

# The value-momentum trade war

May 2018

## Research Signals

In the same way that global markets have witnessed the back and forth on trade discussions, developed market traders have sold off either value or momentum stocks one month, only to see them bounce back the next month. Momentum was the more widely preferred strategy in May (Table 1) as global markets shrugged off fears of a trade war as just a war of words. Hopes remain that growth in major economies will not be undermined, supported by global economic growth remaining solid in May according to the J.P. Morgan Global Manufacturing PMI™. Investors now wait for further developments with upcoming European Central Bank, US Federal Reserve and G-7 meetings.

- US: Natural Logarithm of Market Capitalization performance indicates stronger returns to small caps and 60-Month Beta points to outperformance to higher risk names
- Developed Europe: Deep Value measures underperformed, with Book-to-Market one of the weakest in the group, while Price Momentum metrics such as Industry-adjusted 12-month Relative Strength outperformed
- Developed Pacific: Japanese markets saw extreme movement in the Price Momentum style (e.g., Rational Decay Alpha) over Deep Value (e.g., Book-to-Market), reversing trends at the tails of factor performance the prior month
- Emerging markets: Forward 12-M EPS-to-Enterprise Value and Rational Decay Alpha, which tend to represent opposing trading strategies, were both strong performers for the month

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Table 1

## Global factor quantile return spread performance snapshot, May 2018

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		-1.57	-1.37	-7.67	-3.39	-9.67	0.80
Forward 12-M EPS-to-Enterprise Value	Deep Value	-3.28	-3.48	-4.06	2.68	-2.59	3.42
TTM EBITDA-to-Enterprise Value		-3.46	-2.53	-2.54	2.71	-3.70	-0.57
TTM Free Cash Flow-to-Enterprise Value		-2.42	-2.17	-2.30	0.35	0.25	1.55
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	-0.42	2.45	-4.34	3.46	-3.86	1.88
Industry Relative TTM Dividend Yield		2.86	0.03	-3.75	0.60	-4.17	2.29
Fixed Assets Turnover Ratio		-2.15	-0.05	-1.05	-0.53	3.53	-0.35
Inventory Turnover Ratio	Management Quality	-0.95	-4.42	-0.70	-0.01	0.63	-1.29
Net Operating Asset Turnover		0.11	-1.36	-0.84	-0.70	1.07	1.32
Change in Accruals to Assets		-0.83	-4.93	-1.37	-0.58	1.45	-0.79
Change in TTM COGS vs. Inventory Level	Earnings Quality	1.13	-1.62	-0.43	-0.98	-0.59	1.07
Change in TTM Sales vs. Accounts Receivable		-0.66	-0.64	0.57	0.77	-0.42	-0.52
Working Capital Accruals		-0.50	2.03	-0.70	0.38	1.12	-0.69
1-yr Growth in TTM Free Cash Flow	Historical Growth	-0.57	-0.57	-0.99	-1.49	0.36	0.20
Reinvestment Rate		-1.82	-2.23	-0.13	3.95	2.71	-2.20
Average Monthly Trading Volume-to-Market Cap		4.28	2.87	-1.13	4.39	-3.26	1.75
60-Month Beta	Liquidity, Risk & Size	-1.86	-0.46	2.45	-4.66	4.91	1.67
Asset Quality Index		0.83	-2.29	-1.19	-1.73	0.86	0.84
Operating Leverage		-2.73	0.33	1.32	-0.75	1.83	0.23
Natural Logarithm of Market Capitalization		2.28	-0.79	0.45	3.62	0.17	0.54
2-Year Ahead EPS Growth		-0.56	-0.10	-2.07	-0.28	1.78	-2.94
3-M Revision in FY2 EPS Forecasts	Earnings Momentum	-0.29	-0.40	2.78	1.85	2.81	2.39
Real Earnings Surprise		-2.56	0.33	1.14	0.27	0.20	0.19
24-Month Value at Risk		-3.69	-1.96	3.27	0.14	5.27	1.39
5-day Industry Relative Return	Price Momentum	-1.30	2.06	-0.46	-2.34	2.24	1.60
Industry-adjusted 12-month Relative Price Strength		2.73	2.73	3.20	2.73	7.50	-0.31
Rational Decay Alpha		0.13	0.17	1.73	2.65	6.80	2.52
Demand Supply Ratio	Short Sentiment	-2.40	-1.10	0.62	-0.34	-0.18	-6.66
Implied Loan Rate		-2.18	0.23	0.78	0.73	-0.43	-2.68

Source: IHS Markit

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## United States

### US Large Cap

The May US manufacturing PMI registered at 56.4, down only fractionally from 56.5 in April, thus marking a second straight month of steep improvements in business conditions. Investors pushed stocks up for the month, particularly small caps, as confidence in the strength of the economy outweighed fears of escalating trade tensions.

