

Hedging the corporate profit cycle

February 2019

Research Signals

The global manufacturing sector eased to a 32-month low, according to the February J.P.Morgan Global Manufacturing PMI, with major economies including the US, the euro area and Japan all slowing. However, partially offsetting the global slowdown was China, whose Shanghai Composite moved from being the worst performer last year to the best at the start of this year. In turn, while high beta stocks initially led the market rebound off December's low, high quality took over as a much more prominent theme in February (Table 1), perhaps as investors postured for a maturing business cycle and as major markets showed signs of having already priced in optimism toward the end of February.

- US: High quality names were juxtaposed with high momentum stocks to lead large caps higher in February, as captured by factors including Net Operating Asset Turnover Ratio and Rational Decay Alpha, respectively
- Developed Europe: Strong corporate fundamentals were rewarded, with factors such as Fixed Assets Turnover Ratio and Reinvestment Rate among the top performers
- Developed Pacific: High momentum (e.g., Rational Decay Alpha) and high quality (e.g., Fixed Assets Turnover Ratio) stocks outperformed, while the Book-to-Market factor struggled in Japan
- Emerging markets: Small cap stocks gauged by Natural Logarithm of Market Capitalization led markets higher, along with undervalued names measured by Forward 12-M EPS-to-Enterprise Value

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Table 1

Global factor quantile return spread performance snapshot, Feb 2019

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		-3.96	-2.63	-0.46	-5.17	-5.64	0.40
Forward 12-M EPS-to-Enterprise Value	Deep Value	-1.71	-5.48	1.16	0.27	-1.38	0.82
TTM EBITDA-to-Enterprise Value		-6.42	-6.15	-2.83	-0.82	-1.49	0.53
TTM Free Cash Flow-to-Enterprise Value		1.91	-3.47	0.34	0.71	1.17	-0.16
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	-2.30	-1.49	0.21	-1.51	-2.40	0.22
Industry Relative TTM Dividend Yield		-1.02	-0.33	-0.12	-0.39	-0.41	1.03
Fixed Assets Turnover Ratio		3.22	0.95	3.89	3.50	3.86	1.40
Inventory Turnover Ratio	Management Quality	-0.03	-1.44	-0.13	2.76	2.33	-0.19
Net Operating Asset Turnover		2.96	-3.72	0.89	0.65	2.66	1.35
Change in Accruals to Assets		-0.91	-3.68	-0.45	-1.03	-0.44	-0.47
Change in TTM COGS vs. Inventory Level	Earnings Quality	-1.89	0.91	-0.02	-3.47	-0.45	-0.54
Change in TTM Sales vs. Accounts Receivable		0.87	-3.03	1.28	1.71	0.28	-0.32
Working Capital Accruals		0.47	1.37	1.24	1.59	-2.41	-1.58
1-yr Growth in TTM Free Cash Flow	Historical Growth	2.02	-0.85	-0.03	-1.58	1.42	-0.40
Reinvestment Rate		2.09	-4.61	1.54	1.32	2.25	-0.65
Average Monthly Trading Volume-to-Market Cap		-1.85	2.33	-2.22	4.04	-0.14	3.93
60-Month Beta	Liquidity, Risk & Size	-1.48	-3.91	-2.13	-3.46	-0.06	-1.43
Asset Quality Index		0.54	-0.08	1.28	-1.15	0.52	0.47
Operating Leverage		-0.11	-1.37	-0.75	1.20	1.32	-0.22
Natural Logarithm of Market Capitalization		-0.43	4.30	-2.42	3.73	1.94	4.26
2-Year Ahead EPS Growth		1.01	4.53	0.39	0.82	1.07	-0.60
3-M Revision in FY2 EPS Forecasts	Earnings Momentum	0.59	-0.39	-2.01	-1.60	0.45	-1.45
Real Earnings Surprise		-0.61	1.27	-0.94	1.78	0.79	0.82
24-Month Value at Risk		-0.11	-7.02	-0.11	-2.01	-3.14	-1.55
5-day Industry Relative Return		0.16	2.38	1.22	1.04	-1.31	-0.51
Industry-adjusted 12-month Relative Price Strength	Price Momentum	2.06	-1.92	-0.82	-2.04	0.58	-0.51
Rational Decay Alpha		2.76	-0.51	-1.29	-1.37	3.47	1.46
Demand Supply Ratio	Short Sentiment	-2.61	-1.70	-0.92	-0.48	-0.85	-4.74
Implied Loan Rate		-1.22	-1.88	0.63	1.74	-0.74	-5.01

