Many investors have chosen sides in the partisan “value vs. growth” debate to define their investment ideology and market their products. Instead of choosing sides in this arbitrary debate, since 1995, Applied Finance has advocated for a robust valuation-centric philosophy emphasizing economic principles centered around profitability, growth, competition, and risk. Equipped with this point of view, it is clear that value and growth managers are both aware of important considerations when estimating intrinsic value, but staunch advocates of either perspective suffer from incomplete frameworks. Value advocates are correct that valuation should matter, but commonly used methodologies suffer from poor ex-post performance and lack a robust economic justification, especially when a dividend discount model tautology assumes that negative growth unconditionally generates positive stock market returns. Growth managers are correct that positive growth potentially creates shareholder value, but absent a reliable corporate performance and valuation framework, they too often lack the ability to understand the required future growth and profitability expectations embedded in stock prices.

While our firm is certainly critical of the evolutionary path of value investing, we must be very clear that this does not make us growth managers, nor advocates of ad-hoc improvements to an alternative style-based value factor. Our criticism is much more substantial (and scathing) than this. Choosing sides in this debate is folly; without credible estimates of a firm’s intrinsic value, both value and growth investment styles are built on inadequate frameworks ill-equipped to reliably guide investment decisions across various market environments. (We have a number of innovative insights to share that we accumulated while studying the alpha and beta characteristics of systematically-generated intrinsic value estimates on an out-of-sample basis in our working paper on Valuation Beta.) To highlight the relevance of intrinsic value against commonly used value and growth classifications, we can simply deconstruct the book to price and five-year sales growth factors in cap-weighted 2×3 portfolios popularized by Fama French against a comprehensive estimate of intrinsic value and study performance in aggregate, as well as in value and growth regimes.

Deconstructing Value Investing with Intrinsic Value
First, we can deconstruct the book to price factor with the Intrinsic Value Factor using overlapping 2×3 portfolio classifications, then form portfolios on the stocks unique to the top 30% tier for each factor. Cheap stocks, defined by book to price, not supported by the Intrinsic Value Factor deliver -2.37% of annualized alpha when regressed against the Fama French 5 Factor model over the out-of-sample study horizon of the Intrinsic Value Factor, which is October 1998 to June 2020. Undervalued stocks, however, deliver 1.91% of annualized alpha when they are not classified as cheap by the book to price factor. The accompanying line chart plots the cumulative return index for each deconstructed top 30% portfolio against the overall market return from our asset pricing study.

We also present annual returns and Sharpe ratios for each of these portfolios across the entire study horizon, as well as in value and growth markets (defined by the relative performance of Russell 1000 Value and Russell 1000 Growth indices on a rolling three month basis). Undervalued stocks that are not cheap, according to book to price, outperform the overall market by 4.37% per year with a higher Sharpe ratio. More interestingly, these stocks drastically outperform in value swings of the style pendulum and continue to outperform in growth swings of the style pendulum. Cheap stocks unsupported by intrinsic value, on the other hand, mildly outperform the overall market in value cycles, but drastically lag in growth cycles. We prefer to view these stocks as “cheapness traps”, where book to price valuation-based claims are only a mirage.

The benefit of value investing with the book to price factor is found when cheap stocks are confirmed as undervalued by the Intrinsic Value Factor. These stocks provide 1.20% of annualized alpha when regressed against the Fama French five-factor model, while expensive, overvalued stocks return -0.51% annualized alpha. This portfolio of cheap and undervalued stocks outperforms by 5.58% per year in value markets with Sharpe ratios at 0.50, but lags in growth markets by -1.51% per year with a Sharpe Ratio of 0.53. Simply put, cheapness as a standalone concept is insufficient to explain subsequent stock returns.

Deconstructing Growth Investing with Intrinsic Value

Value and Growth Markets are defined using rolling three month returns between Russell 1000 Value and Russell 1000 Growth indices.

Adopting a commonly applied growth classification of 5-year historical sales growth to define the growth characteristics of a firm, we can also deconstruct the growth investing style through an intrinsic value lens to highlight the importance of a valuation-based discipline in growth investing. Growing, undervalued stocks deliver 2.17% of annualized alpha, while growing, overvalued stocks deliver -0.49% of annualized alpha. Using the entire top 30% sales growth portfolio as our benchmark for this deconstruction, we can see that undervalued, high growth stocks deliver outperformance in both value and growth markets, while overvalued stocks mildly outperform in growth markets but drastically underperform in value markets, while delivering lower Sharpe ratios across the board.

