

Midyear factor review amid the COVID-19 pandemic

July 2020

Research Signals

While coronavirus-induced volatility plagued equity markets in March, we closely monitored daily factor and style model performance with weekly performance **reviews** of daily style exposures. Volatility has since settled down, though still in excess of levels at the start of the year. Given these unusual times, with the COVID-19 pandemic wreaking havoc from a health and financial perspective, we extend our review from both a macro and factor view during the first six months of this year.

- Large caps were favored over small caps through June, while the prolonged growth cycle over value strategies benefited further from a sharp bounce since March
- Price Momentum and Historical Growth factors, such as 24-Month Active Return with 1-Month Lag and 1-yr Change in Sales, respectively, were consistent outperformers, while Deep Value measures suffered, particularly those based on analyst estimates, with Leading 12 Month EBITDA/EV the weakest of the group
- The Historical Growth Model topped all other style models, though the Price Momentum model has been making a comeback since March, while the Deep Value Model sat at the opposite extreme

Macro overview

This year will go down in infamy as the year of the COVID-19 pandemic. The US equity market first reacted to fears surrounding the coronavirus' impact on the global economy in the final week of February, with a bout of volatility not seen since September 2011, marking the worst weekly loss at that time since the financial crisis. Performance of the iShares Russell 1000 ETF (IWB) and iShares Russell 2000 ETF (IWM) since the start of the year, sourced from the IHS Markit ETF Analytics database, reflect these developments and the ensuing volatility as the indexes bottomed in March, with small caps remaining deeper in negative territory on a cumulative basis for the year (Figure 1).

From a fund flow perspective, we compare cumulative flows into US equity and fixed income ETFs since the start of year (Figure 2) to gauge retail investor trends in the ETF market. Interestingly, fixed income ETFs saw outflows during the market tumult in March, while equities continued to see inflows. However, equity inflows subsequently tapered off while fixed income flows catapulted past equities with a cumulative inflow of nearly \$100 Bn by the end of June.