Source: IHS Markit

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United States

US Large Cap

The US manufacturing PMI dipped to an 18-month low in February amid slower expansions in output and new orders. The headline figure posted at 53.0 in February, down from 54.9 at the start of the year, though still signalling solid improvement in operating conditions across the manufacturing sector. While exports remained the principal drag on order books and concerns regarding the impact of tariffs and trade wars weighed on business confidence, equity investors extended January gains on optimism for a dovish Federal Reserve and strong economic growth, though prices leveled off at the close of the month.

High quality stocks led the second leg of the new-year rally, as captured by the top factor performers in the US Large Cap universe in February (Table 2). Leaders included factors such as Operating Liability Leverage (4.88%) and Forward Return on Equity (4.04%). Firms with low debt were also juxtaposed with high momentum stocks as market leaders for the month (Figure 1). At the opposite extreme (Table 3), undervalued names lagged, dragging down performance of factors including TTM EBITDA-to-Enterprise Value (-6.42%) and TTM Cash Flow-to-Price (-6.00%).

Table 2

US Large Cap top decile return spread factor performance, Feb 2019

Factor	Decile spread (%)	Factor group
Debt to Market Cap	5.99	Liquidity, Risk & Size
Attention Span Ratio	5.49	Management Quality
Operating Liability Leverage	4.88	Management Quality
24-Month Active Return with 1-Month Lag	4.69	Price Momentum
Asia-Pacific Sales Exposure	4.28	Macro
Std Dev of FY1 EPS Estimates-to-Price	4.27	Earnings Momentum
TTM Capital Expenditures-to-Price	4.24	Deep Value
Forward Return on Equity	4.04	Management Quality
R-Sqr of 3-yr TTM Sales Trend Line	3.95	Historical Growth
Std Dev of FY2 EPS Estimates-to-Price	3.86	Earnings Momentum
Net Debt to EBITDA	3.78	Management Quality
Inventory Value Concentration	3.58	Short Sentiment
EMEA Sales Exposure	3.57	Macro
Short Concentration Ratio	3.57	Short Sentiment
3-yr Growth in TTM Free Cash Flow	3.47	Historical Growth

