

M, not V, shaped factor recovery

May 2020

Research Signals

Many letters have been thrown around to describe the anticipated shape of the economic recovery following the COVID-19-induced decline, such as 'V', the most optimistic, 'U', 'W' and 'L', the most pessimistic. Signs that the economic downturn is starting to ease, as seen for example in the slightly softer contraction in J.P.Morgan Global Manufacturing PMI, focus on a second derivative perspective. While the risks and uncertainty remain high on the ultimate shape of the recovery, equity investors took a more positive stance that the worst may be behind us, assigning an 'M' for momentum to their desired trades last month, setting aside a short-lived V(alue)-shaped recovery the prior month, as lockdowns were loosened across many regions (Table 1).

- US: High quality firms, such as those gauged by Fixed Assets Turnover Ratio, joined high momentum names as the top performers among large caps, while small cap investors turned to analyst outlook for guidance from measures such as 3-M Revision in FY2 EPS Forecasts
- Developed Europe: Rational Decay Alpha and Book-to-Market depicted the prevailing theme of momentum factor outperformance at the expense of value, respectively
- Developed Pacific: In markets outside Japan, high risk names continued to outperform throughout the duration of the pandemic, as measured by 24-Month Value at Risk
- Emerging markets: Small caps, captured by Natural Logarithm of Market Capitalization, outperformed alongside high quality and momentum names

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Table 1

Global factor quantile return spread performance snapshot, May 2020

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		-8.21	-7.00	-7.99	-10.16	-10.96	-0.63
Forward 12-M EPS-to-Enterprise Value	Deep Value	-2.24	-12.23	-3.09	-7.45	-1.11	-0.18
TTM EBITDA-to-Enterprise Value		-13.01	-12.15	-3.18	-6.01	-3.39	-0.02
TTM Free Cash Flow-to-Enterprise Value		-1.69	-10.97	1.03	-1.65	-0.14	1.10
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	-2.24	-2.61	-6.34	-7.19	-1.79	-1.48
Industry Relative TTM Dividend Yield		-3.69	-2.98	-1.69	-3.46	-1.28	1.66
Fixed Assets Turnover Ratio	Management Quality	7.04	0.19	3.64	2.85	5.12	-1.17
Inventory Turnover Ratio		1.07	-3.20	3.52	9.90	2.32	0.59
Net Operating Asset Turnover		5.19	-3.07	3.78	1.40	1.09	2.29
Change in Accruals to Assets	Earnings Quality	-2.95	-0.83	-2.03	-3.88	1.40	0.93
Change in TTM COGS vs. Inventory Level		-1.59	-2.11	0.65	-0.75	-6.43	1.62
Change in TTM Sales vs. Accounts Receivable		2.00	0.69	-2.29	-0.37	0.14	0.93
Working Capital Accruals		2.73	1.21	-3.31	-1.00	-0.13	-1.41
1-yr Growth in TTM Free Cash Flow	Historical Growth	0.74	-1.99	2.01	-0.52	0.57	0.14
Reinvestment Rate		-0.80	-2.97	2.91	1.82	2.53	-1.06
Average Monthly Trading Volume-to-Market Cap	Liquidity, Risk & Size	0.10	6.39	-2.95	0.57	-1.21	3.38
60-Month Beta		-1.42	-1.56	-1.94	-2.54	-4.95	-1.56
Asset Quality Index		0.18	2.60	2.11	0.73	2.79	-0.22
Operating Leverage		1.48	2.99	-1.19	-0.46	1.01	-0.90
Natural Logarithm of Market Capitalization		0.57	-1.51	-2.36	2.89	-0.42	2.93
2-Year Ahead EPS Growth	Earnings Momentum	0.58	0.23	0.10	-2.33	1.43	-0.23
3-M Revision in FY2 EPS Forecasts		5.22	9.82	1.73	6.24	-1.08	2.44
Real Earnings Surprise		0.37	2.68	0.19	-0.35	-1.28	-1.57
24-Month Value at Risk	Price Momentum	2.74	-4.91	0.12	-5.74	-7.89	0.55
5-day Industry Relative Return		1.56	1.54	1.31	-1.32	-2.24	2.08
Industry-adjusted 12-month Relative Price Strength		5.20	3.56	1.57	7.44	-1.17	2.71
Rational Decay Alpha		3.34	0.08	5.03	8.13	3.74	1.37
Demand Supply Ratio	Short Sentiment	-3.59	-4.38	-2.37	-0.74	-2.57	-1.23
Implied Loan Rate		-3.55	0.29	0.66	1.33	-5.27	-4.41

