

Fall 2019

## The Growth Risk *Still* Lurking in Your Portfolio

The performance gap between large-cap value and large-cap growth stocks has dramatically continued into 2019 and remains a significant risk for equity investors. But it's also an opportunity: Based on Bridgeway's analysis, large-cap value stocks haven't been this cheap since 2000—historically an excellent time to have harvested appreciated growth and rebalanced back into value stocks.

In the Spring of 2018, Bridgeway Capital Management wrote a paper flagging a sometimes-overlooked aspect of the long-running bull market: value stocks had significantly lagged growth stocks since 2009, creating a historically wide gap between large-cap value and large-cap growth returns.

Eighteen months later, as value investors may feel long-suffering, the “lurking growth risk” scenario described below remains a real threat—and opportunity—worthy of investors' attention.

As evidence-based investors, we know from decades of market data that value stocks have outperformed growth stocks over the long run. We believe that buying almost anything—whether a car, a house, a refrigerator, or a stock—at a cheaper price is a good financial principle. That's why we strongly believe in maintaining exposure to value stocks in a diversified portfolio. We also know that value stocks don't always outperform growth stocks, particularly over shorter periods. But conditions such as the ones we've continued to see since our last paper—where the market is so skewed toward one asset class over another—are relatively rare and exceptionally risky to long-term outcomes.

Investors who have not intended to tilt their portfolios toward large-cap growth stocks have likely found themselves in precisely that position. Even large-cap index funds have a greater proportion of their weight in relatively growthier names due to recent performance of large-cap growth stocks. Based on our research, this overweight position could cause portfolios to suffer when large growth and large value returns begin a reversion to the mean. However, investors also have an opportunity to rebalance portfolios between growth and value, better positioning them to capture the expected long-term value premium.

Below, we've updated the data first presented in our Spring 2018 paper to show how big this risk—and opportunity—really is.

### Evidence for reversion to the mean

For this update, we have again focused on large growth and large value stocks as represented by the Russell 1000 Growth and Russell 1000 Value Indexes, since their inception 40 years ago. Examining data from these Russell Indexes shows us that the gap between large value and large growth one-year returns has narrowed: for the 12 months through June 28, 2019, the gap stood at 3.10 percentage points—an improvement over the 16.55 percentage point gap we saw for the 12 months ended December 31, 2017. However, the gap between value and growth returns has widened over longer periods.

For the five years through June 28, 2019, the Russell 1000 Value Index's average annualized return lagged the Russell 1000 Growth Index's by nearly six percentage points, compared to the 2.89 percentage point gap we saw for the five years through 2017. For the 10 years through June 28, 2019, the Russell 1000 Value Index trailed the Russell 1000 Growth index by more than three percentage points *per year* on average.

**Table 1. Large Growth vs. Large Value Returns**  
(as of June 28, 2019)

	RLG	RLV	Difference
<b>One Year</b>	11.56%	8.46%	3.10%
<b>5 Years*</b>	13.39%	7.46%	5.93%
<b>10 Years*</b>	16.28%	13.19%	3.09%
<b>Inception to Date*</b>	11.45%	11.92%	-0.48%

Source: Russell, Bridgeway

\*Annualized. Inception date for Russell 1000 Growth Index and Russell 1000 Value Index: December 31, 1978

Given that large value has outpaced large growth for the 40 years since inception of the Russell Indexes, the current five- and 10-year rolling period gaps are big numbers on both an

absolute and on a relative basis. As of June 28, 2019, the Russell 1000 Value Index was in roughly the 96th percentile of relative trailing performance for rolling five-year periods—meaning that the Russell 1000 Value Index’s historical relative performance was better than its recent relative performance 96% of the time over five-year rolling periods during the 40 years of available Russell data. For ten-year periods, the same index was in the 89th percentile of relative trailing performance for 10-year-periods.

In other words, the Russell large cap value stocks are still well into the worst quintile of large value relative returns for both five-year and 10-year periods. However, we also know that over longer time periods, asset returns eventually revert to the mean, which suggests that large value’s relative performance is likely to improve at some point in the future. To examine what mean reversion might look like, we re-examined how large value stocks performed following similar rolling monthly periods of 10-year underperformance.