Source: IHS Markit

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Figure 1

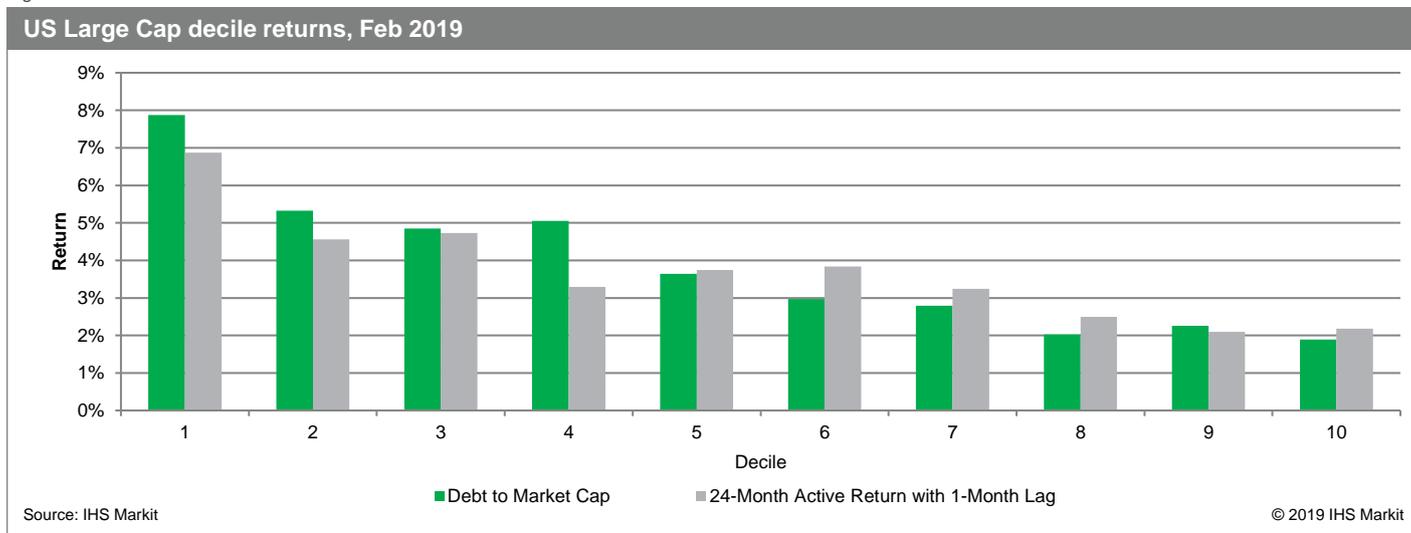


Table 3

Factor	Decile spread (%)	Factor group
Current Ratio	-6.71	Liquidity, Risk & Size
TTM EBITDA-to-Enterprise Value	-6.42	Deep Value
Net Cash to Equity	-6.41	Liquidity, Risk & Size
Altman Z Score	-6.40	Liquidity, Risk & Size
TTM EBITDA-to-Price	-6.34	Deep Value
Asset Composition	-6.21	Liquidity, Risk & Size
Leading 12 Month EBITDA/ EV	-6.07	Deep Value
TTM Cash Flow-to-Price	-6.00	Deep Value
Current Liabilities-to-Price	-5.93	Liquidity, Risk & Size
Net Debt Ratio	-5.77	Management Quality

Source: IHS Markit © 2019 IHS Markit

US Small Cap

Small cap factor performance diverged from large caps among both the leader (Table 4) and laggard (Table 5) boards in February. Management Quality measures such as Attention Span Ratio (8.09%) outperformed, while sales-based measures, led by Operating Profit Margin (-8.60%), underperformed. A handful of valuation factors were also strong performers, as gauged by indicators including Cash-to-Price (8.45%) and 36-Month Active Return with 1-Month Lag (5.35%), a long-term price reversal metric. Lastly, the smallest market cap group (9.26%), measured by Natural Logarithm of Market Capitalization (Figure 2), outperformed as small caps extended their year-to-date lead over large caps.

Table 4

US Small Cap top decile return spread factor performance, Feb 2019		
Factor	Decile spread (%)	Factor group
Cash-to-Price	8.45	Deep Value
Cash to Enterprise Value	8.19	Deep Value
Attention Span Ratio	8.09	Management Quality
Advertising Intensity	7.51	Management Quality
Operating Liability Leverage	7.46	Management Quality
Ohlson Bankruptcy Score	5.83	Liquidity, Risk & Size
3-yr Compound Annual Operating Profit Margin	5.82	Historical Growth
Earnings Shortfall	5.49	Earnings Quality
36-Month Active Return with 1-Month Lag	5.35	Price Momentum
60-Month Alpha	4.75	Price Momentum
On Loan Value Concentration	4.57	Short Sentiment
14 Day Relative Strength Index	4.55	Price Momentum
2-Year Ahead EPS Growth	4.53	Earnings Momentum
Natural Logarithm of Market Capitalization	4.30	Liquidity, Risk & Size
1-Year Ahead EPS Growth	3.72	Earnings Momentum

