

A Dynamic Approach to Large Cap Value Investing

UPENDING THE APPROACH TO TRADITIONAL ACTIVE MANAGEMENT

Many traditional active equity managers, using a defined investment process, focus on identifying stocks that they believe have the potential to outperform a stated market benchmark. Managers stay consistent to their process through market cycles and often acknowledge there will be periods when their approach is out of favor. The manager tolerates these cycles without modifying the approach by focusing on long-term results over a full market cycle. There is no doubt that this strategy can generate excess returns over long periods of time for proven managers. But what about a different approach to active management, one that not only focuses on a disciplined investment process yet also understands the different phases of a market cycle and the types of characteristics that outperform during these different phases? This paper explores an enhanced approach to traditional active management and focuses on a process that strives for greater consistency of excess returns through an emphasis on both fundamental factor analysis in conjunction with an analysis of the current market environment.

The Diversified Value Equity team at Brandywine Global has focused on value-driven investment research and portfolio management for over 25 years. Our research process is centered on identifying fundamental factors and portfolio characteristics that show long-term patterns of excess returns. In the early 2000s, our research team began exploring the idea that there could be different phases of valuation dispersion that occur over a market cycle. Upon analyzing the phases over full market cycles, we observed that certain portfolio characteristics tended to perform better in some environments than others. After significant research, we identified two distinct value phases for the Russell 1000 Value benchmark; we categorize these phases as broad and deep value environments.

BROAD AND DEEP VALUE PHASES

We identified the broad and deep value phases by looking at valuation spreads between the cheapest quartile stocks and the median stocks out of the top 1000 U.S. stocks by market capitalization. Through extensive backtested results that used over 60 years of data, we observed that when valuation spreads peaked—and thus began to narrow—deep-value investing began to outperform. Conversely, when valuation spreads narrowed—and then began to widen—broad-value investing began to outperform. We found that these distinct cycles within value are long-term trends that typically last between 2-7 years. We also discovered that some fundamental factors performed better in one environment—broad or deep value—versus the other. Through our research, we discovered that we could improve the consistency of excess returns and limit drawdowns relative to the benchmark by adjusting our approach to focus on factor exposures consistent with the current market environment.

A broad-value environment is characterized by narrow (and widening) dispersion among individual stocks. Broad-value environments often present themselves in the later stages of a bull market when valuation spreads in the index have narrowed and spreads begin to widen as stocks separate themselves as the market matures, as shown in **Figure 1** on the next page. Individual companies' earnings dynamics are

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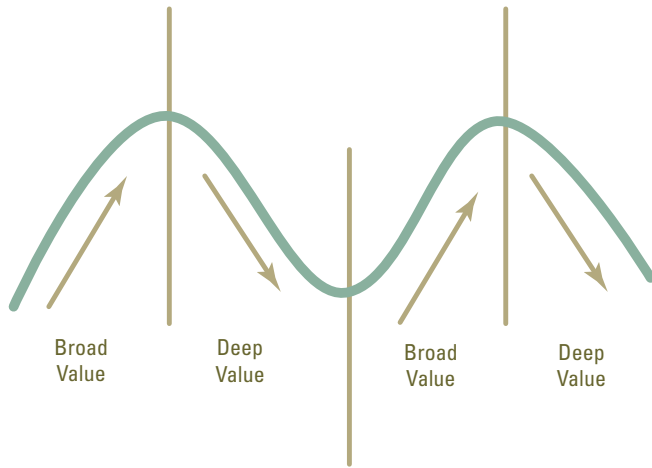
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Figure 1 Valuation Spreads – Long Term Trends



Source: Brandywine Global

more important than deeply discounted valuations at this point in the cycle. Our research shows that a portfolio with an emphasis on high-quality characteristics (e.g. return on equity), as well as relative price strength, performs best in a broad-value environment, which typically—but does not always—occur during the mid-to-late phase of the market cycle.