Interestingly, Asia-Pacific Sales Exposure (6.46%) sat at the top of the list of top performing factors in the US Large Cap universe in May (Table 2), at the same time that the dollar continued its rally off of the mid-February near term low. Earnings were also represented in two forms in terms of outlook from Net # of Revisions for Fiscal QTR 1 (3.69%) and quality from Accounting Accruals (3.43%), the latter of which has been a positive signal for all months but one since August 2017 (Figure 1). At the same time, investors demonstrated a risk-on stance as factors including Stock Return Volatility (-7.13%) and Regression Error of 60-Month CAPM (-6.58%) were especially weak performers for the month (Table 3), with the former posting its weakest spread since April 2016.

Table 2

#### US Large Cap top decile return spread factor performance, May 2018

Factor	Decile spread (%)	Factor group
Asia-Pacific Sales Exposure	6.46	Macro
Cash Flow Leverage	5.28	Liquidity, Risk & Size
Average Monthly Trading Volume-to-Market Cap	4.28	Liquidity, Risk & Size
15/36 Week Stock Price Ratio	3.72	Price Momentum
Net # of Revisions for Fiscal QTR 1	3.69	Earnings Momentum
Dividends- to-Cash Flow	3.64	Management Quality
50-200 Day Stock Price Ratio	3.61	Price Momentum
Debt to Market Cap	3.49	Liquidity, Risk & Size
Accounting Accruals	3.43	Earnings Quality
4-52 Week Price Oscillator	3.25	Price Momentum
Yearly Change in ROE - Arithmetic Difference	3.18	Management Quality
6-Month Nominal Change in 18-Month Alpha	3.14	Price Momentum
TTM Gross Profit Margin	3.13	Management Quality
9-Month Active Return with 1-Month Lag	3.12	Price Momentum
Net Debt to EBITDA	3.11	Management Quality