Source: IHS Markit

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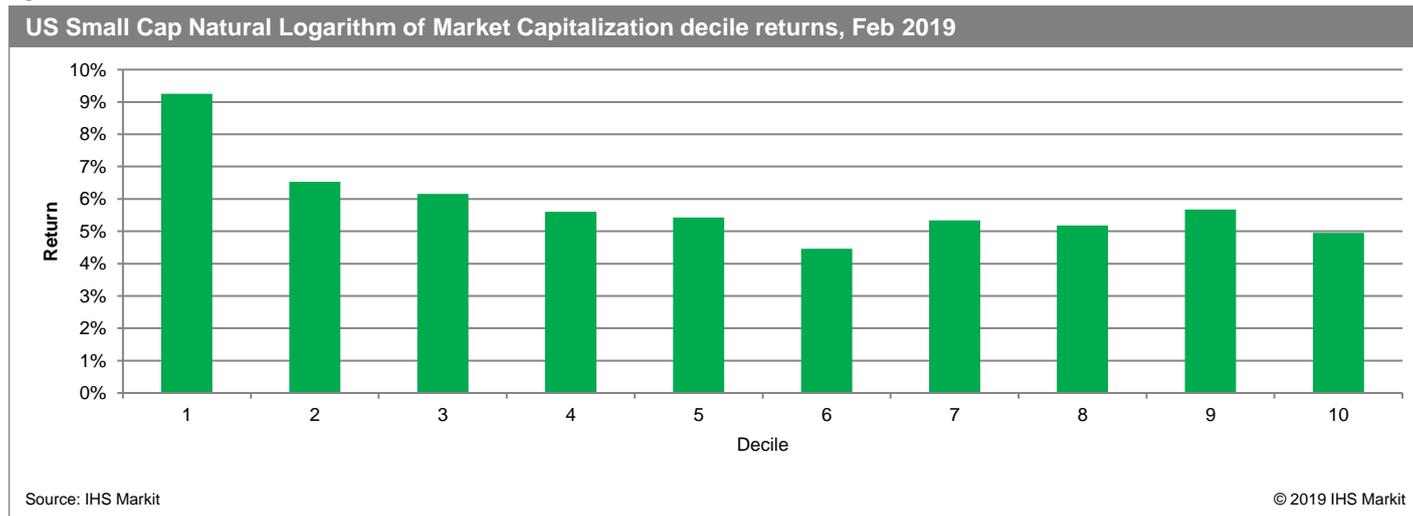
Table 5

US Small Cap bottom decile return spread factor performance, Feb 2019		
Factor	Decile spread (%)	Factor group
Operating Profit Margin	-8.60	Management Quality
Operating Cash Flow Profit Margin	-8.13	Management Quality
1-Month Realized Stock Return Volatility	-8.02	Liquidity, Risk & Size
Quick Ratio	-7.52	Liquidity, Risk & Size
SG&A Expenses-to-Sales	-7.45	Management Quality
Current Ratio	-7.36	Liquidity, Risk & Size
60-Day Residual Risk	-7.33	Liquidity, Risk & Size
Distress Measure	-7.29	Liquidity, Risk & Size
52-Week High	-7.28	Price Momentum
Asset Composition	-7.24	Liquidity, Risk & Size

Source: IHS Markit

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Figure 2



Source: IHS Markit

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Europe

The eurozone manufacturing sector moved into contraction territory in February for the first time since June 2013. The PMI posted at 49.3 in February, down from 50.5 in January, on concurrent declines in output and new orders. The weakest performers were Germany and Italy, while Greece and Ireland were the only two countries to record stronger PMI readings. Worries over domestic political and international trade developments continued to weigh on expectations; however, stock investors remained more sanguine as European equities followed other global markets higher in February on positive Chinese economic data and optimism on its impact on global growth.

Corporate fundamentals were key drivers of performance in European markets in February (Table 6). Fixed Assets Turnover Ratio (3.89%) was the top performer, a sharp turnaround from the prior 12 months in which spreads averaged just -0.94%. Beyond Management Quality measures, Historical Growth and Liquidity, Risk & Size also captured a similar theme represented by factors such as 3-yr Change in Price-adj TTM Cash Flow (3.27%) and Interest Coverage (2.60%), respectively. Conversely, Deep Value and Price Momentum indicators were among the worst performing factors for the month (Table 7), including TTM EBITDA-to-Enterprise Value (-2.83%) and 1-Year Price Momentum Indicator (-2.49%), respectively.

