MEKETA

INVESTMENT GROUP

Viewpoints

The underperformance of value

CONTRIBUTORS
Ryan Lobdell, CFA, CAIA
Frank Benham, CFA, CAIA
Alison Adams, PhD

Despite a rebound in the first half of 2021, value-related investment strategies have significantly trailed their growth counterparts over longer-term periods. The performance struggles of value stocks largely began post-Global Financial Crisis and have been driven by a multitude of factors. This has led investors to decrease their exposure to value strategies or, at the very least, question their exposure to value stocks.

In this viewpoint, we review some factors which contributed to the poor relative performance of value stocks and search for clues as to what investors might expect from future performance.

We find that multiple trends have contributed to the poor performance of value. Adjustments to traditional approaches of defining value may improve risk-adjusted returns. There are likely positive future excess returns to be harvested for those willing to accept increased tracking error and risk relative to peers and core market indices.

What is value investing?

Value investing involves buying financial assets trading at a discount to their intrinsic value and selling them as they approach or reach their intrinsic value. As determining intrinsic value is subjective, value investing strategies often focus on buying companies which are cheap relative to their own history or other assets. While value investing is defined by a methodical sensitivity to the price paid for an asset, the preference for attractively priced stocks does not mean that all cheap stocks are value stocks. Rather, a value investor searches for assets that sell at a discount relative to some measure of intrinsic value, such as earnings, book value, or cash flow. It is anticipated that the discipline of focusing on price will result in larger gains as the asset moves from its initial (discounted) purchase price to its perceived intrinsic value.

The presence of a value premium has been widely recognized across the investment community for many decades. The most common explanations generally fall into two categories. The first is risk-based, arguing that value (or cheap) companies are inherently riskier, so investors demand a higher rate of return as compensation. The second narrative argues that investors make behavioral biases or cognitive errors such as being overly optimistic on the prospects for growth stocks and overly pessimistic for those of value stocks. The market eventually corrects these overreactions, leading to positive excess returns to value. Other behavioral biases and cognitive errors include anchoring, loss aversion, mental accounting, and investor attraction to "lottery ticket" investments.[1] Which narrative is correct is not important to this discussion. As long as one (or more) is correct, investors should expect positive excess returns from investing in properly constructed value strategies.

[1] Anchoring involves overweighting initial information when forming investment views and failing to update those views appropriately as new information presents itself. Loss aversion refers to investor's tendency to hold on to losing investments even when the prospects of profit are impaired. This is driven by the perception that a realized loss is worse than an equivalent gain. Mental accounting refers to investors treating one sum of money different than another because of where it is categorized. Lastly, investors may prefer "lottery ticket" investments even if the likelihood they payoff is limited due to the significant upside potential

How is "Value" measured?

The most discussed metric used to assess if a stock is selling at a discount is the ratio of the company's share price to its book value (Price-to-Book). The book value is, in theory, the amount that one would receive if all company assets and accounts are liquidated, and this value is derived from the company's financial statements. Other common measures include Price-to-Earnings, Price-to-Sales, and Price-to-Cash Flow. Most "value" measures revolve around the ratio of price to a fundamental metric.[2]

[2] Except for the Russell family of indices, most benchmarks and value managers use multiple value metrics, of which price-to-book is the most common.

Index Family	Price / Book	Dividend Yield	Price / Earnings	Price / Sales	Price / Cash Flow	Earnings Growth	Revenue Growth
CRSP	X	X	X	X			
MSCI	X	X	X		Intl Only		
Russell	X						
S&P DJI	X		X	X	Intl Only		
Dow Jones	X	X	X			X	X
FTSE	X	X		X	X		

FIGURE 1

Traditional Value Index Methodology Comparison[3]

[3] Except for the Russell family of indices, most benchmarks and value managers use multiple value metrics, of which price-to-book is the most common.

It is worth considering what is implied when using a value / growth framework that equally divides a universe of stocks into two parts.[4] If an investor believes that the value stocks will produce excess returns and that the indices above are a fair representation of value, then this also implies that the investor expects there will be negative excess returns to growth strategies over the same period.