Contacts

Research Signals · MK-ResearchSignals@ihsmarkit.com

Figure 1

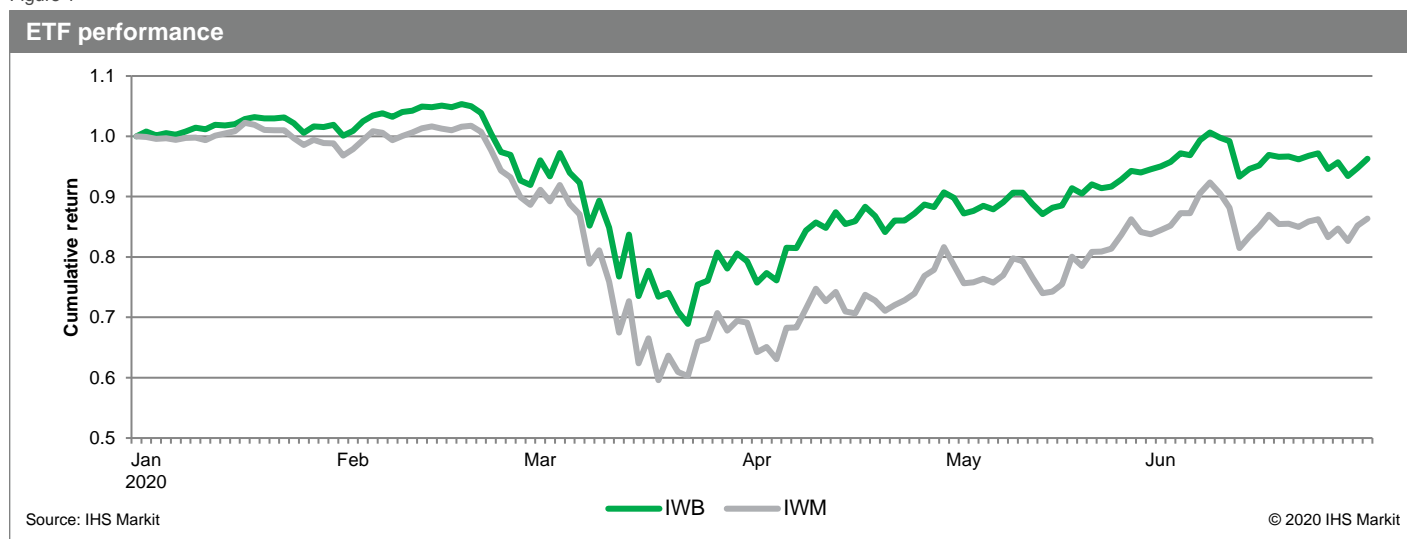
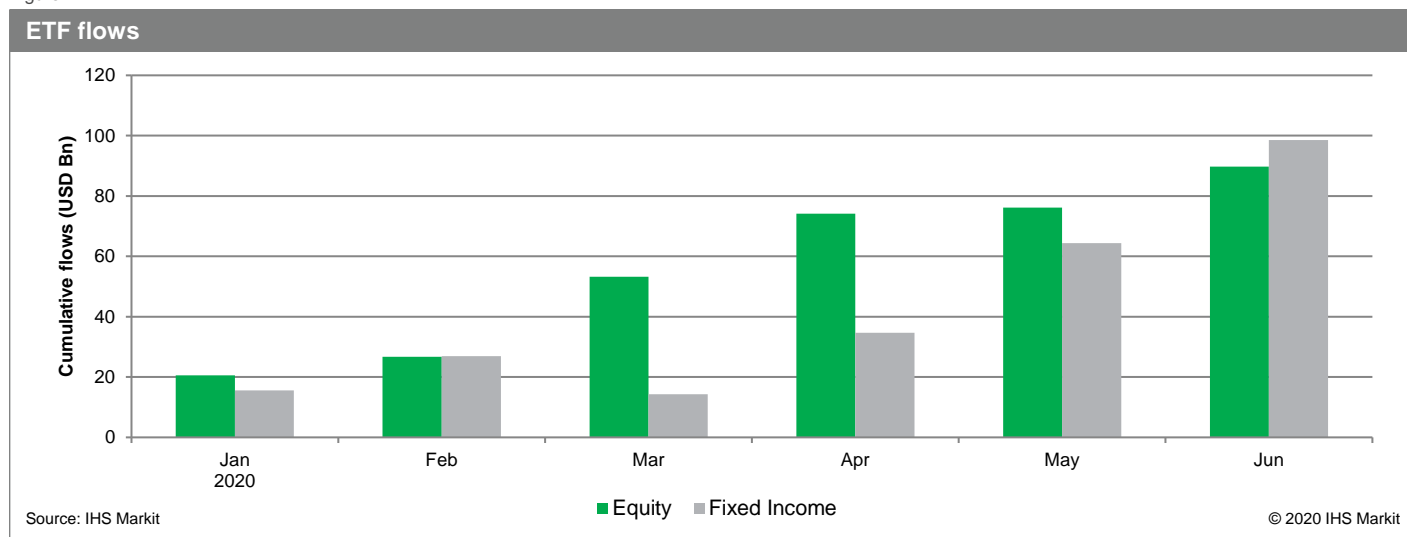
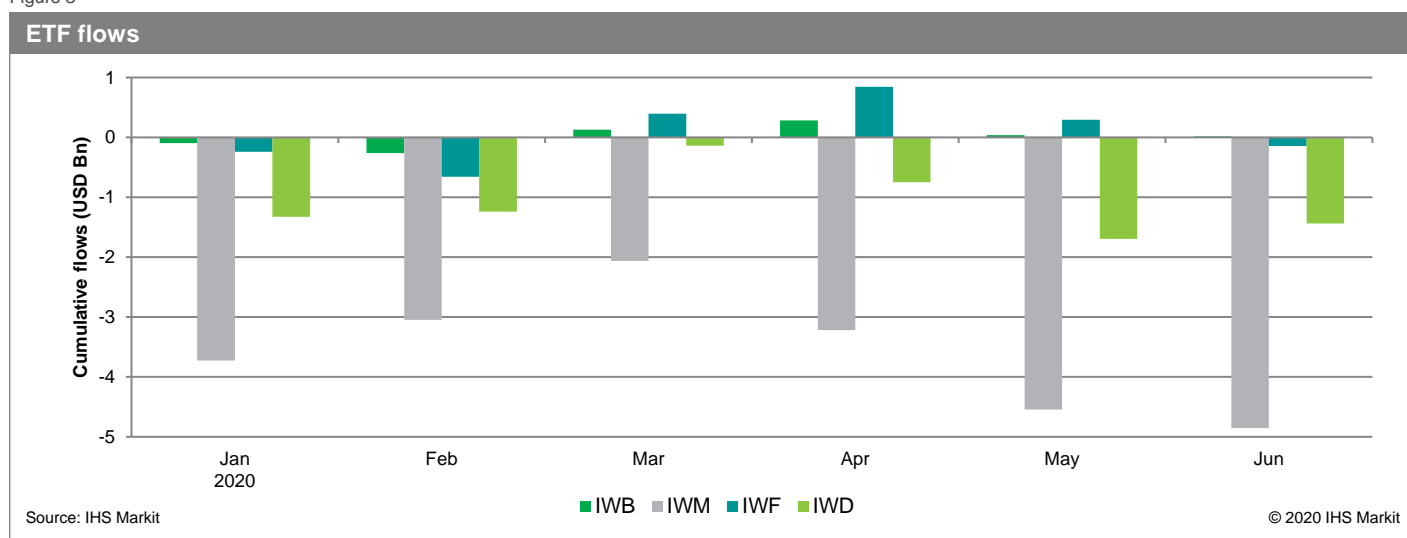