Source: IHS Markit

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Figure 1

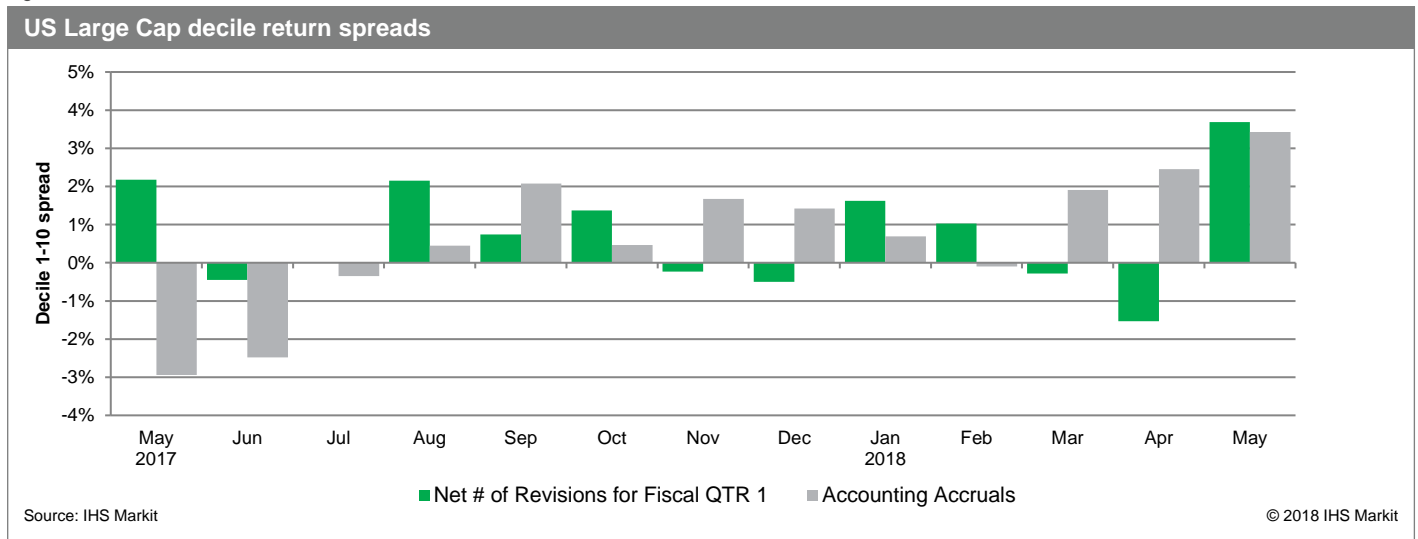


Table 3

US Large Cap bottom decile return spread factor performance, May 2018		
Factor	Decile spread (%)	Factor group
Stock Return Volatility	-7.13	Liquidity, Risk & Size
Regression Error of 60-Month CAPM	-6.58	Liquidity, Risk & Size
24-Month Residual Return Variance	-6.50	Price Momentum
Price Above Last 260-day Lowest Trading Price	-5.87	Price Momentum
Tobin q	-5.80	Liquidity, Risk & Size
Product of Beta and Sigma	-5.37	Liquidity, Risk & Size
Natural Logarithm of Total Assets	-5.35	Liquidity, Risk & Size
60-Day Residual Risk	-5.32	Liquidity, Risk & Size
1-Month Stock Return Interquartile Range	-4.95	Liquidity, Risk & Size
Current Ratio	-4.93	Liquidity, Risk & Size

Source: IHS Markit © 2018 IHS Markit

## US Small Cap

As with large caps, Asia-Pacific Sales Exposure (6.83%) was the top performing factor among small caps (Table 4). Measures capturing corporate fundamentals were also positive signals, including Net Debt to EBITDA (6.74%), which sported an 8.3 percentage point swing in month-on-month spread (Figure 2), and several Historical Growth measures led by 3-yr Change in Assets-adj TTM Cash Flow (3.45%). Bottom performing factors (Table 5) also showed some commonality with large caps in terms of higher risk taking demonstrated by Regression Error of 60-Month CAPM (-5.01%) and Stock Return Volatility (-4.88%).

