

A rough first quarter for bullish sentiment

March 2022

Research Signals

While news from the Russia-Ukraine conflict occupied headlines throughout the month, varying degrees of investor sentiment and factor performance were seen across regional equity markets (Table 1). Economic data was also mixed, as the J.P.Morgan Global Manufacturing PMI slipped to an 18-month low with positive notes from Europe and North America offset by subdued growth in Asia. Alongside the elevated geopolitical tensions, concerns over higher inflation, central bank interest rate hikes and monetary tightening, stretched global supply chains and renewed COVID-19 outbreaks ultimately contributed to the worst quarter for stocks since the start of the pandemic.

- US: 3-M Revision in FY2 EPS Forecasts was a positive indicator in March, particularly among small caps
- Developed Europe: Investors favored growth and quality signals such as Reinvestment Rate and Working Capital Accruals, respectively
- Developed Pacific: An escalation in risk-on sentiment across the region was captured by 60-Month Beta
- Emerging markets: Earnings and Price Momentum, gauged respectively by 3-M Revision in FY2 EPS Forecasts and Rational Decay Alpha, were successful strategies last month

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Table 1

Global factor quantile return spread (%) performance snapshot, Mar 2022

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		2.09	1.71	-3.35	-1.10	-5.34	-0.56
Forward 12-M EPS-to-Enterprise Value	Deep Value	-2.17	4.16	0.41	3.91	-2.48	0.92
TTM EBITDA-to-Enterprise Value		-1.24	0.54	0.31	2.93	-3.56	1.96
TTM Free Cash Flow-to-Enterprise Value		-1.77	-2.62	-0.13	1.17	-4.01	1.24
Industry Relative Leading 4-QTRs EPS to Price		Relative Value	-0.64	-0.09	-3.20	1.46	-1.67
Industry Relative TTM Dividend Yield	2.35		1.04	-3.75	-2.23	-1.65	-0.83
Fixed Assets Turnover Ratio	Management Quality	-3.44	-6.20	-2.52	-4.84	0.10	-0.81
Inventory Turnover Ratio		2.52	-1.68	-1.85	0.46	-0.65	-0.54
Net Operating Asset Turnover		0.21	-1.29	-2.15	-2.58	-1.63	0.58
Change in Accruals to Assets	Earnings Quality	-0.76	-3.97	-2.18	-3.95	-2.12	-0.21
Change in TTM COGS vs. Inventory Level		-4.96	-2.87	-2.83	0.22	-3.54	-0.78
Change in TTM Sales vs. Accounts Receivable		-1.57	-0.13	-1.06	-1.56	1.75	0.32
Working Capital Accruals		0.25	-1.07	2.49	3.64	2.00	-0.49
1-yr Growth in TTM Free Cash Flow	Historical Growth	2.25	0.29	0.03	1.15	-1.24	0.44
Reinvestment Rate		-2.01	-7.24	1.05	-0.79	0.04	0.61
Average Monthly Trading Volume-to-Market Cap	Liquidity, Risk & Size	4.38	6.31	-1.59	1.23	1.32	1.13
60-Month Beta		1.46	-3.93	1.62	-7.63	-6.12	-2.35
Asset Quality Index		2.70	-1.07	2.12	-0.21	1.18	-0.40
Operating Leverage		0.16	-0.45	-3.25	-1.67	0.95	-0.53
Natural Logarithm of Market Capitalization		1.82	-3.55	-2.63	2.72	-1.45	-0.60
2-Year Ahead EPS Growth	Earnings Momentum	-4.90	2.51	-3.14	-5.13	-1.01	-0.67
3-M Revision in FY2 EPS Forecasts		0.20	2.99	-0.61	6.03	1.83	1.87
Real Earnings Surprise		-3.73	-3.44	0.09	-4.71	-0.36	-0.43
24-Month Value at Risk	Price Momentum	-1.85	-5.36	1.69	-1.40	-6.28	-1.91
5-day Industry Relative Return		-6.13	-9.51	-11.79	-2.68	1.24	1.13
Industry-adjusted 12-month Relative Price Strength		-0.37	-1.26	-1.29	3.75	3.68	2.48
Rational Decay Alpha		1.43	2.48	-0.81	5.35	-1.47	2.85
Demand Supply Ratio	Short Sentiment	-2.94	-3.31	-0.18	-0.95	-0.90	-0.21
Implied Loan Rate		-2.80	-1.38	-1.84	2.15	-2.25	-0.75

Source: IHS Markit

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United States

US Large Cap

Operating conditions in the US manufacturing sector improved sharply in March, with the headline PMI figure rising to 58.8 in March, up from 57.3 in February, supported by faster increases in output and new orders and fewer supply bottlenecks, though costs continued to soar. Stocks also rose in March, though not enough to offset their first losing quarter in two years.

