

A new strain on markets

November 2021

Research Signals

Volatility returned to the several regional equity markets as investors weighed the economic risks posed by the new omicron strain of the COVID-19 virus. Furthermore, price and supply shortage measures remain close to recent highs, according to the J.P.Morgan Global Manufacturing PMI report, amid sharp increases in vendor delivery times given the continued severe strain on global supply chains. In turn, factor performance in November (Table 1) reflects variants across regions as investors await potential changes to the timing of the US Federal Reserve's tapering of bond purchases and pace of interest rate hikes.

- US: Deep Value measures, such as Forward 12-M EPS-to-Enterprise Value, which were strongly favored among small caps in October, gained traction among large caps as well last month
- Developed Europe: High momentum stocks measured by Rational Decay Alpha extended October's outperformance into November
- Developed Pacific: Reinvestment Rate was a strong performer in Japan, while Book-to-Market performance was particularly weak in markets outside Japan
- Emerging markets: Deep Value measures such as TTM EBITDA-to-Enterprise Value continued to be rewarded last month

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Table 1

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

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		0.41	2.90	-3.50	-4.80	-0.91	-0.34
Forward 12-M EPS-to-Enterprise Value	Deep Value	8.08	10.93	4.38	2.15	0.09	3.08
TTM EBITDA-to-Enterprise Value		6.05	11.71	4.23	1.33	0.34	3.30
TTM Free Cash Flow-to-Enterprise Value		3.99	8.26	1.12	-0.69	0.13	1.19
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	3.11	10.67	2.18	-1.56	-0.84	2.68
Industry Relative TTM Dividend Yield		0.17	2.07	-0.87	2.21	0.92	2.77
Fixed Assets Turnover Ratio	Management Quality	-3.36	4.14	-1.77	-1.63	1.70	1.55
Inventory Turnover Ratio		-1.31	2.91	-1.38	-1.32	3.42	0.54
Net Operating Asset Turnover		1.57	5.82	2.32	-0.05	-1.85	3.44
Change in Accruals to Assets	Earnings Quality	-0.81	-1.37	-1.01	0.73	-1.44	-1.03
Change in TTM COGS vs. Inventory Level		3.99	5.14	-0.93	0.08	-1.50	0.14
Change in TTM Sales vs. Accounts Receivable		4.48	0.53	1.04	4.40	2.31	1.65
Working Capital Accruals		0.02	1.40	-0.89	1.07	2.15	0.95
1-yr Growth in TTM Free Cash Flow	Historical Growth	2.02	2.99	0.67	-1.14	-1.37	0.23
Reinvestment Rate		6.59	7.72	4.74	3.62	6.68	2.13
Average Monthly Trading Volume-to-Market Cap	Liquidity, Risk & Size	-4.03	-9.59	-5.56	2.02	-3.31	0.43
60-Month Beta		4.98	1.17	4.42	5.15	-4.49	1.23
Asset Quality Index		1.80	-4.34	-2.04	1.95	-0.50	0.23
Operating Leverage		-0.55	1.49	0.78	-1.53	-1.33	0.07
Natural Logarithm of Market Capitalization		-3.98	-8.06	-3.55	-1.79	-4.01	-1.34
2-Year Ahead EPS Growth	Earnings Momentum	-2.24	-6.24	-3.30	-3.06	-1.05	-1.74
3-M Revision in FY2 EPS Forecasts		4.36	4.93	2.82	-0.40	0.97	0.66
Real Earnings Surprise		2.52	6.69	1.55	0.92	0.13	1.65
24-Month Value at Risk		6.26	6.82	5.70	2.89	1.47	3.31
5-day Industry Relative Return	Price Momentum	-2.16	1.02	-0.41	-1.71	-2.72	-3.76
Industry-adjusted 12-month Relative Price Strength		2.04	7.15	3.50	-0.10	1.14	-1.50
Rational Decay Alpha		1.92	0.37	5.08	2.06	2.06	2.81
Demand Supply Ratio	Short Sentiment	5.44	7.47	3.86	2.21	-0.16	-5.21
Implied Loan Rate		3.50	5.45	-1.74	1.45	0.58	-5.03

Source: IHS Markit

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United States

US Large Cap

The US manufacturing PMI dropped to an 11-month low, with the November PMI posting at 58.3, down fractionally from 58.4 in October, amid softer demand conditions and material shortages. Producers reported further near-record supply delays and the slowest new order inflows this year. Longer lead times, supplier shortages and higher energy prices meanwhile pushed the rate of cost inflation to a fresh series high. Inflationary pressures did not escape investors nor the Fed's attention and, coupled with the emergence of the omicron variant, contributed to a volatile end to a flat stock market for the month.