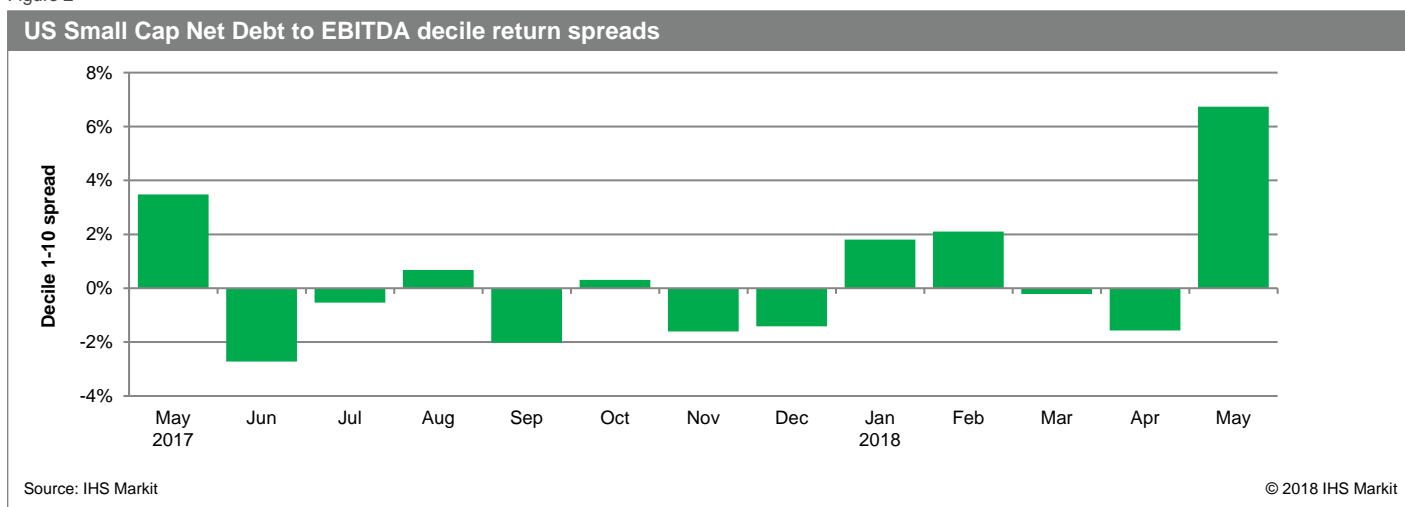
Table 4

US Small Cap top decile return spread factor performance, May 2018		
Factor	Decile spread (%)	Factor group
Asia-Pacific Sales Exposure	6.83	Macro
Net Debt to EBITDA	6.74	Management Quality
Debt to Market Cap	5.06	Liquidity, Risk & Size
Cash Flow Leverage	4.16	Liquidity, Risk & Size
50-200 Day Stock Price Ratio	4.15	Price Momentum
Acquisition Multiple	3.86	Deep Value
Attention Span Ratio	3.52	Management Quality
Advertising Intensity	3.51	Management Quality
6-Month Nominal Change in 36-Month Alpha	3.48	Price Momentum
3-yr Change in Assets-adj TTM Cash Flow	3.45	Historical Growth
Supply Volatility	3.41	Short Sentiment
26-Week Relative Price Strength	3.39	Price Momentum
3-yr Compound Annual Sales Growth	3.36	Historical Growth
Slope of 3-yr TTM Oper Cash Flow Trend Line	3.00	Historical Growth
1-Year Price Momentum Indicator	2.96	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, May 2018		
Factor	Decile spread (%)	Factor group
Price-to-Total Assets	-6.56	Deep Value
1-Month Stock Return Interquartile Range	-6.20	Liquidity, Risk & Size
Tobin q	-5.34	Liquidity, Risk & Size
3-yr MAD of TTM Net Income	-5.33	Liquidity, Risk & Size
Net External Financing	-5.25	Management Quality
Regression Error of 60-Month CAPM	-5.01	Liquidity, Risk & Size
Change in Accruals to Assets	-4.93	Earnings Quality
1-yr Chg in Price-adj TTM Free Cash Flow	-4.91	Historical Growth
Stock Return Volatility	-4.88	Liquidity, Risk & Size
Net Profit Margin	-4.81	Management Quality

Source: IHS Markit

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## Europe

The upturn in the eurozone manufacturing sector showed further signs of cooling in May, with the PMI easing to 55.5, down from 56.2 in April and the lowest level in fifteen months. However, all eight of the nations covered saw manufacturing operating conditions improve for the month, registering above the 50 no-change level. European stocks also cooled for the month, after previously posting their best monthly return since December 2016.

As with US markets, regional sales exposure topped the list of top performing factors in the Developed Europe universe in May (Table 6). However, in this case, firms with high North America Sales Exposure (6.04%) outperformed, indicating positive positioning to a strong US dollar, marking the factor's largest spread since June 2016 at the height of Brexit (Figure 3). Inflation Sensitivity (5.05%) was another Macro indicator with strong performance alongside several Price Momentum metrics, led by 39-Week Return with 4-week Lag (5.94%). At the opposite extreme, the weakest performing factors (Table 7) included several book value based measures such as Book-to-Market (-7.67%) and Leading 12 Month Book Yield (-6.09%).

Table 6

### Developed Europe top decile return spread factor performance, May 2018

Factor	Decile spread (%)	Factor group
North America Sales Exposure	6.04	Macro
Debt to Market Cap	6.03	Liquidity, Risk & Size
39-Week Return with 4-week Lag	5.94	Price Momentum
9-Month Active Return with 1-Month Lag	5.82	Price Momentum
6-Month Active Return with 1-Month Lag	5.66	Price Momentum
50-200 Day Stock Price Ratio	5.45	Price Momentum
15/36 Week Stock Price Ratio	5.39	Price Momentum
Cash Flow Leverage	5.32	Liquidity, Risk & Size
EBITDA-to-Debt	5.10	Liquidity, Risk & Size
Inflation Sensitivity	5.05	Macro
30-75 Week Stock Price Ratio	4.89	Price Momentum
24-Month Active Return with 1-Month Lag	4.62	Price Momentum
Net Debt to EBITDA	4.44	Management Quality
12-Month Active Return with 1-month Lag	4.20	Price Momentum
26-Week Relative Price Strength	4.10	Price Momentum