Figure 2



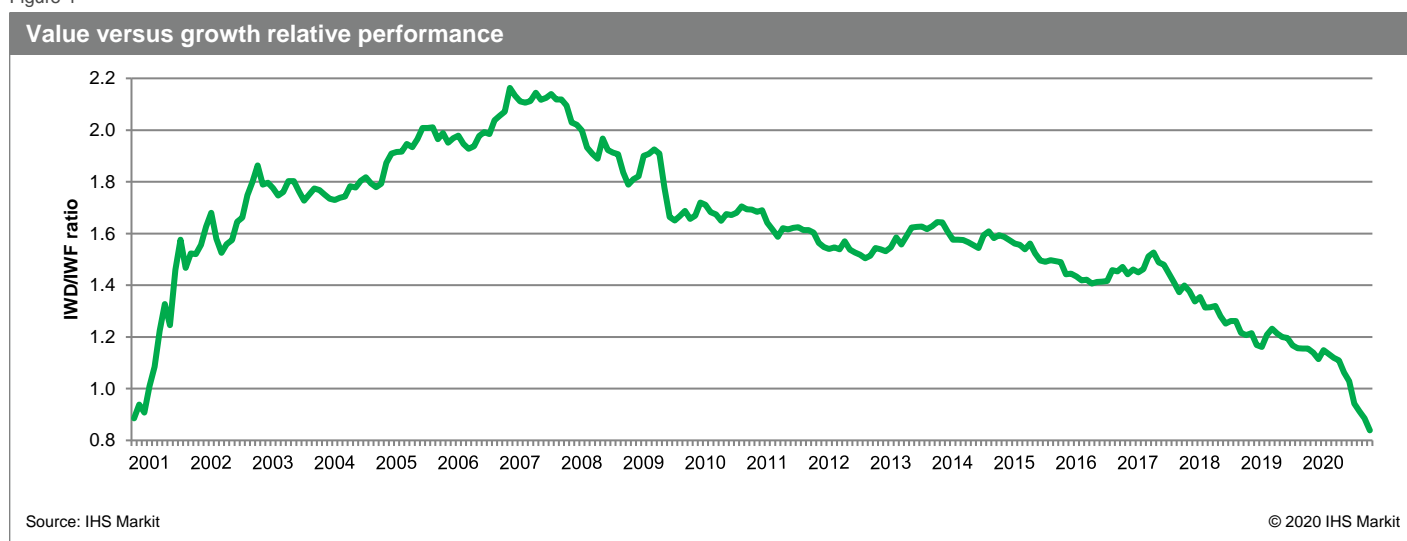
Drilling down further into the equity asset class, we report on cumulative flows into IWB and IWM, as well as value and growth funds, as proxied by the iShares Russell 1000 Value ETF (IWD) and the iShares Russell 1000 Growth ETF (IWF), respectively (Figure 3). For large caps, we find a fairly steady level of flows in and out of IWB, including incremental inflows particularly in March and April, with a similar trend for value stocks. Small cap and growth stocks also saw inflows in the volatile month of March; however, the overall negative pattern of outflows to both strategies picked back up in the following months.