Source: IHS Markit

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United States

US Large Cap

The ongoing COVID-19 impact on the US manufacturing sector weighed further on output in May. While the PMI signaled a softer contraction in May (39.8) compared with April (36.1), the latest figure was the second-steepest decline in operating conditions since April 2009, on lower demand from both domestic and foreign customers. However, equities rallied for the month on optimism from the easing of restrictions put in place to contain the pandemic.

Price Momentum measures were prominent among the top performing factors for US large caps in May (Table 2), led by 26-Week Relative Price Strength (9.39%). At the same time, investors rewarded strong corporate fundamentals captured by Management and Earnings Quality measures, along with gauges of Historical Growth such as 3-yr Compound Annual Sales Growth (7.26%) which has been a positive signal in seven of the past eight months (Figure 1). Factors which trailed for the month (Table 3) were dominated by value measures, with double-digit negative spreads to indicators such as TTM EBITDA-to-Enterprise Value (-13.01%) and TTM Cash Flow-to-Price (-11.47%), a notable turn of events after only a short-lived comeback in April (Figure 1).

Table 2

US Large Cap top decile return spread factor performance, May 2020		
Factor	Decile spread (%)	Factor group
26-Week Relative Price Strength	9.39	Price Momentum
Advertising Intensity	8.16	Management Quality
6-Month Active Return with 1-Month Lag	8.13	Price Momentum
15/36 Week Stock Price Ratio	7.93	Price Momentum
Earnings Shortfall	7.62	Earnings Quality
Time Weighted Earnings Revision	7.48	Earnings Momentum
3-yr Compound Annual Sales Growth	7.26	Historical Growth
Yearly TTM Total Sales Growth Rate	7.19	Historical Growth
Attention Span Ratio	7.08	Management Quality
Fixed Assets Turnover Ratio	7.04	Management Quality
6-Month Nominal Change in 36-Month Alpha	6.95	Price Momentum
Trailing 12-Month Sales to Invested Capital	6.84	Management Quality
24-Month Active Return with 1-Month Lag	6.80	Price Momentum
Net Debt to EBITDA	6.80	Management Quality
2-Year Projected EPS Growth	6.54	Earnings Momentum