Conversely, a deep-value environment is characterized by wide (and narrowing) dispersion among individual stocks. Deep-value environments often present themselves in the early stages of a bull market, when significant valuation anomalies exist, as the market has separated what it perceives as the “winners and losers,” thus creating value opportunities. Mean reversion begins to take place as these deeply discounted securities lead the market higher, causing valuation spreads to start tightening again. A deep-value environment is usually associated with an earlier stage of the market cycle, although there can be anomalies.

THE DYNAMIC LARGE CAP VALUE STRATEGY: A COMBINATION APPROACH

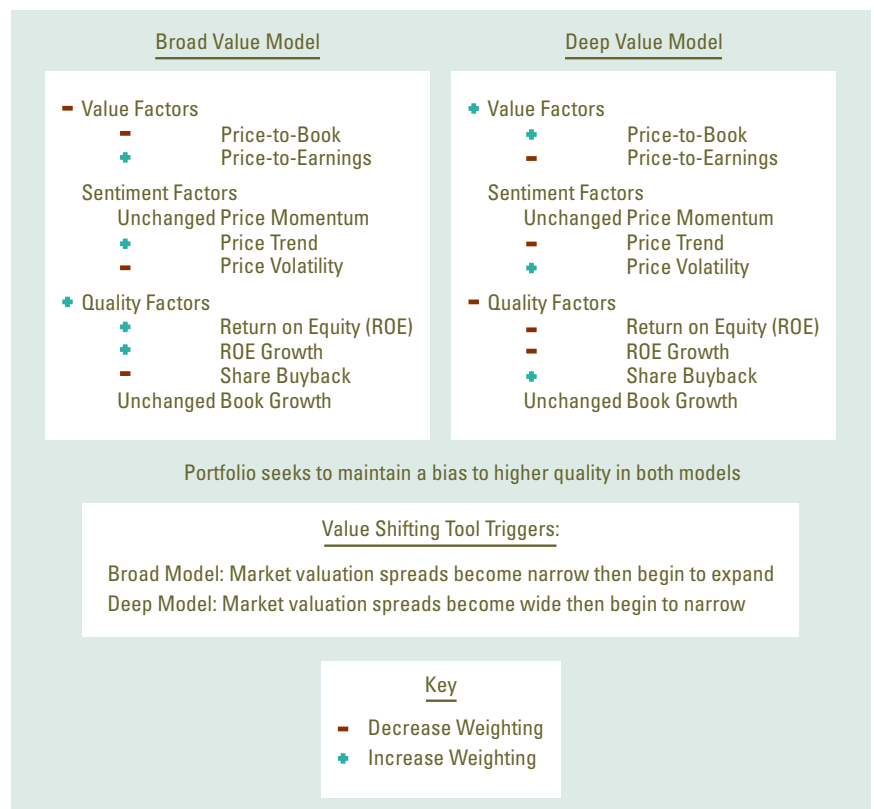
The core of our process in the Dynamic Large Cap Value strategy is a multifactor model that ranks securities in its investment universe by value, quality, and sentiment factors. We ask ourselves three questions:

1. **VALUE:** is the stock attractively priced?
2. **QUALITY:** does the company efficiently generate earnings, deploy capital, and use conservative accounting?
3. **SENTIMENT:** does the current price movement show that the stock has recently turned a corner or could this be a value trap?

While all three factor groupings—value, quality, and sentiment—outperform in the long run, the factor groupings and the 10 underlying factors themselves react and behave differently in each market environment. To account for this, we developed two aptly named quantitative models: a broad-value and deep-value model. Each model includes factors from the three categories listed above, but with differing factor weights reflective of each factor’s historical performance in that particular market environment. **Figure 2** provides a complete list of factors for each market environment.