Table 6

Developed Europe top decile return spread factor performance, Feb 2019

Factor	Decile spread (%)	Factor group
Fixed Assets Turnover Ratio	3.89	Management Quality
3-yr Change in Price-adj TTM Cash Flow	3.27	Historical Growth
Return on Assets	3.15	Management Quality
Yield Curve Slope Sensitivity	3.02	Macro
Return on Equity	3.02	Management Quality
TTM Gross Profit to Assets	2.87	Management Quality
Capital Expenditures to Depreciation Linkage	2.85	Management Quality
3-yr Change in Price-adj TTM EPS	2.82	Historical Growth
TTM Capital Expenditures-to-Sales	2.80	Management Quality
Return on Invested Capital	2.73	Management Quality
Interest Coverage	2.60	Liquidity, Risk & Size
Year-over-year Change in Leverage	2.54	Liquidity, Risk & Size
5-Year Dividend Growth Rate	2.53	Historical Growth
R Sqr of 5-yr TTM EPS Trend Line	2.52	Historical Growth
Forward Free Cash Flow-to-Price	2.50	Deep Value

Source: IHS Markit

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Figure 3

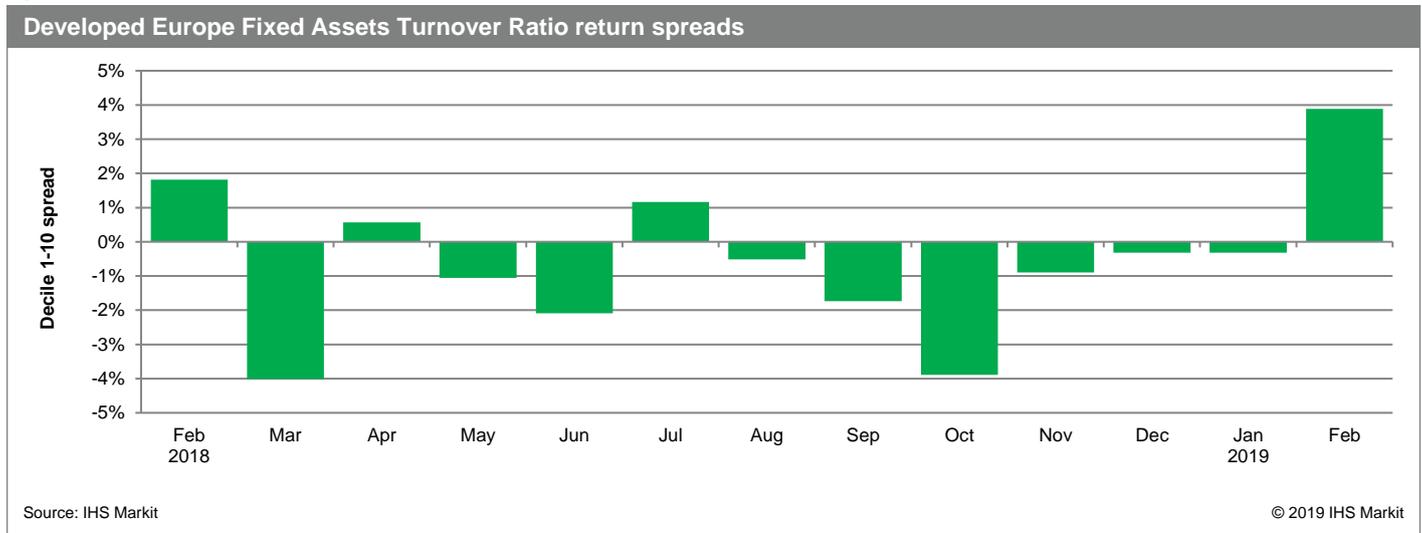


Table 7

Developed Europe bottom decile return spread factor performance, Feb 2019

Factor	Decile spread (%)	Factor group
Working Capital-to-Total Assets	-4.62	Management Quality
Altman Z Score	-4.49	Liquidity, Risk & Size
Current Liabilities-to-Price	-3.26	Liquidity, Risk & Size
1-Month Stock Return Interquartile Range	-2.98	Liquidity, Risk & Size
Flow Ratio	-2.89	Liquidity, Risk & Size
TTM EBITDA-to-Enterprise Value	-2.83	Deep Value
Leading 1-Year Regular Dividend Payout	-2.75	Dividend Forecast
Net Current Assets-to-Price	-2.67	Deep Value
Current Ratio	-2.52	Liquidity, Risk & Size
1-Year Price Momentum Indicator	-2.49	Price Momentum

Source: IHS Markit © 2019 IHS Markit

Asia-Pacific

Manufacturing sector growth resided in contraction territory in the two largest Asian economies of Japan and China in February. In Japan, the PMI breached the neutral 50.0 mark for the first time since August 2016, registering at 48.9, down from 50.3 in January, on sharper reductions in output and demand. While also in contraction territory, PMI data in China was more stable, posting at 49.9 in February, up from 48.3 in January, as both output and new orders expanded slightly. A more positive outlook on the global trade cycle helped push Asia-Pacific stocks higher, with China the leader for the year after lagging other markets in 2018.