[4] The way many of the style indices are constructed is to split the core index into two parts. For example, the Russell 1000 Value and Growth indices, taken together, comprise the Russell 1000 Index. So, if an investor believes the Russell 1000 value index will outperform, then this necessarily implies a belief that the Russell 1000 Growth index will underperform.

Recent performance of value

In 2020, the spread between growth and value stock performance hit a historic high, and the drawdown in value indices relative to growth and core counterparts reached the lowest on record as investors rotated to growth stocks, particularly in the technology sector.[5] This has been true across all implementations of value (i.e., no matter which index family was used) and regions (i.e., both within and outside the US). Any true value strategy has significantly lagged growth, with the depth and duration of the drawdown varying depending on how the strategy or index was implemented.

[5] Technology companies are predominantly included in growth indices and strategies.

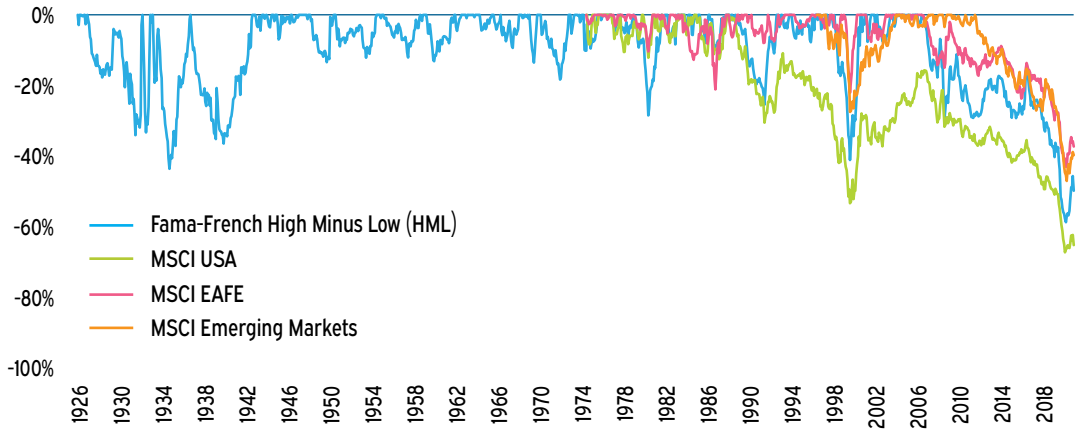

FIGURE 2

Historical Value Drawdowns as of June 2021[6]

[6] Source: Fama-French, MSCI. Note: MSCI Index Value performance is calculated using monthly differences between growth and value indices for each region.

Why have value strategies performed so poorly?

Short- to medium-term periods of underperformance are common with all investment strategies and are often well within expectations. However, the length and depth of the most recent period of underperformance for value has prompted investors to question the validity of the approach. It is natural to wonder if something has changed in the marketplace, thus rendering value metrics and measures ineffective.

There are several theories that may explain the duration or depth of value's underperformance. Some of these include the rise of company investments in intangible assets, low interest rates across developed markets, significant technological advances, and persistent sector biases of many strategies. We address each of these in turn in this section.

Rise of intangibles

Investments in intangible assets have been increasing over the past 40 years.[7] Most commonly, this has been in the form of copyrights, patents, trademarks, software, databases, and intellectual property. Intangibles are not typically included in traditional accounting measures of book value, which can disproportionately impact valuation spreads between growth and value companies.

[7] Source: One Job: Expectations and the Role of Intangible Investments, Michael Mauboussin, and Dan Callahan, September 2020.

For example, technology companies' valuations are more likely driven by intellectual property than by physical assets. Moreover, analysts and investors may tend to value the disruptive power of these types of intangible assets more highly than traditional mainline business assets. This could distort the categorization and relative comparisons of growth and value stocks. For example, the amount spent on research and development, a key input that can lead to these intangible assets, has increased dramatically for growth companies relative to value companies since 2016.

