Is Growth the New Value?

Introduction

Sometimes in life it's hard to walk away. People generally become attached to things, be they objects, other individuals, or even investments. Some might argue, however, it's even harder to stay when things get tough. As Kenny Rogers said in his song *The Gambler*, "You've got to know when to hold 'em, know when to fold 'em, know when to walk away, and know when to run." As it relates to the market, we think it's safe to say that times have been tough for Value investors, with Growth stocks significantly outpacing Value stocks since the end of the financial crisis. For perspective, in 2017 alone the total return spread between the Russell 1000® Growth Index and the Russell 1000® Value index was 16.6% in favor of Growth, one of the widest spreads on record. These trends were mimicked in other Value and Growth indexes, such as the S&P 500®. Though the performance gap narrows in different market capitalizations, the Growth outperformance remains: The S&P SmallCap 600® Growth index returned 15% last year, while the S&P SmallCap 600® Value index returned 11%.

When a particular investment style underperforms to this degree, we think it's natural to ask:

- Fold 'em? Is it time to walk away from Value?
- Or, hold 'em? Should investors continue to expect Value stocks to generate outperformance over the long term?

In this edition of *Strategy Insights*, we help investors navigate the current Value versus Growth conundrum. We not only provide evidence for why we believe Value has struggled in recent years, but we also offer our outlook for Value exposure going forward. In addition, we review our original rationale for including a Value tilt as part of our long-term strategic asset allocations. Ultimately, our view is that Value investing works, just not all the time. To capture the long-term premium associated with exposure to Value stocks, investors may find it necessary to endure periods of underperformance. But we expect value will again have its day, and investors should not abandon their allocations to this style. For that reason, our view is a long-term tilt toward Value has the potential to help generate a performance premium over time.

Analyzing the Performance Drivers of Value

Value investing is an approach whereby stocks that trade below their intrinsic values are purchased (think: Berkshire Hathaway). Common valuation metrics for Value stocks include high dividend yields and low price-to-book and price-to-earnings (P/E) ratios. Growth investing, on the other hand, is a stock selection approach in which stocks are selected based on their projected above-average earnings growth rates relative to a particular industry or the overall market, with valuation being a secondary consideration (think: Amazon). The merits of Value investing are rooted in decades of academic research and real-world observable, not just backtested, outperformance over long horizons. Possible reasons for this persistent Value premium include:

- Behavioral biases: Some investors may tend to prefer the more exciting narratives associated with many Growth stocks, thus bidding up their valuations. Certain stocks considered "cheap," however, may still be high-quality businesses with solid financials. These stocks, for whatever reason, may be mispriced, providing investors with an opportunity to purchase shares at a discount to fair value.
- Efficient market explanations: Historically speaking, Value stocks, on average, have generally compensated investors for taking on higher levels of risk associated with investing in companies that, in theory, could become distressed, but ultimately get re-rated in terms of valuation multiple expansion by the market.

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Table 1
Value's Long-Term Dominance
1979-1Q2018

	Value Return	Value Volatility	Growth Return	Growth Volatility
Large Cap	12.1%	14.4%	11.5%	16.8%
Mid Cap*	11.9%	15.6%	11.0%	19.9%
Small Cap	13.0%	17.2%	9.9%	22.3%

*Data history only goes back to 1986.

Source: FactSet Research Systems Inc., PNC

We think the true driver of the Value premium is likely some combination of behavior and efficient market factors, along with other psychological biases that make markets less than perfectly efficient. Simply put, buying Value stocks has worked out quite well, on average, for many investors over the long term (Table 1).

Given Value's recent struggles, however, it's appropriate to analyze some of the most influential dynamics in equity style performance. Elements such as relative valuation, sector composition, interest rates, bond yields, inflation expectations, currency movements, and an economy's perceived position in its business cycle all play a role in determining which of the two major investment styles are in favor at any given time. Based on our research, outsized performance differentials between Value and Growth stocks can be traced to two predominant phenomena:

- a notable story focused on a single sector or industry group, and
- the economic growth backdrop associated with the business cycle.

Sector and Industry Influence

In the three-year period ending March 31, 2018, Growth stocks outperformed Value stocks across market capitalizations, both domestically and internationally. The largest and most notable performance difference was in domestic large cap, with the Russell 1000 Growth Index outperforming the Russell 1000 Value Index by more than 500 basis points (bps) annualized (Chart 1).

Market events that influence style returns often affect several years of performance. As shown in Chart 1, style trade-offs or large performance differences between the Russell 1000 Growth and Value indexes have often been the result of a major market event. Following the savings and loan crisis, Growth outperformed Value for three consecutive years in the late 1980s and early 1990s. From 1998–99, large-cap Growth beat large-cap Value by more than 5,000 bps as the Information Technology (Tech) bubble formed. Following the bursting of the Tech bubble, however, Value dramatically outperformed until the global financial crisis, which created a backdrop more favorable for Growth. From 2010–14 (the five-year period when the bulk of the current economic expansion occurred), style-based performance differentials were much tighter. During 2017 and the first quarter of 2018, Growth has dominated Value.

Chart 1
Russell 1000 Value Index versus Russell 1000 Growth Index (rolling three-year periods)
As of February 2018

Source: FactSet Research Systems Inc., PNC

There are many ways to define Value and Growth, so it is important to understand how the style indexes used in an analysis are constructed. In this paper, we choose to evaluate the FTSE Russell indexes, which use three variables to determine Growth and Value. A book-to-price ratio is used for Value while Growth uses two variables: I/B/E/S two-year earnings per share growth forecast and historical sales per share growth over the prior five years.[1] Stocks are classified based on these metrics without regard to sector, which has historically led to sector weights that differ dramatically between the Value and Growth indexes. The simple reason is that companies in certain sectors, such as Information Technology, are more likely to have higher growth rates than companies in more mature sectors. In the Russell 1000 Value and Growth indexes, the largest average sector differences have been in Financials, Information Technology, Health Care, Consumer Staples, and Energy (Table 2).

