

# Variants in factor performance

June 2021

## Research Signals

Investors have mostly shrugged off inflation fears, however, concerns surrounding rising delta variant cases and the potential disruption of the global economic recovery has resulted in variations in major equity market performance, such as that between more restrained Asian stocks and new all-time highs in the US. The continued solid upturn in the J.P.Morgan Global Manufacturing PMI also saw regional variations, with extended strength in the eurozone and the US, while Asia continued to underperform. Investors reacted with variants in monthly factor performance by taking on more risk and exposure to momentum stocks, while shunning previously outperforming deep value shares across many regional markets (Table 1).

- US: Value measures such as Forward 12-M EPS-to-Enterprise Value were particularly weak performers among large caps, while higher risk small cap shares ranked in the bottom decile of 60-Month Beta outperformed
- Developed Europe: Investors tempered their optimism in high momentum shares gauged by Rational Decay Alpha with low risk exposure to names captured by 24-Month Value at Risk
- Developed Pacific: High quality firms were especially rewarded, as represented by Inventory Turnover Ratio
- Emerging markets: Investors took on a renewed interest in high momentum, high risk names, as confirmed by outperformance of Rational Decay Alpha and underperformance of 24-Month Value at Risk, respectively

## Contacts

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Table 1

## Global factor quantile return spread (%) performance snapshot, Jun 2021

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market	Deep Value	-7.10	-3.01	-4.10	-1.65	-6.63	-1.84
Forward 12-M EPS-to-Enterprise Value		-8.63	-5.54	0.96	-0.87	-1.76	-1.62
TTM EBITDA-to-Enterprise Value		-6.15	-5.58	0.16	-1.86	-1.18	-2.43
TTM Free Cash Flow-to-Enterprise Value		-1.47	-5.27	-0.71	-0.21	-0.12	-2.16
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	-2.40	-6.38	-1.46	-2.01	-2.16	-2.07
Industry Relative TTM Dividend Yield		-0.72	-0.45	0.11	-0.23	-1.13	-0.96
Fixed Assets Turnover Ratio		0.76	0.27	-1.66	-1.34	1.99	0.13
Inventory Turnover Ratio	Management Quality	-0.31	-0.26	-0.40	4.26	1.93	0.18
Net Operating Asset Turnover		0.74	-4.23	0.21	0.50	2.63	1.21
Change in Accruals to Assets		2.60	0.06	-0.49	0.42	1.49	0.92
Change in TTM COGS vs. Inventory Level	Earnings Quality	-6.63	-3.48	0.30	3.91	-1.86	0.89
Change in TTM Sales vs. Accounts Receivable		-2.41	0.25	-0.18	0.69	-0.01	-0.10
Working Capital Accruals		-3.05	-0.65	0.68	0.28	-0.11	-0.23
1-yr Growth in TTM Free Cash Flow		1.55	-1.26	0.80	2.30	-0.72	-0.86
Reinvestment Rate	Historical Growth	0.49	-5.16	1.62	0.23	1.94	-0.84
Average Monthly Trading Volume-to-Market Cap		-2.01	8.22	-3.56	-4.28	-0.69	0.73
60-Month Beta		-0.07	-3.40	3.51	-3.17	0.45	0.39
Asset Quality Index		0.62	0.86	-0.17	0.38	-0.07	-1.01
Operating Leverage	Liquidity, Risk & Size	-0.83	-1.04	-0.06	-0.24	0.57	-0.04
Natural Logarithm of Market Capitalization		-0.91	2.79	-1.21	0.68	-0.25	1.28
2-Year Ahead EPS Growth		-1.57	4.75	-2.97	-5.03	-0.47	0.33
3-M Revision in FY2 EPS Forecasts		-2.71	-0.03	1.13	3.52	0.69	0.22
Real Earnings Surprise	Earnings Momentum	-3.42	-1.76	0.51	-0.24	0.71	1.34
24-Month Value at Risk		1.44	-5.70	5.75	-2.33	1.18	-1.01
5-day Industry Relative Return		-2.06	-2.09	0.59	-2.72	-0.11	-2.76
Industry-adjusted 12-month Relative Price Strength		1.15	2.03	2.07	3.92	1.19	0.67
Rational Decay Alpha	Price Momentum	2.88	2.05	3.72	1.44	2.14	2.12
Demand Supply Ratio		-3.70	-8.92	-0.35	2.59	0.67	-6.64
Implied Loan Rate		-1.07	-6.72	1.09	1.57	-0.87	-1.66

Source: IHS Markit

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## United States

### US Large Cap

Operating conditions in the US manufacturing sector remained strong, with the June manufacturing PMI matching May's record high of 62.1. The upturn was supported by further marked expansions in output and new order, but supply chain disruptions worsened and input costs showed the largest jump on record, feeding through to another record rise in factory selling prices. Equity markets continued to post all-time highs as investors shrugged off inflationary pressures amid reopening optimism.

