Is the Value Factor Broken

From September 10, 2018's WSJ (online version):

'Value' Stocks Aren't What They Used to Be

Some argue (including HCM) the usual way to evaluate such stocks ~ price-to-book-value ratio ~ should be sent to the graveyard

BY MARK HULBERT

Is "value" dead? Or have we just been measuring it in the wrong way?

It's an urgent question, because value stocks—when defined according to the traditional criterion, low price-to-book-value ratios—have lagged behind growth stocks for at least a decade now. And though value stocks in the past have come roaring back after going through similarly long periods of lagging, some researchers are questioning whether they will do so again.

That's because a growing percentage of companies' market value now comes from intangible assets—things like patents, trademarks and research-and-development expenditures—that are either ignored in the book-value calculation or reflected inconsistently. Therefore, the researchers say, the price-to-book ratio has lost its relevance.

If they are right, we can't expect stocks with the lowest such ratios to reassert their historical dominance over stocks with the highest ratios. And it may call for using a new measure that more accurately measures value, once again allowing investors to feel comfortable about following a value strategy.

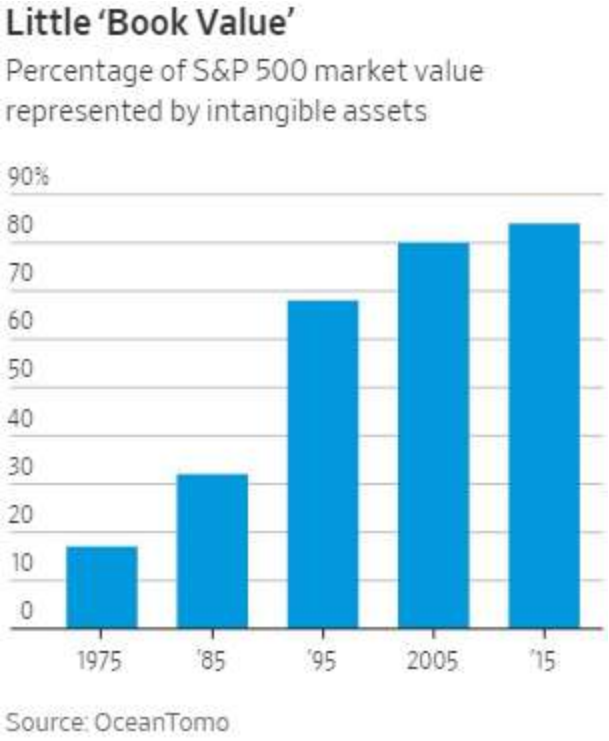
What is clear is that value as a stock-picking style has been a laggard in recent years. Over the past decade, growth stocks (as presented by the 50% of stocks with the highest price-to-book ratios) beat value by 1.9 annualized percentage points, according to data from Dartmouth College Prof. Kenneth French. That's a huge reversal from the previous eight decades, during which value (the 50% of stocks with the lowest price-to-book ratios) beat growth by 4.6 annualized percentage points.

There also can be little doubt that intangibles have grown in importance. According to Ocean Tomo, an intellectual-property consulting firm, 84% of the S&P 500's market capitalization now comes from intangible assets, up from just 17% in 1975.

Losing relevance

Baruch Lev, a professor of accounting and finance at New York University, is one of those arguing most forcefully that the increasing significance of intangible assets is the leading cause of book value's loss of relevance. He says that the accounting treatment of intangible assets—under GAAP, or generally accepted accounting principles—is both outdated and inconsistent: When a company invests in developing patents, its brand or efficient business processes, for example, GAAP requires that the investment be treated as an expense rather than as an asset. But if the company buys an intangible asset instead of generating it internally, then GAAP calls for it to be listed as an asset on its balance sheet.

"Every aspect of the financial report is adversely affected by this dated, industrial-age treatment of intangible capital," Prof. Lev argued in his 2016 book, "The End of Accounting and the Path Forward for Investors and Managers," co-written with Feng Gu, a professor of accounting and law at the University at Buffalo. "And given the likely continued rise in the role of intangibles in corporate value creation, the decline in the usefulness of financial reports is all but certain to persist."



To be sure, not everyone is ready to write the price-to-book ratio's obituary. In an interview, Kent Daniel, a finance professor at Columbia University and a former co-chief investment officer at Goldman Sachs, acknowledges that GAAP's treatment of intangible assets leaves much to be desired. But he says the price-to-book ratio has always been an imperfect and noisy measure of a firm's value. For example, book value has never "captured the value of a firm's growth prospects at all." (PEG, which has a better track record, is HCM's preferred valuation metric for this reason.) So its failure to fully and accurately reflect the value of intangible assets doesn't necessarily mean that it isn't able to do a decent job differentiating between underpriced and overpriced stocks.

In fact, Prof. Daniel says some researchers have found that the book-to-value ratio actually does a better job differentiating among companies that have spent the most on R&D than with firms that spend the least. Investment in R&D, of course, is one of the most significant categories of intangible assets.

Another clue that the price-to-book ratio may still be relevant comes when using it to forecast the S&P 500's return over the subsequent 10 years. Its record since 1975 has been better than it was over the prior five decades.

Book value's problems

If the price-to-book ratio is still somewhat effective, then why has value lagged behind growth in recent years?

One answer comes from a study set to appear in the Journal of Financial Economics. Ray Ball, an accounting professor at the University of Chicago and a co-author, says the source of the deterioration is that book value has come to be dominated by one of its two main components.

This offending category is "contributed capital," or the sum of all of a company's past equity issuances, less share repurchases. Though a ratio of price to contributed capital per share has never had much predictive value, this didn't affect the effectiveness of the price-to-book ratio so long as contributed capital represented a small share of book value, Prof. Ball says. But as it has grown to be a larger share, the price-to-book ratio has lost much of its relevance.

The other major component of book value is retained earnings, and Prof. Ball says that a ratio of price to retained earnings per share remains as effective an indicator as ever in predicting stock returns. His recommendation to investors who have been relying on the price-to-book ratio is to focus instead on this modified ratio based on retained earnings.