Not surprisingly, large differences in sector weights can lead to large differences in performance between the Growth and Value indexes. The key driver of the differing performance could very well be an economic factor specific to one or more sectors or industries rather than a bias among investors about investment styles. An analysis of calendar year returns and the contribution (sector weight multiplied by sector return) of Information Technology and Consumer Staples to the Russell 1000 Growth Index and Financials and Energy to the Russell 1000 Value Index demonstrates that sector differences have played a large role in performance variation of the Russell 1000 Growth and Russell 1000 Value indexes over the past 30 years. In Chart 2 (page 4) we plot the difference in annual performance between the Russell 1000 Growth and Russell 1000 Value indexes (red line) compared to the contribution to the Growth index from Information Technology and Consumer Staples minus the contribution to the Value index of Financials and Energy (the blue bars). When Information Technology and Consumer Staples outperform Financials and Energy (the tall blue bar), it is not surprising to see that Growth beats Value and vice versa.

To take our analysis a step further, we attempt to neutralize the impact of sector weight differences between the Russell 1000 Growth and Russell 1000 Value indexes. We created sector-neutral versions of these two indexes by reweighting the sectors in each of the Value and Growth indexes to match the

Table 2
Russell Value and Growth Indexes Sector Differences
Average annual sector weight 1984-1Q2018

	Average Russell 1000 Growth Index Weight	Average Russell 1000 Value Index Weight	Difference	Average Sector Neutral Value and Growth Index Weights
Consumer Discretionary	14.12	9.66	4.46	11.91
Consumer Staples	15.43	5.27	10.16	10.42
Energy	3.64	13.49	-9.85	8.53
Financials	5.70	24.45	-18.75	14.98
Health Care	17.44	6.50	10.95	12.02
Industrials	12.23	9.95	2.28	11.10
Information Technology	23.66	6.13	17.53	14.98
Materials	3.53	5.29	-1.76	4.40
Real Estate	0.95	2.17	-1.22	1.56
Telecommunication Services	2.79	7.84	-5.05	5.28
Utilities	0.44	9.23	-8.79	4.80

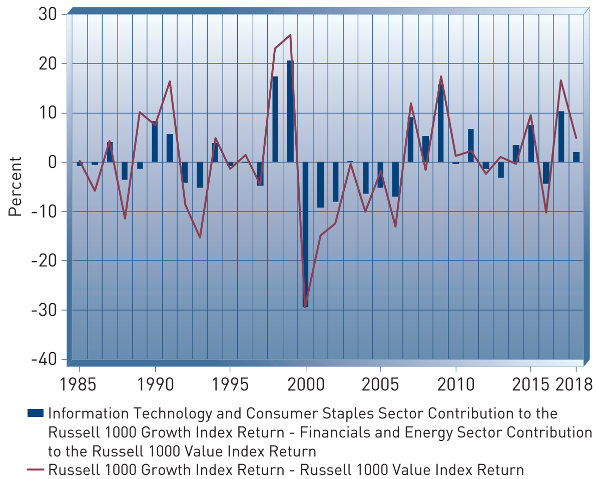
Source: FactSet Research Systems Inc., PNC

[1] I/B/E/S stands for Institutional Brokers' Estimate System, which compiles the different stock analysts' estimates on the future earnings for the majority of U.S. publicly traded companies.

Chart 2

Russell 1000 Growth Index versus Russell 1000 Value Index Analysis

As of 3/10/18

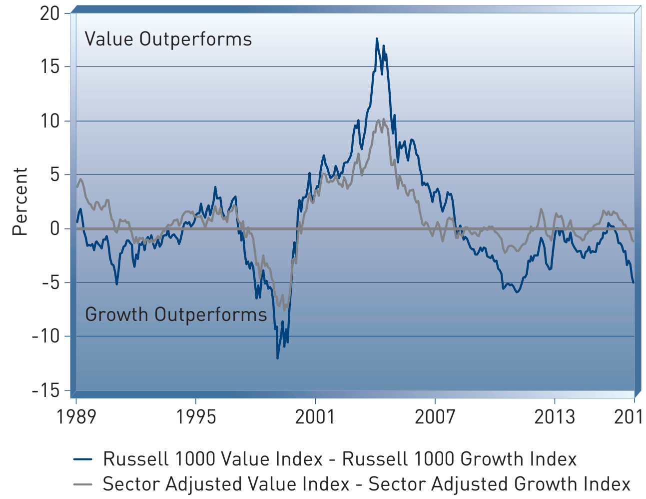


Source: FactSet Research Systems Inc., PNC

Chart 3

Rolling Five-Year Analysis

1989–February 2018



Source: FactSet Research Systems Inc., PNC

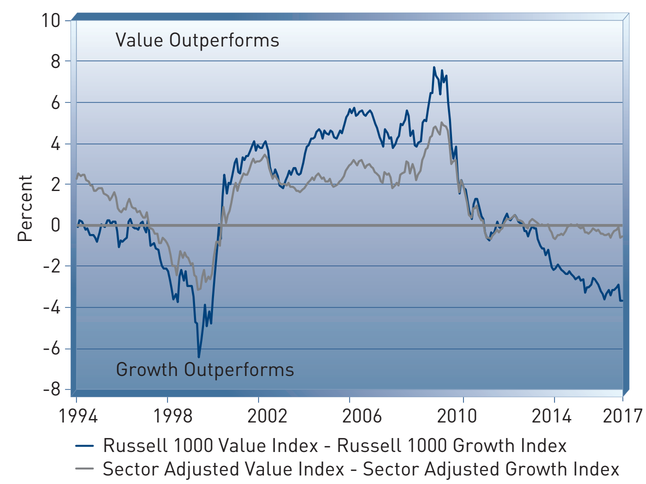
sector weightings of the main Russell 1000 index and then calculated the returns of each reweighted index. This reweighting eliminates the large sector weight differences shown in Table 2 (page 3), and differences in performance between these sector-neutral versions of the Growth and Value indexes should more closely reflect true style differences rather than simply sector differences.