Chart 1, updated through June 2019, illustrates reversion to the mean in action: large value’s five- and ten-year forward relative performance has been weakest following periods when the asset class had the best returns relative to large growth (Quintile 1), but strongest following periods of the weakest relative performance (Quintile 5). Because we still are deep into the fifth quintile of relative returns, historical analysis tells us—based on this data—it is more likely that large value stocks would outperform large growth stocks at some time over the coming five- to 10-year period.

However, as we cautioned in our Spring 2018 analysis, Chart 1 doesn’t tell us exactly when that reversion will take place. Table 2 shows the dispersion of forward relative returns following periods when large value stocks have been in the fifth quintile of relative performance. As we can see, returns in the one-year timeframe following the worst periods of large value underperformance have been mixed, while the evidence is much stronger in subsequent years.

**Table 2: Distribution of Forward Relative Returns for Worst Quintile of Large Value Relative Performance**

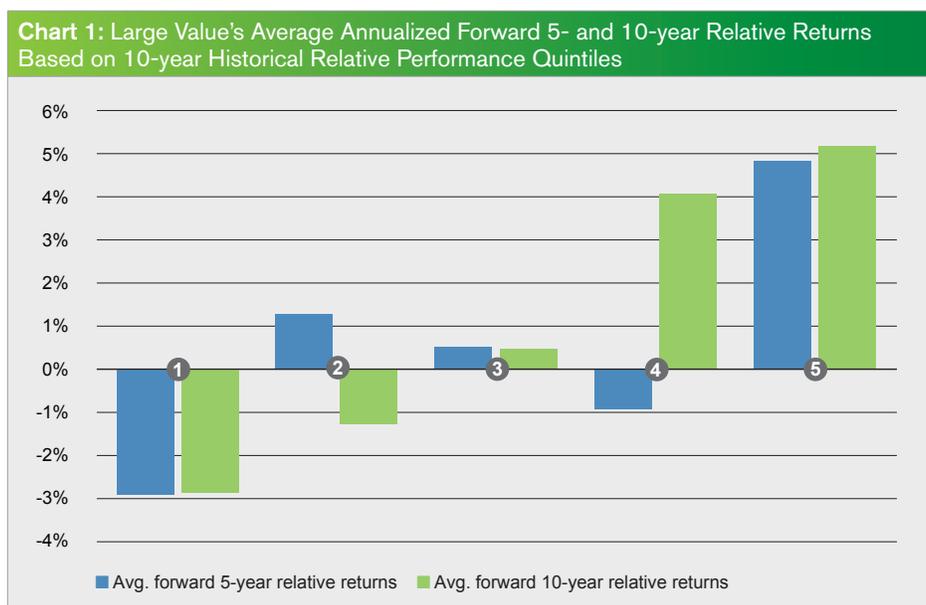
	Forward Year 1	Forward Year 2	Forward Year 3	Forward Year 4	Forward Year 5
25th percentile	-16.13%	-4.37%	-4.37%	-3.97%	-3.46%
50th percentile	0.01%	1.36%	3.90%	1.79%	3.26%
75th percentile	9.21%	15.33%	14.84%	11.73%	12.16%
Average	0.8%	4.2%	6.7%	1.1%	2.8%

Source: Russell, Bridgeway

For periods as short as one year, the principle of reversion to the mean is at odds with something academicians refer to as momentum, or continuation of the current trend. The poster child for such a momentum period was 1999. Although large value stocks had greatly underperformed for the decade ending in December 1998 (down 27.8% cumulatively relative to large growth stocks), they continued to underperform dramatically in calendar year 1999 (down 25.8% relative to large growth stocks), before coming back strongly on a relative basis over the following three years, 2000-2002 (up 66.4% cumulatively relative to large growth stocks). Thus, large value stocks provided some “cushion” in that notorious bear market.

While this relative returns data provides one way to examine large value’s recent performance, we also asked in our original paper whether relative valuation, or cheapness, of large value stocks was a significant factor. Namely, we wondered if their recent decade of underperformance could be explained by the fact that large value stocks had been overvalued and thus were returning to normal valuation levels?