Figure 3



Next, we further evaluate the value-growth cycle, which we **reported** on in July 2019. At that time, we noted that value tracked the market higher in the years leading up to the financial crisis, before giving way to growth subsequent to 2007. Indeed, the ratio of cumulative returns of IWD relative to IWF (Figure 4) reveals the ensuing extended period of growth outperformance, identified by the decreasing trend in the ratio, which experienced another abrupt leg down this year, particularly driven by March's drawdown.

Figure 4



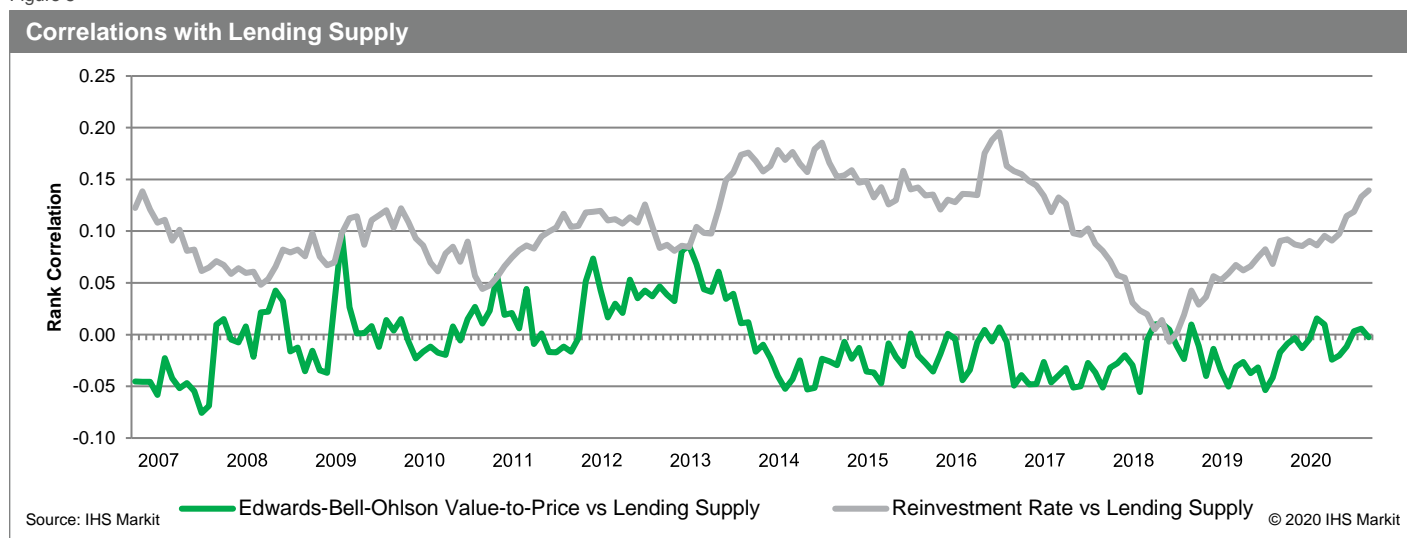
From another vantage point, we estimate institutional investor sentiment towards value and growth stocks (Figure 5) by using our Lending Supply factor from the Short Sentiment suite sourced from the IHS Markit Securities Finance dataset. Lending Supply measures the total quantity of stock made available by custodians in their lending programs relative to the total shares outstanding. It can thus be used as a 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 Price¹, a residual income model derived from the discounted dividend model, and Reinvestment Rate², 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 universe is our US Large Cap universe, which consists of approximately 1,000 of the largest cap names.