We analyzed the spread between the standard Russell 1000 Value Index and the Russell 1000 Growth Index and compared this with the spread between the sector-adjusted Value and Growth indexes that we created over rolling 5- and 10-year periods. The 5-year and 10-year rolling returns (Charts 3 and 4) show that divergence between the Russell 1000 Value and Growth indexes has occurred over a few distinct time periods (for example, the Tech bubble and global financial crisis), but the effect is much more muted when taking out the sector variations. Over the past 35 years, the only period of large Growth outperformance was during the Tech bubble. It is notable that over the past decade, while the standard Russell 1000 Growth Index has consistently outperformed the Russell 1000 Value Index over rolling five-year periods, this is not true for the sector-neutral versions of the indexes, which have performed relatively in line with each other.

Chart 4

Rolling 10-Year Analysis

1994–February 2018



Source: FactSet Research Systems Inc., PNC

Recalling that among the key sector differences are Financials and Energy (overweight in the Value index) and Information Technology (overweight in the Growth index), this is not a surprising result. The global financial crisis led to strong underperformance of Financials during the crisis and the subsequent recovery. Simultaneously, there was a sharp drop in energy prices that has caused a sustained underperformance for Energy stocks.

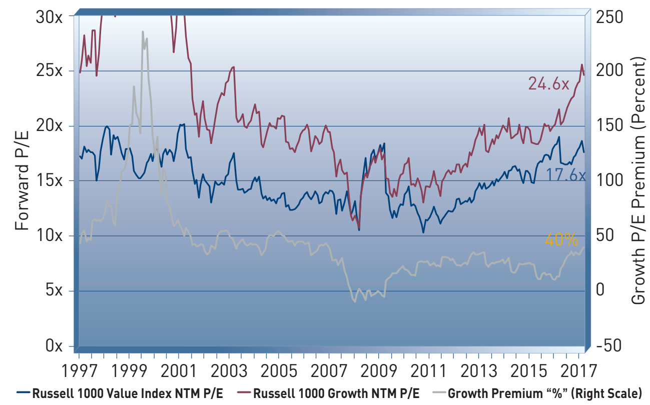
Both of these trends were reversals of fortune from the mid-2000s, when there was a financial boom and high energy prices that drove those two Value sectors to strong relative performance, helping Value outperform Growth even after the effects of the Tech bubble had waned. More recently, Facebook, Amazon, Apple, Netflix, and Google parent Alphabet along with other Information Technology stocks—all in the Growth index—have been the key drivers of the market's upward trajectory. We believe these factors are mainly driven by economic issues and industry-specific patterns, not style preferences among investors.

The advent of the Information Technology sector as a major index force makes this story even more powerful today, in our view. In 1985, the sector comprised 17.5% of the Russell 1000 Growth Index but represents 38.3% of the index currently.

Looking at Growth's outperformance during the Tech bubble, we can make certain parallels to today's style relationship. Our conclusion is not that Information Technology is in a bubble; however, over the past five years it has been the best-performing sector by a wide margin (cumulative return of 162% versus 115% for the Russell 1000 Growth Index and 93% for the broad Russell 1000® Index). Looking forward, the sector cannot outperform forever, and when it turns, we believe Value will likely reassert itself, as it did quite forcefully post-Tech bubble. The potential regulatory issues surrounding Amazon and Facebook may create a regulatory overhang that could make it more difficult for the sector to continue leading the market.

Finally, after a large market run for Growth over Value, one might ask whether Growth stocks are simply more expensive today compared to Value stocks as compared to historical norms. If that is the case, that would point to a reason to expect mean reversion at some point, meaning a resurgence of the Value style. In Chart 5 we show the valuation premium of the Russell 1000 Growth Index over the Russell 1000 Value Index for the past 20 years. We caution that valuation should not be used as a market timing tool as valuation premiums/discounts can persist for very long periods. However, valuation differentials can orient us to the relative long-term return potential of each style. On a forward P/E

Chart 5
Growth Premium
As of February 2018



Source: FactSet Research Systems Inc., PNC

basis, the Russell 1000 Growth Index is trading at the largest premium to the Russell 1000 Value Index since just after the global financial crisis. In that regard, Growth is demanding a higher-than-normal valuation premium compared to Value, limiting its comparative return potential over the longer term.

In sum, we believe these data demonstrate that the unusual outperformance of Growth over Value during the past decade is largely due to a series of economic and industry-specific conditions that will likely change rather than to some sort of regime change that implies the value premium observed in equity markets dating back nearly 100 years has disappeared.

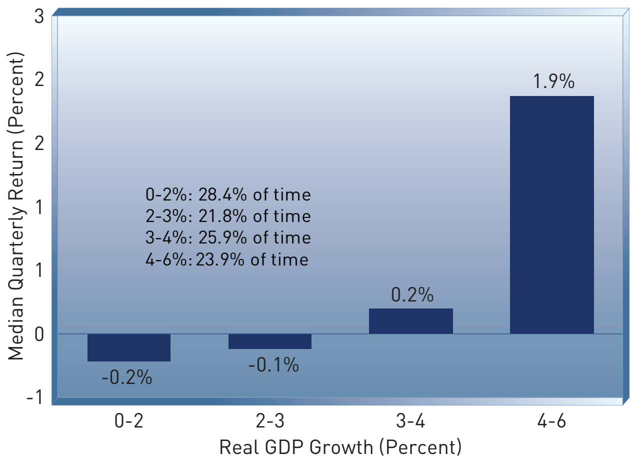
Economic Cycle Influence

In our analysis of Value performance through different stages of the economic cycle, we use the Fama-French High-Minus Low (HML) value factor. This factor represents the return differential between a high book-to-market (Value) portfolio and a low book-to-market (Growth) portfolio. Furthermore, the HML value factor has proven to be statistically significant through various market periods and is a conservative yet effective representation of the historical value premium. The first part of our analysis uses data from the National Bureau of Economic Research (NBER) to identify U.S. expansion and contraction periods. We conclude that Value is a cyclical factor, performing best in periods of strong economic growth (Chart 6, page 6).