Studying the Recent Trends in Value Investing

Recently, value managers have distanced themselves from the foundation of value investing formed on the book to price ratio. The performance-related issues of book to price over the past decade are well documented, but this has led to gnashing of teeth and an uncomfortable level of redefining precisely what “value” is at this point. The definition was already murky before these recent trends; to some investors, book to price is a leverage ratio, rewarding investors higher returns for their higher level of risk assumed. To others, book to price is a style metric, allowing firms that develop style indexes to partition broader universes into their value and growth components. And to a third group, book to price is a valuation metric, providing a classification between cheap and expensive stocks. Our firm only interjects when price multiples are used in a valuation context, as this is a conflation of our research expertise that we have been trying to distance ourselves from for over 25 years.

Campbell Harvey notes that “when feasible, out-of-sample testing is the cleanest way to rule out spurious factors” and “a factor derived from a theory should have a lower hurdle than a factor discovered from a purely empirical exercise.” We affirm the importance of this discipline as best practice in any research setting, which makes the ongoing competition to redefine value investing befuddling. It is informative to study the arc of value investing over the last thirty years and the accompanying frameworks and out-of-sample performance delivered. We understand the impulse to salvage large investment franchises following uncomfortable seasons of underperformance and outflows, but we are concerned at the incredibly low research standards that seem to accompany the motivation behind attempts to “fix” value investing.

Fama French 3 Factor Model Research – Introducing Book to Price (Fama French, 1992)

The seminal claims of modern value investing from Fama French in 1992, that book to price subsumed other price multiples and leverage, have not persisted on an out-of-sample basis from 1992 forward. Most investors are generally
aware of the value premium concept, which was positive and significant on an ex-ante basis from July 1963 to December 1991. From that point forward, the "value premium" has become significantly negative over its out-of-sample horizon. More importantly, book to price only subsumes other price multiples that exclude large portions of the stock universe, including negative earnings, negative cash flow, and no yield dividend payers.

Percentage of stocks excluded from 2×3 factor portfolios for earnings to price (EP), cash flow to price (CFP), and dividends to price (DP) factors (data sourced from June 2020 files from Kenneth French).

Using data directly from Kenneth French’s data library, we can observe a material rise in the prominence of negative earnings, negative cash flow, and zero dividend stocks in the early 1980s. Since 1992, Fama French exclude roughly 30% of stocks due to negative earnings and cash flow levels in the E/P and CF/P factors, while they exclude more than 60% of stocks due to no dividends paid in a dividend yield factor. To study the impact of omitting negative or zero values, we can reconstruct these factors on a point-in-time basis with monthly rebalancing over the out-of-sample horizon of the Applied Finance research database from October 1998 forward. To emphasize broad universe coverage of these factors, we include negative values for earnings and cash flow multiples, and add net share repurchases to cash dividends to calculate a shareholder yield factor using the factor formulas below.

Annualized 2×3 factor alpha of earnings to price (EP), cash flow to enterprise value (CFEV), and shareholder yield to price (SY) when regressed against Fama French 3 Factor Model, using point-in-time data with monthly rebalancing from October 1998 through June 2020.

Once we construct these factors to ensure comprehensive universe coverage, they are no longer subsumed by book to price, as evidenced by the large significant annual alpha to each factor. We also note that a direct measure of leverage subsumes book to price in asset pricing studies over our out-of-sample study horizon. The information provided by book equity prior to 1992 was clearly not prepared to handle the transition towards a digital economy and the emergence of significant levels of share repurchase activity. Aside from this, any economic theory that would justify a book to price framework towards valuation principles seems highly muddled even before realizing its poor out-of-sample performance.

Fama French 5 Factor Model Research – Introducing Profitability and Growth through a Dividend Discount Model (Fama French, 2014)

By 2014, this led to Fama French’s expansion to five factors through a deconstruction of a dividend discount model framework, which motivated two additional factors, operating profitability and investment growth, while rendering book to price redundant. We support the inclusion of profitability and growth in a comprehensive valuation framework. However, we are concerned with the misguided economic theory embedded in the dividend discount model framework that Fama French posited, which predicts capital growth leads to negative stock returns in an asset pricing context. It only requires a basic understanding of corporate finance to affirm that investing in positive NPV projects creates shareholder value; we are baffled that so many prominent investment firms embrace a “valuation” model ignoring common sense to justify a new value investing dogma. While it is certainly true that negative growth as an asset pricing factor provides a unique source of alpha unexplained by the remaining five factors in Fama French’s study, negative growth has no economic tether in creating shareholder value to generate higher future stock returns, and is likely conflating something else entirely.

Dividend Discount Model Tautology:
In the model comparison above, Fama French motivates the operating profitability factor (RMW, noted by Y) and the investment rate factor (CMA, noted by -dB) in the dividend discount model framework. Alternatively, the Applied Finance Intrinsic Value Factor calculates firm value as the present value of future Economic Profits (EP), discounted by a firm-specific cost of capital (r) over a firm’s unique Economic Profit Horizon™ (n). Economic profits can be further deconstructed into Economic Margin (EM), invested capital (IC), and capital growth, each incorporated with a positive sign. Economic profitability directly links to net present value, which provides a more complete economic framework to understand corporate actions; investing increases intrinsic value for firms with positive economic profitability but decreases intrinsic value for those with negative economic profitability.