As previously reported, 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. On the other hand, institutional investors were more heavily weighted toward the growth signal particularly from early 2014 through late 2016, before a strong reversal ensued, bottoming in early 2018. Since that time, the correlation has steadily increased, surpassing the historical average over our available data history, with especially strong conviction since March.

Figure 5



Midyear factor and style model returns

We turn now to a review of factor and style model performance across our US Large Cap universe through the first six months of the year, spanning the time period to date of the COVID-19 pandemic. Performance is based on average monthly decile return spreads, where the spread is computed as the difference in the equal-weighted return at the top (decile 1) and bottom (decile 10) tails.

Beginning with the top factor performance (Table 1), we find a strong showing from Price Momentum and Historical Growth measures. This includes factors such as 24-Month Active Return with 1-Month Lag (4.68%) and 1-yr Change in Sales (4.28%), with positive spreads in four and five months, respectively, for the year (Figure 6).

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 by the average book equity per share in the same period.

Table 1

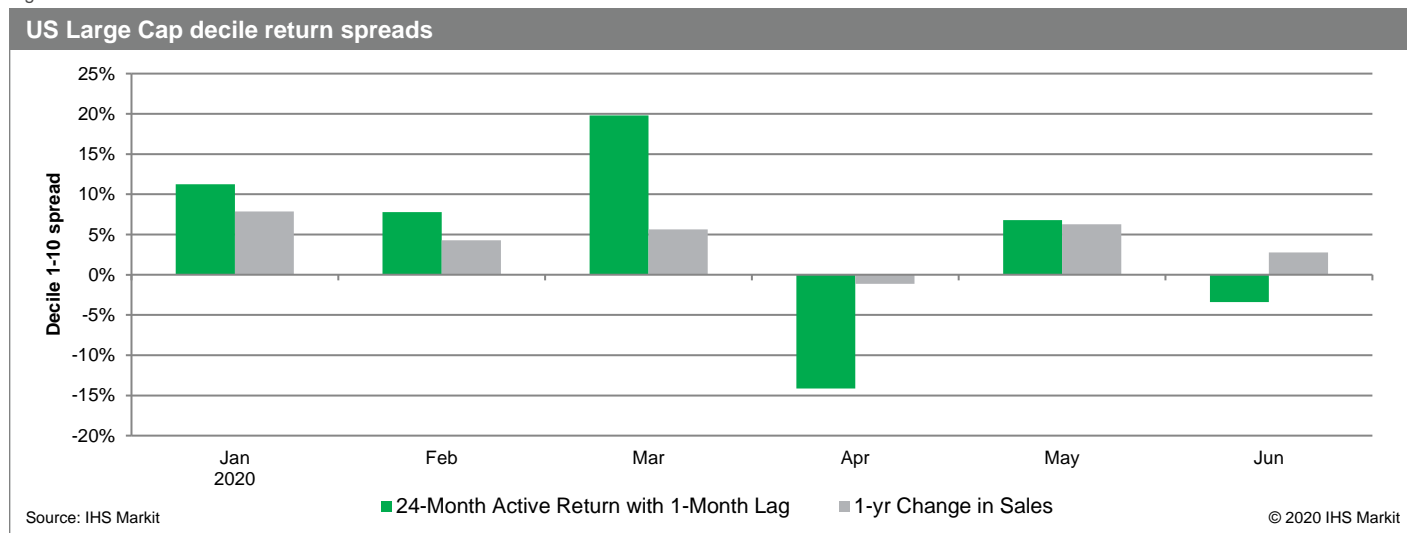
US Large Cap top monthly average decile return spread factor performance, Jan 2020 - Jun 2020