Price Momentum measures returned to the factor leaderboard for US large caps in June (Table 2). 3-Month Active Return (11.53%), a price reversal metric, took top honors, followed by 18-Month Active Return with 1-Month Lag (9.35%). Growth and quality measures were also highly rewarded, as represented by 3-yr Compound Annual Sales Growth (10.15%) and Shareholder Payout to Gross Profit (8.20%), respectively. At the same time, Deep Value factors such as Price-to-Total Assets (-14.84%) were pushed to deep double-digit losses for the month (Table 3), following a solid eight-month run (Figure 1).

Table 2

#### US Large Cap top decile return spread factor performance, Jun 2021

Factor	Decile spread (%)	Factor group
3-Month Active Return	11.53	Price Momentum
3-yr Compound Annual Sales Growth	10.15	Historical Growth
Growth Duration	9.63	Liquidity, Risk & Size
18-Month Active Return with 1-Month Lag	9.35	Price Momentum
Market Volatility Sensitivity	9.06	Macro
Yearly TTM Total Sales Growth Rate	8.65	Historical Growth
1-yr Change in Sales	8.42	Historical Growth
1-Month Active Return	8.40	Price Momentum
Shareholder Payout to Gross Profit	8.20	Management Quality
Slope of 66 Week Price Trend Line	7.73	Price Momentum
Debt to Market Cap	7.40	Liquidity, Risk & Size
Earnings Shortfall	6.47	Earnings Quality
2-Month Active Return	6.34	Price Momentum
Accounting Accruals	6.15	Earnings Quality
24-Month Active Return with 1-Month Lag	6.01	Price Momentum

Source: IHS Markit

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Table 3

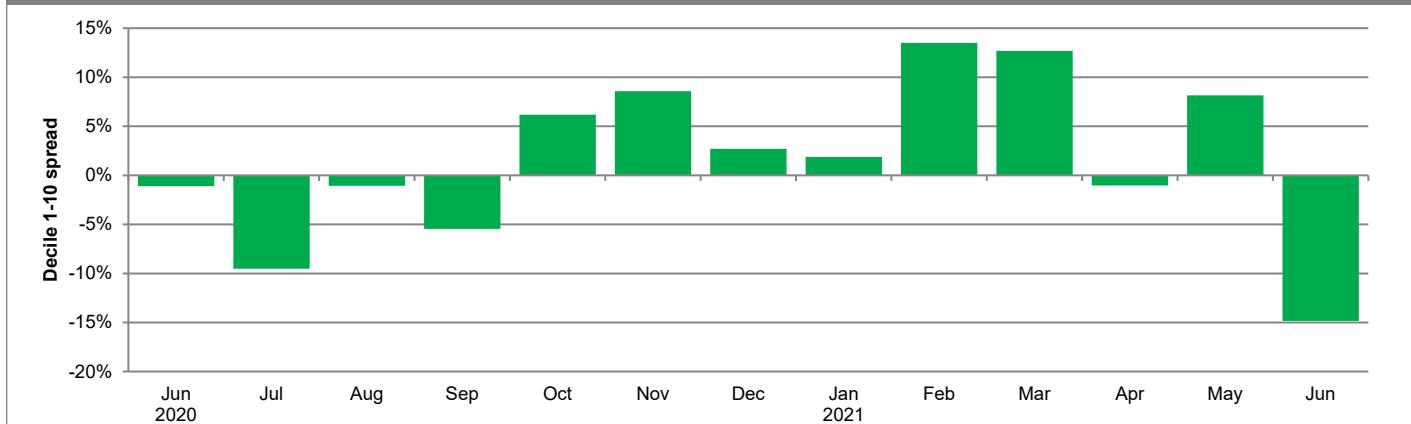
**US Large Cap bottom decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Tobin q	-15.50	Liquidity, Risk & Size
Price-to-Total Assets	-14.84	Deep Value
Price-to-Book Return-on-Equity Combination	-12.85	Deep Value
6-Month Nominal Change in 12-Month Alpha	-12.08	Price Momentum
Leading 12 Month Sales Yield	-11.90	Deep Value
Time Weighted Sales Yield	-11.85	Deep Value
Graham Number Fair Value Premium	-11.53	Deep Value
TTM Sales-to-Enterprise Value	-11.22	Deep Value
Inflation Sensitivity	-11.21	Macro
TTM Sales-to-Price	-10.96	Deep Value