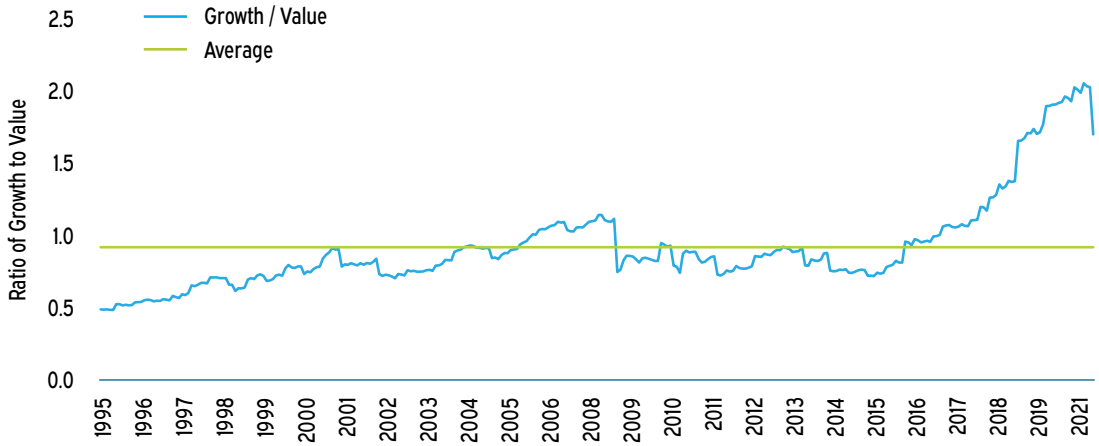

FIGURE 3

R&D Expense Russell 1000 Index: Growth / Value as of June 2021[8]

[8] Source: Russell, Bloomberg.

Value managers may have some success in offsetting the growth-bias rise of intangible assets by including them in traditional value measures. Capitalizing intangible investments (such as research and development) may help neutralize distortions caused when identifying value companies. For example, a company that capitalizes research and development costs related to producing a new product (e.g., software) would result in more assets on the balance sheet, higher cash flow from operations, and greater current profitability. Including intangibles in book value is an intuitive next step for value managers and (in hindsight) might have produced better returns. Figure 4[9] below shows that including intangibles in book value would have increased returns, reduced volatility, and likely reduced the magnitude of the current drawdown. Even so, it would not change the fact that this is the longest and largest relative drawdown on record for value. We would almost certainly be asking the same questions we are now, even with the inclusion of intangibles.

[9] Source: "Reports of Value's Death May Be Greatly Exaggerated", Rob Arnott, Campbell R. Harvey, Vitali Kalesnik, and Juhani Linnainmaa, 2020.