Source: IHS Markit

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Figure 1

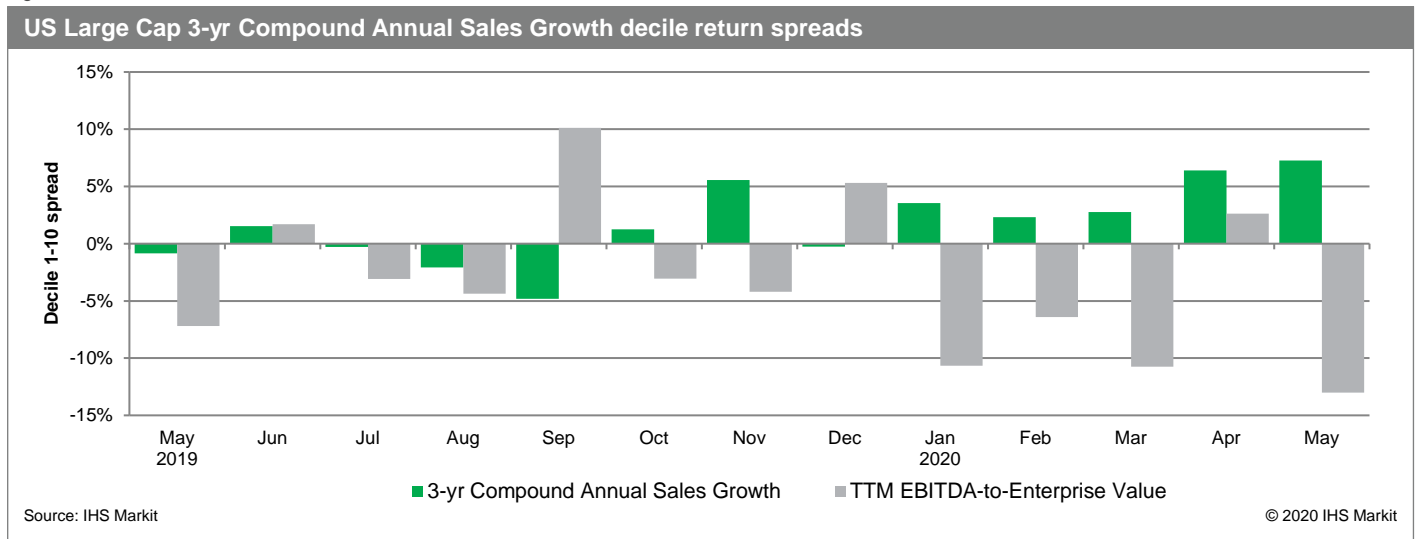


Table 3

US Large Cap bottom decile return spread factor performance, May 2020

Factor	Decile spread (%)	Factor group
TTM EBITDA-to-Enterprise Value	-13.01	Deep Value
TTM Operating Income to Enterprise Value	-12.31	Deep Value
Time Weighted EBITDA/ EV	-11.86	Deep Value
TTM Cash Flow-to-Price	-11.47	Deep Value
TTM EBITDA-to-Price	-11.46	Deep Value
TTM Operating Cash Flow-to-Enterprise Value	-11.27	Deep Value
Leading 12 Month EBITDA/ EV	-11.19	Deep Value
Tobin q	-11.18	Liquidity, Risk & Size
Price-to-Total Assets	-10.78	Deep Value
Time Weighted Cash Yield	-10.52	Deep Value

Source: IHS Markit

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US Small Cap

Earnings Momentum measures were key drivers of top small cap factor performers in May (Table 4). 3-M Revision in FY1 EPS Forecasts (10.96%) took the lead with a sharp 27.2 percentage point increase in monthly spread (Figure 2), suggesting that small cap investors are less dubious on guidance from the analyst community. At the opposite extreme, as with large caps, value performance was deep into negative double-digits last month (Table 5), as demonstrated by TTM EBITDA-to-Price (-15.29%) and TTM Cash Flow-to-Price (-14.53%).

Table 4

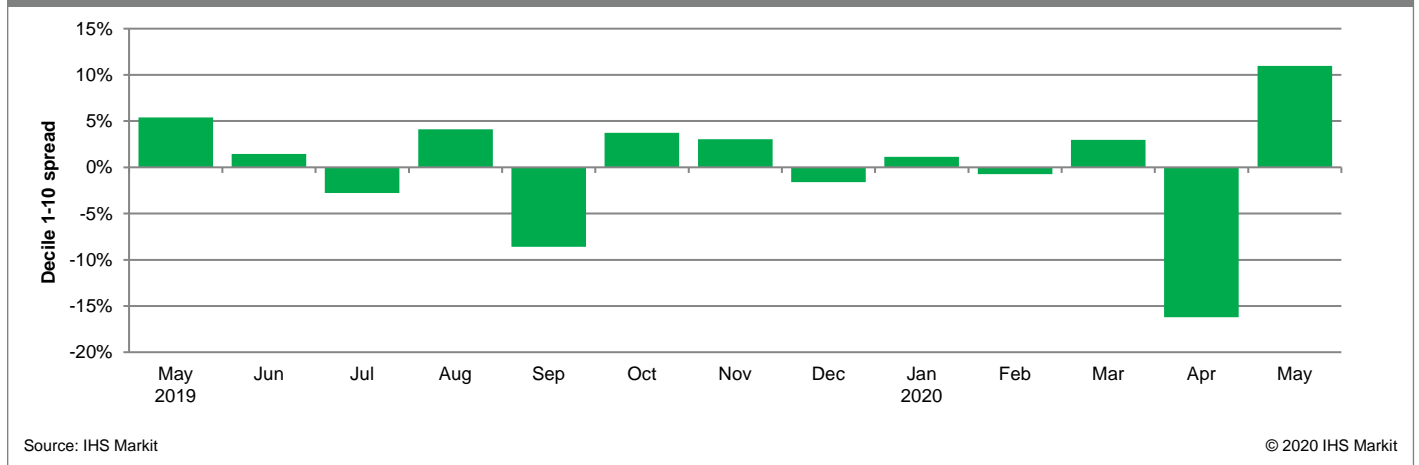
US Small Cap top decile return spread factor performance, May 2020