Factor	Decile spread (%)	Factor group
Growth Duration	5.94	Liquidity, Risk & Size
Attention Span Ratio	5.48	Management Quality
Debt to Market Cap	5.42	Liquidity, Risk & Size
30-75 Week Stock Price Ratio	4.77	Price Momentum
24-Month Active Return with 1-Month Lag	4.68	Price Momentum
Cash Flow Leverage	4.51	Liquidity, Risk & Size
Rational Decay Alpha	4.36	Price Momentum
1-yr Change in Sales	4.28	Historical Growth
Net Debt to EBITDA	4.25	Management Quality
18-Month Active Return with 1-Month Lag	4.18	Price Momentum
Advertising Intensity	4.04	Management Quality
Yearly TTM Total Sales Growth Rate	4.02	Historical Growth
3-yr Compound Annual Sales Growth	3.98	Historical Growth
Slope of 66 Week Price Trend Line	3.73	Price Momentum
1-Year Price Momentum Indicator	3.69	Price Momentum

Source: IHS Markit

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Figure 6



Conversely, Deep Value measures captured a large percentage of the weakest performing factors on average for the year (Table 2), especially those based on analyst estimates, suggesting a hesitancy to pay a premium for analyst outlook during these uncertain times. Leading 12 Month EBITDA/EV (-7.29%) led the way down, with negative spreads in all but one month (Figure 7).

Table 2

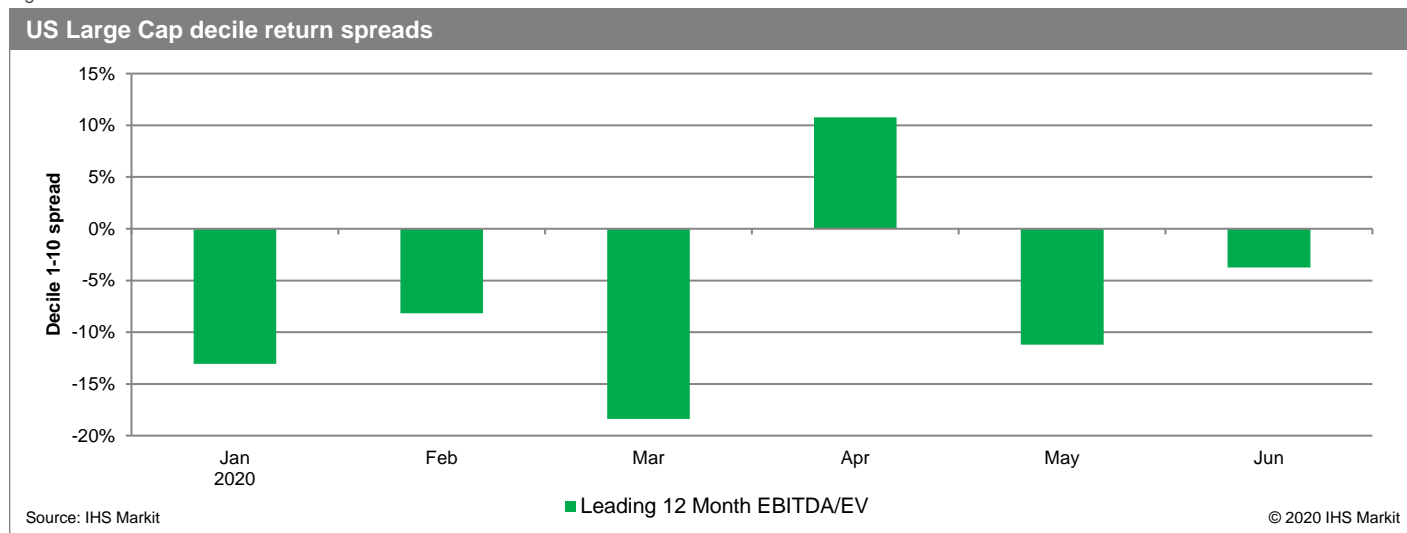
US Large Cap bottom monthly average decile return spread factor performance, Jan 2020 - Jun 2020

