Perspectives on the value-growth cycle

July 2019

Research Signals

Value investing has been an integral component of many famous investors, including prodigies of the so-called father of value investing, Benjamin Graham. These include Warren Buffett and Charlie Munger, who built the Berkshire Hathaway empire on the concepts of long-term value, John Templeton, who extended value strategies to international markets, and Joel Greenblatt, who developed Magic Formula investing on the principles of value. Eugene Fama and Kenneth French also found that value stocks outperform growth stocks, adding book-to-market values (high minus low or HML) to their original three-factor model. However, value investing has its flaws, including so-called value traps or stocks which trade at low valuations for extended periods of time, and exposure to extended periods of underperformance, most notably during the tech bubble in the late 1990s. Value stocks are currently trading in another period of long-term underperformance for which we add some perspectives.

- Institutional investors show some signs of convergence with retail investors based on recent flows into value and growth stocks
- Stocks favored by our Historical Growth Model are trading at rich earnings multiples relative to those identified by our Deep Value Model
- Our Deep Value Model, designed to identify stocks trading at a steep discount to intrinsic value with a quality overlay, successfully navigated the recent growth cycle compared with a pure value strategy and Greenblatt's Magic Formula

To begin with, we take a look at where markets stand in the current value versus growth cycle (Figure 1). For our analysis, we use the IHS Markit ETF Analytics database to compare cumulative returns of the iShares Russell 1000 Value ETF (IWD) and the iShares Russell 1000 Growth ETF (IWF), along with the market return proxied by the iShares Russell 1000 ETF (IWB). We see that value tracked the market higher in the years leading up to the financial crisis, before giving way to growth subsequent to 2007.

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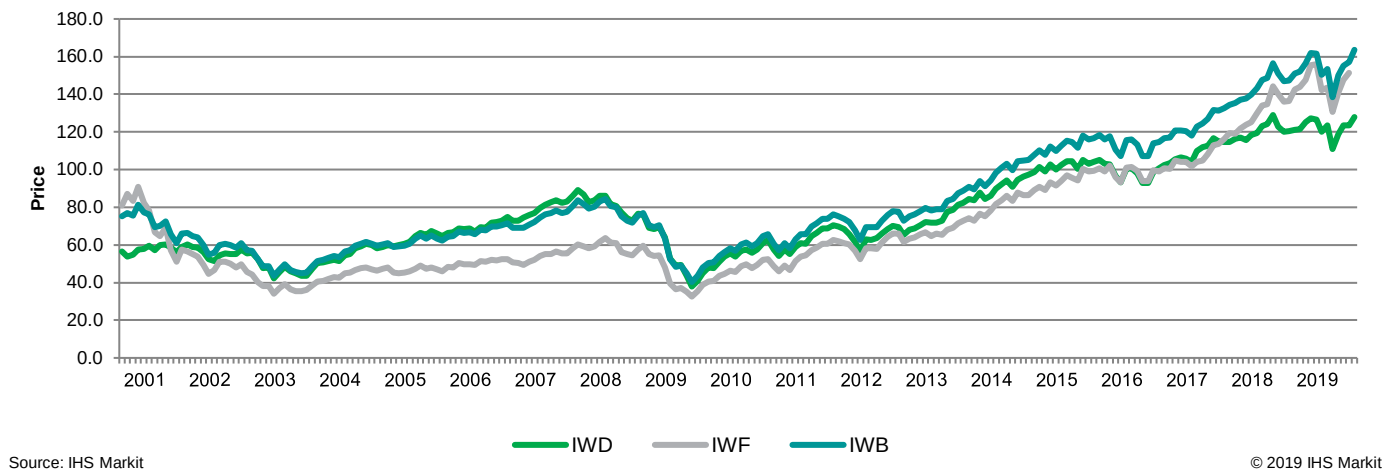
Figure 1