Source: IHS Markit

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Figure 1

**US Large Cap Price-to-Total Assets decile return spreads**

Source: IHS Markit

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**US Small Cap**

Momentum and quality measures were also key drivers for small caps in June (Table 4), with 3-Month Active Return (7.87%) and Inventory-to-Total Assets (5.72%) leading the respective groups. At the opposite extreme, the weakest performing factors for the month (Table 5) captured a theme of increasing risk appetite, as investors moved out to the furthest extremes of the risk curve of measures such as 24-Month Residual Return Variance (Figure 2) which posted a decile return spread of -11.00%.

Table 4

**US Small Cap top decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Average Monthly Trading Volume-to-Market Cap	8.22	Liquidity, Risk & Size
3-Month Active Return	7.87	Price Momentum
2-Month Active Return	7.50	Price Momentum
Oil Prices Sensitivity	6.98	Macro
Industrial Production Sensitivity	5.86	Macro
Inventory-to-Total Assets	5.72	Management Quality
Advertising Intensity	5.61	Management Quality
Market Volatility Sensitivity	5.47	Macro
Average Payable Period	5.09	Management Quality
Demand Value Concentration	5.02	Short Sentiment
Flow Ratio	4.83	Liquidity, Risk & Size
TTM Gross Profit Margin	4.81	Management Quality
Cash Flow Leverage	4.78	Liquidity, Risk & Size
2-Year Ahead EPS Growth	4.75	Earnings Momentum
Natural Logarithm of Closing Price (USD)	4.61	Liquidity, Risk & Size

Source: IHS Markit

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Table 5

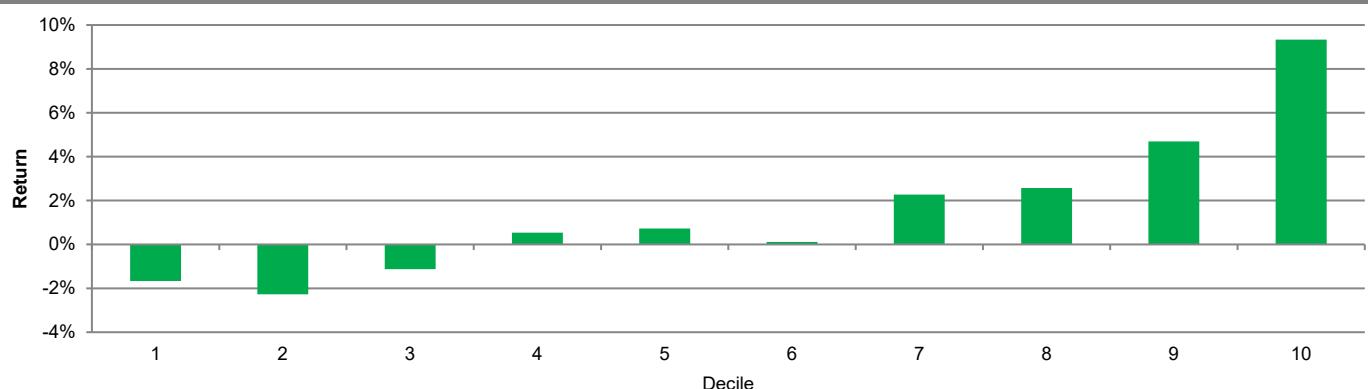
**US Small Cap bottom decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Average Trading Volume in Preceding 6-month	-11.26	Price Momentum
24-Month Residual Return Variance	-11.00	Price Momentum
3-yr MAD of TTM Net Income	-10.86	Liquidity, Risk & Size
Tobin q	-10.61	Liquidity, Risk & Size
Regression Error of 60-Month CAPM	-10.11	Liquidity, Risk & Size
Stock Return Volatility	-10.01	Liquidity, Risk & Size
Utilization	-9.45	Short Sentiment
Trading Turnover Ratio	-9.40	Liquidity, Risk & Size
Product of Beta and Sigma	-9.33	Liquidity, Risk & Size
Active Utilization	-9.22	Short Sentiment