Deep Value measures returned to the top of the factor performance leaderboard for US large caps in November (Table 2). Leading 12 Month EBITDA/EV (9.77%) turned in the top spread and captures the cyclical nature of investor preferences over recent months (Figure 1). Other top performers include Management Quality measures such as Forward Return on Equity (9.27%) along with 52-Week High (7.45%), while the two weakest performing factors (Table 3) were Oil Prices Sensitivity (-6.30%) and Implied Volatility (-6.13%).

Table 2

US Large Cap top decile return spread factor performance, Nov 2021

Factor	Decile spread (%)	Factor group
Leading 12 Month EBITDA/ EV	9.77	Deep Value
Forward Return on Equity	9.27	Management Quality
Leading 12-Month Median Earnings Yield	9.05	Deep Value
Leading 12-Month Mean Earnings Yield	8.34	Deep Value
Time Weighted EBITDA/ EV	8.23	Deep Value
Cash Flow Return on Invested Capital	8.17	Management Quality
Forward 12-M EPS-to-Enterprise Value	8.08	Deep Value
Return on Invested Capital	8.08	Management Quality
Interest Coverage	7.96	Liquidity, Risk & Size
Net External Financing	7.87	Management Quality
Profitability Ratio	7.69	Management Quality
52-Week High	7.45	Price Momentum
Operating Cash Flow Profit Margin	7.32	Management Quality
Operating Cash Flow to Assets	7.29	Management Quality
Current Earnings Yield	7.26	Deep Value

