justify variables that outperform over a given period, yet fail when used in a live, out-of-sample setting. We will discuss the choices of the 5-Factor model another day, as it is also quite suspect in its design and conclusions.

An alternative to the cheapness assumptions embedded in the “value factor,” and other price-to-something type multiples, is to directly estimate intrinsic value and determine if companies are over/under valued. In 1995, Applied Finance developed a comprehensive valuation framework directly incorporating: Economic Profitability, Capital Investment, Competition, and Risk to consistently estimate the intrinsic value of companies around the world. Applied Finance calibrated its valuation model from 1975 to 1995, and since 1995, Applied Finance has used this model to calculate over 20 Million intrinsic value estimates for publicly traded companies globally. To our knowledge, no other firm has such a deep, live, out-of-sample database consistently derived intrinsic value estimates. One important evidence-based investment question is whether simplicity trumps completeness in variable construction and design for investment management. Specific do simple cheapness proxies (such as the book to price multiple, price multiple composites, and book value adjusted for intangibles) offer comparable/superior returns than a more comprehensive and robust valuation based representation of firm value. This is particularly important given the enormous amounts of capital invested in various cheapness approaches anchored to the quantitative value investing approach derived from the original Fama/French research. Applied Finance directly addressed this question in a research study titled: Valuation Beta™: Addressing the Inadequacies of Book to Price with Intrinsic Value, Stewardship, and Leverage.

From this research it is clear, during a 20-plus year out of sample period from 9/98 to 6/20, quantitative value concepts offer little to no portfolio construction benefits after controlling for whether a stock is over/under valued. In other words, traditionally held beliefs about “value” investing, namely that cheap stocks offer superior returns, are completely explained away by understanding whether a stock is trading above or below its intrinsic value. This is not surprising, as the point of quantitative value investing is to find cheap price-to-something stocks that are hopefully also correlated to undervalued stocks.
However, after identifying the cheap stocks that are also undervalued, there is not much purpose left for the remaining stocks, other than perhaps a short portfolio. This is not a shocking conclusion, as cheapness is not value, and value determines the attractiveness of an investment. In fact, cheap stocks (whether defined as book to price, price multiple composites, or book value adjusted for intangibles) unsupported by intrinsic value do not just fail to add alpha to a portfolio, they have significant and negative risk-adjusted alpha. Intrinsic value’s dominance over these approaches provides clear testimony to the economic intuition underpinning the use of a comprehensive valuation approach. The evidence from this study is overwhelming and clear given the 20 plus years of Applied Finance’s Intrinsic Value Factor™ live, out-of-sample track record. This represents true evidence-based investing. This study also makes clear that the investment research industry needs to adopt much more rigorous research standards. Quality must be given priority over quantity for research. Only through out-of-sample testing will research be free of inadvertent hindsight and data snooping biases that justify questionable theories with “empirical results.”


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