ETF NAV



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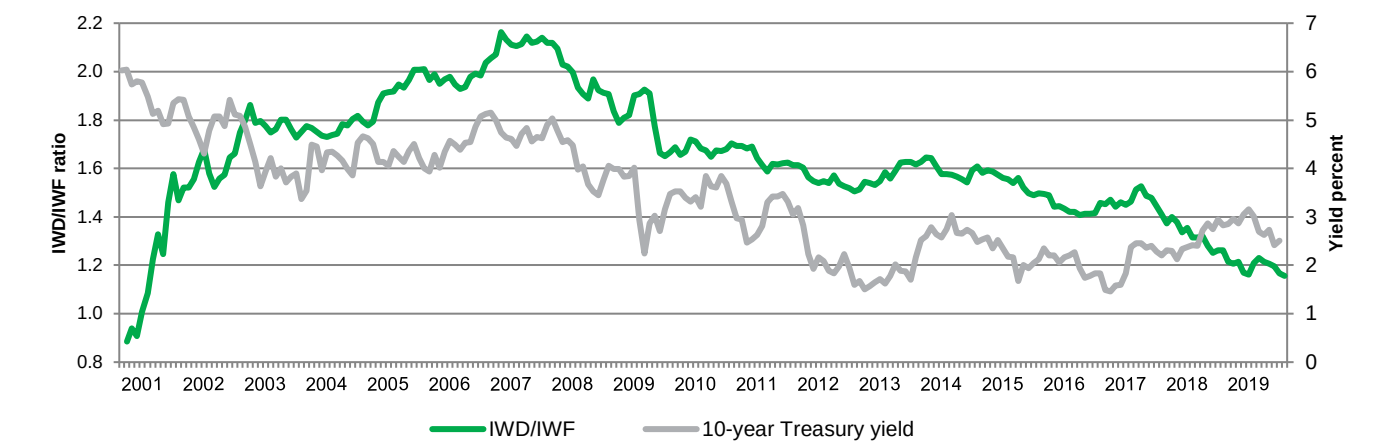
From another vantage point (Figure 2), we present the ratio of cumulative returns of IWD relative to IWF overlaid with the trend in 10-year Treasury yields. This view more explicitly reveals the peaking of the value cycle in late 2006, with a rising ratio through 2007. The ensuing extended period of growth outperformance is identified by the decreasing trend in the ratio, coincident with declining interest rates, which is expected given the benefits of low-rate environments for growth stocks in terms of discounting future cash flows.

Figure 2

Value versus growth relative performance and interest rates



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This leads us to evaluate the impact of interest rates on performance of value and growth investing styles (Table 1). Using our Deep Value and Historical Growth Models, we compute monthly model performance by first dividing stocks into deciles with the highest 10% ranks comprising decile 1 (D1) and the lowest 10% ranks assigned to decile 10 (D10). The long-short spread is calculated based on an investment strategy going long the highest ranked names (D1) and shorting the lowest (D10), capturing the D1-D10 spread which is a common gauge of overall model efficacy. We then compute the correlation between monthly spread performance and prior month percentage changes in 10-year Treasury Yields. (Stocks included in this and the remainder of our analyses are those in our US Large Cap universe which consists of approximately 1000 names.)

In the table below, we observe a neutral correlation (-0.007) between the Deep Value Model and interest rate changes in the earlier value cycle period, with somewhat of an increase (0.040) during the latter period when value was out of favor. However, the Historical Growth Model exhibited a much higher sensitivity (-0.108) to declining interest rates when value stocks were favored, before returning to a more neutral correlation (0.003) when growth was favored.

Table 1

Correlations between monthly model performance and interest rate percentage changes

Factor	Jan 2001 – Dec 2006	Jan 2007 – Apr 2019
Deep Value Model	-0.007	0.040
Historical Growth Model	-0.108	0.003