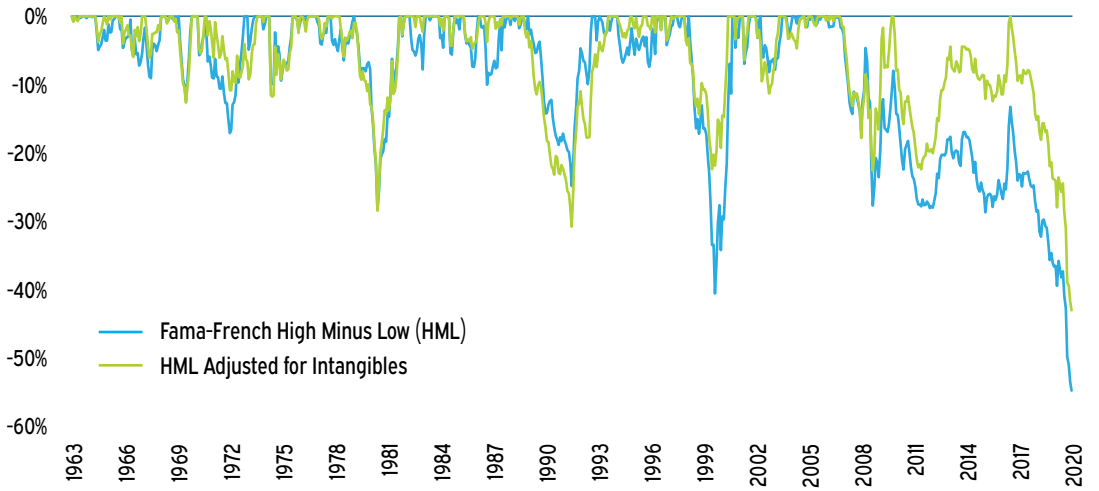

FIGURE 4

Impact of Including Intangibles on Max Drawdown

July 1963 to June 2020

In addition, the inclusion of intangible assets is limited to only one of the preferred value metrics: the price-to-book measure of value. Failure to include intangible assets into value-driven investment strategies only *partially* explains the magnitude of underperformance. It does not change the fact that this is still the longest and worst relative drawdown on record for value.

Low interest rates

In response to the shock of the Global Financial Crisis (GFC), central banks across developed markets slashed interest rates, and in some cases, undertook purchasing distressed assets. Their efforts proved to be long-lived, providing a significant tailwind for companies with debt on their balance sheets by lowering the cost of capital for all issuers (regardless of credit quality). Investors also benefited with the ability (or perceived ability) that they can take on meaningfully more risk due to an expectation that the Federal Reserve would likely step in to stabilize asset prices should there be a meaningful negative event.[10]

[10] This expectation regarding the Fed's action during a negative event is colloquially referred to as the "Fed Put."

Likewise, low interest rates increase the present value of future cash flows. With growth companies typically reliant on longer-dated future cash flows than their value counterparts, some investors argue that low rates have disproportionally benefitted growth companies. In addition, low yields may have pushed investors further out on the risk curve toward technology companies in their search for higher potential returns.

While these explanations are intuitively appealing, much of the historical industry research points to their being little to no relationship between interest rates and the performance of value strategies.[11] However, the correlation between the performance of value and changes in rates has steadily increased over the same period (see Figure 5).

[11] See Maloney, Thomas and Moskowitz, Tobias J., Value and Interest Rates: Are Rates to Blame for Value's Torments? (May 22, 2020).

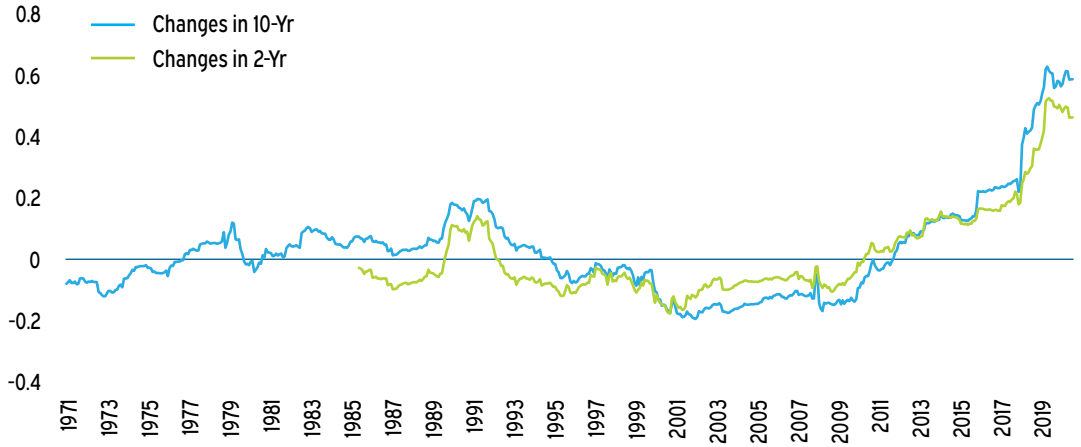

FIGURE 5

10-year Correlations of Fama French High Minus Low (HML) to Monthly Rate Changes as of June 2021[12]

[12] Source: Fama-French, FRED.

Arguably, the most recent experience should carry disproportionate weight, as it is based on a completely new policy environment where the aforementioned "Fed put" is driving investor behavior. Growth stocks should be expected to outperform value if investors perceive that the Fed is fully backstopping the market with record low interest rates. However, such an environment is unlikely to last indefinitely, and a new policy regime may prove far less supportive of growth stocks.