Source: IHS Markit

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Figure 2

**US Small Cap 24-Month Residual Return Variance decile returns, Jun 2021**

Source: IHS Markit

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## Europe

Growth of the eurozone manufacturing sector hit new heights during June, with the PMI setting a fresh survey record for a fourth successive month at 63.4, up from 63.1 in May, on sharp production increases, while prices rose at record rates as supply-side constraints persisted. The Netherlands continued to lead the way, followed by Austria. European equities were also boosted to a fifth consecutive monthly gain, contributing to a solid double-digit first half performance, while investors weighed the prospects of the economic recovery against rising delta variant cases.

While investors in Developed Europe were willing to take on exposure to high momentum shares in June (Table 6), they overlaid it with layer of risk reduction. This theme is demonstrated by performance of 24-Month Value at Risk (5.75%), sorted to favor low risk, and 18-Month Active Return with 1-Month Lag (4.98%), whose distribution of decile returns indicate systematic trading across both signals (Figure 3). At the other end of the spectrum, value measures were dominant among the weakest performing factors (Table 7), including long-term price reversal metrics such as 60-Month Alpha (-5.98%) and Deep Value indicators such as Price-to-Total Assets (-5.25%).

Table 6

### Developed Europe top decile return spread factor performance, Jun 2021

Factor	Decile spread (%)	Factor group
Std Dev of FY2 EPS Estimates-to-Price	5.75	Earnings Momentum
24-Month Value at Risk	5.75	Price Momentum
Std Dev of FY1 EPS Estimates-to-Price	5.05	Earnings Momentum
18-Month Active Return with 1-Month Lag	4.98	Price Momentum
Debt to Market Cap	4.72	Liquidity, Risk & Size
3-M Revision in FY1 EBITDA Forecasts: Dispersion Relative	4.13	Earnings Momentum
24-Month Active Return with 1-Month Lag	4.11	Price Momentum
3-yr Change in Assets-adj TTM Cash Flow	3.76	Historical Growth
Rational Decay Alpha	3.72	Price Momentum
Market Volatility Sensitivity	3.67	Macro
NOPAT Margin	3.62	Management Quality
1-yr Change in Sales	3.60	Historical Growth
60-Month Beta	3.51	Liquidity, Risk & Size
Product of Beta and Sigma	3.48	Liquidity, Risk & Size
R Sq of 5-yr TTM EPS Trend Line	3.38	Historical Growth