Regarding the conflating aspect of a negative growth preference, it should be relatively obvious that firms with high profitability and low/negative growth are likely returning a significant amount of capital to shareholders, while firms with low profitability and high growth are likely reliant on significant levels of external financing to fuel growth, a relationship captured in the graphic above. Fama French clearly advocate for parsimonious models built on theoretical motivation, and in that spirit we find compelling evidence that the high profitability and low growth preference of the dividend discount model can be fully captured in a single factor based on a firm’s financing cash flows as a percentage of enterprise value, rendering the individual factors motivated from their interpretation redundant. Our proof of this is the exact same tautology posited by Fama French; we are simply using the left side of the “d = Y – dB” equation to motivate the Financing Yield factor (RMD) instead of their choice to affirm “Y” and “-dB” as separate factors. Financing Yield succinctly captures the relationship of profitability and growth in a shareholder-yield focused manner consistent with the dividend discount model approach to valuation. In our Valuation Beta paper, we step through tests of operating profitability and investment rate factor redundancy against Financing Yield in more detail.

The information provided by Financing Yield is consistent with agency research (Jensen, 1986) that outlines the conflicting interests of managers and shareholders. Payouts to shareholders reduce capital available for managers to increase the size of a firm beyond its optimal size, essentially reducing their ability to emphasize growth for their own benefit. From this perspective, high levels of Financing Yield may align with strong corporate governance and provide evidence that a firm is operated in the best interest of shareholders.
Value managers would be correct in assuming that this concept relates less to value and more to capital being returned, which should be obvious from the motivation assumed by a dividend discount model framework. As an emergent theme of value investing, however, we agree that this entire tautology is best classified under a shareholder yield perspective, whether using Financing Yield parsimoniously or independent sorts of high profitability and low/negative growth motivated by a dividend model.

**AQR 6 Factor Model Research – Using Momentum to Resurrect the Value Premium (AQR, 2014)**

Shortly after the introduction of the five-factor model, AQR followed with the inclusion of the momentum factor to resurrect the book to price factor from redundancy, where HMLDEV is formed with timelier prices and monthly rebalancing. While this observation is clearly valid based on a study that merges ex-ante and ex-post datasets for book to price, further analysis confirms that the devil is most certainly in the details.

Using remaining factors in regressions to explain average returns on each individual factor: July 1963 to December 1991 and January 1992 to June 2020, using lagged data files with annual rebalancing each June for all factors except HMLDEV and UMD which are rebalanced monthly and incorporate recent pricing (data sourced from June 2020 file from Kenneth French and June 2020 file from AQR).

The resurrection of the value premium against the momentum factor is entirely attributable to performance in the initial ex-ante period of the book to price factor through 1991, where the monthly intercepts of book to price (HML) and momentum (UMD) provide a significant source of alpha unexplained by the other factors in the Fama French 5 Factor asset pricing model. Since 1992, however, book to price is redundant even against momentum, further highlighting the struggles of a book to price worldview beyond its introduction in a three-factor context. Equally troubling, this six-factor asset pricing model suffers from multicollinearity concerns for book to price due to its strong inverse relationship with momentum, which has further strengthened over the ex-post horizon from 1992 forward.

**Expansion Towards Price Multiple Composites (AQR, 2020)**

Outside of this evolution related to asset pricing studies, many value managers have migrated towards price multiple composites instead of relying on a single factor approach based on book to price alone. We understand the motivation to diminish reliance on the book to price factor due to its numerous limitations. However, incorporating additional price multiples simply exposes investors to other notable shortcomings of these factors, and the economic framework to migrate in this direction is unclear. Book equity has been biased by accounting convention regarding capitalized R&D, capitalized leases (until recently), and share repurchase activity. Earnings are similarly biased when R&D and lease activity are treated as a period expense instead of capitalized investment. Cash flows are biased in the same manner if these investments are treated as operating cash flows. Regardless, we can build a composite of book to price, earnings to price and sales to price (consistent with the style methodology used by S&P style indexes, as well as a recent AQR publication on systematic value) in setting up a deconstruction study.

Value and Growth Markets are defined using rolling three month returns between Russell 1000 Value and Russell 1000 Growth indices.