Chart 6

Fama-French Value Factor Median Quarterly Returns

By Real GDP Growth 1947–2017

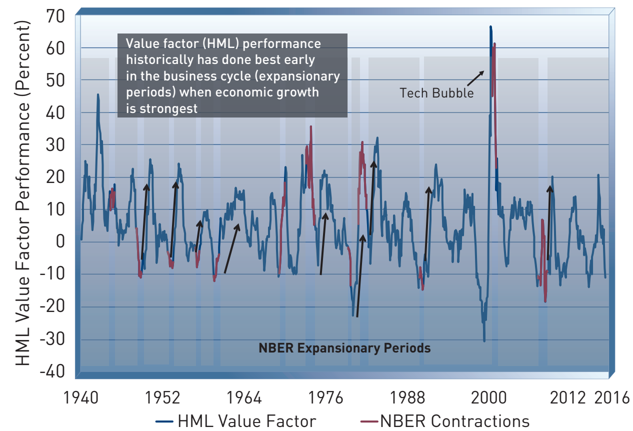


Source: FactSet Research Systems Inc., PNC

Chart 7

Fama-French HML Value Factor Performance over Expansion and Contraction Periods

(Rolling 12-Month Returns 1940–2017)



Source: FactSet Research Systems Inc., PNC

Intuitively, this makes sense to us: In high economic growth periods, many investors elect to allocate to cheaper Value-oriented equities and are only willing to pay a growth premium (higher price) in slower growth environments or when Growth is considered "scarce." Of course, the growth trajectory of an economy can vary widely over the course of a single cycle, hence the high degree of variability in performance patterns for Value and Growth. Often the most robust economic growth, as measured by real GDP, occurs in the early stages of the business cycle and tapers off as the expansion period matures. Since 1940, there have been 13 economic expansions, and our analysis shows that in nine of these the Value factor has exhibited its most robust performance early in the cycle[2] when the economy begins to accelerate after the preceding contraction (Chart 7). Over these nine periods, which for simplicity's sake we have titled "high HML," the Value factor posted an average annualized return of 19%[3] versus an average annualized return over the corresponding full expansionary cycles of 3.2%. Over these same nine high HML periods, the average real GDP quarter-over-quarter growth rate was 6.3%, well ahead of the historical average of 3.2% (1947–2017). Conversely, during contractionary periods, defined by the NBER, the value factor posted some of its worst performance.

These findings closely align with our own proprietary business cycle framework. Our business cycle analysis uses various economic and market-related leading indicators to project cycle turning points that allow us to calibrate current market valuations with the state of the economy. We find evaluating business cycles in binary expansion/contraction terms less useful when making investment decisions. Consequently, our framework divides business cycles into four distinct stages:

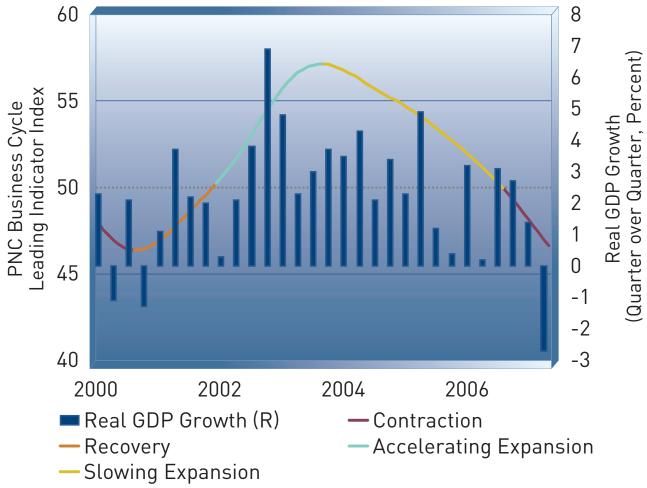
- contraction;
- recovery;
- accelerating expansion; and
- slowing expansion (Chart 8, page 7).

The strongest economic growth occurs in the accelerating expansion phase, which typically aligns with the early expansionary periods via the NBER. Using traditional market-cap-weighted domestic equity indexes, we found that since 1989 Value stocks across large, mid, and small

[2] In our HML value factor performance review, we define "early cycle" as the low point of the rolling one-year HML value factor performance coming out of each NBER-defined contractionary period to the ensuing expansion period HML value factor peak. On average, these periods began 3 months of postcontraction and lasted for an average of 14 months into the corresponding expansionary period.

[3] High HML performance periods less than 12 months are not annualized; if the period was less than 12 months, cumulative returns were used.

Chart 8
PNC Business Cycle Leading Indicator Index: Four Stages of the Business Cycle



Source: PNC

cap outperformed Growth stocks during the accelerating expansion phase, consistent with our HML value factor conclusions. Also over this same period, Information Technology was the most negatively correlated (-0.42) sector to the HML value factor. This is consistent with our conclusion that the sector is often a key driver in Growth outperformance.

Other cyclical factors, which are often influenced by the underlying economic backdrop, can also help provide insight into what environments tend to favor one style over another. Corporate profits, inflation, and even the size of the Federal Reserve's (Fed's) balance sheet can demonstrate historical patterns related to style performance. Each Value-friendly environment listed below tends to occur in periods of accelerating economic growth.

- Corporate profits: From 1982 to the present, periods of accelerating earning growth have favored Value, with a return of 38% during such periods versus 29% for Growth.[4]
- Inflation: From a factor prospective, periods of rising core inflation favor Quality and Value over Growth and Momentum.
- Fed balance sheet: Historically, when the Fed is shrinking its balance sheet, Value outperforms Growth. The median outperformance during such periods since 1948 is 12%.