Source: IHS Markit

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Figure 3

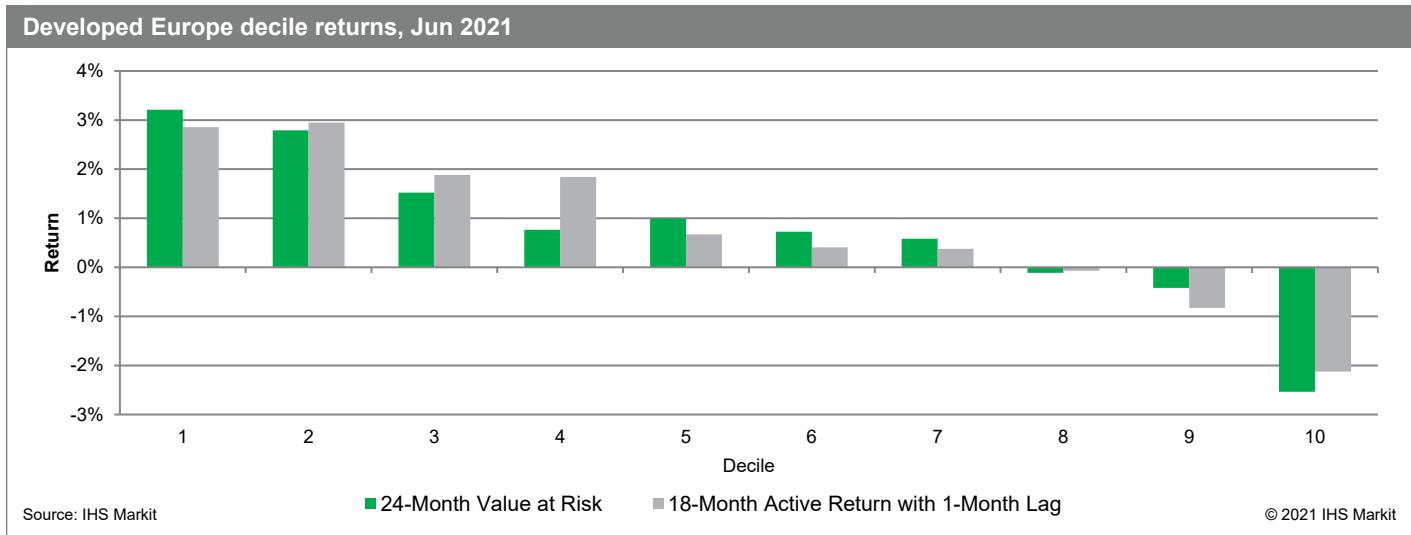


Table 7

**Developed Europe bottom decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
60-Month Alpha	-5.98	Price Momentum
60-Month Active Return with 1-Month Lag	-5.93	Price Momentum
60-Month Active Return with 12-Month Lag	-5.86	Price Momentum
Price-to-Total Assets	-5.25	Deep Value
Normalized Earnings Yield	-4.94	Deep Value
36-Month Active Return with 1-Month Lag	-4.84	Price Momentum
Leading 12 Month Book Yield	-4.80	Deep Value
Time Weighted Book Yield	-4.71	Deep Value
Altman Z Score	-4.56	Liquidity, Risk & Size
1-yr Change in Total Assets	-4.52	Historical Growth

Source: IHS Markit      © 2021 IHS Markit

## Asia-Pacific

Manufacturing operating conditions continued to expand in the two largest Asian economies of China and Japan in June, though at softer paces, as the recent uptick in COVID-19 cases and supply chain pressures disrupted activity. The Japanese manufacturing sector was the stronger of the two, with the PMI at 52.4, dipping from 53.0 in May. In China, the manufacturing PMI edged down to 51.3 in June, from 52.0 in May. Stocks were also under some pressure in June, as investors swing between optimism on the global economic recovery and the impact of new virus outbreaks.

Top (Table 8) and bottom (Table 9) performing factors in markets outside Japan once again spanned a broad array of themes. The top performers included measures such as Time Weighted Earnings Revision Dispersion (5.21%), Yearly Change In Gross Profit Margin (5.13%), Distress Measure (4.63%) and 1-Year Price Momentum Indicator (4.54%). On the other hand, bottom performers covered Natural Logarithm of Closing Price (-6.43%), Leading 12 Month Total Dividend Yield (-5.82%) and US Dollar Value Sensitivity (-5.75%) which recorded its weakest spread over the past year (Figure 4).

In Japan, Management Quality measures took on a larger majority of spots on the factor performance leaderboard in June (Table 10), led by Cash Flow Return on Invested Capital (4.96%) which is trying to return to a positive trend after a rough couple of months to start the year (Figure 5). Conversely, as with US large caps and developed Europe shares, value measures dominated the laggard board (Table 11), with the weakest performance turned in by Net Asset Value to Price (-6.93%) and Book-to-Market (-6.63%).

Table 8

**Developed Pacific exJapan top decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Time Weighted Earnings Revision Dispersion	5.21	Earnings Momentum
Yearly Change In Gross Profit Margin	5.13	Management Quality
Net Profit Margin	5.08	Management Quality
Time Weighted Earnings Revision	4.74	Earnings Momentum
Distress Measure	4.63	Liquidity, Risk & Size
1-Year Price Momentum Indicator	4.54	Price Momentum
Dividend Coverage Ratio	4.52	Liquidity, Risk & Size
Year-over-year Change in Leverage	4.44	Liquidity, Risk & Size
3-M Revision in FY2 EPS Forecasts: Dispersion Relative	4.38	Earnings Momentum
9-Month Active Return with 1-Month Lag	4.37	Price Momentum
Inventory Turnover Ratio	4.26	Management Quality
1-yr Chg in Acct Receivable as % of Sales	4.24	Historical Growth
3-M Revision in FY1 EBITDA Forecasts: Dispersion Relative	4.24	Earnings Momentum
Slope of 66 Week Price Trend Line	4.16	Price Momentum
12-Month Active Return with 1-month Lag	3.99	Price Momentum