Source: IHS Markit

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Figure 1

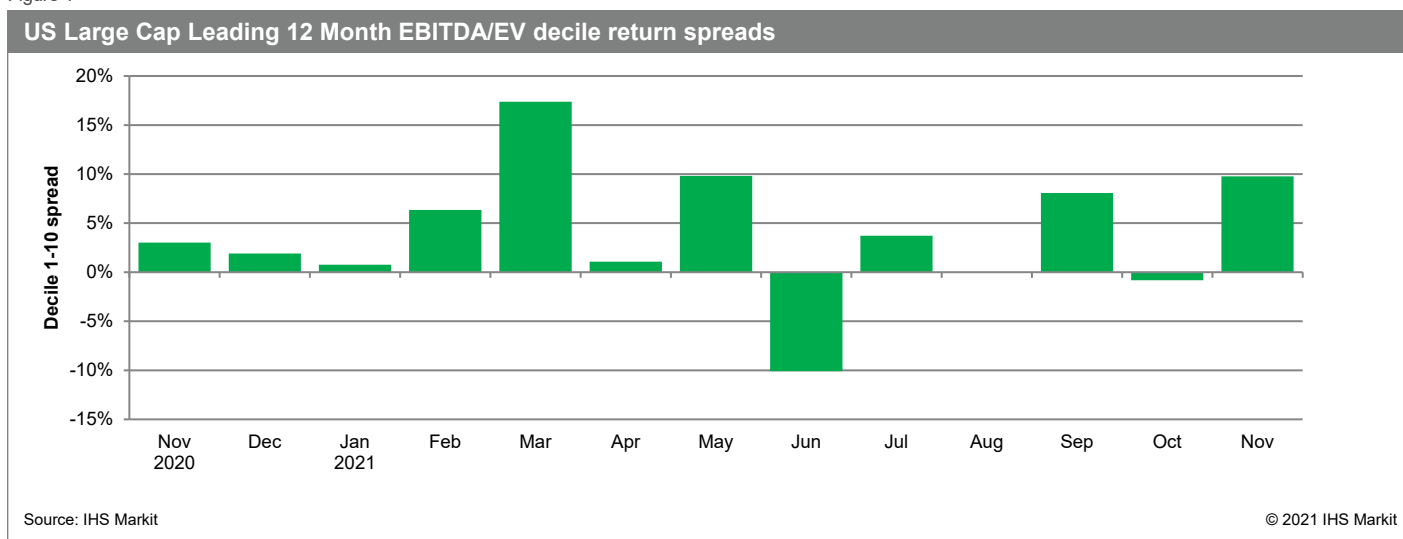


Table 3

US Large Cap bottom decile return spread factor performance, Nov 2021

Factor	Decile spread (%)	Factor group
Oil Prices Sensitivity	-6.30	Macro
Implied Volatility	-6.13	Liquidity, Risk & Size
Acquisition Multiple	-6.08	Deep Value
Cash-to-Price	-5.58	Deep Value
Inventory-to-Total Assets	-5.31	Management Quality
Flow Ratio	-5.14	Liquidity, Risk & Size
14 Day Relative Strength Index	-5.14	Price Momentum
Slope of 3-yr TTM Oper Cash Flow Trend Line	-4.86	Historical Growth
Slope of 3-yr TTM Cash Flow Trend Line	-4.73	Historical Growth
Cash to Enterprise Value	-4.69	Deep Value

Source: IHS Markit

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US Small Cap

Small cap top performing factors in November (Table 4) were led by Management Quality measures, with Return on Assets (14.70%) taking the top spot. This factor has had a solid run since March (Figure 2), locking in an average spread of 5.87% and outperformance in all but two months. As with large caps, one of the weakest performing factors (Table 5) was Implied Volatility (-10.16%), while Natural Logarithm of Closing Price (-11.02%) and Natural Logarithm of Market Capitalization (-8.06%) also underperformed, suggesting that small and micro caps were strongly disfavored in November.

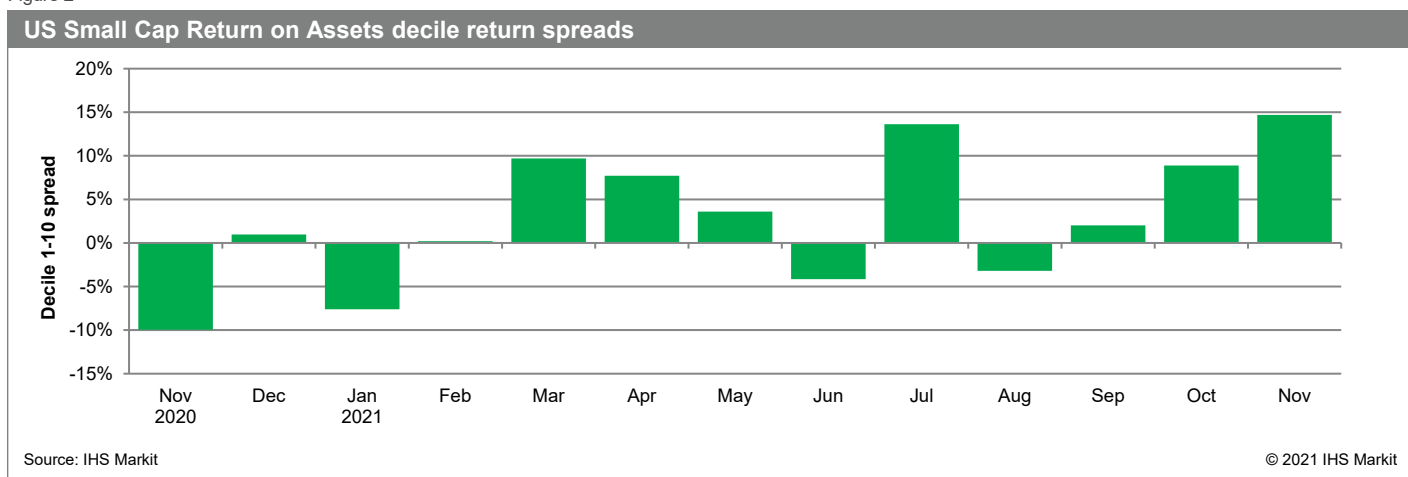
Table 4

US Small Cap top decile return spread factor performance, Nov 2021		
Factor	Decile spread (%)	Factor group
Return on Assets	14.70	Management Quality
Pretax Return on Net Operating Assets	14.63	Management Quality
Slope of 52 Week Price Trend Line	13.54	Price Momentum
Natural Logarithm of TTM Sales	13.53	Liquidity, Risk & Size
Cash Flow Return on Invested Capital	13.03	Management Quality
Operating Cash Flow to Assets	13.02	Management Quality
Retained Earnings-to-Total Assets	12.95	Management Quality
EBITDA-to-Debt	12.94	Liquidity, Risk & Size
Distress Measure	12.93	Liquidity, Risk & Size
3-yr MAD of TTM Net Income	12.88	Liquidity, Risk & Size
Profitability Ratio	12.83	Management Quality
1-Year Price Momentum Indicator	12.72	Price Momentum
TTM Operating Income to Enterprise Value	12.67	Deep Value
Current Earnings Yield	11.92	Deep Value
15/36 Week Stock Price Ratio	11.72	Price Momentum