Prof. Ball's recommendation points to a broader theme shared by many value-oriented advisers: "Value" is better seen as a reflection of many different indicators rather than of just book value alone. In a 2015 study in the Journal of Portfolio Management, Clifford Asness, founding co-principal of AQR Capital Management, along with three colleagues, mentioned the ratios of price to earnings, dividend, cash flow and sales. The study found that a composite value indicator based on these many different measures produced better risk-adjusted returns than the price-to-book ratio alone.

Regardless of how value has been defined, however, the fact remains that value stocks on average have performed dismally over the past decade. But Prof. Daniel reminds us that value in the 1990s went through a similarly long period in which it lagged behind growth, and then—following the bursting of the internet-stock bubble—came roaring back.

"I would guess that something similar will occur in the future, but I'm not sure," he says, "and I've been wrong for a long time now!"

Mr. Hulbert is the founder of the Hulbert Financial Digest and a senior columnist for MarketWatch.

Value Investing Portfolios are Not Dead, But Some Have Done Better than Others

By Nicolas Rabener May 3rd, 2018

Mirror, mirror, on the wall – which is the fairest of them all?

Recent commentary (to include a recent Barron's article) seems to suggest that value is dead and may never come back. Of course, most of these comments revolve around the price-to-book valuation metric, which, as the Barron's article points out, might have some issues:

> ***But there's a problem*** *with price/book: today's economy. Price/book, perhaps the most conventional measure of value, evaluates stock prices based on a company's book value—the worth of all tangible assets but no intangible ones…Today's service economy is filled with companies whose biggest assets are their brands, intellectual property, or customer loyalty, which don't show up on the balance sheet.*

But as Wes highlighted not that long ago in a WSJ piece, determining if value investing is dead, really hinges on how one measures "value investing."

In this piece, we look at the performance of various value investing screens from 2000 to 2018 across the globe to garner some more insight on how value investing has faired in recent memory. The results suggest a mixed view on value. There is no conclusive evidence that value is dead, but there is also no clear case that value has done well.

Valuation Horse Race Methodology

Systematic value investors face a lot of options when deciding which value metric they should utilize when constructing their portfolios. Historically, investors have focused on the price-to-book ratio, which is still the preferred metric in some sectors, e.g. REIT specialists in Europe and Asia continue to focus on premium and discount to book values as it is a very intuitive measure for identifying value in the real estate sector. However, in most sectors investors tend to focus on earnings or cash flow-based metrics. In this short research note, we will compare different value metrics across the globe and evaluate utilizing a multi-metric approach. Wes and

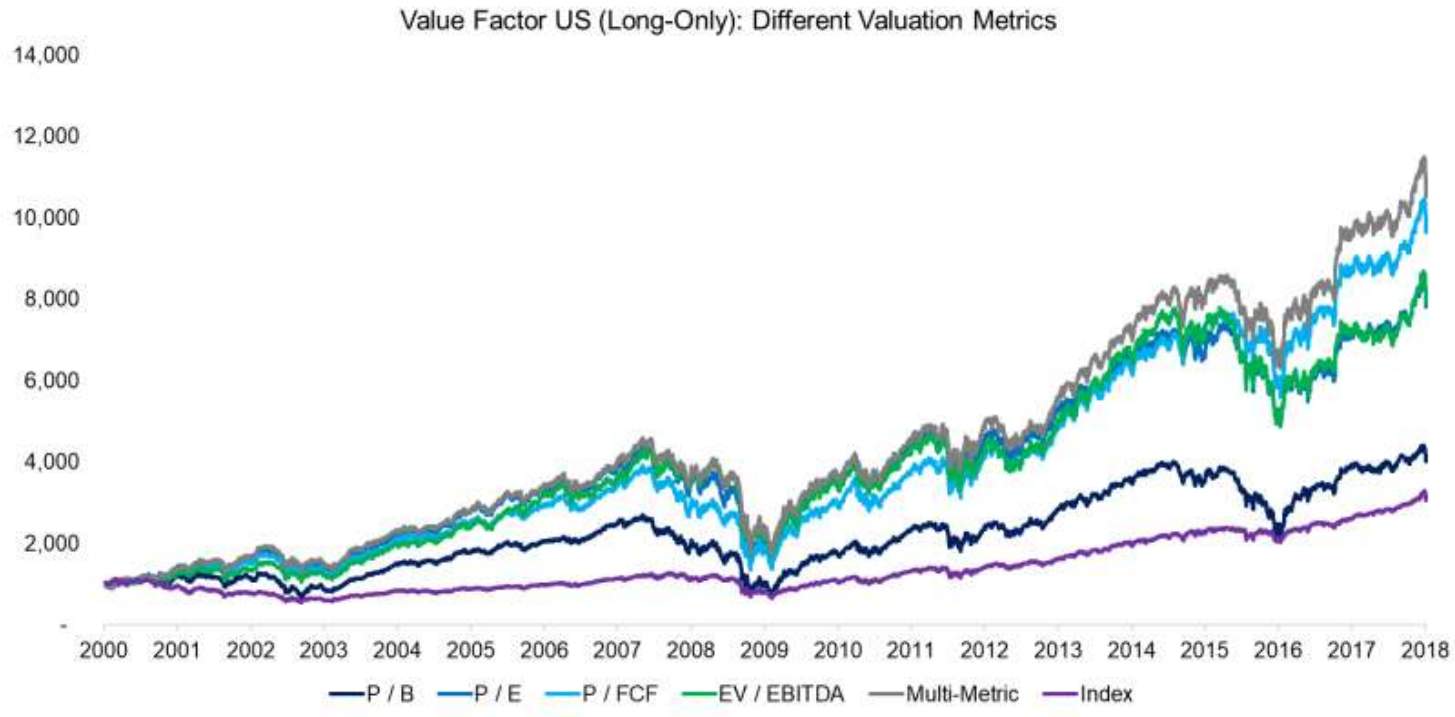
Jack have done a similar analysis for the US market over a 40-year period, which can be contrasted with the results below.

We focus on value portfolios in the US, Europe and Japan and the following four valuation metrics: price-to-book (P/B), price-to-earnings (P/E), price-to-free cashflow (P/FCF) and enterprise value-to-EBITDA (EV/EBITDA). The portfolios are constructed by taking the top 10% of the stock universes and are rebalanced monthly. Only stocks with market capitalizations of larger than $1 billion are considered and 10 basis points of costs per transaction are included.