Again, while theoretically possible, the statistical answer to this ques-



Source: Russell, Bridgeway

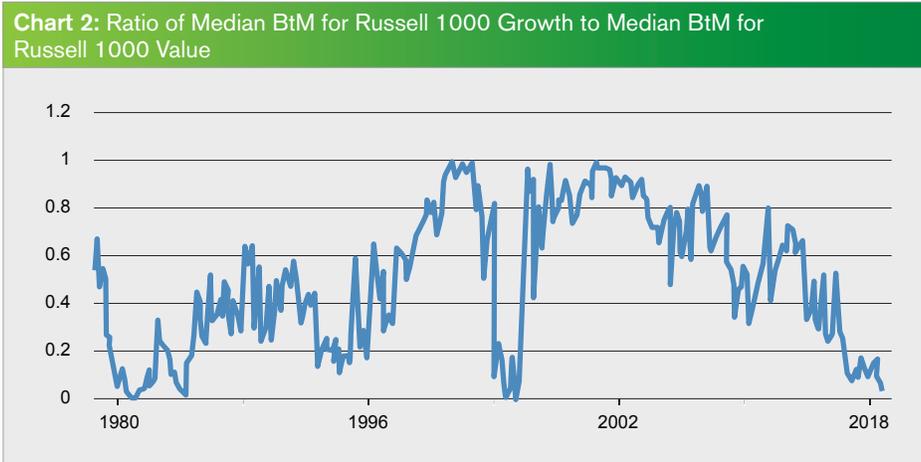
tion remains “no.” As of June 28, 2019, value stocks were in the 97th percentile of “cheapness” as measured by median book-to-market (BtM). That is, value stocks have only been cheaper 3% of the time in the last 40 years. While BtM is not our preferred way of measuring value (for more thoughts on this topic, request Bridgeway’s paper “Measuring Value – Let Me Count the Ways”), it is the classic academic definition and a component of how Russell assigns value and growth stocks.

By comparison, value stocks were in the 89th percentile of cheapness 18 months ago—which indicates the spring has continued to get wound tighter in favor of value’s eventual reversion to the mean. Indeed, the last time large value stocks were this cheap was in 2000—a time that would have been excellent for rebalancing back to value.

Chart 2 shows the median BtM ratio for the Russell 1000 Growth Index to median BtM for the Russell 1000 Value Index. A high metric, toward the top of the chart, means that value stocks are expensive. A low metric, toward the bottom of the chart, means they are cheap. This chart demonstrates that since the peak in early 2005, value stocks have become breathtakingly cheap, relative to growth stocks.

Chart 2 gives us some pause with respect to any portfolio currently underweighted in value stocks relative to growth stocks. Furthermore, examining forward relative returns following periods of low relative valuation of large value stocks (shown in Chart 3) paints a similar picture to Chart 1, above. In periods when value stocks are very cheap relative to growth stocks (Quintile 5)—as has been the case for roughly two years—returns have performed relatively strongly over the next five years.

Examining the effect on future returns of both historic relative performance (Chart 1) as well as relative valuations (Chart 3) reveals just