Factor	Decile spread (%)	Factor group
Operating Liability Leverage	14.19	Management Quality
3-M Revision in FY1 EPS Forecasts	10.96	Earnings Momentum
Attention Span Ratio	10.77	Management Quality
Net # of Revisions for Fiscal QTR 1	10.13	Earnings Momentum
3-M Revision in FY2 EPS Forecasts	9.82	Earnings Momentum
Debt to Market Cap	9.66	Liquidity, Risk & Size
Ohlson Bankruptcy Score	9.36	Liquidity, Risk & Size
Revision in Fiscal QTR 1 EPS Forecasts	9.22	Earnings Momentum
Advertising Intensity	9.15	Management Quality
Inflation Sensitivity	8.96	Macro
3-M Revision in FY2 EPS Forecasts: Dispersion Relative	8.89	Earnings Momentum
Net # of Revisions for Fiscal Year 2	8.75	Earnings Momentum
3-M Revision in FY1 EPS Forecasts: Dispersion Relative	8.52	Earnings Momentum
60-Day Lagged Quarterly Earnings Surprise	8.43	Earnings Momentum
1-Year Ahead EPS Growth	8.22	Earnings Momentum

Source: IHS Markit

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Figure 2

US Small Cap 3-M Revision in FY1 EPS Forecasts decile return spreads

Source: IHS Markit

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Table 5

US Small Cap bottom decile return spread factor performance, May 2020

Factor	Decile spread (%)	Factor group
TTM EBITDA-to-Price	-15.29	Deep Value
TTM Cash Flow-to-Price	-14.53	Deep Value
3-yr MAD of TTM Net Income	-14.43	Liquidity, Risk & Size
Operating Cash Flow Profit Margin	-13.93	Management Quality
Asset Composition	-13.14	Liquidity, Risk & Size
TTM Operating Income to Enterprise Value	-13.09	Deep Value
TTM Operating Cash Flow-to-Price	-12.64	Deep Value
1-Year Trough Operating Margin	-12.53	Management Quality
TTM Operating Cash Flow-to-Enterprise Value	-12.38	Deep Value
Forward 12-M EPS-to-Enterprise Value	-12.23	Deep Value

Source: IHS Markit

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Europe

The eurozone manufacturing economy continued to contract sharply in May, though with noticeable easing from the prior month, with the PMI registering at 39.4, compared to April's survey record low of 33.4. General improvement was seen across the region, although all countries continued to experience further deteriorations, with Germany reporting the lowest PMI, followed by Spain, while Italy, in contrast, was the best performing. With the manufacturing downturn looking to have bottomed in April, stocks, meanwhile, continued on their upward path from their lows on 18 March on a more positive outlook as economies reopen.

The top (Table 6) and bottom (Table 7) performing factors in Developed Europe in May mirrored that of US large caps, with an influential showing from Price Momentum and Deep Value signals, respectively. Two key measures representing these groups include 6-Month Nominal Change in 36-Month Alpha (7.18%) and Price-to-Total Assets (-10.47%), with factor performance concentrated at the tails of both measures (Figure 3). Other factors of interest include the top performance to a Management Quality measure, TTM Gross Profit to Assets (7.59%), and underperformance to Tobin q (-9.98%), an alternative measure of fair value from our Liquidity, Risk & Size group.