US Value Portfolios: Metric Comparison

The chart below shows the comparison of different metrics for value portfolios in the US for the period from 2000 to 2018. We can observe that all portfolios outperformed the market over that time period, which can be explained by the period from 2000 to 2003, where the Tech bubble imploded and cheap stocks significantly outperformed the index.

The analysis highlights that the price-to-book portfolio generated the lowest performance, which likely indicates that in the US this metric has been inferior for identifying cheap companies compared to others. Modern finance focuses more on earnings and cashflow than book values, which rarely reflect the intrinsic value of company, e.g. technology companies tend to have few tangible assets. The multi-metric portfolio, which ranks stocks for all four metrics simultaneously, generated the strongest performance.

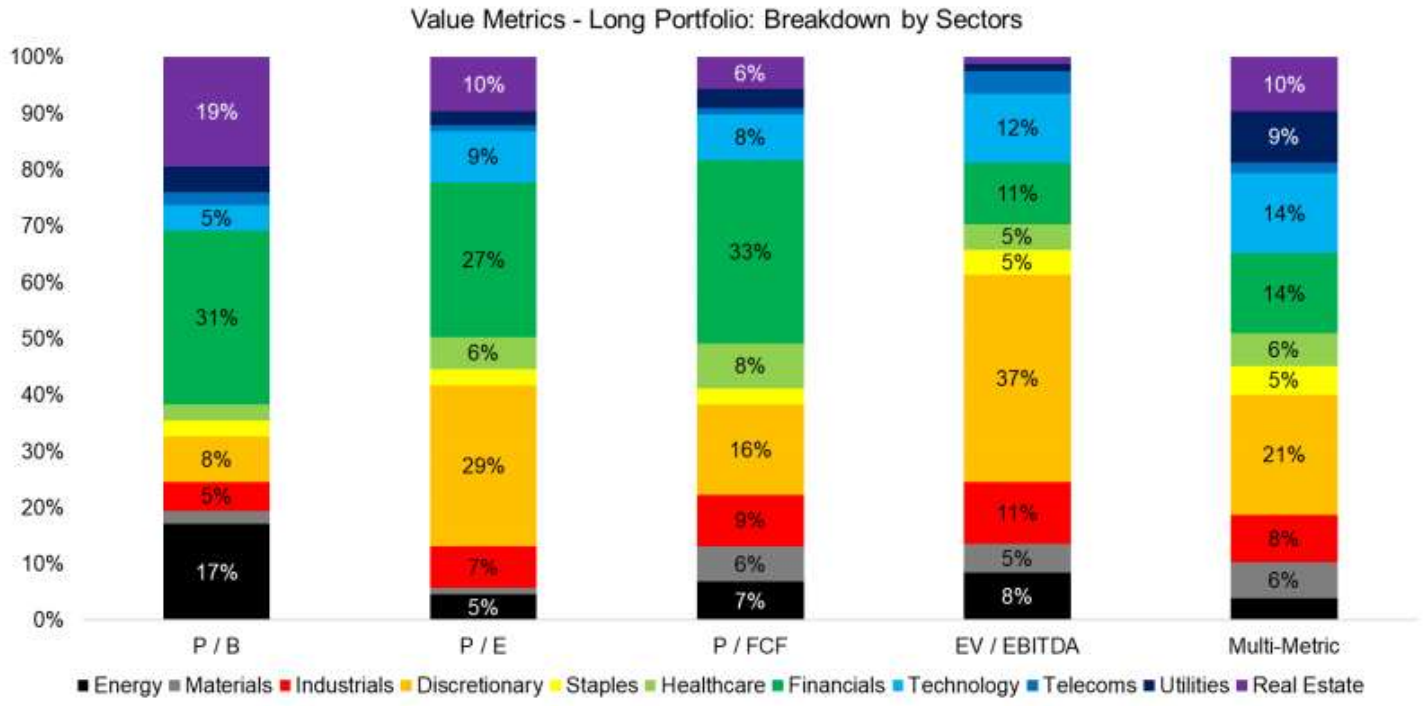


Source: FactorResearch.

It is worth highlighting that the valuation metrics lead to different portfolios from a sector perspective. For example, EBITDA (earnings before interest, depreciation and amortization) is not a meaningful measure for banks, as their major source of income is interest, which means they are excluded from the EV/EBITDA portfolio (other financial companies, like asset managers, which have fee income are included).