Our findings may seem somewhat obvious, but the typical pattern of Value performance has not materialized during the current business cycle. We believe the rather subdued growth dynamic of the current expansion may play a key role in Value's ongoing underperformance. In our view, the current cycle's persistently slow real GDP growth has contributed to the HML value factor closing 2017 with a 10-year annualized return of -1.1%, which is the third worst 10-year stretch since 1940, only outdone in 2015 at -2.1% and 2016 at -1.4%. Value often lags during periods of falling inflation, slow economic growth, and slow earnings growth. Since the beginning of the current expansionary period in June 2009, real GDP growth has averaged just 2.2% quarter over quarter, below the historical average of 3.2% and well below the 6.3% average experienced during the nine historical early cycle periods in which Value performed best. Inflation and earnings growth have similarly lagged long-term averages during this period. If the current pace of growth persists, it will be the lowest average growth rate of any expansionary period. Value's underperformance has likely been compounded by the cycle's historical length (second longest ever recorded by the NBER at 108 months), prolonging many investors' search for growth and encouraging a willingness to buy more expensive, higher-growth companies. On a cumulative return basis, the Russell 1000 Growth Index has returned 87% more than the Russell 1000 Value Index since June 2009.

The nature of the Fed-aided recovery may also help explain the outperformance of Growth stocks during this cycle. Specifically, the prolonged zero interest rate environment from 2008–15 helped keep the cost of capital very low, enabling companies to fund growth cheaply. In a rising interest rate environment, Value should typically outperform because of its shorter duration.[5]

[4] Based of return data from Russell 1000 Growth and Value indexes, excluding the Tech bubble.

[5] Growth stocks exhibit higher duration than value stocks consistent with the expectation that a higher proportion of cash flows from growth stocks will be received in the more distant future.

However, for much of the past 10 years, domestic interest rates were actively suppressed by the Fed in an effort to support the broader economy. Interest rates, already near historic bottoms in 2010, only drifted down further through 2012. For example, the 10-year Treasury yield reached a local nadir of around 1.4% in 2012 and has yet to firmly break above 3%.

Key Observations

Although Value has meaningfully underperformed in recent years, our analysis offers some important observations and potential explanations. In combination with an unusually slow economic expansion that has helped perpetuate investor appetite for Growth, sector differentials between the indexes have had a major influence. Is it time to give up on Value? We don't think so. Our view is that the factors driving Value's underperformance are transitory in nature and should not lead to perpetual underperformance. In fact, quite the opposite is true. We believe that as central banks begin to loosen their influence, economic growth patterns will likely start to normalize. Further, we view sector leadership as a cyclical phenomenon; that is, as highly influential sectors such as Information Technology experience a degree of mean reversion, Value can again outperform. Lastly, the current valuation gap between Growth and Value indicates to us the relative return potential between the two styles currently favors Value.

The question is, *when* will this style shift occur? We acknowledge that precisely timing such events is often a fool's errand, particularly in a world with so many cross-currents. Generally, our view is we are later in the business cycle, and as we have detailed, that often favors Growth. Growth is also enjoying tremendous momentum, which can be a powerful market force. That said, in the immediate future there are components of the backdrop that could offset the forces of the underlying business cycle. For example, we believe fiscal policy may help encourage a short-term acceleration of economic growth, interest rates and inflation seem to be rising, and the Fed continues to shrink its balance sheet—all historically positive dynamics for Value. It all depends on the time period in which one chooses to invest, but amid the many countervailing forces we feel comfortable with an asset allocation that reflects a Value tilt, even if that means enduring more near-term Growth leadership.

An International Perspective—Does the Value Story Apply There Too?

Developed International Markets

Over the last 20 years,[6] developed international Value has outperformed its Growth counterpart by more than 150 bps on an annualized basis. In the 10 years ending December 31, 2007, Value outperformed Growth by nearly 500 bps on an annualized basis. With performance differentials even more pronounced than in the United States over the same periods, similar style patterns can be observed. While the data help support the idea that a Value premium exists in international equities, the MSCI World ex-US Growth Index has outperformed its Value counterpart over the last five years by about 100 bps annualized. Again, this is similar to the trends observed in the United States, but there are notable differences.

First, we believe similar macroeconomic forces have influenced style performance within developed international equities. As with the United States, economic momentum is often a powerful force in equity style performance (Chart 9, page 9). Our view is these same forces that have influenced domestic Value and Growth performance trends have similarly affected international markets—slow economic growth, low inflation, and easy monetary policy, to name a few.

From a sector perspective, an analysis of the MSCI World ex-US Index (all developed countries excluding the United States) indicates weightings that have not changed drastically over time (Table 3, page 9). Both longer-term averages and current weightings highlight the dominance of Financials and Energy in the Value index. The two sectors alone comprise nearly 50% of the entire Value index. Unlike its U.S. counterpart, however, the World ex-US Growth

[6] Both the MSCI World ex-US Growth and Value indexes were launched in December 1997.

Table 3

MSCI World ex-US Index Weightings

Sector	MSCI World ex-US Current*	MSCI World ex-US 10-Yr. Avg.	MSCI World ex-US Change	World ex-US Value Current	World ex-US Value 10-Yr. Avg.	World ex-US Value Change	World ex-US Growth Current	World ex-US Growth 10-Yr. Avg.	World ex-US Growth Change
Consumer Discretionary	11.3%	9.9%	1.4%	**10.6%**	**8.2%**	**2.4%**	12.0%	11.5%	0.5%
Consumer Staples	10.4%	10.4%	0.0%	3.3%	3.2%	0.1%	17.3%	17.6%	-0.3%
Energy	**6.4%**	**8.9%**	**-2.5%**	**10.0%**	**12.0%**	**-2.0%**	**2.9%**	**5.9%**	**-3.0%**
Financials	23.2%	22.0%	1.2%	36.9%	34.6%	2.3%	9.5%	9.6%	-0.1%
Health Care	9.1%	9.1%	0.0%	6.3%	6.5%	-0.2%	11.9%	11.7%	0.2%
Industrials	13.1%	11.7%	1.4%	8.8%	8.4%	0.4%	17.3%	14.9%	2.4%
Information Technology	**7.3%**	**5.2%**	**2.1%**	1.4%	2.6%	-1.2%	**13.1%**	**7.8%**	**5.3%**
Materials	8.9%	10.0%	**-1.1%**	6.9%	7.4%	-0.5%	10.8%	12.6%	-1.8%
Real Estate	3.5%	3.3%	0.2%	4.8%	4.1%	0.7%	2.1%	2.5%	-0.4%
Telecomm. Services	4.0%	5.3%	-1.3%	6.1%	7.0%	-0.9%	2.0%	3.7%	-1.7%
Utilities	3.0%	4.2%	-1.2%	4.9%	6.0%	-1.1%	1.1%	2.3%	-1.2%