Source: IHS Markit

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Table 9

**Developed Pacific exJapan bottom decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Natural Logarithm of Closing Price (USD)	-6.43	Liquidity, Risk & Size
Leading 12 Month Total Dividend Yield	-5.82	Dividend Forecast
US Dollar Value Sensitivity	-5.75	Macro
Leading 12 Month Regular Dividend Yield	-5.40	Dividend Forecast
Industrial Production Sensitivity	-5.35	Macro
Net Asset Value to Price	-5.18	Deep Value
2-Year Ahead EPS Growth	-5.03	Earnings Momentum
Flow Ratio	-4.98	Liquidity, Risk & Size
Altman Z Score	-4.71	Liquidity, Risk & Size
Working Capital-to-Total Assets	-4.71	Management Quality

Source: IHS Markit

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Figure 4

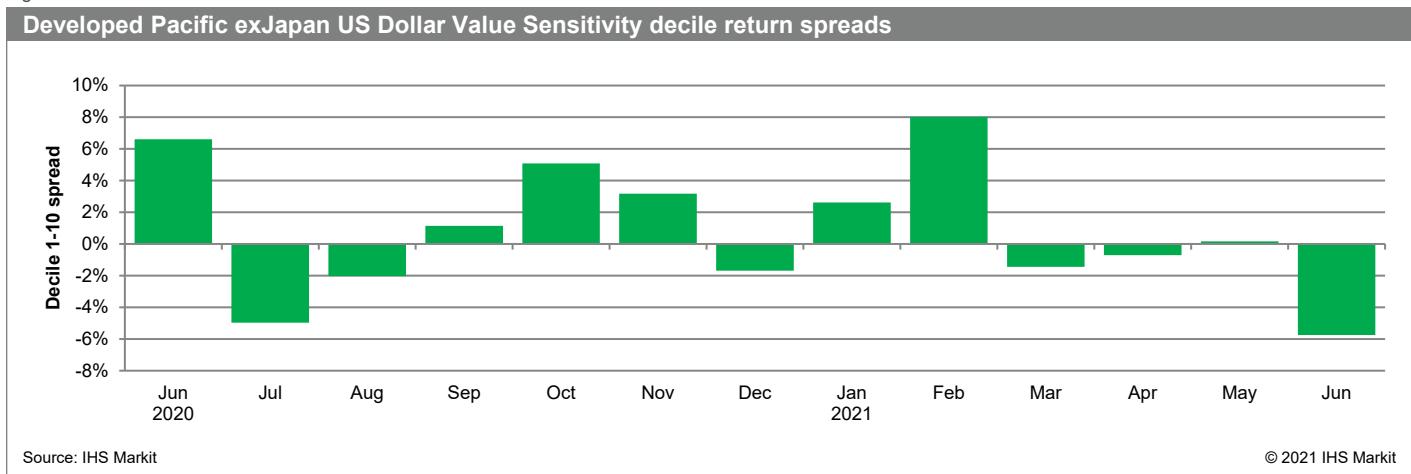


Table 10

**Japan Standard Cap top decile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Cash Flow Return on Invested Capital	4.96	Management Quality
Cash Flow Leverage	4.91	Liquidity, Risk & Size
Operating Cash Flow to Assets	4.90	Management Quality
Forward Return on Equity	4.69	Management Quality
Street Consensus Rating	4.34	Earnings Momentum
Oper Cash Flow Return on Invested Capital	4.32	Management Quality
3 Year Change in Gross Profit Margin	4.30	Management Quality
Net Debt to EBITDA	4.04	Management Quality
Debt to Market Cap	4.04	Liquidity, Risk & Size
Average Collection Period	3.80	Management Quality
Cash Earnings Return On Equity	3.69	Management Quality
Assets Turnover Ratio	3.59	Management Quality
3-yr Compound Annual Sales Growth	3.41	Historical Growth
24-Month Active Return with 1-Month Lag	3.40	Price Momentum
18-Month Active Return with 1-Month Lag	3.36	Price Momentum