Source: IHS Markit

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Figure 2



Source: IHS Markit

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Table 5

US Small Cap bottom decile return spread factor performance, Nov 2021		
Factor	Decile spread (%)	Factor group
Natural Logarithm of Closing Price	-11.02	Liquidity, Risk & Size
Implied Volatility	-10.16	Liquidity, Risk & Size
Advertising Intensity	-9.91	Management Quality
Average Monthly Trading Volume-to-Market Cap	-9.59	Liquidity, Risk & Size
Ohlson Bankruptcy Score	-8.85	Liquidity, Risk & Size
60-Month Active Return with 1-Month Lag	-8.81	Price Momentum
5-yr Relative TTM Sales-to-Price	-8.43	Relative Value
Cash to Enterprise Value	-8.14	Deep Value
Natural Logarithm of Market Capitalization	-8.06	Liquidity, Risk & Size
Attention Span Ratio	-7.60	Management Quality

Source: IHS Markit

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Europe

Eurozone manufacturing sector growth stabilized in November following a four-month slowdown, with the PMI registering at 58.4 (October PMI: 58.3), as factories battled with harsh supply headwinds and output price inflation hit a fresh record. Italy was the top performer and Greece registered one of its fastest expansions on record, while elsewhere growth rates tended to slow compared with that seen earlier in 2021. European shares extended October's strong gains into November, before reeling in the second half of the month on the discovery of the omicron variant.

As with US markets, Management Quality measures were prevalent on the list of top performing factors in November (Table 6), led by Net Income per Employee (7.94%) and NOPAT Margin (7.17%). However, 24-Month Active Return with 1-Month Lag (7.13%) also captured a second month of outperformance for high momentum shares (Figure 3). On the other hand, long-term price reversal metrics were highly disfavored for the month (Table 7), including factors such as 36-Month Active Return with 1-Month Lag (-6.96%).

Table 6

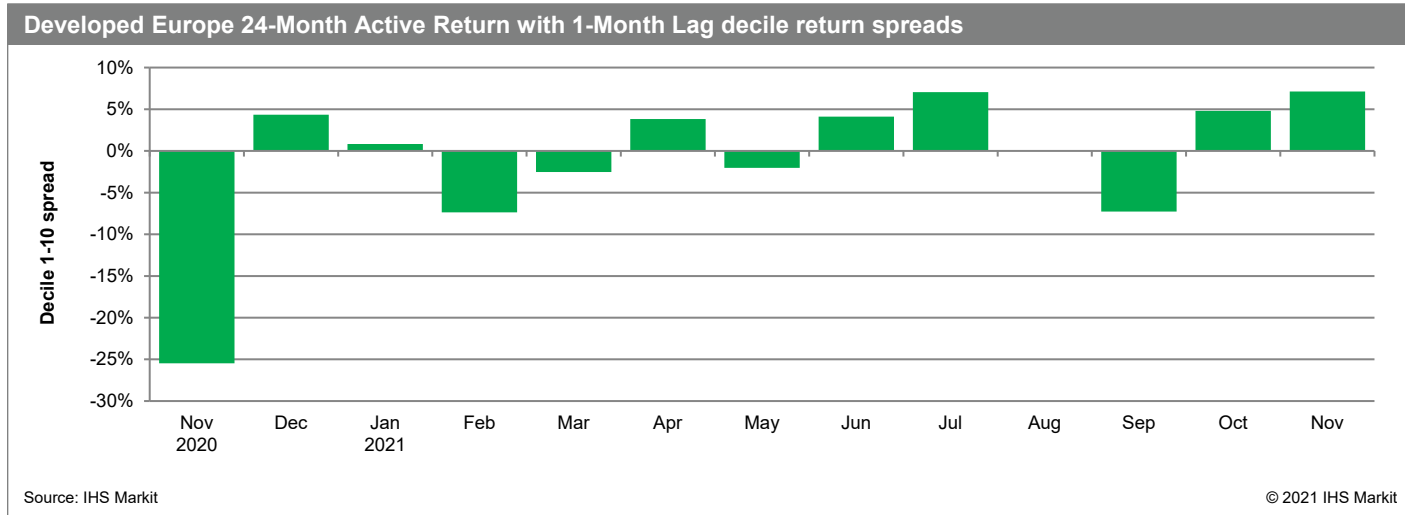
Developed Europe top decile return spread factor performance, Nov 2021