Technological revolution

Technology companies have grown earnings at rates well above their value counterparts for nearly two decades, and this trend has only accelerated since the GFC. This leads some investors to argue that today's technology companies are better than decades past, justifying higher valuations than previously seen for those companies (and thus wider spreads relative to value).

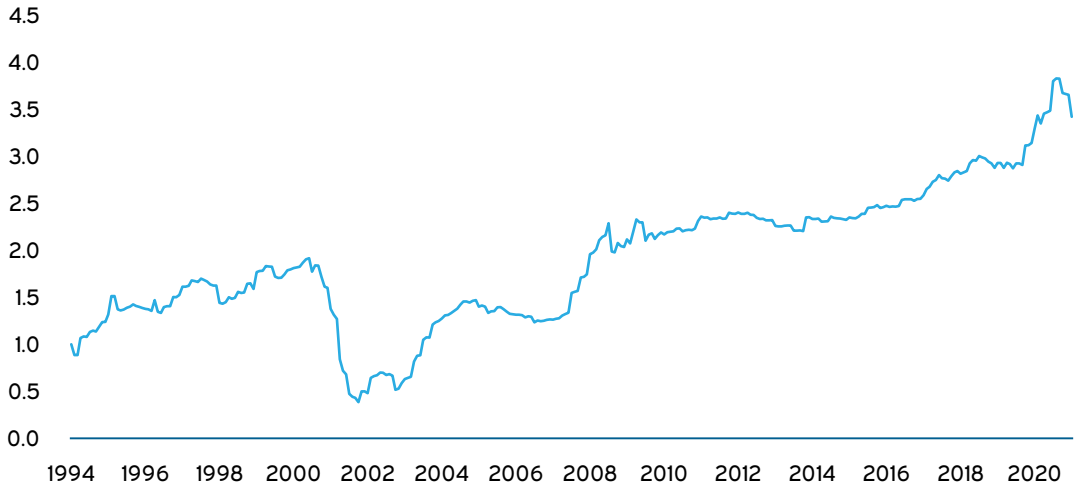

FIGURE 6

S&P Info Tech Sector vs. S&P 500

12-month EPS Growth as of June 2021[13]

[13] Source: S&P, Bloomberg

The outperformance of the technology sector since 2009 has been the main driver of performance dispersion between growth and value companies. Some of this outperformance may be justified given the earnings growth of the technology sector relative to the rest of the market. As a result of this strong performance, the information technology sector accounts for more than 90% of some growth indices, with the largest names (Facebook, Amazon, Google, Microsoft, Netflix, and Apple) accounting for most of the growth, and now, the majority of the sector itself.[14] It is also plausible that increased accessibility of online retail trading in recent years and familiarity bias towards the large technology names with which consumers interact daily has also impacted relative performance.

[14] The Technology sector accounted for 48.8% and FANMAG accounted for 42.6% of the S&P 500 Growth Index as of 6/30/2021. Note that Netflix and Amazon are categorized as Consumer Discretionary stocks.

Expressing a bias toward US value stocks effectively represents a bet that these large technology companies will underperform going forward. While the technology revolution may partially explain value's underperformance, its impact on value investing can be addressed through strategy construction that neutralizes sector biases, as discussed in the next section.

Sector biases and market cap weighted indices

Value and growth indices often hold persistent overweights and underweights to specific sectors. For example, value indices are typically significantly underweight technology and consumer discretionary (the best performing sectors since 2009) and overweight energy and financials (the worst performing sectors since 2009). These weighting differences have accounted for more than half of the return differences between growth and value indices since 2009.

Disentangling how much of the performance gap is attributable to sector biases versus security selection is a difficult task, but it is important to recognize that investing in traditional value strategies effectively represents a bet on certain sectors and against others, which may not be an investor's intent.

A logical remedy for this is for value strategies to be constructed as sector or industry neutral by matching the weighting of a core benchmark (e.g., the S&P 500). This approach compares value and growth stocks within sectors and industries instead of across them. Using this approach would have historically resulted in significantly better risk-adjusted returns for value strategies.