As an emerging trend of systematic value, we can clearly see the improvement through 2018 in the top 30% of the price multiple composite portfolio unsupported by the Intrinsic Value Factor, compared to the earlier deconstruction of book to price alone. Backtested results prior to 2018 would clearly support moving to a composite over a single factor approach, but with limited economic motivation, it should not be surprising how poorly this adjustment to value investing has performed over the last several years. Price multiple composites unsupported by intrinsic value do provide much stronger performance in value markets but continue to drastically lag in growth markets. Meanwhile, undervalued stocks based on the Intrinsic Value Factor that defy price multiple composite cheapness claims continue to outperform in both value and growth environments.

Research Affiliates iHML – Capitalizing Intangible Investment (Arnott Harvey, 2020)

Most recently, Research Affiliates has begun studying the capitalization of intangible investment from R&D and SG&A expense directly to book equity, though a variable they call iHML. While a specific formulation of this adjustment is yet undefined as academics and practitioners weigh in on the subject matter, we can study an option suggested in a recent working paper to capitalize R&D and 30% of SG&A expense. While we have advocated since 1995 that undoing the accounting rules that call for immediate expensing of R&D investment better aligns corporate performance measurement to economic reality, wantonly capitalizing a percentage of SG&A seems to be an overreach untethered to viable theory. In addition, directly adding capitalized intangible investment to book value assumes that these investments automatically create shareholder value, which is certainly not always the case. Capitalizing intangible investment is a corporate performance issue, which then impacts a firm’s intrinsic value estimate. Simplifying this as a direct valuation adjustment is an inadequate shortcut without economic justification. More troubling, this practice reeks of data snooping as value managers are fully aware of their underperformance over the last decade related to technology stocks, and this appears to be an attempt to better align an incomplete framework to the digital economy by overfitting data to correct for known factor shortcomings.

Value and Growth Markets are defined using rolling three month returns between Russell 1000 Value and Russell 1000 Growth indices.

The deconstruction of iHML with the Intrinsic Value Factor highlights that intangible-adjusted cheap stocks unsupported by intrinsic value outperform the Fama French version of book to price, but still significantly underperform the overall market. This portfolio tracked the overall market more closely than its HML alternative through 2018 before significantly underperforming over the last several years. However, any improvement comes with caveats of a suspect methodology, given the data snooping concern and lack of out-of-sample data to objectively evaluate its robustness. Even ignoring these concerns, iHML continues to offer a subpar alternative to a complete intrinsic value framework, as out-of-sample intrinsic value portfolios that defy iHML classifications continue to outperform in value and growth markets.

Reconciliation of Value and Growth Principles – Valuation Stewardship

Rather than attempting to salvage value investing, we advocate a valuation approach through the performance of factor-based portfolios formed on Excess Intrinsic Value and Financing Yield, motivated from factors studied in our Valuation Beta research. Excess Intrinsic Value simply captures each firm’s intrinsic value levels in excess of its book value, while Financing Yield parsimoniously subsumes the profitability and growth factors motivated by a dividend discount model approach to valuation.

Value and Growth Markets are defined using rolling three month returns between Russell 1000 Value and Russell 1000 Growth indices.

We find the performance characteristics of these two distinct valuation frameworks used in tandem compelling. Stocks with attractive valuation-based characteristics from both an intrinsic value and dividend discount model motivation outperform in value and growth market cycles, while also delivering drastically improved Sharpe ratios in aggregate. Stocks with poor valuation-based characteristics underperform in value and growth cycles, while also delivering much lower Sharpe ratios in aggregate.

Conclusion

With value managers attempting to distance themselves from their book to price legacy through alternative definitions of value, the meanings of “value” and “systematic value” have been wholly diluted in our industry’s discourse. We will be the first to admit that we no longer understand what value managers exactly mean these days when they describe their research process as “systematic value”, as there appear to be a number of competing ideas to solve the woes of value investing. These terms now seem to be fungible by design anyway, and as researchers, these emergent attempts to salvage value investing are concerning to us.

With that in mind, we invite value advocates to clarify precisely what they mean these days by “systematic value” investing, including the economic theory from which it is derived and the out-of-sample evidence that proves its claims are not spurious. Unfortunately, the vagaries seem to be by design with the hopes that no one holds them accountable for delivered performance, allowing the focus towards the promise of what’s likely coming next and selling the fear of missing out.

Eventually, it will be more widely understood that all price multiples are flawed in some way by accounting convention, directly adding intangible assets to equity misrepresents the role of corporate performance on incremental investment, and that a narrowly-defined dividend discount model is an inadequate substitute for a comprehensive estimate of intrinsic value that incorporates profitability, growth, competition, and risk. Due to this, value advocates will likely continue down this path of ad-hoc refinements to salvage value investing, a trend that we already find alarming. As a contrast, Applied Finance will continue to provide transparency on our research focus; we have been intrinsic value advocates for twenty-five years. We have no intention of that ever changing, and our Valuation Beta research paper highlights the out-of-sample merit of a valuation framework we first introduced in 1995.