Short-term price reversal metrics remained strong performers in developed Pacific markets outside of Japan in February (Table 8). For example, 2-Month Active Return (5.86%) has posted positive spreads in four of the last five months, with an average spread of 4.83% (Figure 4). The largest capitalization stocks also trailed, as gauged by Natural Logarithm of Market Capitalization (3.73%). At the opposite extreme, measures of total assets and book value underperformed for the month (Table 9) including factors such as Natural Logarithm of Total Assets (-5.44%) and Leading 12 Month Book Yield (-5.29%), respectively.

High momentum and quality stocks outperformed in Japan in February (Table 10). 24-Month Active Return with 1-Month Lag (5.64%) was the top performer, breaking a five-month losing streak with a 7.95 percentage point month-on-month increase in spread (Figure 5). Other outperformers include Return on Assets (3.92%) and Total Coverage (3.66%), while factors that underperformed (Table 11) include several Deep Value measures such as Price-to-Total Assets (-7.02%) and Time Weighted Book Yield (-6.28%).

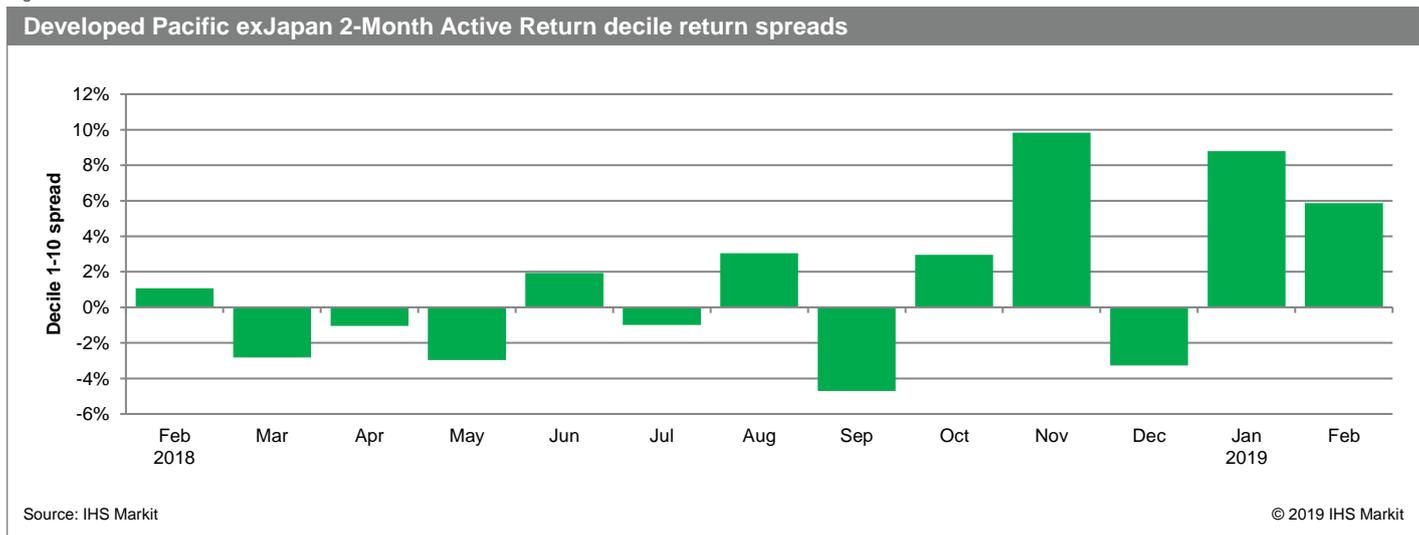
Table 8

Developed Pacific exJapan top decile return spread factor performance, Feb 2019		
Factor	Decile spread (%)	Factor group
Attention Span Ratio	5.92	Management Quality
2-Month Active Return	5.86	Price Momentum
3-Month Active Return	4.69	Price Momentum
Operating Liability Leverage	4.39	Management Quality
5-yr Relative TTM Earnings-to-Price	4.16	Relative Value
Average Monthly Trading Volume-to-Market Cap	4.04	Liquidity, Risk & Size
60-Day Lagged Quarterly Earnings Surprise	3.88	Earnings Momentum
Assets Turnover Ratio	3.77	Management Quality
Profit and Loss Impact	3.76	Short Sentiment
Natural Logarithm of Market Capitalization	3.73	Liquidity, Risk & Size
Debt to Market Cap	3.66	Liquidity, Risk & Size
Fixed Assets Turnover Ratio	3.50	Management Quality