Source: IHS Markit

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Figure 3

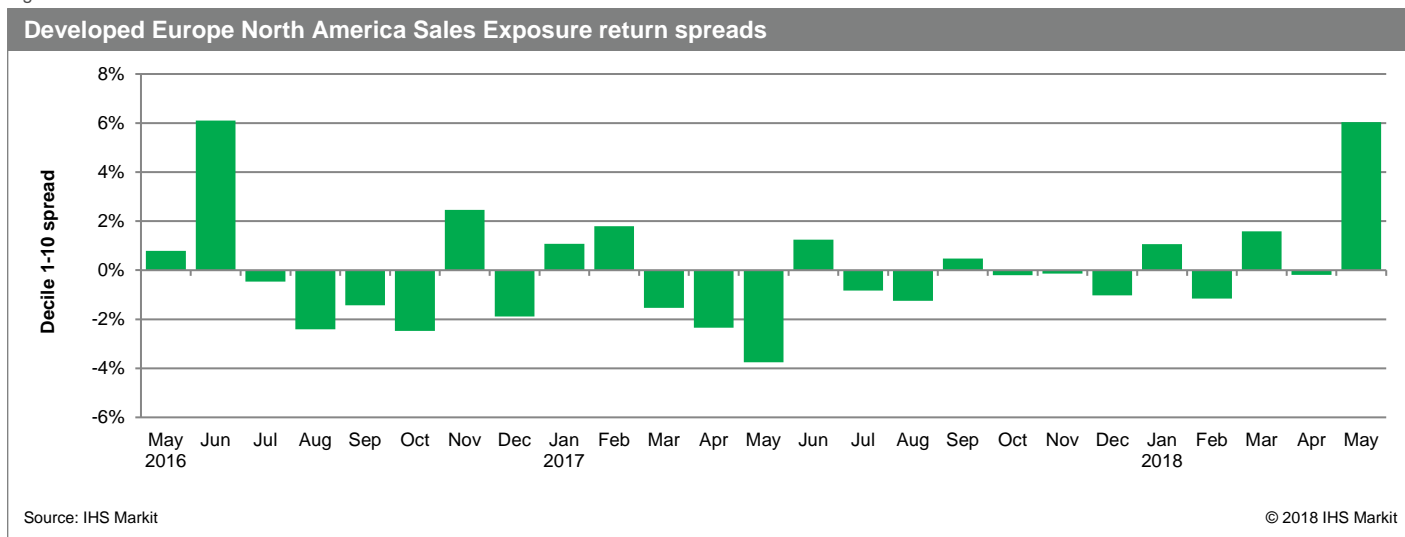


Table 7

**Developed Europe bottom decile return spread factor performance, Apr 2018**

Factor	Decile spread (%)	Factor group
Tobin q	-10.50	Liquidity, Risk & Size
Price-to-Total Assets	-9.09	Deep Value
Long-term Debt-to-Equity	-8.06	Liquidity, Risk & Size
Book-to-Market	-7.67	Deep Value
Net Asset Value to Price	-7.09	Deep Value
Current Liabilities-to-Price	-6.74	Liquidity, Risk & Size
Book Leverage	-6.49	Liquidity, Risk & Size
Market Leverage	-6.47	Liquidity, Risk & Size
Natural Logarithm of Total Assets	-6.30	Liquidity, Risk & Size
Leading 12 Month Book Yield	-6.09	Deep Value

Source: IHS Markit © 2018 IHS Markit

## Asia-Pacific

Manufacturers in the two largest Asian economies continued to point to improved operating conditions in May. Japan, the stronger of the two, saw the PMI ease to 52.8 in May, reversing the acceleration recorded in April (53.8). In China, manufacturing survey data remained modest, with an unchanged May PMI of 51.1. Asia-pacific equity markets saw stocks vacillate in Japan and China, as major indexes in both countries finished mostly flat for the month, with Japan the weaker of the two.