Source: IHS Markit © 2021 IHS Markit

Figure 5

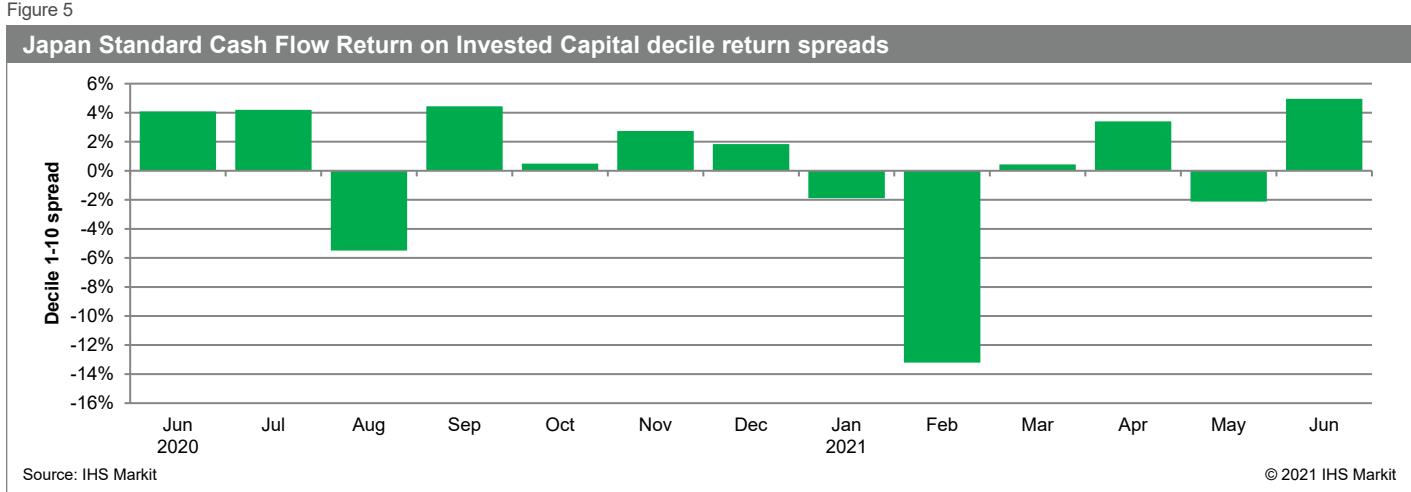


Table 11

## Japan Standard Cap bottom decile return spread factor performance, Jun 2021

Factor	Decile spread (%)	Factor group
Net Asset Value to Price	-6.93	Deep Value
Book-to-Market	-6.63	Deep Value
Tobin q	-6.43	Liquidity, Risk & Size
Price-to-Total Assets	-6.35	Deep Value
Time Weighted Book Yield	-6.35	Deep Value
Leading 12 Month Book Yield	-6.31	Deep Value
Graham Number Fair Value Premium	-5.90	Deep Value
Natural Logarithm of Total Assets	-5.81	Liquidity, Risk & Size
Capital Expenditure-to-Total Assets	-5.71	Management Quality
Industry Relative Book-to-Market	-5.31	Relative Value

Source: IHS Markit

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## Emerging Markets

We conclude with a review of top (Table 12) and bottom (Table 13) performing factors in emerging markets in June. Investors took on a renewed interest in high momentum, high risk names, sending measures such as 9-Month Active Return with 1-Month Lag (4.92%) to the top of the performance list while dragging down performance of measures of low risk such as 1-Month Realized Stocks Return Volatility (-4.27%). In fact, spread performance of these factors was especially driven by outperformance at the respective top and bottom tails (Figure 6).