Source: IHS Markit

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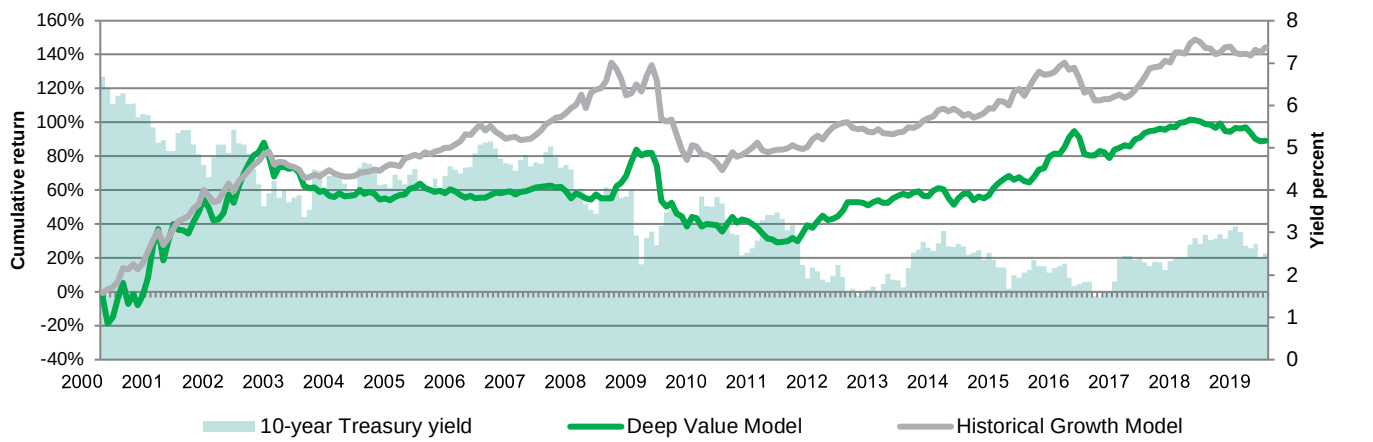
Taking a longer view (Figure 3), we observe the performance of the Deep Value and Historical Growth models versus the 10-year treasury yield over the past 19+ years, a period of consistent interest rate declines. While difficult to draw statistical conclusions from this data, we note our observations over longer periods. In the first period of interest rate decline, from 2000 to 2003, both models performed quite strong, though Historical Growth produced a much less volatile cumulative long short return. During the period from 2004 to 2008 leading up to the financial crisis (stable interest rates), Historical Growth consistently outperformed Deep Value, while during the financial crisis period, though both strategies suffered, Deep Value was able to close the gap with Historical Growth. During the ensuing period of quantitative easing and flattening interest rates that has shaped most of the past decade, we observe a fairly stable gap between the two models' cumulative performance, indicating the models are performing roughly the same. Only during the most recent three years have we observed a divergence where historical growth is outperforming, and while interest rates are quite low, this period first starts with increasing interest rates, only to again decrease starting in 2019.

Figure 3

Model performance and interest rates



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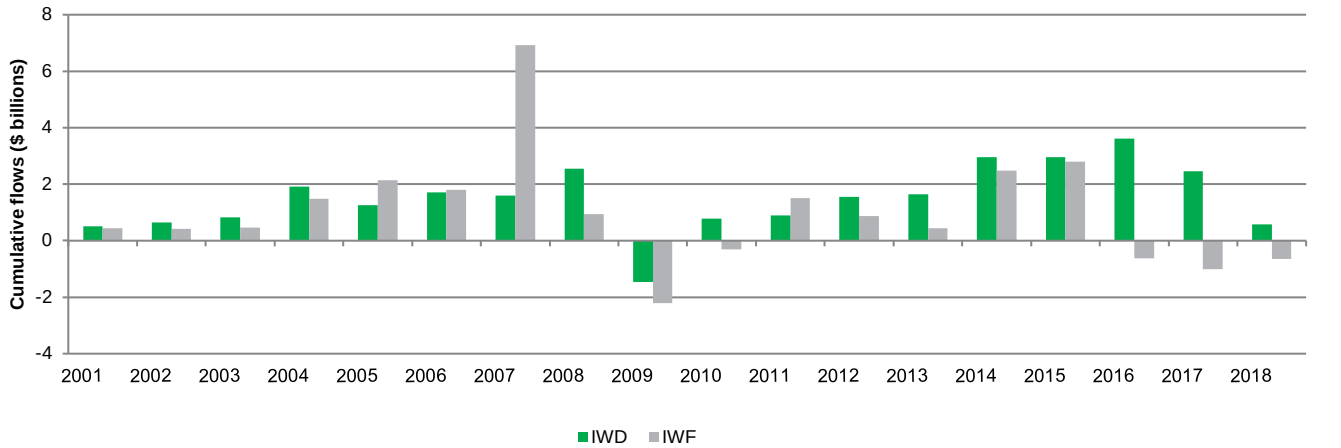
Glimpses of retail and institutional sentiment convergence

Turning to overall investor sentiment toward value and growth stocks (Figure 4), we evaluate retail investor trends in the ETF market. Here we compare annual flows into IWD and IWF. In this case, we find that the annual flows into IWD outpaced IWF through 2004, before growth was more favored by retail investors for the following three years. We also highlight the extreme spike in 2007 as the financial crisis set in, which proved to be an especially prescient

move by the retail community at the start of the growth cycle. However, for the remainder of the cycle, ETF inflows have tended to favor value.

Figure 4

ETF flows



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Next, to take the pulse of institutional investors (Figure 5), we use our Lending Supply factor from the Short Sentiment suite sourced from the IHS Markit Securities Finance dataset (factor ranks are available beginning in July 2006). Lending Supply measures the total quantity of stock made available by custodians in their lending programs relative to the total shares outstanding. It can be used as a higher frequency proxy of institutional ownership as much of the lendable supply comes from the custodians of pensions and mutual funds.