Factor	Decile spread (%)	Factor group
Tobin q	-8.30	Liquidity, Risk & Size
Leading 12 Month EBITDA/ EV	-7.29	Deep Value
TTM Operating Income to Enterprise Value	-7.22	Deep Value
Price-to-Total Assets	-7.21	Deep Value
Time Weighted EBITDA/ EV	-7.15	Deep Value
Time Weighted Cash Yield	-6.66	Deep Value
Yield Curve Slope Sensitivity	-6.29	Macro
TTM Cash Flow-to-Price	-6.08	Deep Value
Asset Composition	-6.04	Liquidity, Risk & Size
TTM EBITDA-to-Enterprise Value	-6.02	Deep Value
3-yr MAD of TTM Sales	-5.99	Liquidity, Risk & Size
Time Weighted Earnings Yield	-5.99	Deep Value
Working Capital-to-Trailing 12-Month Sales	-5.93	Management Quality
Natural Logarithm of Total Assets	-5.87	Liquidity, Risk & Size
Leading 12-Month Median Earnings Yield	-5.73	Deep Value

Source: IHS Markit

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Figure 7



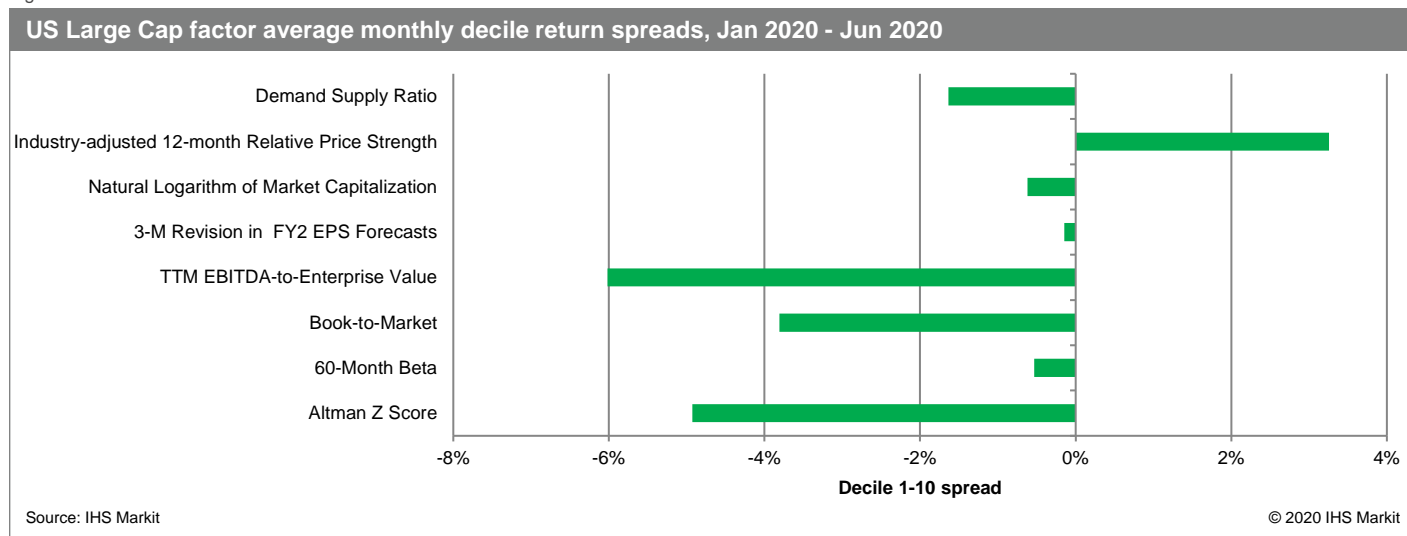
To add more color, we also include performance across a representative group of our 400+ US factor library in addition to our style models - Deep Value, Earnings Momentum, Price Momentum, Historical Growth, Relative Value and Value Momentum Analyst II. We report average monthly decile return spreads from January through June 2020.