Figure 7 examines the impact of industry neutral weightings on the Fama French High Minus Low (HML) value factor broken into three time horizons: the full sample set, pre-GFC, and post-GFC. We selected these time periods to focus on the impact in the most recent period of poor value performance (post-GFC).

We expect strategies which neutralize sector bets to produce better risk-adjusted returns in the future as well. Which strategy might produce higher absolute returns is uncertain as unintended sector bets could just as easily help or hurt performance. However, removing an unintended and potentially uncompensated bet should (all else equal) reduce the risk of any investment strategy on average without reducing expected returns. Even so, a sector neutral approach still would have produced negative excess returns since 2009.

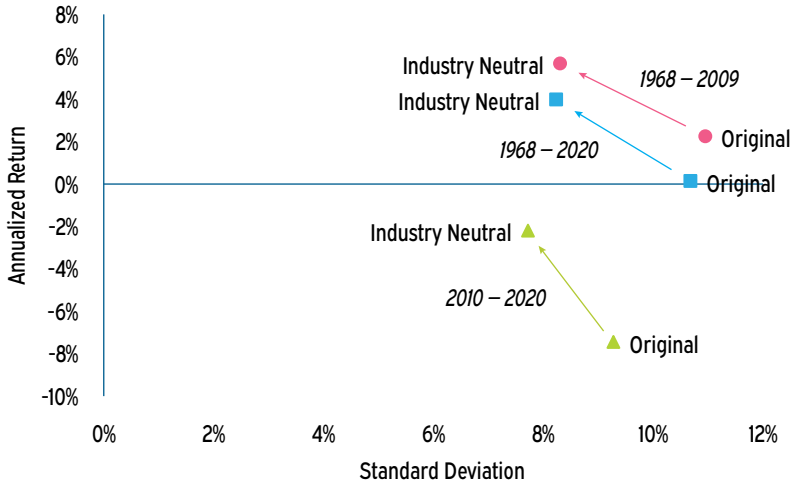

FIGURE 7

Annualized Return and Risk of Fama French High Minus Low (HML)[15]

[15] Source: AQR. Ken French Data Library.

End point bias

All investors look at historical returns when making investment decisions, but data may be biased by analyzing a single "snapshot" in time. This may inadvertently result in biased decision-making, such as making changes at the wrong time. This can be particularly true when reviewing outsized (positive or negative) results for investment strategies, as is the case here. Keeping the potential for endpoint bias in mind may lead to better analysis in determining whether there are positive excess returns to be had by value strategies going forward.

For example, the last time valuation spreads between value and growth stocks were similarly elevated and combined with a wide performance gap was the tech bubble at the turn of the century. When this bubble burst, value managers handily beat their growth counterparts for an extended period, as demonstrated by the performance of Large Cap US Stocks. This is shown in Figure 8 where we compare the average valuation spread between the Russell 1000 Value and Growth Indices, the trailing difference in annualized returns up to that point, and the subsequent annualized performance differences from that point forward.

	6/2000	6/2021
Average Starting Valuation[16]	2.0x	1.4x
Average Valuation Percentile	100th	93rd
Last 3-Yr Value Annualized Return	-17.1%	-10.1%
Last 5-Yr Value Annualized Return	-10.9%	-11.8%
Last 10-Yr Value Annualized Return	-4.9%	-6.3%
Next 3-Yr Value Annualized Return	21.3%	---
Next 5-Yr Value Annualized Return	16.9%	---
Next 10-Yr Value Annualized Return	7.5%	---

FIGURE 8

Russell 1000 Value vs. Growth

[16] Average of Price/Book, Price/Earnings, Price/Sales, and Price/Cash Flow.

Current valuations and future expected returns

When forecasting future equity market returns, dividend yields, earnings growth rates, and changes in price multiples are often considered the key components.

In analyzing growth and value stocks regarding these metrics, we find that dividend yields have consistently favored value stocks while earnings growth rates have (on average) favored growth stocks. The remaining item of changes in price multiples (i.e., valuations), in this case expressed as the spread in valuations between value and growth, is the largest unknown and most likely the biggest driver of future return differences between the two categories. Similar to the broad equity markets, over long-time horizons, valuation levels have been a loose indicator of future performance for value and growth styles (see Figure 9 on the following page).