Momentum and quality measures were among the top performing factors for US large caps in February (Table 2). 1-Quarter Ahead EPS Growth (7.25%) took the lead, extending its solid track record during the market’s recent struggles (Figure 1). Quarterly Change in Gross Profit Assets (6.89%) and 6-Month Nominal Change in 12-Month Alpha (4.67%) were other strong performers, while Normalized Earnings Yield (-8.80%) and 2-Month Active Return (-6.83%) were included on the laggard board for the month (Table 3).

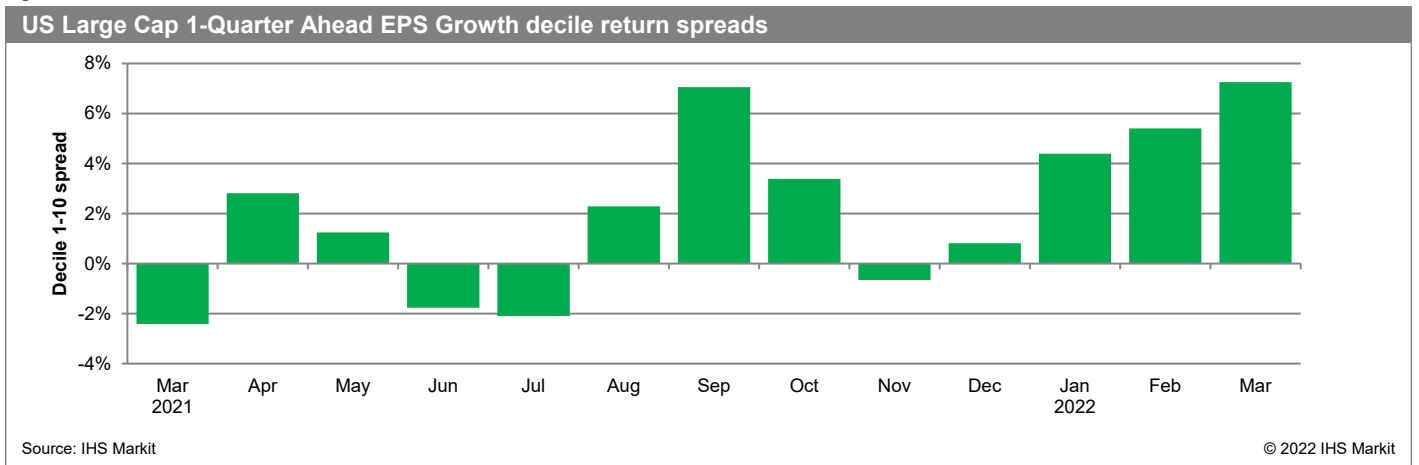
Table 2

US Large Cap top decile return spread factor performance, Mar 2022		
Factor	Decile spread (%)	Factor group
1-Quarter Ahead EPS Growth	7.25	Earnings Momentum
Quarterly Change in Gross Profit to Assets	6.89	Management Quality
Revenue per Employee	6.55	Management Quality
SG&A Expenses-to-Sales	6.31	Management Quality
4-Quarter Sales Acceleration	6.15	Historical Growth
Change in QTR SG&A Expenses vs. Sales	5.18	Earnings Quality
Asset Composition	4.95	Liquidity, Risk & Size
6-Month Nominal Change in 12-Month Alpha	4.67	Price Momentum
26-Week Relative Price Strength	4.42	Price Momentum
Average Monthly Trading Volume-to-Market Cap	4.38	Liquidity, Risk & Size
Year-over-year Change in Leverage	4.35	Liquidity, Risk & Size
Yearly TTM Total Sales Growth Rate	4.30	Historical Growth
Leading 1-Year Regular Dividend Payout	4.23	Dividend Forecast
Street Consensus Rating	4.05	Earnings Momentum
Standardized Unexpected Cash Flow	4.03	Earnings Momentum