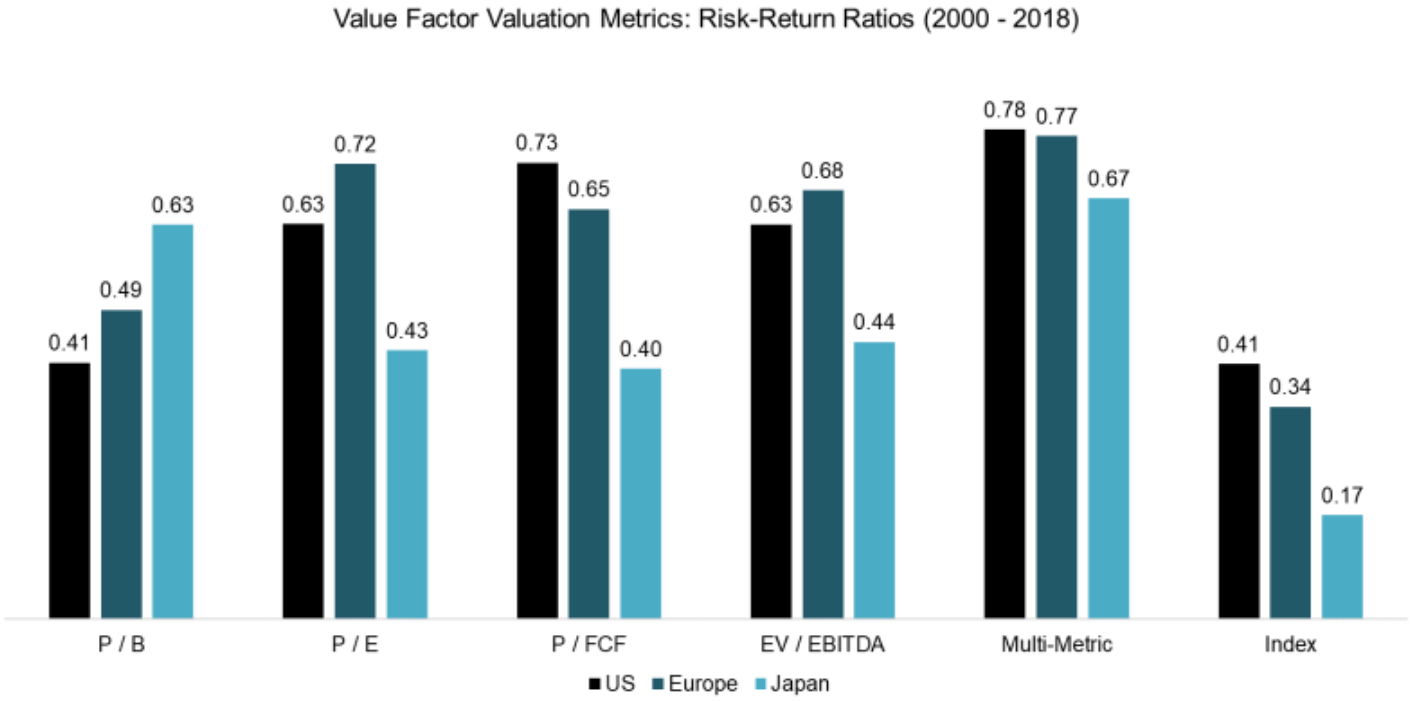
US Value Portfolios: Breakdown by Sectors

The chart below shows the long portfolio for the different valuation metrics and we can observe that there are sectoral biases towards the Financial and Consumer Discretionary sectors, i.e. these sectors are cheap across metrics. Interestingly, the multi-metric portfolio is most diversified across sectors.



Value Portfolio Metrics: Risk-Return Ratios

In addition to showing the raw performance of the various metrics, we can also analyze the risk-return ratios, which are displayed in the chart below. Overall there does not seem to be one metric that is consistently superior across regions. Selecting the best performing metric for each region could be challenged as optimization, unless there is a sound economic explanation, e.g. unique investor behavior in certain markets. Given similar accounting rules and a global financial community, this is unlikely (although there are arguments



for the "single-factor" value metric when it comes to enterprise multiples, see here, here, and here).

However, investors can mitigate value metric selection risk by combining different metrics. One possible explanation for the superior results of the multi-metric approach is that it avoids false positives, e.g. stocks that appear as value stocks on a single metric for accounting reasons but would not be considered value stocks on other valuation metrics. This ensemble approach shows attractive risk-return ratios across regions.

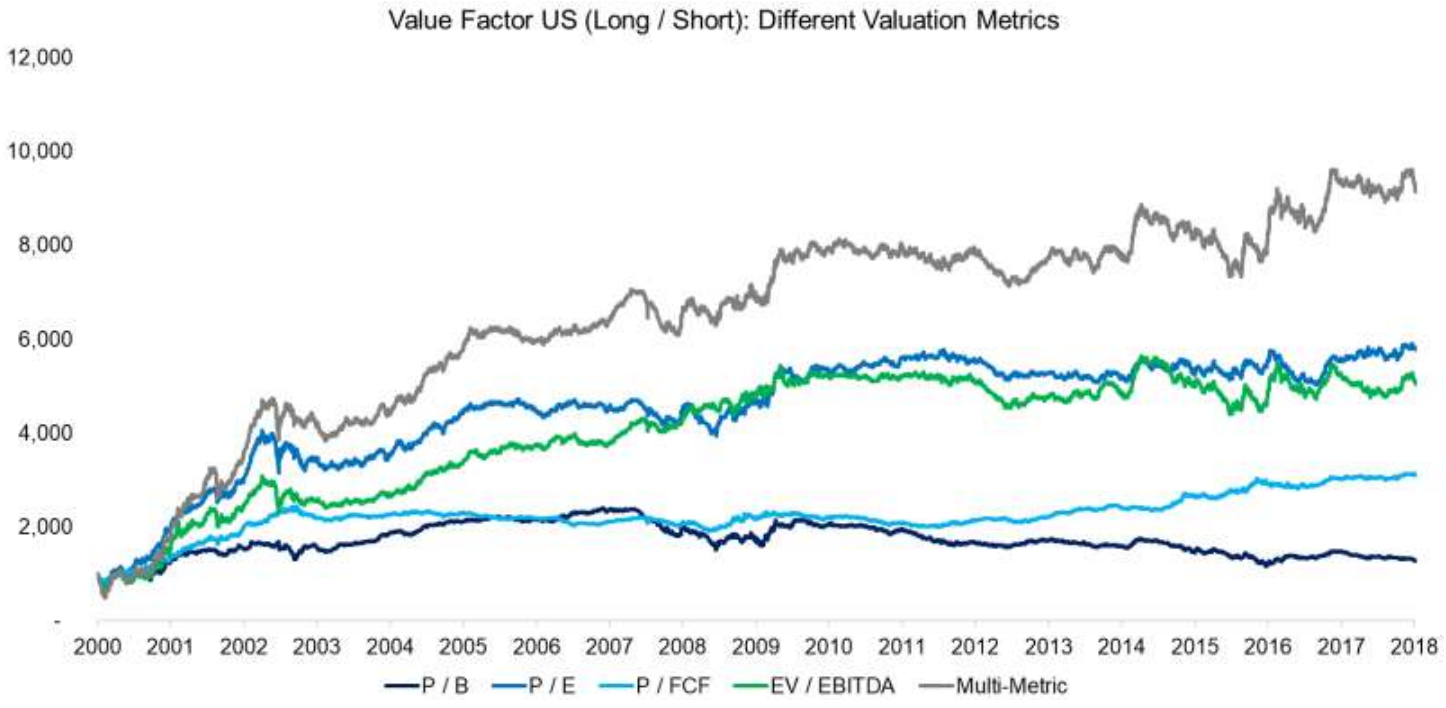
Further Thoughts

This research note highlights some of the choices investors have when defining value stocks. Value isn't necessarily dead — it all depends on how you measure it, when and where it is measured. This inconsistency suggests that value is merely "noisy," which is well-established. Moreover, the inconsistent performance of the valuation metrics across regions is somewhat surprising, but might be mitigated via a multi-metric approach. However, although combining multiple valuation metrics has generated relatively more attractive results across regions, the value factor performance was flat over the last 10 years. Naturally, investors can diversify across factors by creating multi-factor portfolios, allowing them to harvest returns from a variety of risk premia sources ....