To assess the trend in borrow supply, we examine the correlations in monthly cross-sectional factor ranks with two representative value and growth factors - Edwards-Bell-Ohlson Value-to-Price[1], a residual income model derived from the discounted dividend model, and Reinvestment Rate[2], a standard growth measure based on fundamentals. A higher correlation suggests a higher propensity for institutional investors to hold stocks of the respective underlying style.

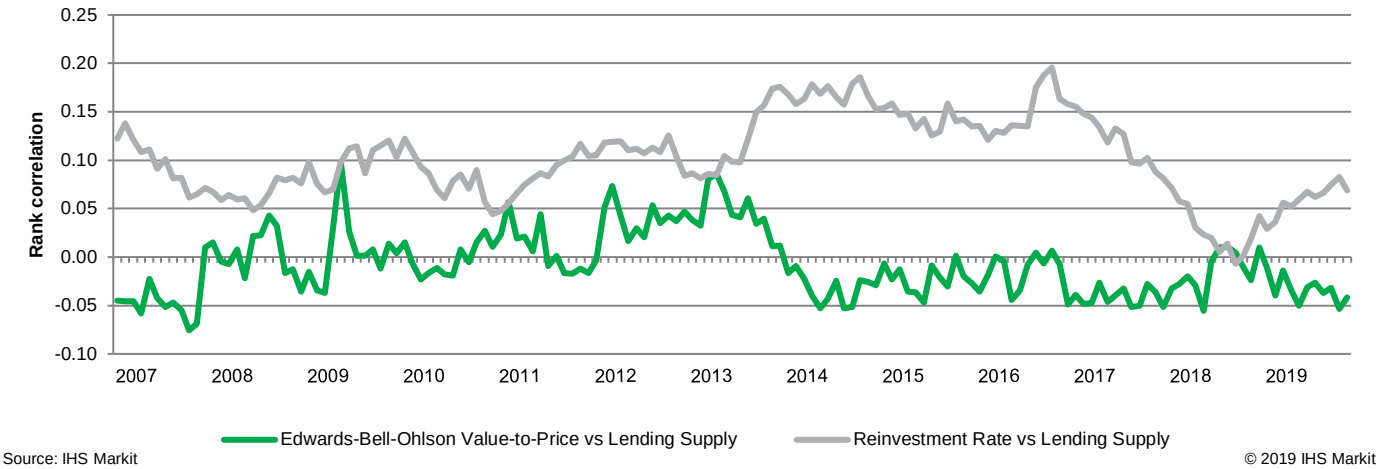
The correlation results in the figure below demonstrate a slight uptrend with the value signal in general through late 2012, before reverting to a lower trading channel through 2019, the opposite trend seen from retail investors but more closely aligned with the recent growth cycle. Likewise, institutional investors were more heavily weighted toward the growth signal, particularly from early 2014 through late 2016; however, a strong reversal occurred which bottomed in early 2018. While the correlation between Lending Supply and Reinvestment Rate rebounded off this series low, it is still hovering near the lower end of correlations since 2007, a sign of decreased holdings in stocks with high growth characteristics. Thus, from the value angle, retail investors' more enthusiastic sentiment in recent years has not shown up in the institutional results, but some signs of an overextended growth trade may be developing if the growth correlations remain in the lowered trading range.

[1] It is defined as a stock's valuation based on the Edwards-Bell-Ohlson (EBO) model deflated by price. EBO is a modified dividend discount model that measures a firm's intrinsic value by comparing generated earnings to the cost of capital.

[2] It is defined as the trailing 12-month earnings per share before extra items less the trailing 12-month dividends per share by ex-date divided the average book equity per share in the same period