Source: IHS Markit

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Figure 1



Source: IHS Markit

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Table 3

US Large Cap bottom decile return spread factor performance, Mar 2022

Factor	Decile spread (%)	Factor group
Normalized Earnings Yield	-8.80	Deep Value
Price Above Last 260-day Lowest Trading Price	-8.18	Price Momentum
60-Month Trading Volume Trend	-7.59	Liquidity, Risk & Size
Capital Expenditure-to-Total Assets	-6.96	Management Quality
1-Year Growth of Quarterly Regular Dividend	-6.85	Historical Growth
2-Month Active Return	-6.83	Price Momentum
Advertising Intensity	-6.44	Management Quality
Cyclically Adjusted Earnings-to-Price	-6.25	Deep Value
5-day Industry Relative Return	-6.13	Price Momentum
Cyclically and Inflation Adjusted Earnings-to-Price	-5.91	Deep Value

Source: IHS Markit

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US Small Cap

A broad selection of themes was represented among the top performing factors for small caps in March (Table 4), including Industrial Production Sensitivity (8.23%) and 1-Quarter Ahead EPS Growth (7.52%). However, the most highly rewarded factor was 1-yr Change in Assets-adj TTM Cash Flow (8.77%), extending its streak as a positive signal with outperformance in all but three months over the past year (Figure 2). Conversely, factors which struggled for the month (Table 5) include Price Above Last 260-day Lowest Trading Price (-11.13%), Housing Starts Sensitivity (-10.19%) and TTM Gross Profit to Assets (-9.06%).

Table 4

US Small Cap top decile return spread factor performance, Mar 2022

Factor	Decile spread (%)	Factor group
1-yr Change in Assets-adj TTM Cash Flow	8.77	Historical Growth
Industrial Production Sensitivity	8.23	Macro
Working Capital-to-Total Assets	7.69	Management Quality
1-Quarter Ahead EPS Growth	7.52	Earnings Momentum
1-yr Change in Assets-adj TTM EPS	7.39	Historical Growth
Asset Composition	7.16	Liquidity, Risk & Size
Change in QTR SG&A Expenses vs. Sales	7.07	Earnings Quality
Averaged Last 6-M EPS Revisions for FY2	6.71	Earnings Momentum
Net Current Assets-to-Price	6.63	Deep Value
60-Month Active Return with 12-Month Lag	6.54	Price Momentum
1-Year Ahead EPS Growth	6.53	Earnings Momentum
Leading 12 Month EBITDA/ EV	6.39	Deep Value
Current Ratio	6.34	Liquidity, Risk & Size
1-yr Change in Price-adj TTM EPS	6.33	Historical Growth
Average Monthly Trading Volume-to-Market Cap	6.31	Liquidity, Risk & Size