5-yr Relative TTM Cash Flow-to-Price	3.29	Relative Value
Street Consensus Rating	3.15	Earnings Momentum
Stock Illiquidity	3.06	Liquidity, Risk & Size

Source: IHS Markit

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Figure 4



Source: IHS Markit

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Table 9

Developed Pacific exJapan bottom decile return spread factor performance, Feb 2019

Factor	Decile spread (%)	Factor group
52-Week High	-5.53	Price Momentum
Natural Logarithm of Total Assets	-5.44	Liquidity, Risk & Size
Leading 12 Month Book Yield	-5.29	Deep Value
Stock Return Volatility	-5.19	Liquidity, Risk & Size
Book-to-Market	-5.17	Deep Value
Regression Error of 60-Month CAPM	-5.01	Liquidity, Risk & Size
1-Month Stock Return Interquartile Range	-4.98	Liquidity, Risk & Size
Short Loan Concentration	-4.76	Short Sentiment
60-Day Residual Risk	-4.40	Liquidity, Risk & Size
1-yr Change in Total Assets	-4.36	Historical Growth

Source: IHS Markit

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Table 10

Japan Standard Cap top decile return spread factor performance, Feb 2019

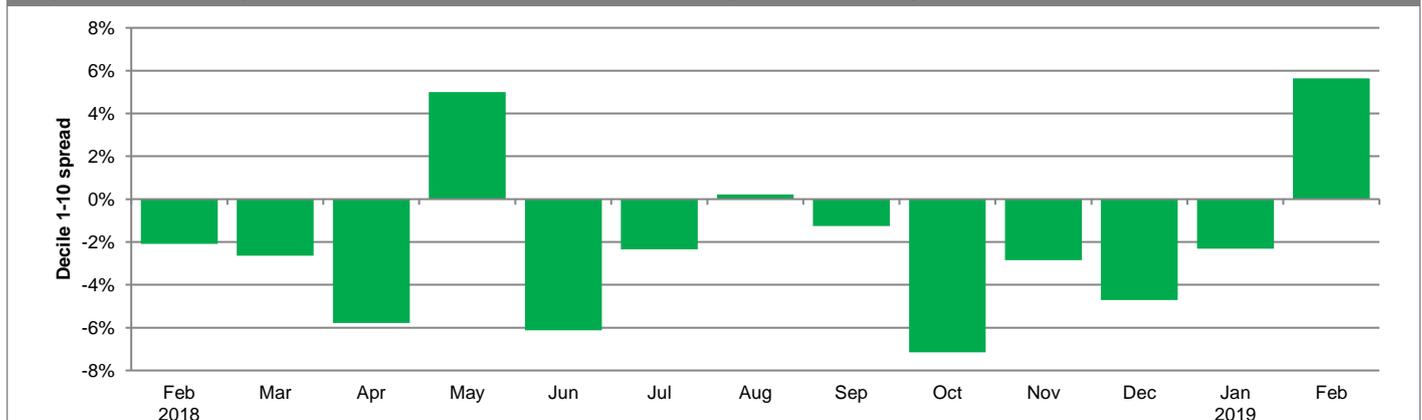
Factor	Decile spread (%)	Factor group
24-Month Active Return with 1-Month Lag	5.64	Price Momentum
TTM Capital Expenditures-to-Price	4.80	Deep Value
Second Preceding 6-month Return	4.54	Price Momentum
18-Month Active Return with 1-Month Lag	4.24	Price Momentum
30-75 Week Stock Price Ratio	4.14	Price Momentum
Operating Cash Flow to Assets	3.97	Management Quality
Return on Assets	3.92	Management Quality
Fixed Assets Turnover Ratio	3.86	Management Quality
Fama-French Momentum	3.67	Price Momentum
Total Coverage	3.66	Liquidity, Risk & Size
Capital Acquisition Ratio	3.54	Management Quality
Debt to Market Cap	3.52	Liquidity, Risk & Size
Slope of 66 Week Price Trend Line	3.47	Price Momentum
Rational Decay Alpha	3.47	Price Momentum
Attention Span Ratio	3.47	Management Quality