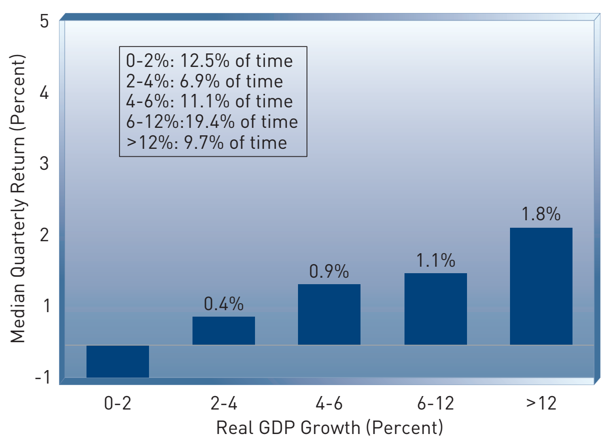
**Current as of the end of 1Q2018*

Source: FactSet Research Systems Inc., PNC

Chart 9

Value Factor Median Quarterly Return by Real GDP Growth

As of 3/10/18



Source: FactSet Research Systems Inc., PNC

Chart 10

Five-Year Cumulative Return Comparison: International and Domestic Growth versus Value

As of 4/1/18

Source: FactSet Research Systems Inc., PNC

Index is not led by Information Technology. Almost counterintuitively for domestic/U.S.-based investors, Consumer Staples is the largest component of the Growth Index, with large weightings to tobacco and alcohol companies. Another key difference for international markets is exposure to the Materials sector. Not even 3% of the S&P 500, the Materials sector plays an important role within both Growth and Value indexes abroad.

Therefore, even within a portfolio's Growth allocation, meaningful diversification can be achieved by allocating to different geographies.

Given the sector disparities, Information Technology in particular, different outcomes may be expected between domestic and international Growth exposures. For example, not only has the Russell 1000 Growth Index outpaced the MSCI World ex US Growth Index by a cumulative return of 55% over the past five years, but the spread between developed international Growth and Value has been far tighter than the spread between domestic Growth and Value (Chart 10). For additional context, over the past 12 months, the correlation between U.S. and developed international growth indexes

Table 4
The Move Toward Consumption and Services

	MSCI Emerging Markets			EM Value			EM Growth		
Sector	Current*	10-Yr. Avg.	Change	Current	10-Yr. Avg.	Change	Current	10-Yr. Avg.	Change
Consumer Discretionary	11.1%	8.1%	3.0%	6.7%	6.9%	-0.2%	15.4%	9.7%	5.7%
Consumer Staples	6.4%	6.6%	-0.2%	3.1%	3.3%	-0.2%	9.6%	9.9%	-0.3%
Energy	**6.9%**	**10.5%**	**-3.6%**	**12.2%**	**15.7%**	**-3.5%**	1.6%	6.3%	-4.7%
Financials	24.1%	22.7%	1.4%	**36.0%**	**28.9%**	**7.1%**	**12.3%**	**18.1%**	**-5.8%**
Health Care	2.7%	1.9%	0.8%	1.2%	0.5%	0.7%	4.2%	3.2%	1.0%
Industrials	4.6%	6.4%	-1.8%	5.4%	5.3%	0.1%	3.8%	6.5%	-2.7%
Information Technology	**26.7%**	**18.1%**	**8.6%**	10.2%	9.6%	0.6%	**43.0%**	**25.1%**	**17.9%**
Materials	**7.8%**	**11.6%**	**-3.8%**	11.3%	13.6%	-2.3%	**4.3%**	**10.3%**	**-6.0%**
Real Estate	2.8%	2.1%	0.7%	3.3%	1.9%	1.4%	2.1%	2.2%	-0.1%
Telecomm. Services	4.7%	8.5%	-3.8%	**6.6%**	**10.0%**	**-3.4%**	2.7%	6.3%	-3.6%
Utilities	2.4%	3.4%	-1.0%	3.9%	4.4%	-0.5%	0.8%	2.4%	-1.6%

**Current as of the end of 1Q2018*
Source: FactSet Research Systems Inc., PNC

has only been a weak 0.52. That compares to a 0.82 correlation between the Russell 1000 and MSCI ex US core indexes.

We highlight that style exposures are not consistent across different geographies. Within developed international markets, Growth in particular is far less exposed to sectors such as Information Technology and hasn't enjoyed quite the same advantage over Value in the past few years. We think this means that when the inevitable style shift occurs, U.S. markets could see a bigger correction within Growth compared to developed international markets.

Emerging Markets

Interestingly to us, the pursuit of strictly defined Value investing has not proliferated within emerging markets—yet. In the United States, 20–25% of the Morningstar universe identify as Value. In developed markets excluding the United States, that number drops to 11–15% of the foreign fund category in Morningstar. However, less than 3% in the emerging market (EM) universe pursue Value-oriented strategies. We find it curious that the popularity of Value investing has not yet translated to emerging markets given the relative pricing inefficiencies of the asset class. With the expanding depth and breadth of the equity markets in developing regions, we have no reason to believe Value's ability to generate outperformance over the long term would not persist within EM equities. However, the ability to invest in specific styles (Value in particular) is generally more limited in these markets, at least for now.

From an exposure perspective, even passively investing in so-called "core" emerging markets typically results in a Growth bias. With a 30% weighting toward Information Technology, MSCI's core emerging market exchange-traded fund (EEM) is generally closer to Growth than Value. For perspective, the Russell 1000 Growth Index has a 39% weighting toward the Information Technology sector. The sector has come to represent a larger proportion of EM indexes, with emerging economies continuing to evolve from heavy industrial and production (commodity-based, value sectors) toward one of consumption and services (consumer, growth sectors) (Table 4). One example of the move to consumption is the generational shift toward e-commerce. For reference, less than 10% of e-commerce in the United States is transacted via mobile devices versus 80% of e-commerce in

[7] Source: iResearch, Bloomberg, pymnts.com, 2017.