First, from a factor perspective (Figure 8), we focus our results on several factors of interest covering value, momentum, size, risk and short sentiment signals, namely Book-to-Market, TTM EBITDA-to-Enterprise Value, 3-M Revision in FY2 EPS Forecasts, Industry-adjusted 12-Month Relative Price Strength, Natural Logarithm of Market Capitalization, 60-Month Beta, Altman Z-score and Demand Supply Ratio.

Industry-adjusted 12-month Relative Price Strength (3.26%) is the only factor to post a positive average monthly spread this year through June. Not surprisingly, the weakest performance was associated with a value factor, namely

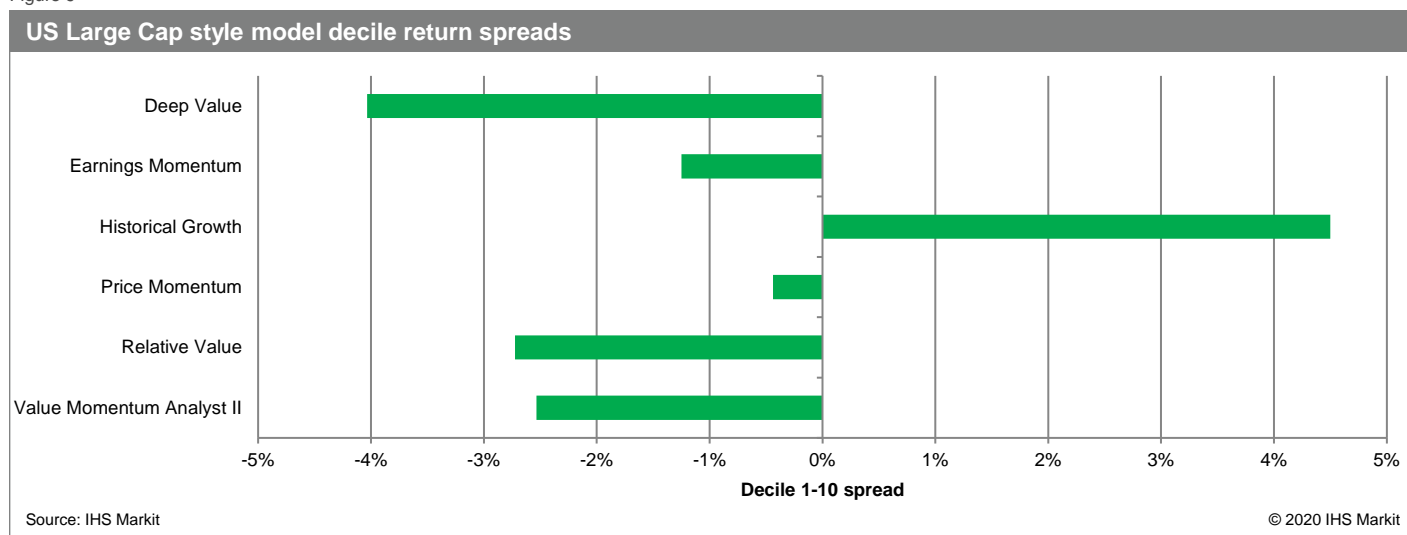
TTM EBITDA-to-Enterprise Value (-6.02%). Altman Z Score (-4.93%) has also suffered through June as investors have tended to disfavor high bankruptcy risk names.

Figure 8



Historical Growth (4.50%) is our only style model with a positive average spread this year (Figure 9), recording one of its highest six-month average spreads, only to be outmatched by that of March of this year. At the opposite extreme, Deep Value (-4.04%), the weakest performer, registered its largest six-month average drawdown since September 2009, following the financial crisis market bottom. Lastly, while negative overall, Price Momentum experienced the largest bounce off the volatile markets in March, as the only model with a positive monthly average spread after that time period.

Figure 9



In conclusion, the COVID-19 pandemic has impacted our factor and style model performance in the first half of 2020. That said, the trend of growth and momentum stocks outperforming value stocks has persisted, with value only showing signs of life in April.

IHS Markit Customer Support:

Support@ihsmarkit.com

Americas: +1 877 762 7548

Europe, Middle East, and Africa: 00800 6275 4800

Asia and the Pacific Rim: +65 6922 4210

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