Table 6

Developed Europe top decile return spread factor performance, May 2020

Factor	Decile spread (%)	Factor group
TTM Gross Profit to Assets	7.59	Management Quality
6-Month Nominal Change in 36-Month Alpha	7.18	Price Momentum
12-Month Active Return with 1-month Lag	6.93	Price Momentum
30-75 Week Stock Price Ratio	6.83	Price Momentum
3-yr Compound Annual Sales Growth	6.45	Historical Growth
26-Week Relative Price Strength	6.32	Price Momentum
15/36 Week Stock Price Ratio	6.19	Price Momentum
Slope of 52 Week Price Trend Line	6.03	Price Momentum
50-200 Day Stock Price Ratio	6.00	Price Momentum
Debt to Market Cap	5.74	Liquidity, Risk & Size
52-Week High	5.54	Price Momentum
Cash Flow Leverage	5.42	Liquidity, Risk & Size
Fama-French Momentum	5.28	Price Momentum
24-Month Active Return with 1-Month Lag	5.26	Price Momentum
Std Dev of FY1 EPS Estimates-to-Price	5.25	Earnings Momentum

Source: IHS Markit

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Table 7

Developed Europe bottom decile return spread factor performance, May 2020

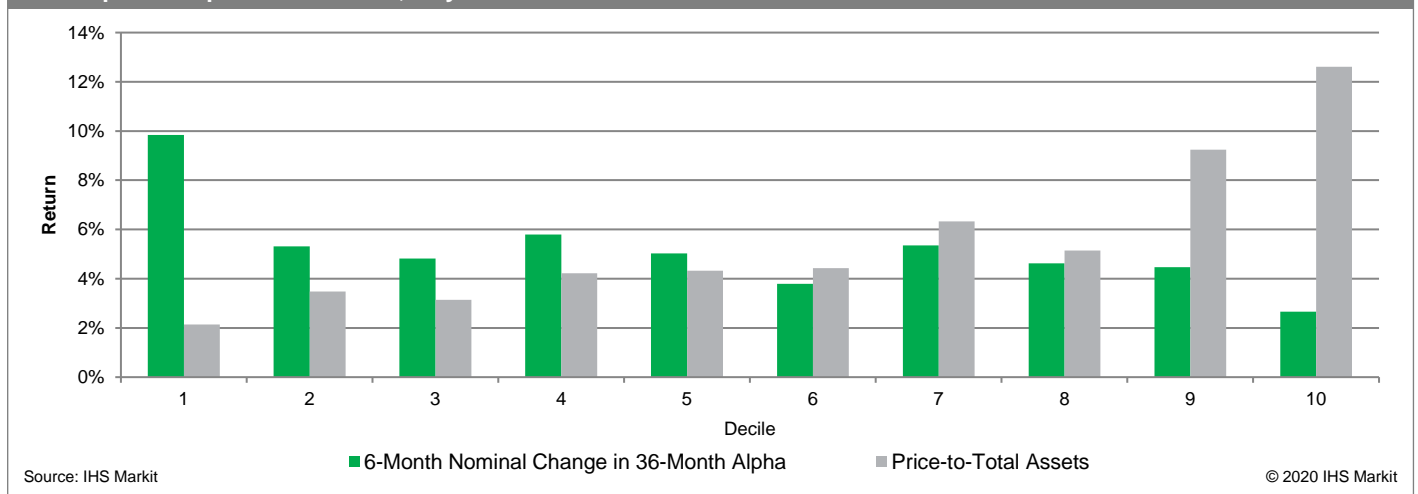
Factor	Decile spread (%)	Factor group
Current Liabilities-to-Price	-11.09	Liquidity, Risk & Size
Price-to-Total Assets	-10.47	Deep Value
Tobin q	-9.98	Liquidity, Risk & Size
60-Month Active Return with 12-Month Lag	-9.90	Price Momentum
60-Month Active Return with 1-Month Lag	-9.77	Price Momentum
60-Month Alpha	-9.44	Price Momentum
Altman Z Score	-8.99	Liquidity, Risk & Size
Leading 12 Month Book Yield	-8.59	Deep Value
Graham Number Fair Value Premium	-8.58	Deep Value
1-yr Change in Total Assets	-8.30	Historical Growth

Source: IHS Markit

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Figure 3

Developed Europe decile returns, May 2020



Source: IHS Markit

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Asia-Pacific

In the two largest Asian economies of China and Japan in May, the latter continued to suffer a sharper deterioration in manufacturing operating conditions, as the PMI fell for the fourth consecutive month to 38.4 in May, from 41.9 in April, its lowest reading since March 2009. However, manufacturing output in China rose solidly, with the PMI rising to 50.7, from 49.4 in April, as COVID-19 restrictions were lifted. Stocks in Asia were stable in May after recovering from their sharp declines in March, though markets in Japan fared better than in China, as tensions between the US and China have risen.