Developed Pacific investors outside Japan turned to high quality firms in May, with Profitability Ratio (7.26%) and Return on Invested Capital (6.42%) among the top performing factors for the month (Table 8). This is confirmed by quality measures occupying 9 of the top 15 spots and further corroborated by the distribution of decile returns across the former (Figure 4). The largest firms were also highly rewarded, as demonstrated by the underperformance of factors (Table 9) such as Natural Logarithm of Total Assets (-7.08%), Revenue per Employee (-6.80%) and Market Cap per Analyst (-5.83%).

May’s top (Table 10) and bottom (Table 11) performing factors in Japanese markets, on the other hand, were highly concentrated in Price Momentum and Deep Value styles, respectively. Looking at decile returns across the factors that topped both lists (Figure 5), we find nearly monotonic distributions and particularly sizeable returns at the tails of 50-200 Day Stock Price Ratio (10.66%) and Leading 12 Month Book Yield (-10.37%), suggesting fairly systematic trading. What is more, a good majority of the Price Momentum and Deep Value factors that we find at the performance extremes were the same factors that we reported in April at the opposite extremes.

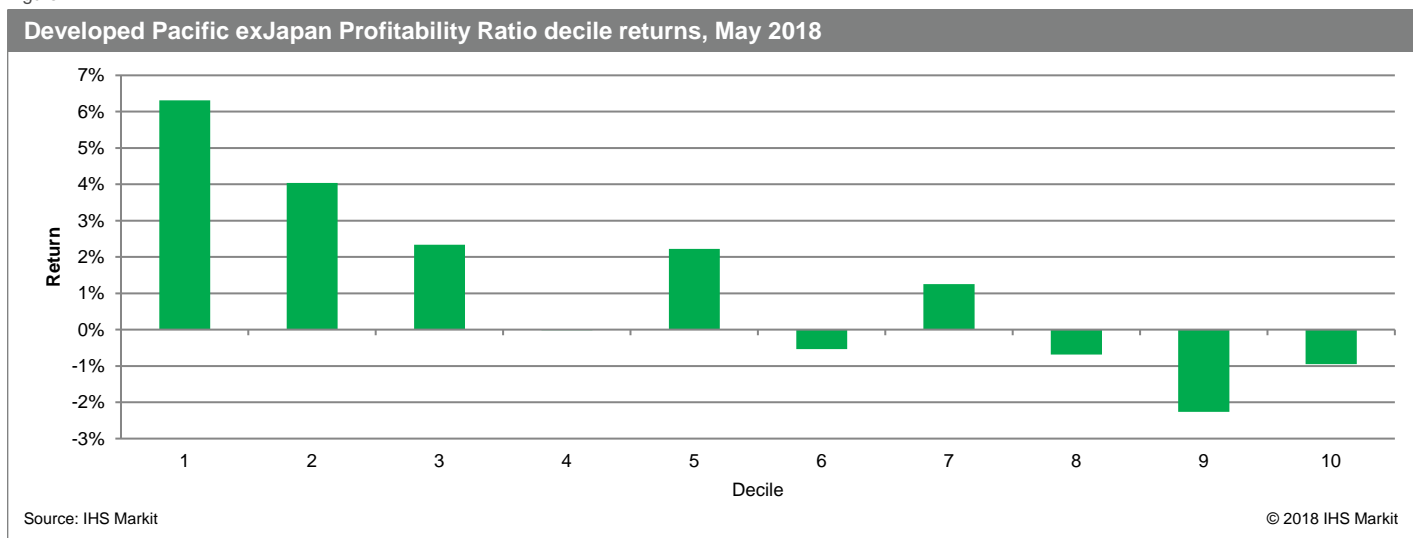
Table 8

Developed Pacific exJapan top decile return spread factor performance, May 2018		
Factor	Decile spread (%)	Factor group
Profitability Ratio	7.26	Management Quality
Flow Ratio	6.69	Liquidity, Risk & Size
Return on Invested Capital	6.42	Management Quality
Change in TTM Oper Income vs. LT Debt	6.13	Earnings Quality
Return on Equity	5.92	Management Quality
On Loan Value Concentration	5.86	Short Sentiment
3-M Revision in FY2 EPS Forecasts: Dispersion Relative	5.52	Earnings Momentum
TTM Operating Income to Enterprise Value	5.34	Deep Value
Industry-adjusted Quarterly Return on Equity	5.32	Management Quality
Return on Assets	5.24	Management Quality