Factor	Decile spread (%)	Factor group
Net Income per Employee	7.94	Management Quality
NOPAT Margin	7.17	Management Quality
24-Month Active Return with 1-Month Lag	7.13	Price Momentum
Return on Assets	6.97	Management Quality
Forward Return on Equity	6.78	Management Quality
Market Cap per Analyst	6.55	Liquidity, Risk & Size
Net Profit Margin	6.53	Management Quality
Cash Flow Return on Invested Capital	6.46	Management Quality
3-yr Growth in TTM Earnings per Share	6.31	Historical Growth
Return on Invested Capital	6.23	Management Quality
Operating Cash Flow Ratio	6.14	Liquidity, Risk & Size
3-yr Change in Price-adj TTM EPS	5.89	Historical Growth
Operating Profit Margin	5.84	Management Quality
Std Dev of FY2 EPS Estimates-to-Price	5.81	Earnings Momentum
Std Dev of FY1 EPS Estimates-to-Price	5.77	Earnings Momentum

Source: IHS Markit

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Figure 3



Source: IHS Markit

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Table 7

Developed Europe bottom decile return spread factor performance, Nov 2021

Factor	Decile spread (%)	Factor group
36-Month Active Return with 1-Month Lag	-6.96	Price Momentum
Oil Prices Sensitivity	-6.94	Macro
3-yr Compound Annual TTM EPS after Extra Items-to-Price Growth Rate	-5.70	Historical Growth
60-Month Active Return with 12-Month Lag	-5.64	Price Momentum
Average Monthly Trading Volume-to-Market Cap	-5.56	Liquidity, Risk & Size
60-Month Active Return with 1-Month Lag	-5.49	Price Momentum
3-yr Compound Annual ROIC Growth	-5.40	Historical Growth
60-Month Alpha	-5.24	Price Momentum
Attention Span Ratio	-5.17	Management Quality
Industrial Production Sensitivity	-5.11	Macro

Source: IHS Markit

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Asia-Pacific

Rates of change in manufacturing operating conditions moved in opposite directions in the two largest Asian economies of China and Japan in November. Japan saw quicker improvement, with the manufacturing PMI rising to 54.5 in November, from 53.2 in October, as output and new orders rose at faster rates, though significant supply chain disruptions intensified price pressures. In China, the manufacturing PMI dipped below the 50.0 neutral mark, to 49.9 in November, from 50.6 in October, as demand conditions softened. Equity markets in both countries also moved in opposite directions, though, in this case, China saw a slight improvement, while shares in Japan tailed off sharply at the end of the month.

In developed markets outside Japan, top performing factors in November (Table 8) represented a broad representation of styles including Unexpected Change in Accounts Receivable (6.22%), Std Dev of FY1 EPS Estimates-to-Price (5.51%) and 15/36 Week Stock Price Ratio (5.21%). At the opposite extreme, factors which lagged for the month (Table 9) were topped by several Deep Value measures such as Leading 12 Month Sales Yield (-6.80%) which turned in its weakest spread since January 2020 (Figure 4).

In Japan, Historical Growth measures were dominant on the list of outperformers in November (Table 10). 3-yr Growth in TTM Cash Flow (7.00%) led the way, recording its highest spread since the dotcom bubble burst (Figure 5). This contrasts with the appearance of 2-Year Ahead Projected EPS Growth (-5.29%) on the laggard board (Table 11), perhaps suggesting that investors turned to realized growth as opposed to projected growth as omicron fears fueled a selloff in stocks.