Price Momentum was also prominent on the list of top factor performance in developed Pacific markets outside Japan in May (Table 8), led by Fama-French Momentum (12.88%). Management Quality was a positively rewarded theme as well, as measured by factors such as Inventory Turnover Ratio (9.90%). Conversely, the weakest performing factors in May (Table 9) included Deep Value measures such as Leading 12 Month Book Yield (-14.40%) alongside 60-Day Residual Risk (-14.84%) whose time series of decile spreads (Figure 4) interestingly depicts an increasing investor risk appetite over the course of the pandemic.

In Japan, high quality was the more dominant theme among top performing factors in May (Table 10). TTM Gross Profit Margin (6.52%) took the lead, nearly doubling its performance from the prior month (Figure 5). At the opposite end of the spectrum, various valuation surrogates occupied nearly the totality of the laggard board (Table 11), including such representatives as Tobin q (-11.34%) and Book-to-Market (-10.96%).

Table 8

Developed Pacific exJapan top decile return spread factor performance, May 2020		
Factor	Decile spread (%)	Factor group
Fama-French Momentum	12.88	Price Momentum
30-75 Week Stock Price Ratio	12.28	Price Momentum
1-Year Price Momentum Indicator	11.98	Price Momentum
Second Preceding 6-month Return	10.48	Price Momentum
Inventory Turnover Ratio	9.90	Management Quality
TTM Gross Profit to Assets	9.68	Management Quality
Debt to Market Cap	9.46	Liquidity, Risk & Size
Rational Decay Alpha	8.13	Price Momentum
39-Week Return with 4-week Lag	7.88	Price Momentum
9-Month Active Return with 1-Month Lag	7.55	Price Momentum
Industry-adjusted 12-month Relative Price Strength	7.44	Price Momentum
12-Month Active Return with 1-month Lag	7.39	Price Momentum
Inventory-to-Total Assets	7.28	Management Quality
Cash Flow Leverage	6.96	Liquidity, Risk & Size
52-Week High	6.66	Price Momentum

Source: IHS Markit

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Table 9

Developed Pacific exJapan bottom decile return spread factor performance, May 2020		
Factor	Decile spread (%)	Factor group
60-Day Residual Risk	-14.84	Liquidity, Risk & Size
Leading 12 Month Book Yield	-14.40	Deep Value
Time Weighted Book Yield	-13.92	Deep Value
Tobin q	-13.46	Liquidity, Risk & Size
Graham Number Fair Value Premium	-13.44	Deep Value
Price Above Last 260-day Lowest Trading Price	-12.44	Price Momentum
Natural Logarithm of Total Assets (USD)	-11.95	Liquidity, Risk & Size
Price-to-Book Return-on-Equity Combination (PB-ROE)	-11.90	Deep Value
Capital Expenditure-to-Total Assets	-11.82	Management Quality
Edwards-Bell-Ohlson Value-to-Price	-11.80	Deep Value