Valuation spreads have been near or above the top 90th percentile since mid-2018. This is true across the price-to-book, price-to-sales, and price-to-earnings metrics, which we combine along with price-to-cash flow into one composite[17] as shown in Figure 9. The impact of these extended valuations could depend on whether these spreads revert toward their historical average, and if so, how far they revert. In addition, which metric is used can have a significant impact on future return expectations, as valuation metrics (and the difference from their respective historical averages) vary considerably. Using composite measures of valuations across price-to-book, price-to-sales, price-to-earnings, and price-to-cash flow helps to reduce the impact of any single measure. Viewed as a composite, the picture is consistent in indicating that 1) value spreads are significantly elevated, and 2) historically, this has led to positive excess returns to value over subsequent periods (with larger spreads generally leading to larger excess returns).

[17] We combine price-to-book, price-to-sales, price-to-earnings, and price-to-cash flow in equal weights. Price-to-cash flow valuation spread between Russell 1000 Growth and Value is currently at the 54th percentile as of June 30, 2021.

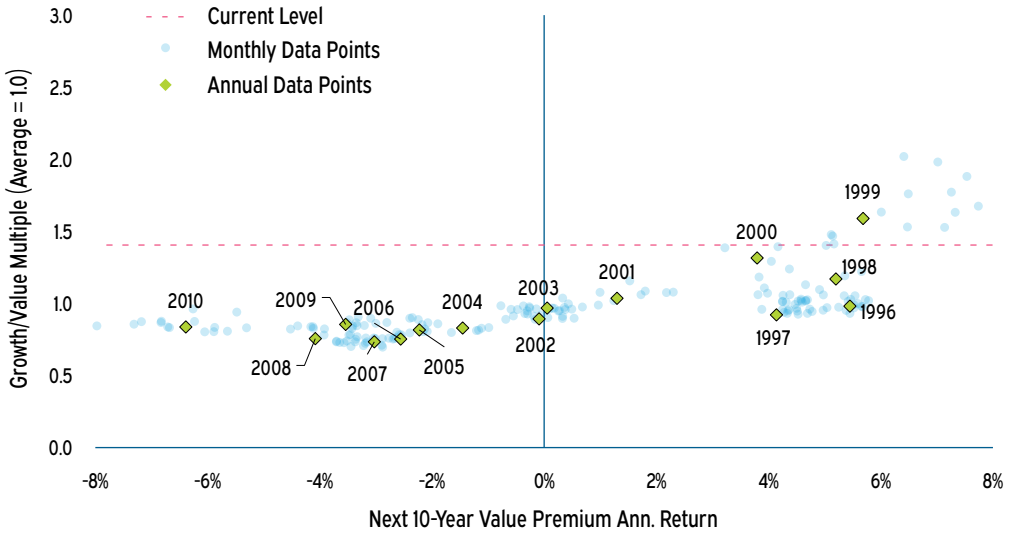

FIGURE 9

Valuations vs. Next 10-year Return[18]

[18] Source: Russell, Bloomberg. Returns are for the Russell 1000 Value and Growth indices.

Considering value exposure

With any investment strategy, there will be times when performance is underwhelming. These periods of poor performance should not lead an investor to conclude that the strategy has become useless or "dead." Many adjustments, such as the ones highlighted in this piece (e.g., accounting for intangibles, going sector neutral) could be adopted to improve value investment strategies. However, none of these valuation enhancements in isolation, or even when combined, would have resulted in positive excess returns since 2009. Aside from backward-looking narratives alleging that value does not work and never did, there does not appear to be new evidence that would completely invalidate value's original thesis. While the magnitude and duration of the current value drawdown does raise some concerns regarding its future efficacy, it does not, in isolation, cause the value factor to be statistically insignificant.

Even so, the depth and duration of the current drawdown leads us to question what path investors should take. That is, should they increase value bets, return to a neutral position, or ride it out by maintaining their allocation? The answer to that question is likely different for each investor and depends on individual investment beliefs and risk preferences. With spreads near all-time highs, investors who are considering unwinding value exposure should do so gradually, to reduce timing risk, while investors with growth biases may consider it an opportune time to rebalance.