Source: IHS Markit

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Figure 2

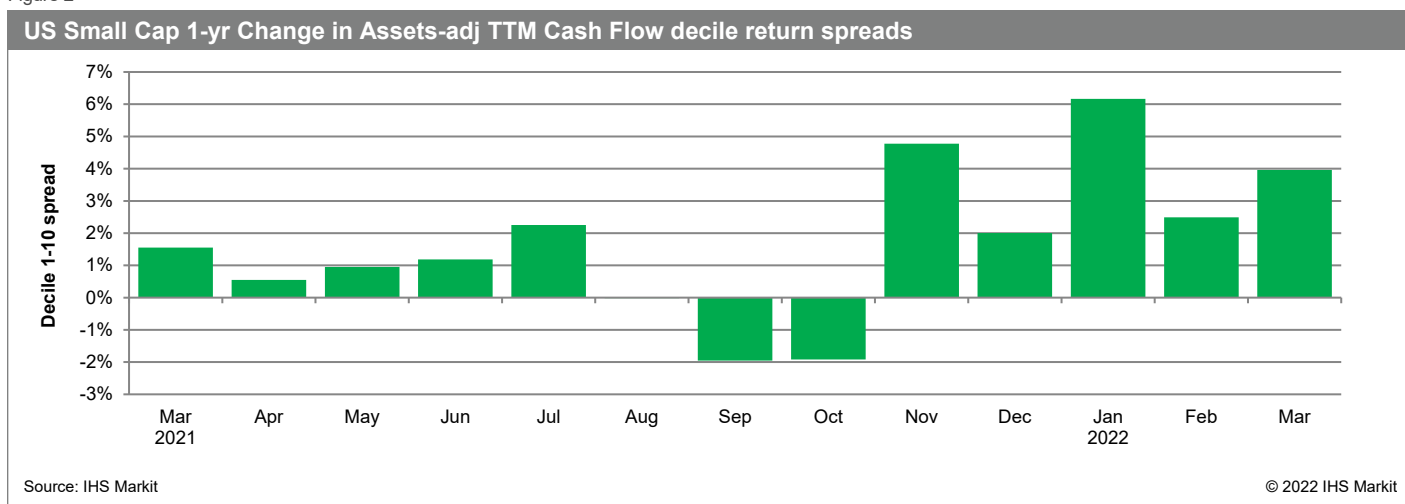


Table 5

Factor	Decile spread (%)	Factor group
Price Above Last 260-day Lowest Trading Price	-11.13	Price Momentum
Housing Starts Sensitivity	-10.19	Macro
5-day Industry Relative Return	-9.51	Price Momentum
TTM Gross Profit to Assets	-9.06	Management Quality
60-Month Trading Volume Trend	-7.85	Liquidity, Risk & Size
Trading Turnover Ratio	-7.65	Liquidity, Risk & Size
14 Day Relative Strength Index	-7.58	Price Momentum
24-Month Residual Return Variance	-7.39	Price Momentum
Reinvestment Rate	-7.24	Historical Growth
Capital Expenditure-to-Total Assets	-7.01	Management Quality

Source: IHS Markit © 2022 IHS Markit

Europe

The Eurozone Manufacturing PMI slid to a 14-month low in March, slumping to 56.5, from 58.4 in February, amid rising inflation and geopolitical tensions. Ireland registered the highest reading, followed by Austria, while rates of expansion slowed in the remaining monitored eurozone constituents. In equity markets, stocks recovered early-March declines, finishing the month flat, though still negative for the year.

Historical Growth and Management Quality styles were key contributors in March (Table 6), including 3 Year Change in Gross Profit Margin (5.18%), whose distribution of decile returns (Figure 3) reveals a concentrated investor preference for the highest quality (Decile 1) names. On the other hand, Deep Value measures joined short term price reversal metrics on the list of weakest performers for the month (Table 7), including 5-day Industry Relative Return (-11.79%), which resided at the furthest extreme, and TTM Sales-to-Price (-5.42%).

Table 6

Developed Europe top decile return spread factor performance, Mar 2022		
Factor	Decile spread (%)	Factor group
Market Cap per Analyst	5.36	Liquidity, Risk & Size
3-yr Change in Assets-adj TTM Oper Cash Flow	5.28	Historical Growth
3 Year Change in Gross Profit Margin	5.18	Management Quality
3-yr Change in Assets-adj TTM Cash Flow	5.17	Historical Growth
3-yr Change in Assets-adj TTM EPS	4.70	Historical Growth
3-yr Chg in Assets-adj TTM Free Cash Flow	4.05	Historical Growth
3 Year Change in Gross Profit to Assets	3.99	Management Quality
5-Year Dividend Growth Rate	3.87	Historical Growth
Debt to Market Cap	3.81	Liquidity, Risk & Size
3-yr Change in Price-adj TTM EPS	3.70	Historical Growth
Operating Cash Flow Ratio	3.70	Liquidity, Risk & Size
Return on Assets	3.39	Management Quality
Slope of 52 Week Price Trend Line	3.30	Price Momentum
R Sqr of 5-yr TTM EPS Trend Line	3.29	Historical Growth
52-Week High	3.17	Price Momentum