Long short results are posted below.

A few key highlights between the long-only and the long/short analysis:

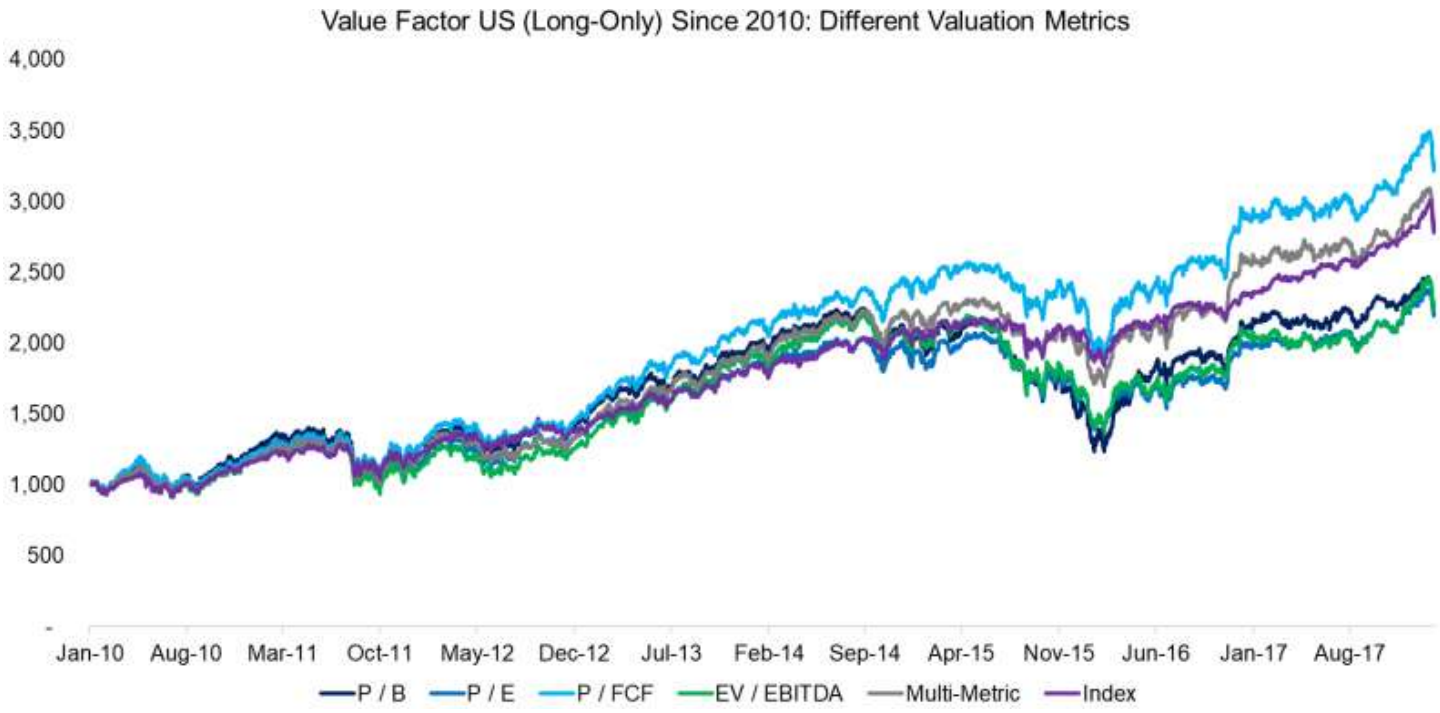
- Multi-metric is the most effective approach across the board.
- Price-to-book has been a poor performer for at least a decade
- Long-only and long-shorts results sometimes diverge



Source: FactorResearch.

Long-Only Results Post the Global Financial Crisis

The charts below show the long-only value portfolios rebased in 2010, i.e. post the Global Financial Crisis. The results highlight that there isn't one single superior valuation metric, but that the multi-metric approach is likely the best approach. We can also observe that the difference between the value portfolios and the indices across regions are much narrower than in the analysis from 2000, which highlights that many value portfolios did not generate positive excess returns over the last decade.



Source: FactorResearch.

About the Author: Nicolas Rabener

Nicolas Rabener is the Managing Director of FactorResearch, which provides quantitative solutions for factor investing. Previously he founded Jackdaw Capital, an award-winning quantitative investment manager focused on equity market neutral strategies. Before that Nicolas worked at GIC (Government of Singapore Investment Corporation) in London focused on real estate investments across the capital structure. He started his career working in investment banking at Citigroup in London and New York. Nicolas holds a Master of Finance from HHL Leipzig Graduate School of Management, is a CAIA charter holder.

Our thoughts

From our website: "Although academics still use Price/Book (also formulated as Book/Market), research has demonstrated that P/B is one of (if not the) weakest measures of Value. ... Another way to improve on the Value Factor is to invest in funds that use more than one metric to determine Value." We are currently using 4 of BlackRock's iShares Edge MSCI Factor ETFs for clients. They calculate the Value Factor from "forward and trailing share price to earnings, share price to cash earnings, share price to book value and enterprise value to earnings before interest & taxes (EBIT)". In February Vanguard finally joined the Factor-based Fund Parade

with 6 ETFs and 2 OEFs. Their U.S. Value Factor ETF (VFVA) uses "measures such as book to price and earnings to price ratios".