Average Collection Period	5.18	Management Quality
Interest Coverage	5.09	Liquidity, Risk & Size
Cash Flow Return on Invested Capital	5.03	Management Quality
Forward Return on Equity	4.91	Management Quality
Debt to Market Cap	4.84	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, May 2018		
Factor	Decile spread (%)	Factor group
Natural Logarithm of Total Assets	-7.08	Liquidity, Risk & Size
Revenue per Employee	-6.80	Management Quality
Acquisition Multiple	-6.34	Deep Value
Market Cap per Analyst	-5.83	Liquidity, Risk & Size
Year-over-year Change in Current Ratio	-5.19	Liquidity, Risk & Size
Natural Logarithm of TTM Sales	-4.84	Liquidity, Risk & Size
60-Month Beta	-4.66	Liquidity, Risk & Size
Market Leverage	-4.57	Liquidity, Risk & Size
Net Debt Ratio	-4.55	Management Quality
Change in Inventory to Average Assets	-4.52	Management Quality

Source: IHS Markit

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Table 10

Japan Standard Cap top decile return spread factor performance, May 2018		
Factor	Decile spread (%)	Factor group
50-200 Day Stock Price Ratio	10.66	Price Momentum
15/36 Week Stock Price Ratio	10.33	Price Momentum
6-Month Active Return with 1-Month Lag	9.58	Price Momentum
39-Week Return with 4-week Lag	8.73	Price Momentum
26-Week Relative Price Strength	8.60	Price Momentum
9-Month Active Return with 1-Month Lag	8.23	Price Momentum
14 Day Relative Strength Index	7.59	Price Momentum
Industry-adjusted 12-month Relative Price Strength	7.50	Price Momentum
Fama-French Momentum	7.42	Price Momentum
12-Month Active Return with 1-month Lag	7.25	Price Momentum
Profitability Ratio	6.97	Management Quality
Rational Decay Alpha	6.80	Price Momentum
30-75 Week Stock Price Ratio	6.61	Price Momentum
Return on Assets	6.58	Management Quality
1-Year Price Momentum Indicator	6.44	Price Momentum

Source: IHS Markit

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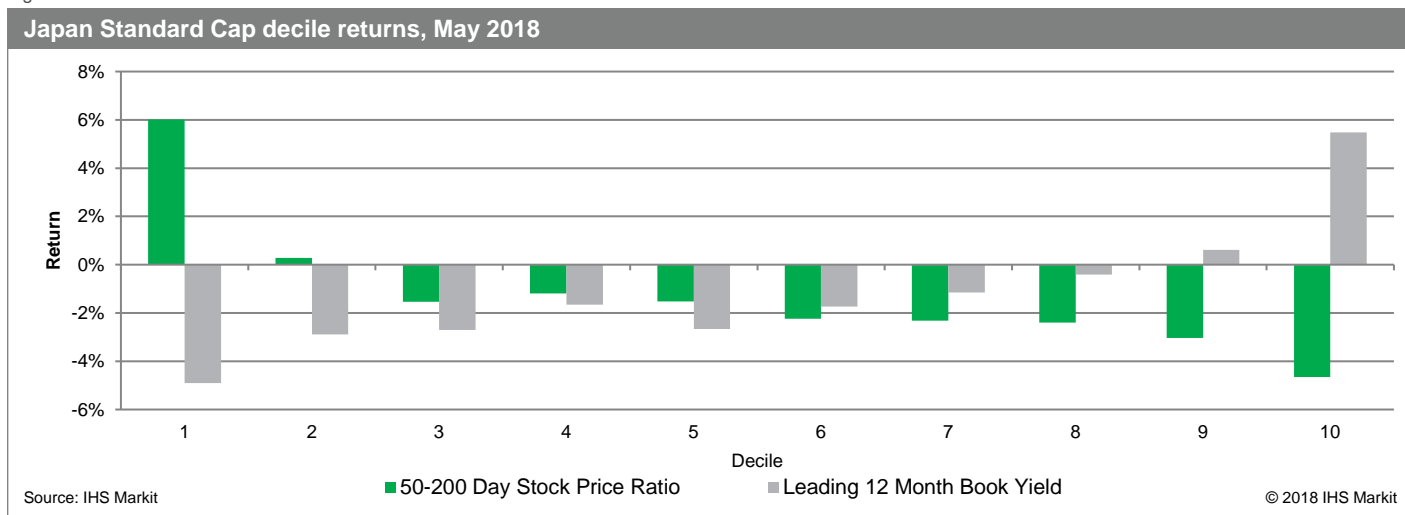
Table 11