China. Alibaba (Alipay) and TenCent (WeChat), two of the three largest companies in the MSCI EM Index, control well over 50% of the growing Chinese third-party payment market.[7]

Our message in this section falls under the category of "know what you own." Not only are EM indexes tilted toward Growth, but also the exposures are more concentrated compared to developed international and U.S. markets. In the current environment of scarce growth, it's no wonder the EM asset class has been a strong performance leader. For example, the top five stocks in the S&P 500 Information Technology sector account for about 11% of the overall index. Within EEM, the top five Tech names account for 20% of the overall index, with Tencent and Samsung comprising more than 10% alone. China (roughly 25% of the EM Index) is also likely to skew further into growth as more A shares[8] are included in the index. The MSCI EM Index covers only 31% of the market capitalization of the universe (excludes A shares not cross-listed in Hong Kong) versus the Russell 1000 Growth, which covers more than 95% of the U.S. large-cap growth universe. Our view is that when Growth outperformance ultimately shifts in favor of Value, core EM equity exposure may be more vulnerable compared to other regions given its inherent style bias—hence, buyer beware.

Rationale for a Strategic Value Tilt[9]

Understanding the current environment and how it affects style performance is critical in determining whether there has been a fundamental shift in the Value versus Growth relationship. As we have stated above, we do not believe this to be the case. Therefore, it is important to provide more detail as it relates to our long-term preference for Value. This discussion goes far beyond the present, examining the rationale for our strategic Value tilt.

We start with the Capital Asset Pricing Model (CAPM), which was developed in the 1960s and published in 1970 by William Sharpe, a financial economist, in his book *Portfolio Theory and Capital Markets*. The research posed that individual investments face two risks: systematic, or risks that cannot be diversified away (such as macro events like recessions), and unsystematic risk, which is known as specific risk that can be diversified. According to the CAPM, a stock's risk premium, that is, its expected return relative to cash, should be completely and exclusively determined by its sensitivity (beta) to the return on the capitalization-weighted portfolio of all available assets (the market portfolio). Thus, it should not be possible to earn a higher risk-adjusted return by selecting stocks based on any other characteristic.

Since the CAPM was developed more than 50 years ago, there has been much literature documenting and trying to explain how stocks with certain characteristics tend to generate higher risk-adjusted returns. The early literature referred to these results as anomalies, but as the evidence accumulated it became accepted that various characteristics other than beta were given a return premium by the market.[10] With this acceptance came a shift in terminology. The hunt for anomalies became a search for "factors" to measure risks and generate additional returns.

Virtually any observable, measurable characteristic can be used to define a factor. Given a set of factors, one can estimate the exposure/sensitivity of individual stocks to each factor, form portfolios based on these exposures, and measure factor returns based on the performance of these portfolios. It is then possible to see which factors have been working and, if we believe that performance will persist (or we can predict the factors that will work next), make tactical allocations based on factor exposures.

For our strategic, baseline asset allocation recommendations, however, we are primarily interested in factors that:

[8] Shares that are purchased and traded on the Shanghai and Shenzhen stock exchanges. This is in contrast to B shares, which are owned by foreigners who cannot purchase A shares due to Chinese government restrictions.

[9] This section relies heavily on two previously published PNC reports: *A Guide to the Hawthorn Strategic Balanced Portfolio* (2015) and *Investment Outlook–Quest for Value* (May 2011).

[10] The theoretical foundations for multifactor valuation were established by, for example, Ross (1976).

- are likely to earn a positive return premium over intermediate-to-long horizons;
- have proved to be significant in various sample periods, with various data sets, and using various empirical definitions and methodologies; and
- are associated with reasonably well-defined, stable subsets of stocks (asset classes) rather than reflecting active portfolio strategies.

The first criterion eliminates factors that add no value on average, but which might add value if we actively increased/decreased exposure to them at the right times. The second criterion means we want to have confidence that the evidence supporting the factor is not an artifact of particular time periods or data sets and is reasonably robust to variations in how the factor is defined and/or measured. One way to interpret the third criterion would be to say that, for our purposes, we want factors that can be reasonably represented by passive portfolios.

Two well-known factors, value and size, meet our criteria. Fama and French (1992, 1993) found that the variation in expected stock returns can be explained by these two factors in addition to market beta. Numerous other studies, both before and after, have confirmed these two factors earn a positive premium on average. Specifically in this case, Value stocks tend to earn a higher return than Growth stocks having the same sensitivity to the overall market. An additional factor, price momentum, is also widely acknowledged to generate predictably positive excess returns. Although we believe some exposure to momentum may be suitable for some investors, we will not focus on it here because it reflects a strategy that may be defined as active in the sense that it relies on buying a subset of stocks with the biggest recent gains.

Historical analysis supports the notion that a strategic portfolio tilt toward Value is likely to be additive to returns over time. For example, we looked at the annualized return differential between two portfolios (one Growth and one Value)[11] for every 10-year period from July 1926 through March 2015.[12] A Large Cap Value portfolio outperformed a Large Cap Growth portfolio in 74% of the 10-year periods. The median differential was 2.9% and the average was 2.6%. The difference was even stronger in small cap, where Value outperformed in 90% of the 10-year periods; the median differential was 5.3% and the average was 4.7%.

Given the historically strong performance of the Value style, there are three primary reasons we have not built even larger tilts into our strategic baseline asset allocations:

- We believe the historical results likely *overstate* the impact of these factors going forward. The benefits of tilting toward Value are well known. This does not necessarily mean the benefits have been eliminated but that they are likely to be less pronounced.
- Although a Value tilt has worked well on average, there have been periods when it was a significant drag on performance, as seen over the past decade.
- Value stocks tend to be more cyclical. Therefore, prudence dictates our Value tilt not be extreme.