While the above article and study address how Value should be measured, they don't answer the question of how best to take advantage of it. Again, from our website:

Exhibit 1 - Returns on Portfolios Sorted by Size and Book/Price

	Low 1	2	3	4	High 5	5-1
Large	9.89	10.29	10.68	9.75	11.51	1.62
Mid	10.58	11.00	12.35	14.44	13.72	3.14
Small-Mid	8.64	13.22	12.95	14.91	16.12	7.48
Small	8.04	12.40	14.46	15.16	15.33	7.29
Micro	4.39	12.11	12.92	16.03	16.96	12.57

Source: French Data Library. Data from July 1963 through May 2018.

Historically, the greatest extra return from the Value Factor has come from Small-Mid, Small, and Micro Cap stocks. Hence, HCM aims to provide clients with exposure to Small Cap Value, both Domestic and International.

Factor Fimbulwinter

BY COREY HOFFSTEIN

ON JUNE 11, 2018

Summary

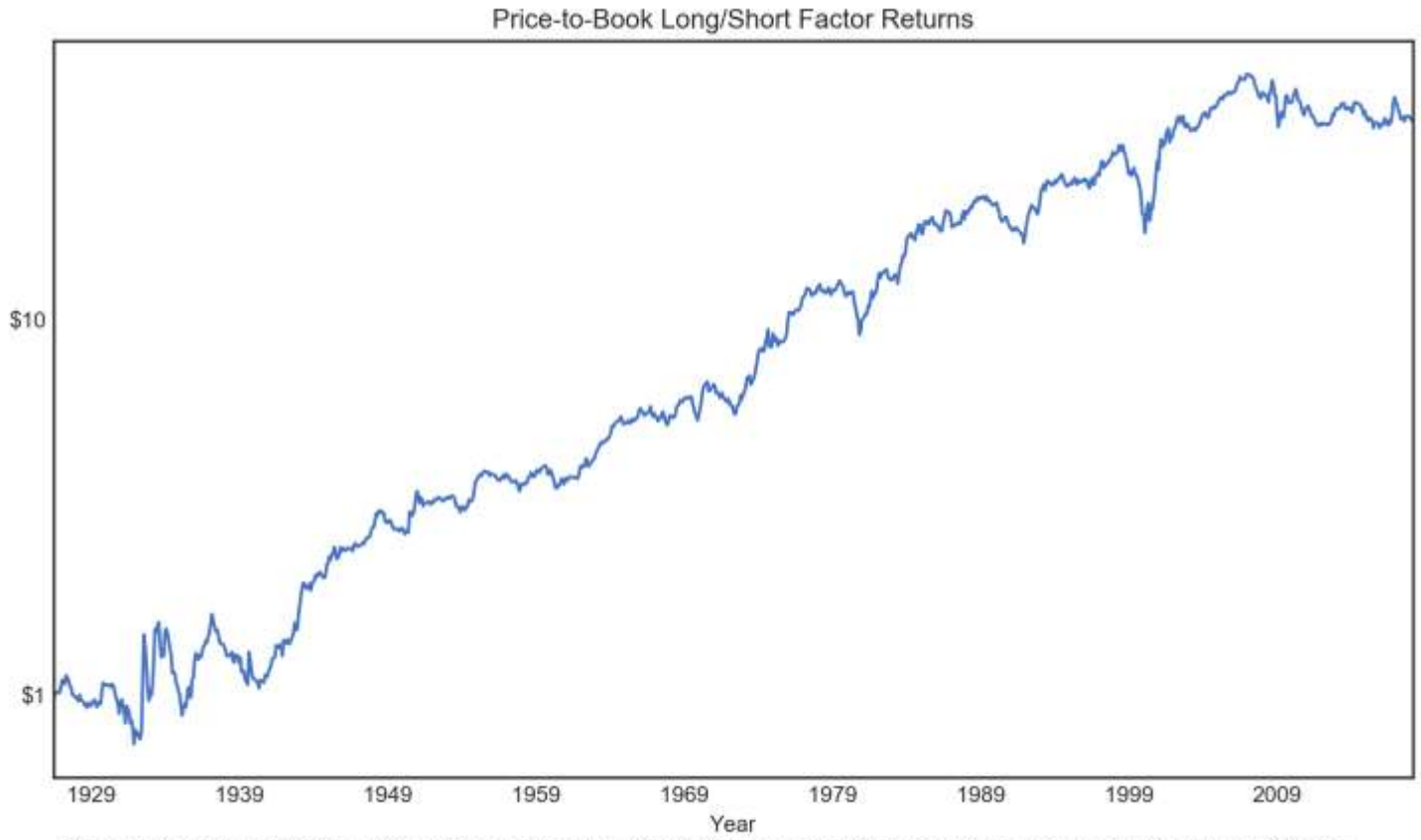
- Value investing continues to experience a trough of sorrow. In particular, the traditional price-to-book factor has failed to establish new highs since December 2006 and sits in a 25% drawdown.
- While price-to-book has been the academic measure of choice for 25+ years, many practitioners have begun to question its value (pun intended).
- We have also witnessed the turning of the tides against the size premium, with many practitioners no longer considering it to be a valid stand-alone anomaly. This comes 35+ years after being first published.
- With this in mind, we explore ... how long it would take for us to finally dismiss a factor.
- We find that for most factors, we would have to live through several careers to finally witness enough evidence to dismiss them outright.
- Thus, while factors may be established upon a foundation of evidence, their forward use requires a bit of faith.

In Norse mythology, Fimbulvetr (commonly referred to in English as “Fimbulwinter”) is a great and seemingly never-ending winter. It continues for three seasons – long, horribly cold years that stretch on longer than normal – with no intervening summers. It is a time of bitterly cold, sunless days where hope is abandoned and discord reigns.

This winter-to-end-all-winters is eventually punctuated by Ragnarok, a series of events leading up to a great battle that results in the ultimate death of the major gods, destruction of the cosmos, and subsequent rebirth of the world.

Investment mythology is littered with Ragnarok-styled blow-ups and we often assume the failure of a strategy will manifest as sudden catastrophe. In most cases, however, failure may more likely resemble Fimbulwinter: a seemingly never-ending winter in performance with returns blown to-and-fro by the harsh winds of randomness.

Value investors can attest to this. In particular, the disciples of price-to-book have suffered greatly as of late, with "expensive" stocks having outperformed "cheap" stocks for over a decade. The academic interpretation of the factor sits nearly 25% *below* its prior high-water mark seen in December 2006.