Source: IHS Markit

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Figure 3

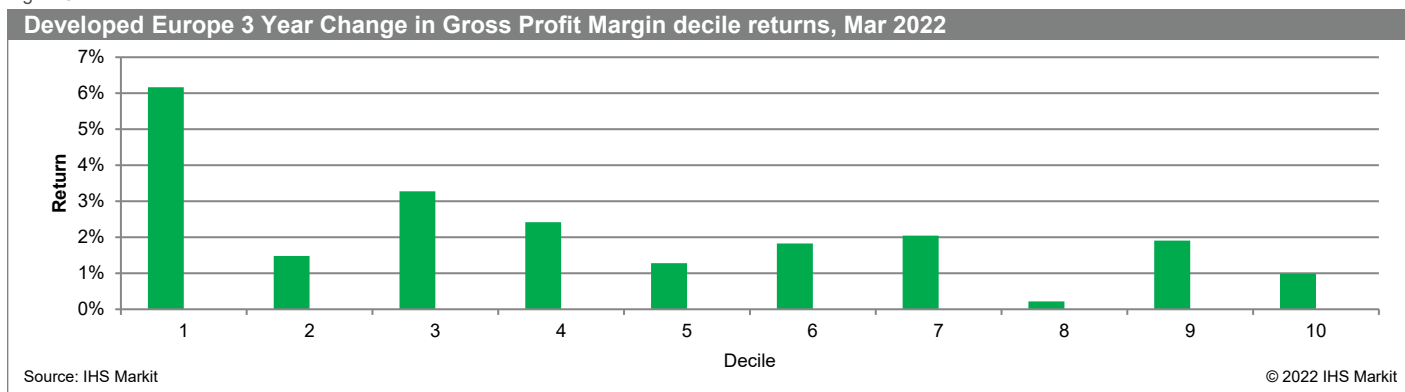


Table 7

Developed Europe bottom decile return spread factor performance, Mar 2022		
Factor	Decile spread (%)	Factor group
5-day Industry Relative Return	-11.79	Price Momentum
14 Day Relative Strength Index	-8.47	Price Momentum
1-Month Active Return	-7.94	Price Momentum
Price Above Last 260-day Lowest Trading Price	-7.32	Price Momentum
60-Month Alpha	-5.93	Price Momentum
Natural Logarithm of TTM Sales (USD)	-5.64	Liquidity, Risk & Size
TTM Sales-to-Price	-5.42	Deep Value
Cash-to-Price	-5.19	Deep Value
Current Liabilities-to-Price	-5.12	Liquidity, Risk & Size
Normalized Earnings Yield	-4.96	Deep Value

Source: IHS Markit

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Asia-Pacific

Renewed lockdown restrictions to contain the spread of the latest wave of COVID-19 in China dampened manufacturing operating conditions in the two largest Asian economies of China and Japan in March. In China, the tighter restrictions weighed heavily on the manufacturing PMI, which returned to contraction territory at 48.1 in March, down from 50.4 in February. However, while total new order growth was held back in Japan by a solid reduction in export sales, the headline PMI still rose from 52.7 in February to 54.1 in March. By the same token, equity markets in both countries moved in opposite directions last month, with China suffering deep losses while Japan's rebound extended beyond their early-month losses.

Price Momentum was a prominent theme among the key contributors in developed Pacific markets outside Japan in March (Table 8). 39-Week Return with 4-week Lag (9.75%) was the lead measure, posting its highest spreads over the past year in three of the last four months (Figure 4). Investors' risk-on sentiment was also evident with 60-Month Beta (-7.63%) appearing near the bottom of the spectrum of factor performance for the month (Table 9).

Momentum was also an important theme in Japan in March (Table 10), though, in this case, an Earnings Momentum measure, Time Weighted Earnings Revision Dispersion (5.72%), took top honors, with a marked recovery from its steep decline at the start of the year (Figure 5). At the same time, 60-Month Beta (-6.12%) demonstrated increased risk taking as a bottom performing factor for the month (Table 11), consistent with the broader region.