Table 8

Developed Pacific exJapan top decile return spread factor performance, Nov 2021

Factor	Decile spread (%)	Factor group
6-Month Active Return with 1-Month Lag	6.73	Price Momentum
Unexpected Change in Accounts Receivable	6.22	Earnings Quality
Cash Flow Return on Invested Capital	6.08	Management Quality
Average Payable Period	5.60	Management Quality
Std Dev of FY1 EPS Estimates-to-Price	5.51	Earnings Momentum
3 Year Change in Gross Profit to Assets	5.39	Management Quality
5-Year Dividend Growth Rate	5.37	Historical Growth
15/36 Week Stock Price Ratio	5.21	Price Momentum
60-Month Beta	5.15	Liquidity, Risk & Size
Cash Flow Leverage	5.14	Liquidity, Risk & Size
Fama-French Momentum	4.78	Price Momentum
Return on Invested Capital	4.63	Management Quality
Yearly TTM Total Sales Growth Rate	4.57	Historical Growth
30-75 Week Stock Price Ratio	4.56	Price Momentum
Product of Beta and Sigma	4.55	Liquidity, Risk & Size

Source: IHS Markit

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Table 9

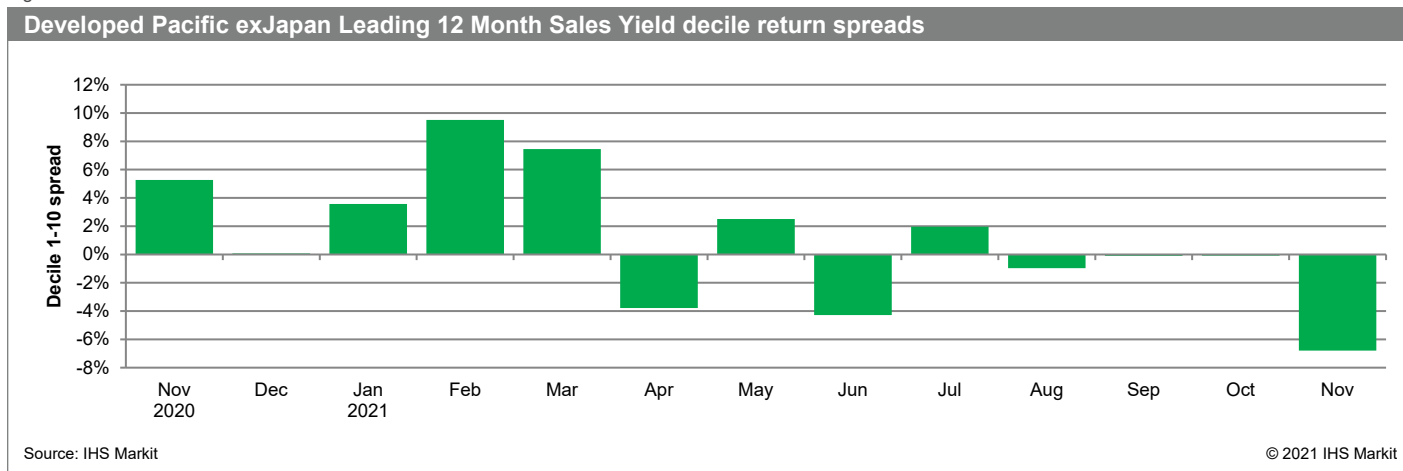
Developed Pacific exJapan bottom decile return spread factor performance, Nov 2021

Factor	Decile spread (%)	Factor group
Leading 12 Month Sales Yield	-6.80	Deep Value
Time Weighted Sales Yield	-6.54	Deep Value
Leading 12 Month Book Yield	-5.97	Deep Value
Natural Logarithm of TTM Sales	-5.89	Liquidity, Risk & Size
Time Weighted Cash Yield	-5.68	Deep Value
36-Month Active Return with 1-Month Lag	-5.59	Price Momentum
60-Month Alpha	-5.58	Price Momentum
Working Capital-to-Total Assets	-5.44	Management Quality
Change in Inventory to Average Assets	-5.31	Management Quality
Time Weighted Book Yield	-5.22	Deep Value