Japan Standard Cap bottom decile return spread factor performance, May 2018		
Factor	Decile spread (%)	Factor group
Leading 12 Month Book Yield	-10.37	Deep Value
Time Weighted Book Yield	-9.83	Deep Value
Book-to-Market	-9.67	Deep Value
Graham Number Fair Value Premium	-9.00	Deep Value
Price-to-Book Return-on-Equity Combination (PB-ROE)	-8.96	Deep Value
Net Asset Value to Price	-8.78	Deep Value
Tobin q	-7.99	Liquidity, Risk & Size
Price-to-Total Assets	-7.70	Deep Value
36-Month Active Return with 1-Month Lag	-7.56	Price Momentum
TTM EBITDA-to-Price	-7.12	Deep Value

Source: IHS Markit

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Figure 5



## Emerging Markets

We round out our report with a review of top (Table 12) and bottom (Table 13) performing factors in emerging markets in May. Firms which outperformed include those exposed to several Macro indicators, including Credit Risk Premium Sensitivity (3.92%), Oil Prices Sensitivity (3.48%) and North America Sales Exposure (3.20%). Deep Value measures were also juxtaposed with Price Momentum metrics, such as Cash to Enterprise Value (4.00%) and 18-Month Active Return with 1-Month Lag (2.62%) among the top performers. Another interesting juxtaposition occurred among the weakest performers with Dividend Coverage Ratio (-4.85%) and Cash & Equivalents-to-Current Liabilities (-4.79%), favoring firms well positioned to cover dividends and current liabilities, sitting next to Long-term Debt-to-Equity (-4.71%) and Ohlson Bankruptcy Score (-4.55%), favoring more highly levered firms.

Table 12

Factor	Decile spread (%)	Factor group
Interest Coverage	4.46	Liquidity, Risk & Size
Cash to Enterprise Value	4.00	Deep Value
Credit Risk Premium Sensitivity	3.92	Macro
Net Debt to EBITDA	3.81	Management Quality
Oil Prices Sensitivity	3.48	Macro
Forward 12-M EPS-to-Enterprise Value	3.42	Deep Value
North America Sales Exposure	3.20	Macro
Debt to Market Cap	3.15	Liquidity, Risk & Size
TTM Dividend Yield	3.05	Deep Value
Averaged Last 6-M EPS Revisions for FY1	2.98	Earnings Momentum
TTM Growth Flow-to-Price	2.95	Deep Value
Cash-to-Price	2.81	Deep Value
Total Coverage	2.68	Liquidity, Risk & Size
18-Month Active Return with 1-Month Lag	2.62	Price Momentum
Rational Decay Alpha	2.52	Price Momentum

Source: IHS Markit

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Table 13

## Emerging Markets bottom quintile return spread factor performance, May 2018

<b>Factor</b>	<b>Decile spread (%)</b>	<b>Factor group</b>
Working Capital-to-Total Assets	-5.39	Management Quality
Net Current Assets-to-Price	-5.11	Deep Value
Net Debt Ratio	-4.86	Management Quality
Dividend Coverage Ratio	-4.85	Liquidity, Risk & Size
Cash & Equivalents-to-Current Liabilities	-4.79	Liquidity, Risk & Size
Long-term Debt-to-Equity	-4.71	Liquidity, Risk & Size
Ohlson Bankruptcy Score	-4.55	Liquidity, Risk & Size
Net Cash to Equity	-4.39	Liquidity, Risk & Size
Latin America Sales Exposure	-4.24	Macro
Capital Gearing Ratio	-4.20	Liquidity, Risk & Size

Source: IHS Markit

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