Table 8

Developed Pacific exJapan top decile return spread factor performance, Mar 2022		
Factor	Decile spread (%)	Factor group
39-Week Return with 4-week Lag	9.75	Price Momentum
Fama-French Momentum	9.29	Price Momentum
1-Year Price Momentum Indicator	9.14	Price Momentum
Second Preceding 6-month Return	8.53	Price Momentum
Time Weighted Earnings Revision	8.08	Earnings Momentum
30-75 Week Stock Price Ratio	7.57	Price Momentum
50-200 Day Stock Price Ratio	7.55	Price Momentum
15/36 Week Stock Price Ratio	7.32	Price Momentum
24-Month Active Return with 1-Month Lag	6.92	Price Momentum
9-Month Active Return with 1-Month Lag	6.82	Price Momentum
Natural Logarithm of Market Capitalization (USD)	6.29	Liquidity, Risk & Size
Averaged Last 6-M EPS Revisions for FY2	6.18	Earnings Momentum
1-yr Change in Assets-adj TTM EPS	6.11	Historical Growth
3-M Revision in FY2 EPS Forecasts	6.03	Earnings Momentum
Days to Cover	5.99	Short Sentiment

Source: IHS Markit

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Figure 4

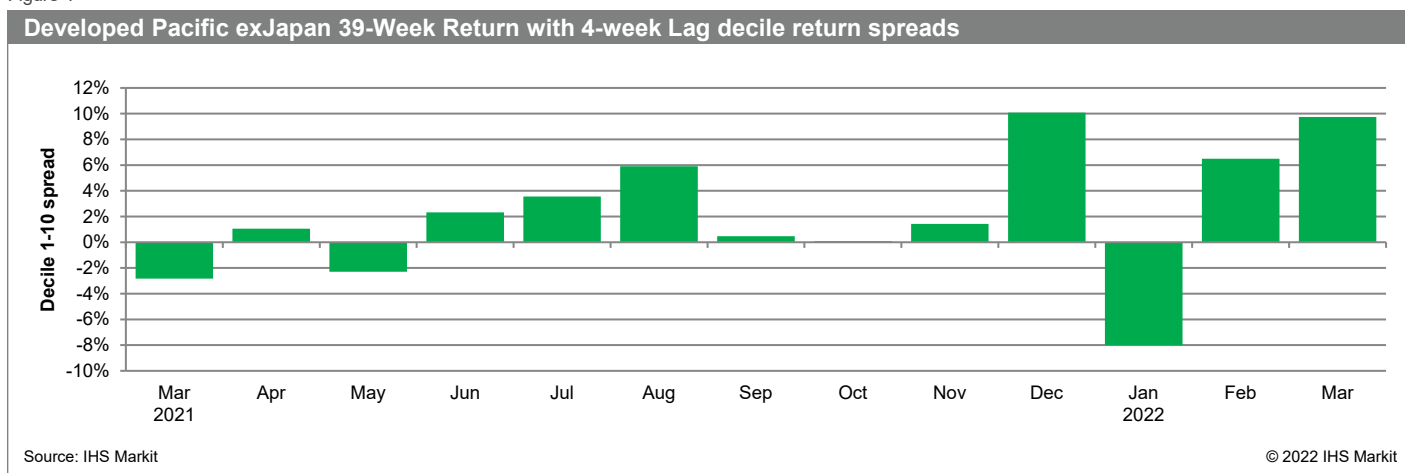


Table 9

Developed Pacific exJapan bottom decile return spread factor performance, Mar 2022

Factor	Decile spread (%)	Factor group
Altman Z Score	-8.05	Liquidity, Risk & Size
60-Month Beta	-7.63	Liquidity, Risk & Size
Trading Turnover Ratio	-7.35	Liquidity, Risk & Size
Average Trading Volume in Preceding 6-month	-6.02	Price Momentum
Inventory Value Concentration	-5.71	Short Sentiment
Market Volatility Sensitivity	-5.61	Macro
Earnings Shortfall	-5.17	Earnings Quality
2-Year Ahead EPS Growth	-5.13	Earnings Momentum
Price Above Last 260-day Lowest Trading Price	-4.97	Price Momentum
Natural Logarithm of Closing Price (USD)	-4.90	Liquidity, Risk & Size