Source: IHS Markit

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Figure 4



Source: IHS Markit

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Table 10

Japan Standard Cap top decile return spread factor performance, Nov 2021		
Factor	Decile spread (%)	Factor group
Change in QTR SG&A Expenses vs. Sales	7.10	Earnings Quality
3-yr Growth in TTM Cash Flow	7.00	Historical Growth
3-yr Growth in TTM Earnings per Share	6.90	Historical Growth
Reinvestment Rate	6.68	Historical Growth
Yearly TTM Total Sales Growth Rate	6.67	Historical Growth
Net Income per Employee	6.55	Management Quality
Return on Assets	6.45	Management Quality
Slope of 66 Week Price Trend Line	6.44	Price Momentum
Sustainable Growth Rate	6.37	Historical Growth
Return on Equity	6.31	Management Quality
Profitability Ratio	6.19	Management Quality
24-Month Active Return with 1-Month Lag	6.06	Price Momentum
Slope of 52 Week Price Trend Line	5.48	Price Momentum
1-yr Growth in TTM Earnings per Share	5.42	Historical Growth
1-yr Change in Assets-adj TTM EPS	5.39	Historical Growth

Source: IHS Markit

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Figure 5

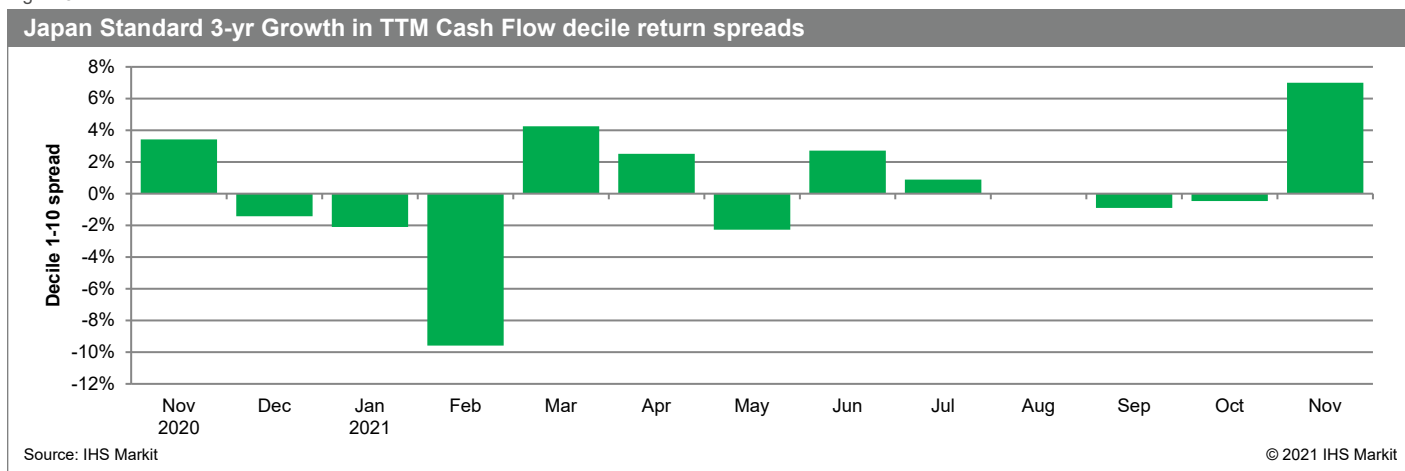


Table 11

Japan Standard Cap bottom decile return spread factor performance, Nov 2021		
Factor	Decile spread (%)	Factor group
Slope of 5-yr TTM EPS Trend Line	-6.93	Historical Growth
1-yr Change in Total Assets	-6.58	Historical Growth
3-yr Compound Annual ROIC Growth	-5.73	Historical Growth
Quick Ratio	-5.35	Liquidity, Risk & Size
2-Year Projected EPS Growth	-5.29	Earnings Momentum
3-Month Active Return	-5.24	Price Momentum
Stock Illiquidity	-5.19	Liquidity, Risk & Size
Change in Inventory to Average Assets	-5.15	Management Quality
Current Liabilities-to-Price	-4.88	Liquidity, Risk & Size
Cash-to-Sales	-4.83	Management Quality

Source: IHS Markit

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Emerging Markets

We cap off the report with a review of top (Table 12) and bottom (Table 13) performing factors in emerging markets in November. Measures of corporate fundamentals occupied the leaderboard, led by TTM Growth Flow-to-Price (5.04%) which reached its highest spread since January 2019 (Figure 6). Conversely, several Historical Growth measures trailed for the month, including 1-yr Change in Total Assets (-4.53%) and 5-yr Sales Growth (-3.83%).