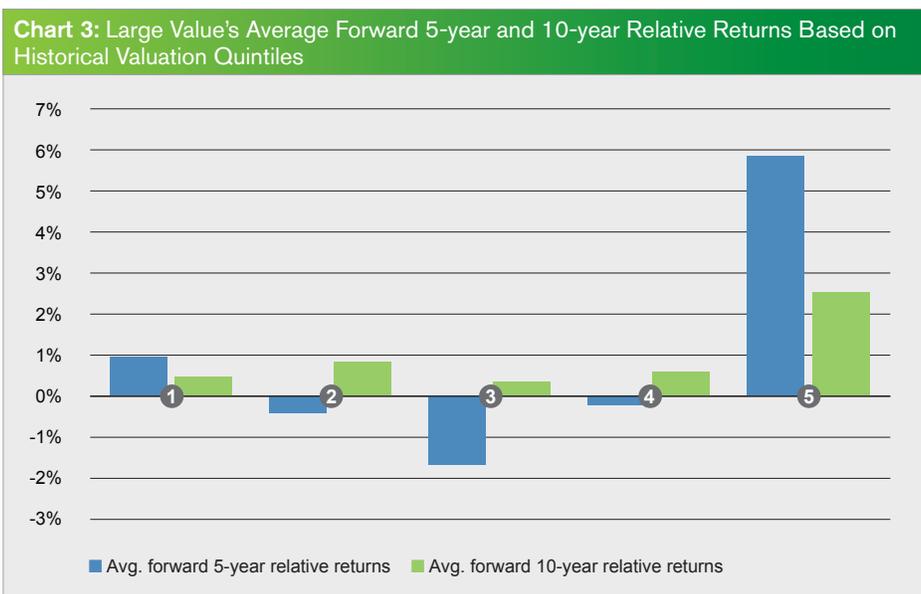


Source: Compustat, Russell, Bridgeway

how much the market has swung in favor of large growth in recent years. While we have some caveats to consider regarding this analysis<sup>1</sup>, the forward-looking performance data for both measures show the same phenomenon: a history of strong future relative performance for large value stocks as their returns and valuations revert to the mean.

**The solution: rebalancing**

Despite the evidence for large value’s positive forward returns following similar periods of underperformance as we have found ourselves in recent years, we caution investors against trying to time exactly the market’s swing away from large growth. Large growth’s dominance could continue for some period of time. But the historical evidence shows that



Source: Russell, Bridgeway

a reversion to the mean is likely to happen—and investors should be careful not to let their portfolios end up on the wrong side of an asset class's long-term average performance.

Fortunately, there's a relatively simple strategy that can help institutional investors and advisors manage this risk: Examining a portfolio's exposure to large growth and large value and rebalancing if needed to bring allocations in line with a long-term investing strategy.

For portfolios that already have stakes in both large growth and large value stocks and have not been rebalanced—and this includes passive index investors—chances are good that they have become overweight to large growth and underweight to large value. This carries the dual risk of being overweight to large growth at a time when future returns may be muted and underweight to large value when and if returns revert to the mean.

As a result, you might consider adding to value assets when investing new money, or trimming growth stocks in non-taxable accounts. In either case, you'll be taking advantage of a rebalancing opportunity we seldom see so clearly presented in market data.

What's more, boosting investments in out-of-favor asset classes is a critical practice that can support better long-term outcomes. By resisting the temptation to chase recent strong performance of large growth stocks, investors can avoid buying high on an asset class that is expensive relative to the last four decades of history. This combination of sound investing and behavioral principles can help reduce the potential growth risk that still may be “hidden” in equity portfolios following another year of large value underperformance.

## REFERENCES

<sup>1</sup>Statistical caveats: In addition to the normal caveats of using history to inform the future, there are two caveats of special note here.

First, 39 years is actually a relatively short period of time for this kind of analysis. For Chart 1, for example, we have a “look back” period of 10 years and forward return period of 5 and 10 years. Thus, we have 24 annual data points—39 minus 10 minus 5—although we use rolling monthly periods. Since these are time series analyses, the data points are not fully statistically independent of each other. Each quintile, therefore, has only about five non-overlapping annual data points.

Second, the breakpoints used to create the five quintiles were based on the full 39-year period delete comma and thus were not in “rolling windows” format, for example. This increases the “look ahead” bias of the analyses.

## DISCLAIMER

The opinions expressed here are exclusively those of Bridgeway Capital Management (“Bridgeway”). Information provided herein is educational in nature and for informational purposes only and should not be considered investment, legal, or tax advice.

All tables presented in this material reflect data as of June 30, 2019.

The Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity universe. It includes those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values. The Russell 1000 Growth Index is constructed to provide a comprehensive and unbiased barometer for the large-cap growth segment. The Index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect growth characteristics.

The Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity universe. It includes those Russell 1000 companies with lower price-to-book ratios and lower expected growth values. The Russell 1000 Value Index is constructed to provide a comprehensive and unbiased barometer for the large-cap value segment. The Index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect value characteristics.