Source: IHS Markit © 2022 IHS Markit

Table 10

Japan Standard Cap top decile return spread factor performance, Mar 2022

Factor	Decile spread (%)	Factor group
Time Weighted Earnings Revision Dispersion	5.72	Earnings Momentum
2-Month Active Return	5.71	Price Momentum
Credit Risk Premium Sensitivity	5.12	Macro
18-Month Active Return with 1-Month Lag	4.60	Price Momentum
Time Weighted Earnings Revision	4.58	Earnings Momentum
North America Sales Exposure	4.51	Macro
Industry-adjusted Doubtful Account Receivables	4.50	Earnings Quality
3-Month Active Return	4.49	Price Momentum
Yearly Change In Gross Profit Margin	4.10	Management Quality
Slope of 66 Week Price Trend Line	3.96	Price Momentum
TTM Capital Expenditures-to-Price	3.94	Deep Value
4-week Industry Relative Return	3.90	Price Momentum
3 Year Change in Gross Profit Margin	3.90	Management Quality
24-Month Active Return with 1-Month Lag	3.82	Price Momentum
Yearly TTM Total Sales Growth Rate	3.77	Historical Growth

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Figure 5

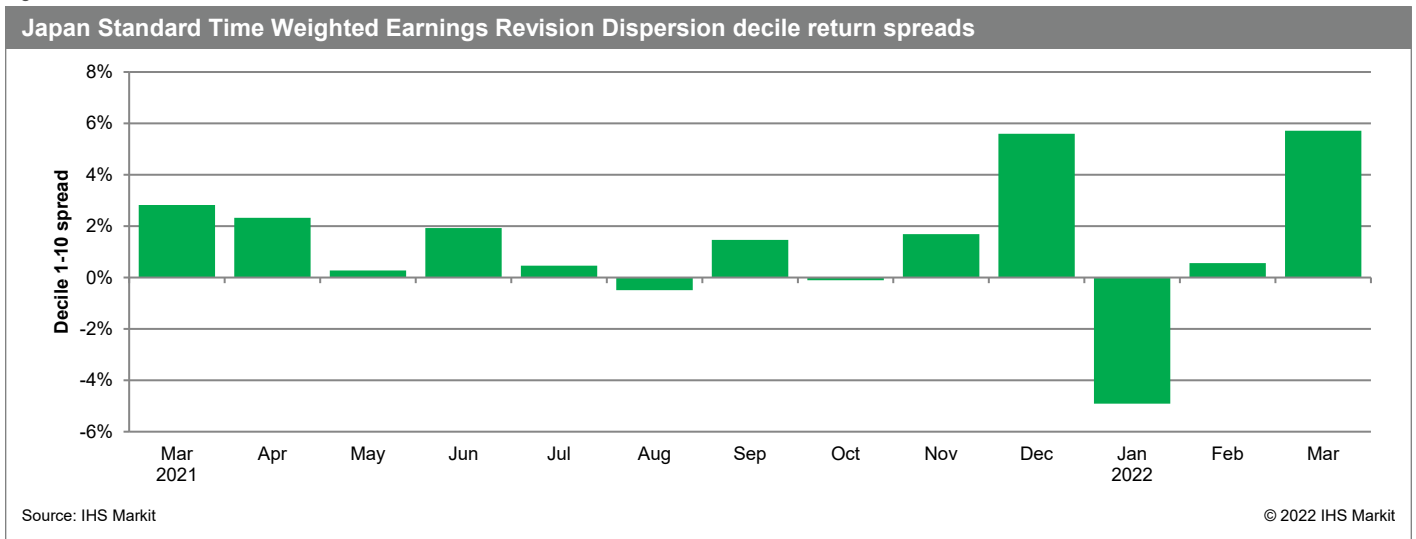


Table 11

Factor	Decile spread (%)	Factor group
1-Month Stock Return Interquartile Range	-8.21	Liquidity, Risk & Size
Trading Turnover Ratio	-8.06	Liquidity, Risk & Size
60-Day Residual Risk	-7.78	Liquidity, Risk & Size
Average Trading Volume in Preceding 6-month	-7.50	Price Momentum
1-Month Realized Stock Return Volatility	-6.65	Liquidity, Risk & Size
CV of Prior 90-Day Closing Prices	-6.43	Price Momentum
Product of Beta and Sigma	-6.40	Liquidity, Risk & Size
24-Month Value at Risk	-6.28	Price Momentum
60-Month Beta	-6.12	Liquidity, Risk & Size
Cash-to-Sales	-6.06	Management Quality

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Emerging Markets

We conclude our review with a look at the top (Table 12) and bottom (Table 13) performing factors in emerging markets in March. Momentum measures ran near the totality of the list of outperformers in March. 1-Year Price Momentum Indicator (3.88%) led the way with a 4.3 percentage point month-on-month improvement in spread performance (Figure 6), while 3-M Revision in FY1 EPS Forecasts: Dispersion Relative (2.89%) topped the Earnings Momentum group. Investors also took on more risk, sending factors such as 60-Day Residual Risk (-3.16%) to the opposite extreme of factor performance.