Source: IHS Markit

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Figure 4

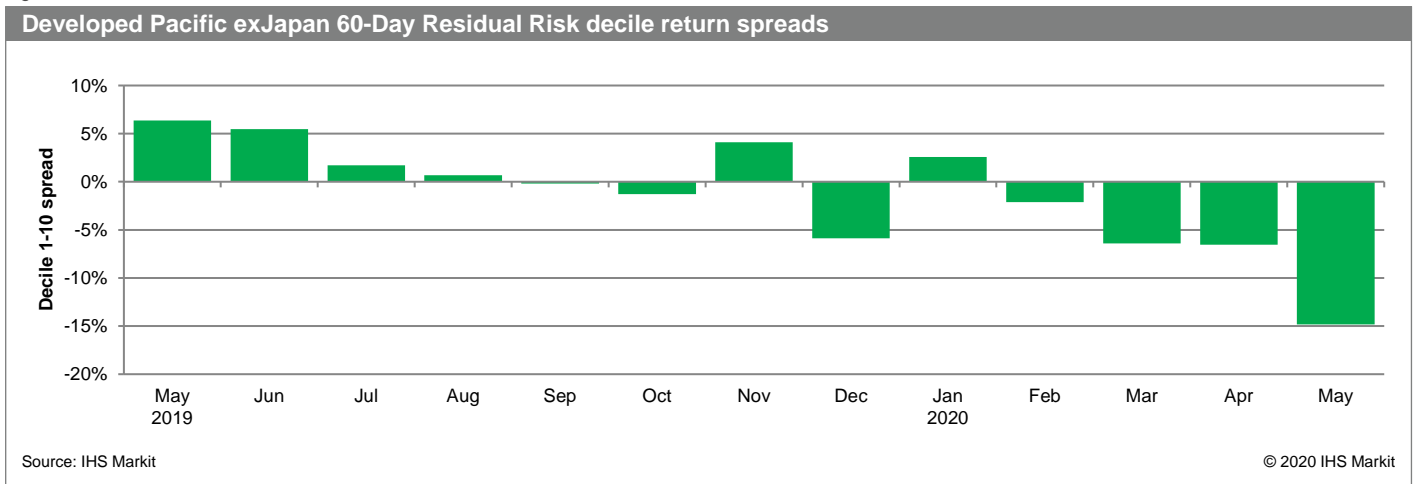


Table 10

Factor	Decile spread (%)	Factor group
TTM Capital Expenditures-to-Price	7.16	Deep Value
TTM Gross Profit Margin	6.52	Management Quality
Return on Assets	6.12	Management Quality
Debt to Market Cap	5.95	Liquidity, Risk & Size
3-yr Compound Annual Sales Growth	5.75	Historical Growth
Operating Cash Flow to Assets	5.17	Management Quality
Fixed Assets Turnover Ratio	5.12	Management Quality
Yearly TTM Total Sales Growth Rate	5.11	Historical Growth
Cash Flow Return on Invested Capital	5.02	Management Quality
Cash Flow Leverage	4.88	Liquidity, Risk & Size
Forward Return on Equity	4.82	Management Quality
Supply Volatility	4.79	Short Sentiment
Return on Equity	4.70	Management Quality
Return on Invested Capital	4.69	Management Quality
Profitability Ratio	4.68	Management Quality