Figure 5

Correlations with Lending Supply



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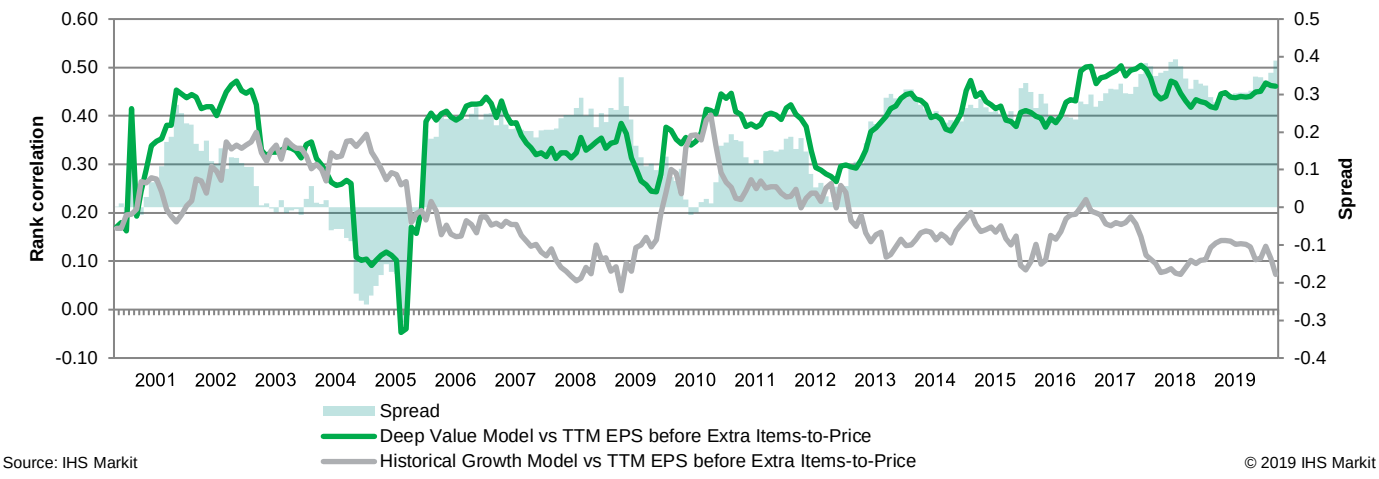
Under(value)d stocks

Another interesting development is unveiled in comparing the discount that value stocks are trading at relative to growth stocks (Figure 6). To examine this, we turn to TTM EPS before Extra Items-to-Price, a standard gauge of value, and evaluate the monthly cross-sectional factor ranks with that of stocks identified as value and growth prospects, again according to our Deep Value and Historical Growth Models, respectively. In the figure below, the lines represent the correlation times series and the shaded area depicts their spread, in other words, the correlation with value less that with growth, with a positive spread implying that value stocks are trading at a steeper discount than growth stocks.

As expected, value stocks for the most part trade at a discount relative to growth stocks, as confirmed by the shaded area mostly residing in positive territory. A notable exception is in 2004 with the spread troughing at the end of that year, perhaps portending the eminent growth cycle. We also draw attention to recent elevated value-growth correlation spreads, with the latest observation sitting at the top of the range, just shy of the September 2017 peak.

Figure 6

Correlations with TTM EPS before Extra Items-to-Price



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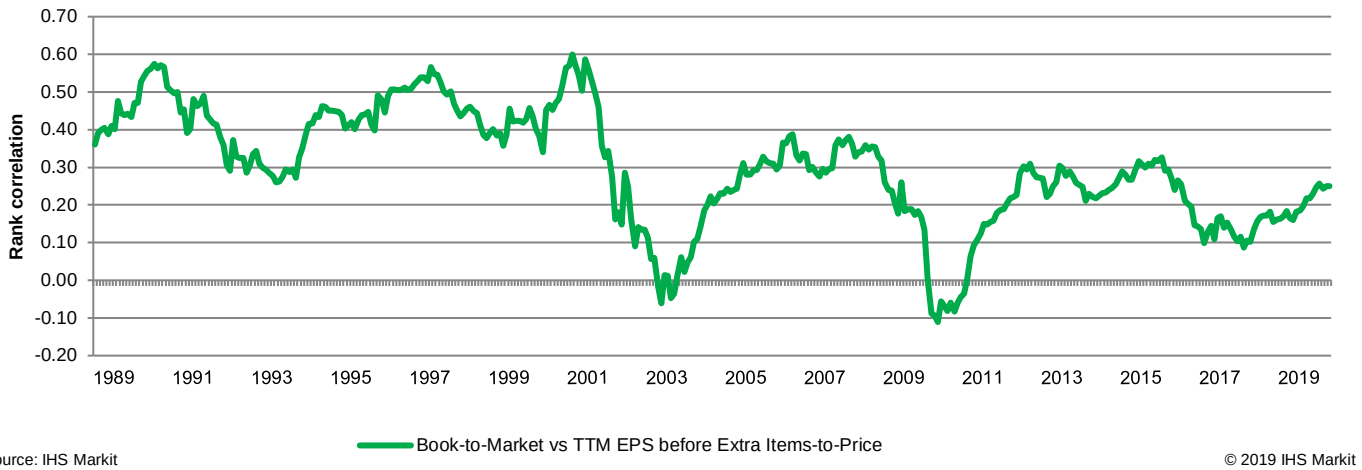
We also remark on our choice of TTM EPS before Extra Items-to-Price to represent value as opposed to Book-to-Market, the familiar factor in the Fama-French model. This decision was based on concerns revealed in the factors' rank correlations over time. In Figure 7 below, we find that the relatively strong relationship between the two factors has broken down since around the time of the tech bubble, where we find an average rank correlation of 0.44 from 1988 through 2000 compared with just 0.20 subsequently. The impact from the rise in importance of intangibles and the higher prevalence of share buybacks on the performance of Book-to-Market are topics for future research.