Source: IHS Markit

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Figure 5

Japan Standard Cap 24-Month Active Return with 1-Month Lag decile return spreads



Source: IHS Markit

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Table 11

Japan Standard Cap bottom decile return spread factor performance, Feb 2019		
Factor	Decile spread (%)	Factor group
Price-to-Total Assets	-7.02	Deep Value
Tobin q	-6.75	Liquidity, Risk & Size
Natural Logarithm of Total Assets	-6.64	Liquidity, Risk & Size
Time Weighted Book Yield	-6.28	Deep Value
Net Asset Value to Price	-6.18	Deep Value
Leading 12 Month Book Yield	-6.13	Deep Value
Time Weighted Cash Yield	-5.65	Deep Value
Book-to-Market	-5.64	Deep Value
TTM Cash Flow-to-Price	-5.44	Deep Value
Graham Number Fair Value Premium	-5.22	Deep Value

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 February. Small caps led the year-to-date market rally (Figure 6), pushing Natural Logarithm of Market Capitalization (4.26%) to the top of the leaderboard last month. The Deep Value style was also a well rewarded theme, with positive spreads associated with Cash to Enterprise Value (3.10%), among others. On the other hand, medium-term Price Momentum metrics underperformed for the month, represented by measures including 6-Month Active Return with 1-Month Lag (-3.74%) and 15/36 Week Stock Price Ratio (-3.25%).

Table 12

Emerging Markets top quintile return spread factor performance, Feb 2019		
Factor	Decile spread (%)	Factor group
Natural Logarithm of Market Capitalization	4.26	Liquidity, Risk & Size
Average Monthly Trading Volume-to-Market Cap	3.93	Liquidity, Risk & Size
Natural Logarithm of Closing Price	3.36	Liquidity, Risk & Size
Cash to Enterprise Value	3.10	Deep Value
Attention Span Ratio	2.63	Management Quality
Cash-to-Price	2.62	Deep Value
Second Preceding 6-month Return	2.18	Price Momentum
Interest Coverage	1.99	Liquidity, Risk & Size
Net Debt to EBITDA	1.95	Management Quality
1-yr Change in Operating Profit Margin	1.93	Historical Growth
Stock Illiquidity	1.85	Liquidity, Risk & Size
Oil Prices Sensitivity	1.84	Macro
5-yr Relative TTM Dividend Yield	1.75	Relative Value
Skewness of 90-Day Stock Daily Returns	1.74	Price Momentum
Leading 12 Month Sales Yield	1.70	Deep Value

Source: IHS Markit

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Table 13

Emerging Markets bottom quintile return spread factor performance, Feb 2019		
Factor	Decile spread (%)	Factor group
Natural Logarithm of Total Assets	-4.55	Liquidity, Risk & Size
6-Month Active Return with 1-Month Lag	-3.74	Price Momentum
Natural Logarithm of TTM Sales	-3.73	Liquidity, Risk & Size
Latin America Sales Exposure	-3.64	Macro
6-Month Nominal Change in 36-Month Alpha	-3.33	Price Momentum
15/36 Week Stock Price Ratio	-3.25	Price Momentum
50-200 Day Stock Price Ratio	-3.21	Price Momentum
Market Cap per Analyst	-3.19	Liquidity, Risk & Size
Net Current Assets-to-Price	-2.77	Deep Value
Net Debt Ratio	-2.65	Management Quality

Source: IHS Markit

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Figure 6



Source: IHS Markit

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