Source: IHS Markit © 2020 IHS Markit

Figure 5

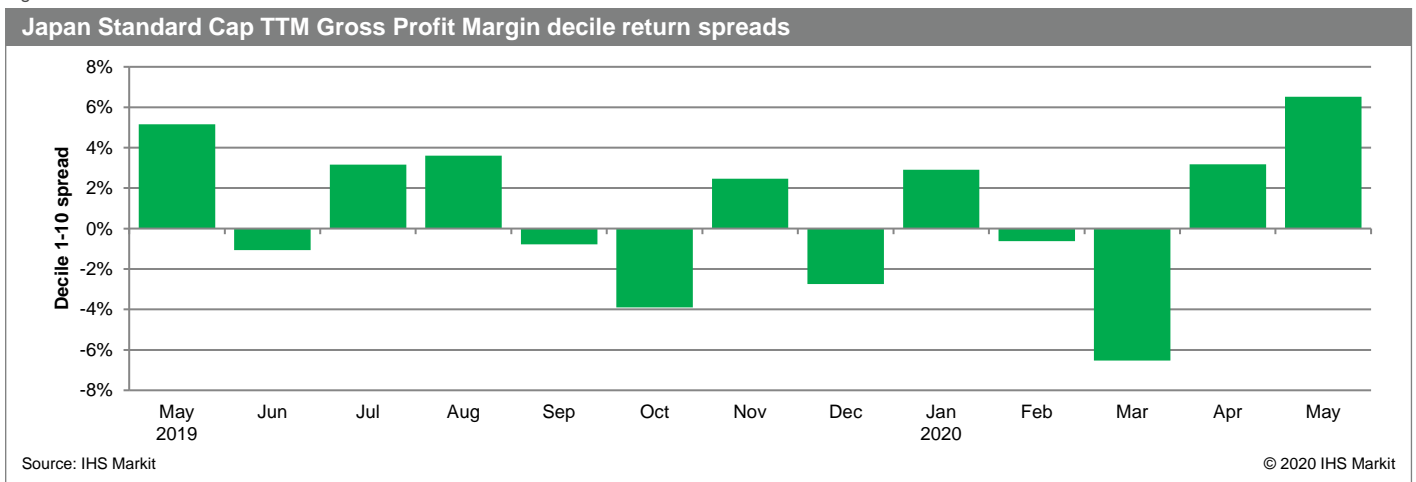


Table 11

Japan Standard Cap bottom decile return spread factor performance, May 2020		
Factor	Decile spread (%)	Factor group
Tobin q	-11.34	Liquidity, Risk & Size
Book-to-Market	-10.96	Deep Value
Price-to-Total Assets	-10.27	Deep Value
Net Asset Value to Price	-10.23	Deep Value
Natural Logarithm of Total Assets (USD)	-10.07	Liquidity, Risk & Size
Time Weighted Book Yield	-10.03	Deep Value
Graham Number Fair Value Premium	-9.98	Deep Value
Leading 12 Month Book Yield	-9.89	Deep Value
Current Liabilities-to-Price	-9.37	Liquidity, Risk & Size
1-Month Realized Stock Return Volatility	-9.08	Liquidity, Risk & Size

Source: IHS Markit

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Emerging Markets

Lastly, we review top (Table 12) and bottom (Table 13) performing factors in emerging markets in May. As with our other coverage universes, Management Quality and Price Momentum measures were highly rewarded themes, as represented by Net Debt to EBITDA (4.09%) and 26-Week Relative Price Strength (4.08%), respectively. However, one exception on the leaderboard is Natural Logarithm of Market Capitalization, whose distribution of quintile returns (Figure 6) indicates concentrated underperformance to the largest capitalization firms. Highly levered firms also suffered last month, as confirmed by negative spreads associated with measures such as Net Fixed Assets to Long-term Debt (-3.03%).

Table 12

Emerging Markets top quintile return spread factor performance, May 2020		
Factor	Decile spread (%)	Factor group
Net Debt to EBITDA	4.09	Management Quality
26-Week Relative Price Strength	4.08	Price Momentum
6-Month Nominal Change in 36-Month Alpha	3.59	Price Momentum
Attention Span Ratio	3.43	Management Quality
6-Month Nominal Change in 12-Month Alpha	3.43	Price Momentum
Average Monthly Trading Volume-to-Market Cap	3.38	Liquidity, Risk & Size
Yield Curve Slope Sensitivity	3.20	Macro
15/36 Week Stock Price Ratio	2.99	Price Momentum
Natural Logarithm of Market Capitalization	2.93	Liquidity, Risk & Size
Change in Net Operating Assets	2.92	Management Quality
Cash Flow Return on Invested Capital	2.81	Management Quality
Industry-adjusted 12-month Relative Price Strength	2.71	Price Momentum
Operating Cash Flow to Assets	2.66	Management Quality
50-200 Day Stock Price Ratio	2.65	Price Momentum
6-Month Active Return with 1-Month Lag	2.48	Price Momentum

Source: IHS Markit

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Table 13

Emerging Markets bottom quintile return spread factor performance, May 2020

Factor	Decile spread (%)	Factor group
Market Cap per Analyst	-3.60	Liquidity, Risk & Size
Supply Volatility	-3.26	Short Sentiment
4-week Industry Relative Return	-3.25	Price Momentum
Cash & Equivalents-to-Current Liabilities	-3.24	Liquidity, Risk & Size
Net Fixed Assets to Long-term Debt	-3.03	Liquidity, Risk & Size
Trading Turnover Ratio	-2.96	Liquidity, Risk & Size
Financial Leverage	-2.82	Liquidity, Risk & Size
Natural Logarithm of Total Assets (USD)	-2.74	Liquidity, Risk & Size
Price-to-Total Assets	-2.69	Deep Value
Long-term Debt-to-Equity	-2.67	Liquidity, Risk & Size

Source: IHS Markit

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Figure 6

Emerging Markets Natural Logarithm of Market Capitalization quintile returns, May 2020



Source: IHS Markit

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