Source: Kenneth French Data Library. Calculations by Newfound Research. Not actual strategies managed by Newfound Research. Returns are gross of all fees, including transaction fees, taxes, and any management fees. Returns assume the reinvestment of all distributions. Past performance is not a guarantee of future results.

Expectedly, a large number of articles have been written about the death of the value factor. Some question the factor itself, while others simply argue that price-to-book is a broken implementation.

But are these simply retrospective narratives, driven by a desire to have an explanation for a result that has defied our expectations? Consider: if price-to-book had exhibited positive returns over the last decade, would we be hearing from nearly as large a number of investors explaining why it is no longer a relevant metric?

To be clear, we believe that many of the arguments proposed for *why* price-to-book is no longer a relevant metric are quite sound. The team at O'Shaughnessy Asset Management, for example, wrote a particularly compelling piece that explores how changes to accounting rules have led book value to become a less relevant metric in recent decades.

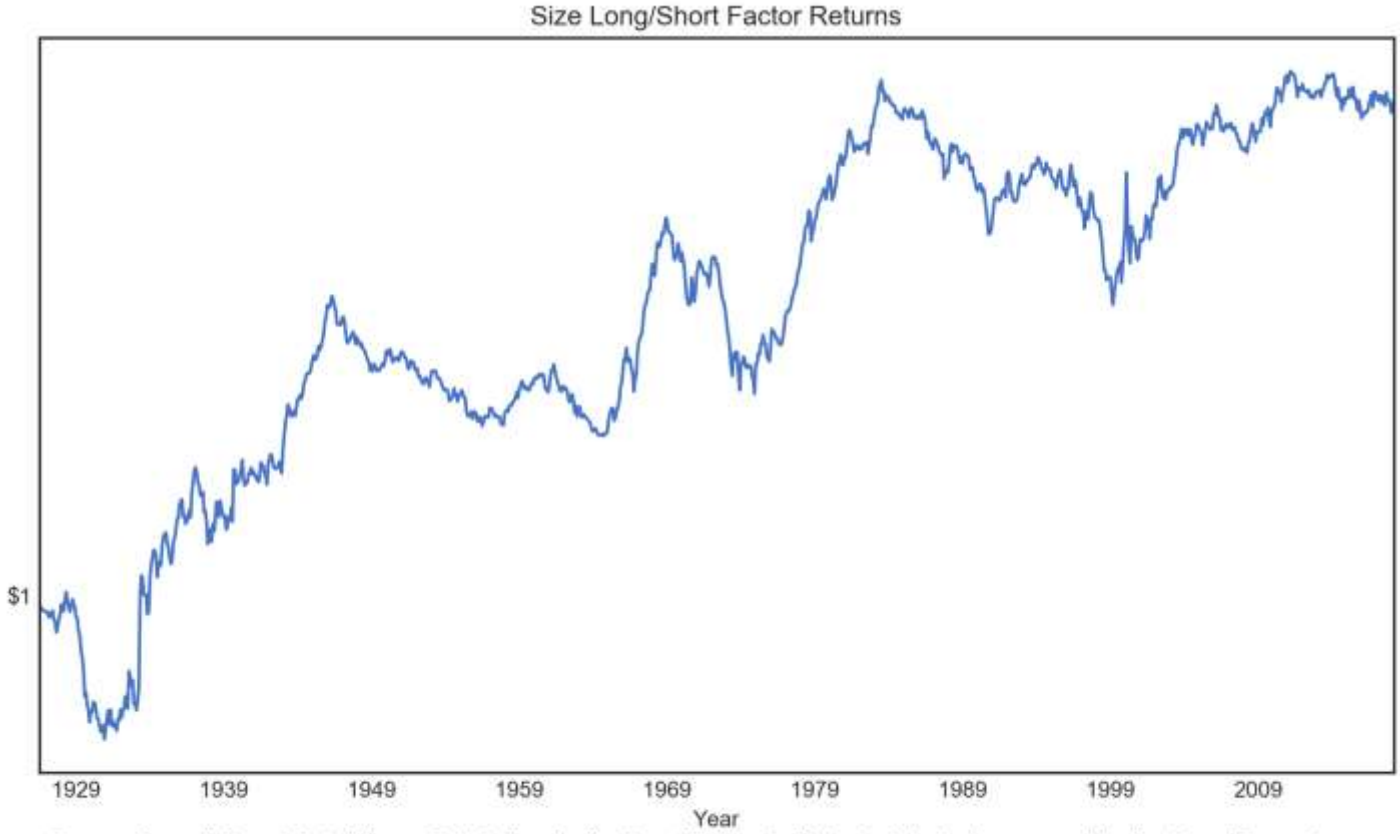
Nevertheless, we think it is worth taking a step back, considering an alternate course of history, and asking ourselves how it would impact our current thinking. Often, we look back on history as if it were the obvious course. "If only we had better prior information," we say to ourselves, "we would have predicted the path!"[2] Rather, we find it more useful to look at the past as just one realized path of many that's that could have happened, none of which were preordained. Randomness happens.

With this line of thinking, the poor performance of price-to-book can just as easily be explained by a poor roll of the dice as it can be by a fundamental break in applicability. In fact, we see several potential truths based upon performance over the last decade:

1. This is all normal course performance variance for the factor.
2. The value factor works, but the price-to-book measure itself is broken.
3. The price-to-book measure is over-crowded in use, and thus the "troughs of sorrow" will need to be deeper than ever to get weak hands to fold and pass the alpha to those with the fortitude to hold.
4. The value factor never existed in the first place; it was an unfortunate false positive that saturated the investing literature and broad narrative.

The problem at hand is two-fold: (1) the statistical evidence supporting most factors is considerable and (2) the decade-to-decade variance in factor performance is substantial. Taken together, you run into a situation where a mere decade of underperformance likely cannot undo the previously established significance. Just as frustrating is the opposite scenario. Consider that these two statements are not mutually exclusive: (1) price-to-book is broken, and (2) price-to-book generates positive excess return over the next decade.

In investing, factor return variance is large enough that the proof is not in the eating of the short-term return



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pudding.