We then analyze the market valuation dispersion environment using our proprietary shifting tool to determine the current phase of value that we believe is likely to outperform, broad or deep value. Given the environment, we position our portfolio using factor weights for the preferred model. The

Figure 2 Dynamic Value Shifting Tool – Models



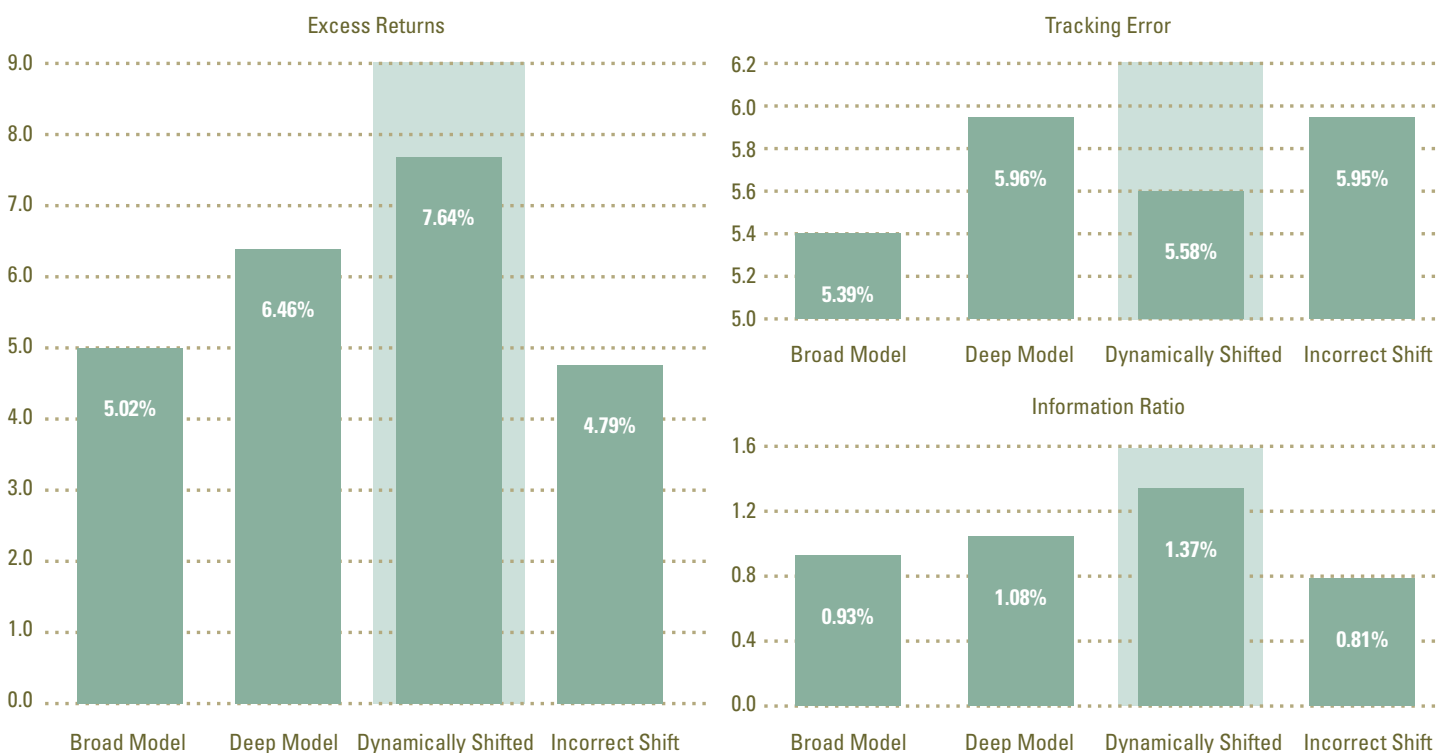
Source: Brandywine Global

shifts from broad to deep value occur every 2-7 years, once our switching tool signals the trend is in place. Our most recent shifts included a move from broad to deep value in May 2009, and from deep to broad value in August 2015. The end result of our process is a portfolio of 75-150 stocks that we believe have attractive value, quality, and sentiment factors relative to the Russell 1000 Value Index.