Figure 7

Correlations between earnings and book value measures



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Identifying undervalued quality firms in a growth cycle

Lastly, we dig a little deeper into the performance of the Research Signals Deep Value Model during the recent long-term growth cycle (Figure 8). Our model is designed to identify stocks trading at a steep discount to intrinsic value with a quality overlay and is constructed using the following five factors:

- TTM Free Cash Flow-to-Enterprise Value
- Indicated Dividend Yield
- Percent Change in Shares Outstanding
- Current ROE
- YOY Chg in Asset Turnover

For our analysis, we compare model decile spread performance with that of a pure value strategy, TTM EPS before Extra Items-to-Price, in addition to Greenblatt's Magic Formula.

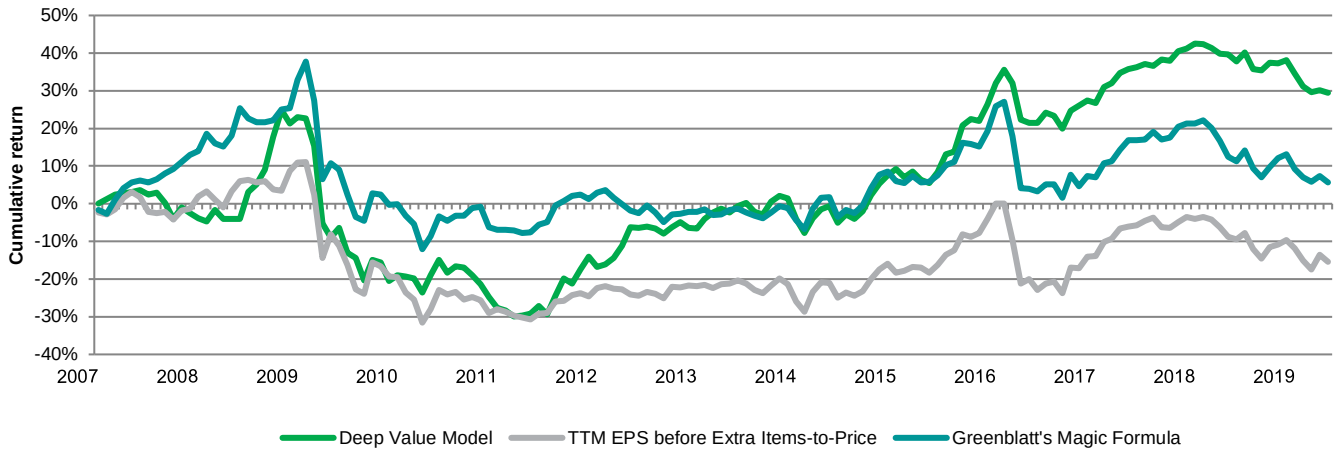
Since the beginning of the current growth cycle at the start of 2007, the model has recorded an average monthly decile spread of 0.20%, or 2.37% annualized, with positive performance in 54% of months. The cumulative spread over the period reached 29.4%. Performance exceeded the Magic Formula which averaged 0.04%, or 0.46% annualized, in addition to TTM EPS before Extra Items-to-Price whose cumulative spread drifted mostly in negative territory (average: -0.10%; annualized: -1.25%).

TTM Free Cash Flow-to-Enterprise Value (average: 0.51%; hit rate: 64%) and Percent Change in Shares Outstanding (average: 0.29%; hit rate: 62%) were the strongest performing factors over the period. Top decile stocks which are also

currently (as of 18 June) ranked in the top decile of both indicators include Ameriprise Financial (AMP), Biogen (BIIB), Booking Holdings (BKNG), Lam Research (LRCX), Synchrony Financial (SYF), Teradyne (TER) and Waters Corp (WAT).

Figure 8

Cumulative monthly performance



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