The small-cap premium is an excellent example of the difficulty in discerning, in real time, the integrity of an established factor. The anomaly has failed to establish a meaningful new high since it was originally published in 1981. Only in the last decade – nearly 30 years later – have the tides of the industry finally seemed to turn against it as an established anomaly and potential source of excess return.

The remaining broadly accepted factors – e.g. value, momentum, carry, defensive, and trend – have all been demonstrated to generate excess risk-adjusted returns across a variety of economic regimes, geographies, and asset classes, creating a great depth of evidence supporting their existence. ...

To explore this question, we ran a simple experiment for each factor. Our goal was to estimate how long it would take to determine that a factor was no longer statistically significant. ...

Based upon this experience, sixty-seven years is median number of years we will have to wait until we officially declare price-to-book ("HML," as it is known in the literature) to be dead. At the risk of being morbid, we're far more likely to die before the industry finally sticks a fork in price-to-book.

We performed this experiment for a number of other factors – including size ("SMB" – "small-minus-big"), quality ("QMJ" – "quality-minus-junk"), low-volatility ("BAB" – "betting-against-beta"), and momentum ("UMD" – "up-minus-down") – and see much the same result. It will take decades before sufficient evidence mounts to dethrone these factors.

	HML	SMB[7]	QMJ	BAB	UMD
Median Years-until-Failure	67	43	132	284	339

Now, it is worth pointing out that these figures for a factor like momentum ("UMD") might be a bit skewed due to the design of the test. If we examine the long-run returns, we see a fairly docile return profile punctuated by sudden and significant drawdowns (often called "momentum crashes").

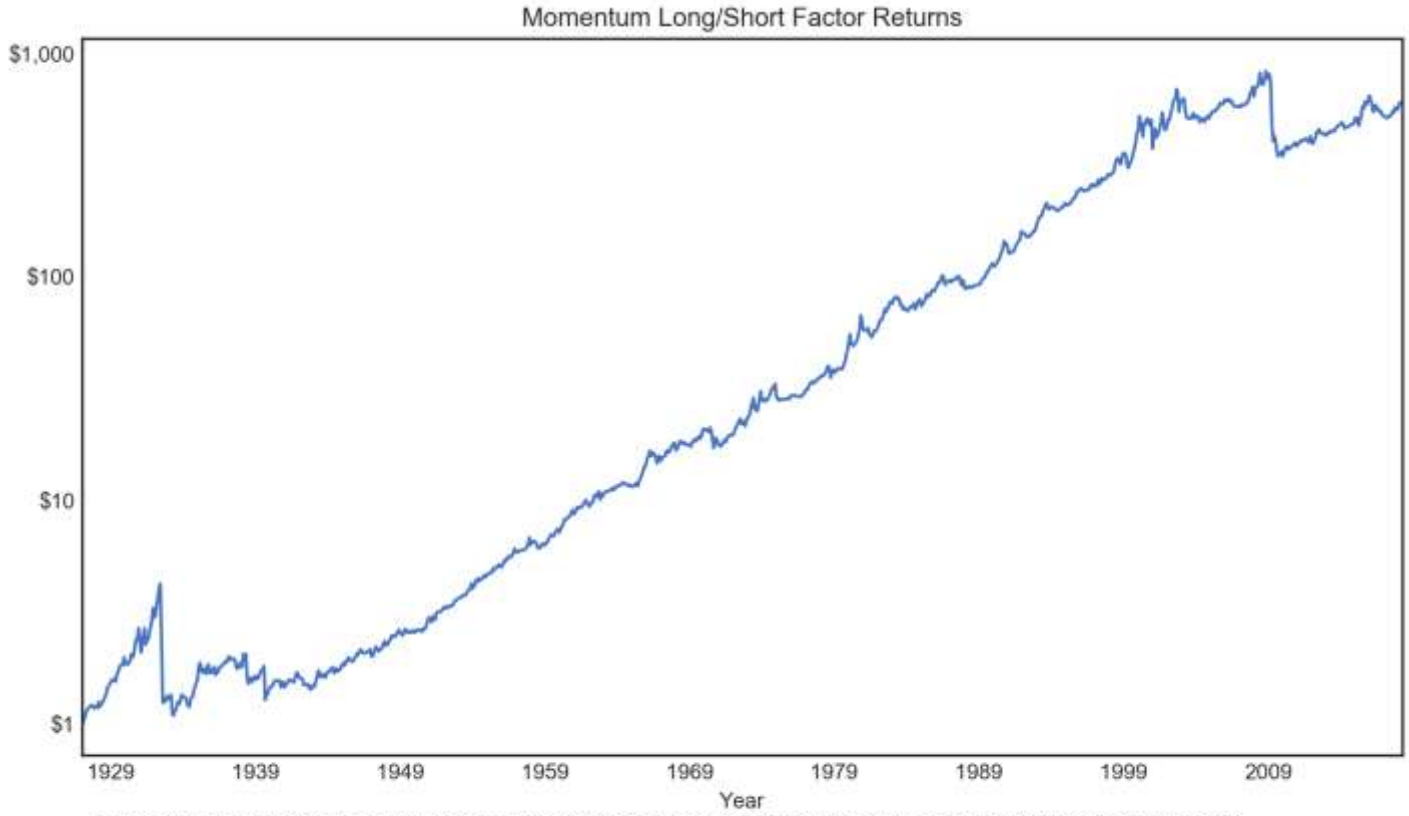
Conclusion

While an evidence-based investor should be swayed by the weight of the data, the simple fact is that most factors are so well established that the majority of current practitioners will likely go our entire careers without experiencing evidence substantial enough to dismiss any of the anomalies.

Therefore, in many ways, there is a certain faith required to use them going forward. Yes, these are ideas and concepts derived from the data. Yes, we have done our best to test their robustness out-of-sample across time, geographies, and asset classes. Yet we must also admit that there is a non-zero probability, however small it is, that these are false positives: a fact we may not have sufficient evidence to address until several decades hence.

And so a bit of humility is warranted. Factors will not suddenly stand up and declare themselves broken. And those that are broken will still appear to work from time-to-time.

Indeed, the death of a factor will be more Fimulwinter than Ragnarok: not so violent to be the end of days, but enough to cause pain and frustration among investors.



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