RESULTS

By recognizing and adapting our process to a changing market environment, we have been able to produce a more efficient risk/return profile with higher alpha, consistent excess returns, and a reduced frequency and magnitude of drawdowns relative to the benchmark. The objective of our Dynamic Large Cap Value strategy is to efficiently—meaning, with a high Information ratio—generate excess returns relative to the Russell 1000 Value Index. Our value models are designed to minimize drawdowns both relative to the benchmark and in absolute terms, while reducing volatility as much as possible relative to the index.

Figure 3 Dynamic Large Cap Value Backtested Returns 1975-2014



Source: Brandywine Global

The dynamic shift between models doesn't drive return—it enhances returns. The shift is the core of our process—value, quality, and sentiment analysis at the stock level—which drives the overall risk/return profile of the portfolio. **Figure 3** demonstrates how this strategy would have performed from 1975-2014 under four scenarios:

The first two scenarios show an outcome if we had managed the strategy using either the broad or deep models continuously and never dynamically shifted. Both outcomes produce compelling results; however, by shifting between the broad and deep value models, we're able to produce higher and more consistent alpha, as well as the most efficient portfolio on a risk-adjusted basis for the given time period. Ultimately, being able to adapt the portfolio to a changing market environment produced the most optimal results. Lastly, we show what could have happened to the portfolio if we shifted incorrectly. In other words, each time our shifting tool signaled the market environment was changing, we made decisions contrary to the direction provided by the tool. For example, the portfolio shifted to the deep-value model when we should have shifted to broad, and vice versa. The risk/return outcome was sub-optimal versus the other scenarios but, importantly, it still offered excess return and attractive risk metrics. We be-

believe the extensive backtesting provides evidence that our process is driven by our core stock selection process and enhanced by the dynamic shift.

CONCLUSION

The Brandywine Global Dynamic Large Cap Value strategy was designed to enhance the traditional active management approach by combining a factor-driven process with analysis of the current market environment. We believe this enhanced approach creates the potential for greater consistency of excess returns while minimizing underperformance versus the Russell 1000 Value index. We believe that our disciplined, repeatable process that adapts to a changing market environment is a unique and effective approach to investing in a portfolio of large-cap value equities.

The views expressed represent the opinions of Brandywine Global Investment Management, LLC ("Brandywine Global") and are not intended as a forecast or guarantee of future results. Brandywine Global's selection process may prove incorrect, which may have a negative impact on performance. There is no guarantee that holding securities with relatively high (or low) price-to-earnings, price-to-book or price-to-cashflow ratios will cause the portfolio to outperform its benchmark or index. Backtested performance results have several inherent limitations. Unlike an actual performance record, backtested results do not represent actual performance (i.e. the results of actual trading) and are generally prepared with the benefit of hindsight. There are frequently sharp differences between backtested performance results and the actual results subsequently achieved by any particular account, product, or strategy. There are numerous other factors related to the markets in general or the implementation of any specific investment strategy, which cannot be fully accounted for in the preparation of backtested results and all of which can adversely affect actual results. There is no guarantee that investment goals will be met. Our research process continuously evolved and seeks to improve backtested and actual client results. Backtest return, volatility and information ration characteristics subject to change and revision as new factors are incorporated. Specific changes from one model revision to another are proprietary in nature and will not be disclosed. The model used in this whitepaper was developed as of March 1, 2010. All securities trading, whether in stocks, options or other investment vehicles, is speculative in nature and involves substantial risk of loss. Characteristics, holdings and sector weightings are subject to change and should not be considered as investment recommendations. The Russell 1000 Index measures the performance of the large-cap segment of the U.S. equity universe. It is a subset of the Russell 3000® Index and includes approximately 1000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 92% of the U.S. market. The Russell 1000 Index is constructed to provide a comprehensive and unbiased barometer for the large-cap segment and is completely reconstituted annually to ensure new and growing equities are reflected. Indices are unmanaged and not available for direct investment. This information should not be considered a solicitation or an offer to provide any Brandywine Global service in any jurisdiction where it would be unlawful to do so under the laws of that jurisdiction. **Backtested performance is no guarantee of future results.**

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