Table 12

## Emerging Markets top quintile return spread factor performance, Jun 2021

Factor	Decile spread (%)	Factor group
9-Month Active Return with 1-Month Lag	4.92	Price Momentum
39-Week Return with 4-week Lag	3.73	Price Momentum
50-200 Day Stock Price Ratio	3.69	Price Momentum
Shareholder Payout to Gross Profit	3.68	Management Quality
15/36 Week Stock Price Ratio	3.44	Price Momentum
12-Month Active Return with 1-month Lag	3.39	Price Momentum
6-Month Nominal Change in 18-Month Alpha	3.34	Price Momentum
18-Month Active Return with 1-Month Lag	3.31	Price Momentum
US Dollar Value Sensitivity	3.21	Macro
Inflation Sensitivity	3.02	Macro
26-Week Relative Price Strength	2.79	Price Momentum
24-Month Active Return with 1-Month Lag	2.73	Price Momentum
Natural Logarithm of Market Capitalization (USD)	2.64	Liquidity, Risk & Size
6-Month Active Return with 1-Month Lag	2.61	Price Momentum
1-Year Price Momentum Indicator	2.57	Price Momentum

Source: IHS Markit

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Table 13

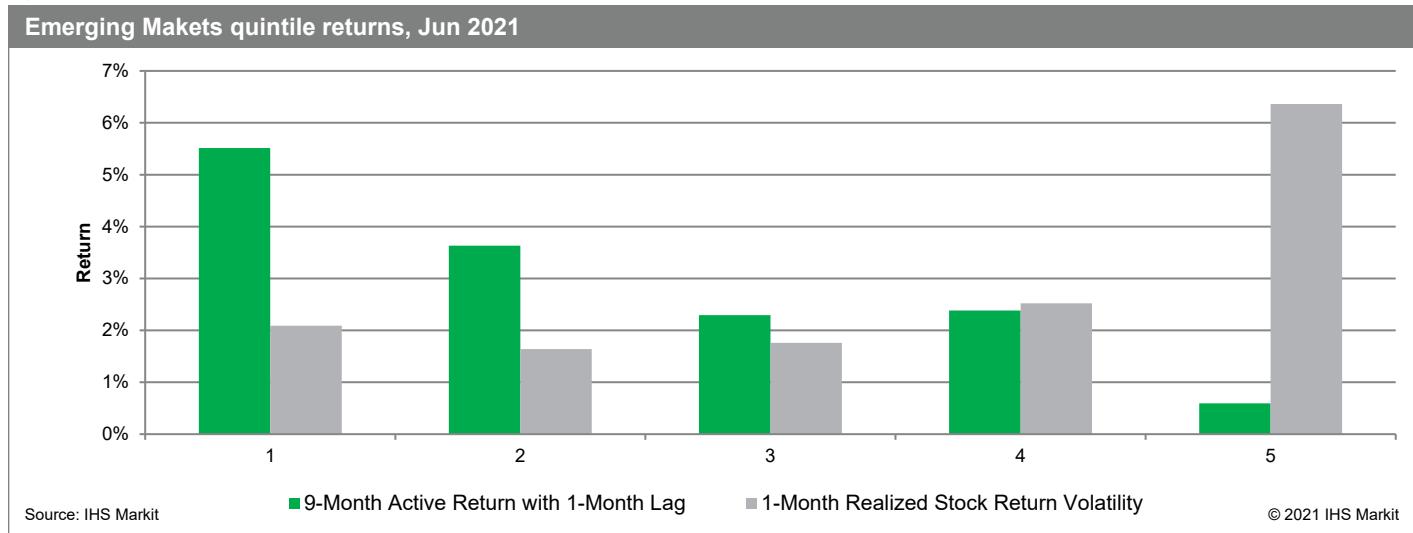
**Emerging Markets bottom quintile return spread factor performance, Jun 2021**

Factor	Decile spread (%)	Factor group
Average Trading Volume in Preceding 6-month	-4.57	Price Momentum
Natural Logarithm of Total Assets (USD)	-4.44	Liquidity, Risk & Size
1-Month Stock Return Interquartile Range	-4.29	Liquidity, Risk & Size
1-Month Realized Stock Return Volatility	-4.27	Liquidity, Risk & Size
Trading Turnover Ratio	-4.09	Liquidity, Risk & Size
14 Day Relative Strength Index	-4.06	Price Momentum
Cyclically Adjusted Earnings-to-Price	-3.88	Deep Value
5-yr Relative TTM Sales-to-Price	-3.63	Relative Value
Natural Logarithm of TTM Sales (USD)	-3.40	Liquidity, Risk & Size
CV of Prior 90-Day Closing Prices	-3.38	Price Momentum

Source: IHS Markit

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Figure 6



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