Table 12

Emerging Markets top quintile return spread factor performance, Mar 2022

Factor	Decile spread (%)	Factor group
1-Year Price Momentum Indicator	3.88	Price Momentum
30-75 Week Stock Price Ratio	3.51	Price Momentum
Second Preceding 6-month Return	3.35	Price Momentum
39-Week Return with 4-week Lag	3.18	Price Momentum
Fama-French Momentum	3.17	Price Momentum
1-yr Change in Sales	3.11	Historical Growth
1-yr Change in Price-adj TTM EPS	3.03	Historical Growth
50-200 Day Stock Price Ratio	2.92	Price Momentum
3-M Revision in FY1 EPS Forecasts: Dispersion Relative	2.89	Earnings Momentum
Slope of 52 Week Price Trend Line	2.88	Price Momentum
Rational Decay Alpha	2.85	Price Momentum
15/36 Week Stock Price Ratio	2.77	Price Momentum
3-M Revision in FY1 EPS Forecasts	2.68	Earnings Momentum
Net # of Revisions for Fiscal Year 1	2.68	Earnings Momentum
Street Revision Magnitude	2.67	Earnings Momentum

Source: IHS Markit

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Figure 6

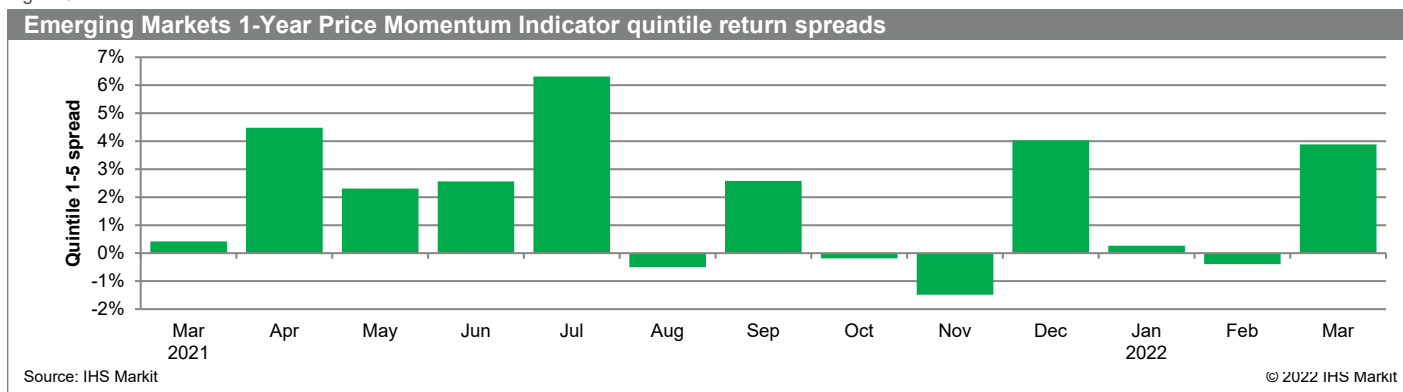


Table 13

Emerging Markets bottom quintile return spread factor performance, Mar 2022

Factor	Decile spread (%)	Factor group
Trading Turnover Ratio	-3.57	Liquidity, Risk & Size
Average Trading Volume in Preceding 6-month	-3.38	Price Momentum
20-Day Volume Volatility to Price Volatility	-3.33	Liquidity, Risk & Size
60-Day Residual Risk	-3.16	Liquidity, Risk & Size
Price Above Last 260-day Lowest Trading Price	-3.14	Price Momentum
US Dollar Value Sensitivity	-3.00	Macro
CV of Prior 90-Day Closing Prices	-2.91	Price Momentum
Product of Beta and Sigma	-2.90	Liquidity, Risk & Size
4-Year Change in the Average Trading Volume	-2.86	Price Momentum
5-yr Relative Book-to-Market	-2.70	Relative Value

Source: IHS Markit

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