Putting It All Together

Our message here is generally a simple one: We still believe Value "works" in the long run and the conditions that have perpetuated Growth's outperformance in recent years are explainable and temporary. Markets have experienced long stretches of persistent style leadership, and our view is that we are merely in the midst of another one of those periods. So, is Growth the new Value? We don't think so. We contend that a long-term Value tilt provides investors with the opportunity to

[11] The portfolios are determined as follows. The dividing line between Growth and Value is determined by the ratio of book equity (BE) to market equity (ME) with value portfolios containing the 30% of stocks with the highest BE/ME ratios, growth portfolios containing the 30% of stocks with the lowest BE/ME ratio, and what we have labeled as "core" portfolios containing the middle 40% with respect to BE/ME.

[12] Returns are continuously compounded growth rates.

generate outperformance, and we should only be tactically overweighting Growth if our conviction is high. Currently, that is not the case given the complexity of the backdrop—certain preconditions may be in place (for example, short-term economic acceleration, shrinking Fed balance sheet, and accelerating profit growth) that generally favor Value in the near term. However, we believe we remain in the later innings of the business cycle, so many investors may still be willing to pay up for Growth as the cycle matures. As a result, we do not recommend any tactical shift toward Growth, even though Value continues to trail thus far in 2018.

Finally, it is important for investors to understand that Value and Growth styles will likely behave somewhat differently when investing internationally due to significant variances in the underlying style index exposures. Specifically, when style performance eventually shifts in favor of Value, we expect developed international Growth may be less vulnerable compared to the United States, while the Growth bias within EM indexes may make core allocations there more exposed.

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Hawthorn Asset Allocation Playbook

As of 3/31/2018

Asset Class	Sub Asset Class	Favorability -			Neutral			+	Points of View
Equities					●				
U.S.	Large Cap					●			Relative valuation and vulnerability to what has been an increase in overall market volatility in 2018 cause us to narrowly favor large over small. Small caps have outperformed year to date, with investor concerns related to trade driving them to seek protection from less exposed small-cap stocks. However, we believe the trade overhang will ultimately lift, removing this particular tailwind. Smaller companies may also benefit from positive tax-reform-related forward guidance; however, valuations remain quite expensive at 22.5x on a forward earnings basis.
	Mid Cap				●				
	Small Cap				●				
Non-U.S.	Intl. Large/Mid Cap					●			Valuations appear relatively more attractive versus domestic equities, potentially creating attractive opportunities in many international markets. Still largely accommodative monetary policy by global central banks and strong earnings momentum should also provide additional support for international equities.
	Intl. Small Cap				●				Although we like emerging markets for the long term given current valuations, we believe the rally to be overextended. The shorter-term bear case for emerging market equities rests mainly on China, which has a significant impact on performance with a weight of over 25% of the emerging markets index. Year-to-date performance has been good, but momentum has waned.
	Emerging Markets			●					
Fixed Income				●					
U.S.	Short Muni Fixed Income			●					With the likelihood of longer-term rates remaining well below long-run averages, we favor intermediate duration fixed income. While mindful of the numerous cross-currents affecting interest rate movements, we will not attempt to time our duration positioning, even though we think rates may drift higher in 2018.
	Core Muni Fixed Income				●				
	U.S. High Yield			●					The credit cycle is aging, and valuations should become an increasing headwind for most below-investment-grade issuers. Leveraged loans remain more attractive than high yield given their seniority in the capital structure, potentially providing more protection from higher interest rates.
	U.S. Leveraged Loans				●				
	U.S. TIPS				●				Although inflation looks poised to rise later in 2018, the outlook is far from certain. We prefer to hedge inflation over the long term via our equity exposure.
Non-U.S.	Global Bond				●				We reduce our preference to neutral given some of the below-investment-grade credit held in many of these funds. Although we are not overly negative on credit, we do believe slowly shifting to higher quality areas of fixed income is sensible given the level of spreads.
	Unconstrained Bond				●				
	Emerging Market Bond			●					
Alternatives						●			
Private	Private Real Estate					●			Key drivers include a still relatively constrained supply backdrop, modest leverage levels, and the fact that capital flows into the asset class are becoming increasingly global (that is, investor demand is quite robust).
	Private Debt					●			Middle market lending in the corporate sector is still quite constrained, continuing to create opportunities for private debt investors. We continue to see investors rewarded with a substantial illiquidity premium for taking on unrated, smaller sized loans.
	Private Equity						●		There is opportunity in new/less efficient markets, and a more diverse investable opportunity set, for example, via secondaries and "co-investment" options.
Hedge Funds	Equity Long/Short					●			A transition from a primarily macro-driven market environment to a more fundamentally driven one will be positive for these alpha-generating strategies. Central banks now appear more committed to a steady normalization of interest rates than they have been in past years. However, should the market move steadily higher with little volatility, these allocations will likely underperform.
	Event Driven					●			
	Relative Value					●			
	Directional					●			

Asset Class	Sub Asset Class	Favorability							Points of View
		-			Neutral			+	
Cash					●				
Tactical Allocations						●			
Tactical	Master Limited Partnerships					●			Performance has suffered after a strong start to the year. Markets penalized the sector after a potentially unfavorable tax ruling; however, we believe the overall impact will be small. Stronger fundamentals and rising energy prices could spur investor interest given currently depressed valuations and underweight energy positioning among equity portfolio managers.
	Infrastructure					●			Defensive qualities and income potential that we like in this market.
	Currency Hedged Europe				●				Stabilizing economic conditions, improving earnings growth, and relatively attractive valuations put European equities in a good position. The currency hedge may no longer be necessary.
	Currency Hedged Japan					●			Valuations are attractive, earnings growth is strong, and consumer confidence is high. We still like the currency hedge as the Bank of Japan remains easy relative to the Federal Reserve and yen positioning (now net long) is no longer supportive of a move higher.
	U.S. Banks						●		We think valuations, the regulatory backdrop, and the continuation of this business cycle are compelling reasons to tilt toward U.S. banks within value allocations.
	Structured Note (Drawdown)					●			Ability to earn a coupon while waiting for a more attractive entry point into equities can be an attractive strategy, especially versus cash.

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