Investors should be cognizant that allocating to value investment strategies requires taking on additional risks. There are some ways to partially mitigate the risk of allocating to value at the margin. When selecting a value manager or strategy, it is important to assess how robust or simple a strategy is, including whether they pursue a sector-neutral approach, apply multiple measures of valuation, and utilize appropriate portfolio position sizing.

All these approaches are useful in mitigating risks, both in absolute and relative (i.e., tracking error) terms. Further, investors can combine value exposure with other factor exposures that are complementary to value (e.g., momentum, carry, quality) in their portfolio. We summarize a list of pros and cons to consider in Figure 10 below. It is important to consider these and plan ahead to prevent negative surprises and reversal of policies at the wrong time.

Pros	Cons
Current valuation levels have historically indicated strong positive future returns	Increased total risk and tracking error relative to the market and peers
The outperformance of value may not be dependent on multiple compression	Timing value exposure is difficult
If the value premium has not disappeared, there are positive excess returns to investing in the strategy	Changes in valuations require changes in investor preferences and willingness to pay certain prices for growth / value companies
Value is arguably one of the most historically robust risk premiums	There may be wide future return dispersion across different value implementations
There are multiple ways to manage the added risk of allocating to value	Future returns may be lower than history

FIGURE 10

Pros and Cons of Value Exposure

Summary

The value risk premium has significantly underperformed expectations since 2009. We find that while no single factor can fully explain value's extended period of underperformance, multiple factors have contributed. For example, intangible investments have not been accurately captured in accounting measures, thus negatively skewing book value comparisons. Low interest rate policies may have favored sectors predominantly found in growth indices. And the sectors most associated with growth (e.g., tech) have outperformed, both in terms of earnings and investment returns, while those associated with value (e.g., energy) have struggled.

It is unclear what the future holds for value investing. This period of value underperformance has been longer than past cycles, with implications for both growth and value investing. We do not know for certain when or even if the value factor will produce excess returns in the future. That said, it would still require multiple decades of continued underperformance to conclude that the value factor is statistically insignificant.[19]

The qualitative explanations for the existence of a value premium still appear sound, although the exact definition of "value" may need updating (e.g., to account for intangibles). Even with all the historical evidence pointing to positive excess returns for value (at some point) in the future (even if just due to cyclicality), the continued use of the strategy requires some faith and a contrarian view. However, this is true for many investment strategies, and it is important that investors weigh the pros and cons of tilting a portfolio toward value or growth.

Contact us

meketa@meketa.com

[19] See Corey Hoffstein, Factor Fimbulwinter (June 11, 2018).

Disclaimers

This document is for general information and educational purposes only, and must not be considered investment advice or a recommendation that the reader is to engage in, or refrain from taking, a particular investment-related course of action. Any such advice or recommendation must be tailored to your situation and objectives. You should consult all available information, investment, legal, tax and accounting professionals, before making or executing any investment strategy. You must exercise your own independent judgment when making any investment decision.

All information contained in this document is provided "as is," without any representations or warranties of any kind. We disclaim all express and implied warranties including those with respect to accuracy, completeness, timeliness, or fitness for a particular purpose. We assume no responsibility for any losses, whether direct, indirect, special or consequential, which arise out of the use of this presentation.

All investments involve risk. There can be no guarantee that the strategies, tactics, and methods discussed in this document will be successful.

Data contained in this document may be obtained from a variety of sources and may be subject to change. We disclaim any and all liability for such data, including without limitation, any express or implied representations or warranties for information or errors contained in, or omissions from, the information. We shall not be liable for any loss or liability suffered by you resulting from the provision to you of such data or your use or reliance in any way thereon.

Nothing in this document should be interpreted to state or imply that past results are an indication of future performance. Investing involves substantial risk. It is highly unlikely that the past will repeat itself. Selecting an advisor, fund, or strategy based solely on past returns is a poor investment strategy. Past performance does not guarantee future results.