Table 12

Emerging Markets top quintile return spread factor performance, Nov 2021		
Factor	Decile spread (%)	Factor group
TTM Growth Flow-to-Price	5.04	Deep Value
Cash Flow Return on Invested Capital	4.70	Management Quality
Return on Invested Capital	4.63	Management Quality
TTM EPS after Extra Items-to-Price	4.37	Deep Value
TTM EPS before Extra Items-to-Price	4.34	Deep Value
Return on Equity	4.29	Management Quality
Return on Assets	4.22	Management Quality
TTM Core Earnings-to-Price	4.07	Deep Value
3-yr Growth in TTM Earnings per Share	4.06	Historical Growth
Interest Coverage	4.05	Liquidity, Risk & Size
Profitability Ratio	3.96	Management Quality
3-yr Compound Annual Sales Growth	3.87	Historical Growth
Yearly TTM Total Sales Growth Rate	3.77	Historical Growth
Pretax Return on Net Operating Assets	3.74	Management Quality
3-yr Growth in TTM Cash Flow	3.68	Historical Growth

Source: IHS Markit

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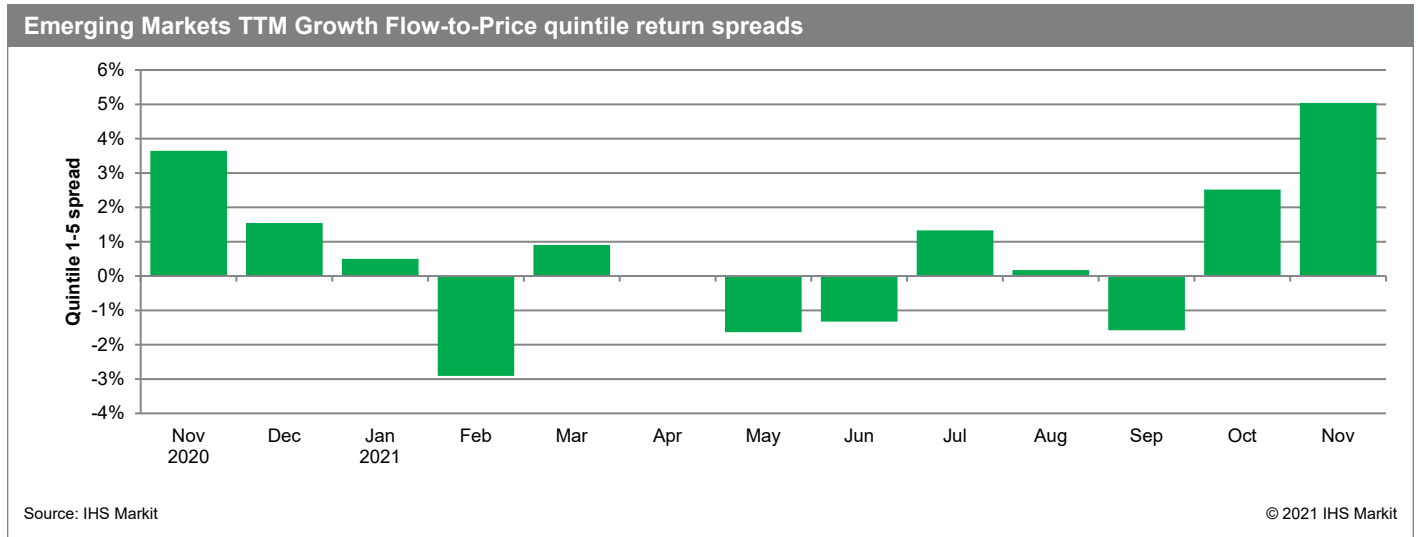
Table 13

Emerging Markets bottom quintile return spread factor performance, Nov 2021		
Factor	Decile spread (%)	Factor group
1-yr Change in Total Assets	-4.53	Historical Growth
Acquisition Multiple	-3.95	Deep Value
5-yr Sales Growth	-3.83	Historical Growth
5-day Industry Relative Return	-3.76	Price Momentum
3-yr Compound Annual ROIC Growth	-3.74	Historical Growth
3-yr Compound Annual TTM EPS after Extra Items-to-Price Growth Rate	-3.51	Historical Growth
Net Current Assets-to-Price	-3.41	Deep Value
Industrial Production Sensitivity	-3.25	Macro
Cash & Equivalents-to-Current Liabilities	-3.11	Liquidity, Risk & Size
60-Month Active Return with 12-Month Lag	-3.00	Price Momentum

Source: IHS Markit

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Figure 6



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