

# Halcyon days of the markets

May 2017

## Research Signals

Whether artificial or natural, calm in the markets has persisted in spite of political and geopolitical risks, Moody's downgrade of China amid concerns that Chinese economic growth may slow and questions surrounding the impact of central bank policy tightening. Indeed, another small bout of volatility mid-May proved only temporary as global markets continued to push stock prices higher and momentum strategies benefitted, while valuation saw mixed results between book value (negative) and earnings-based (positive) measures (Table 1). How much longer can markets sustain low volatility?

- US: 24-Month Value at Risk outpaced Book-to-Market by 13% and 9% among large and small cap stocks, respectively, while Forward 12-M EPS-to-Enterprise Value was a positive indicator, particularly for small caps, on strong earnings reports
- Developed Europe: Trend following captured by Rational Decay Alpha was a positively rewarded theme, though investors were cognizant of high short interest stocks according to Demand Supply Ratio
- Developed Pacific: Low beta was rewarded across developed Pacific markets, while Book-to-Market especially suffered in Japanese markets
- Emerging markets: High quality stocks gauged by measures such as Fixed Assets Turnover Ratio were favored, though with less of a concern for valuation

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## Contacts

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Table 1

## Global factor quantile return spread performance snapshot, May 2017

Factor	Factor Group	US Large Cap	US Small Cap	Developed Europe	Developed Pacific ex Japan	Japan Standard Cap	Emerging Markets
Book-to-Market		-5.05	-5.54	-1.73	-0.27	-9.66	-0.71
Forward 12-M EPS-to-Enterprise Value	Deep Value	2.15	5.95	0.57	-1.70	2.31	1.08
TTM EBITDA-to-Enterprise Value		-1.97	3.41	1.81	-1.24	0.31	0.62
TTM Free Cash Flow-to-Enterprise Value		0.20	1.82	1.30	0.78	0.29	1.20
Industry Relative Leading 4-QTRs EPS to Price	Relative Value	1.42	2.98	-0.88	-1.32	-2.49	0.68
Industry Relative TTM Dividend Yield		-0.17	-2.57	-1.20	-3.78	-2.66	1.83
Fixed Assets Turnover Ratio	Management Quality	5.20	3.52	1.03	0.53	2.42	2.80
Inventory Turnover Ratio		0.58	-1.17	-0.09	-0.22	2.56	-0.07
Net Operating Asset Turnover		2.12	0.20	0.89	0.74	6.35	1.36
Change in Accruals to Assets	Earnings Quality	2.86	2.51	1.19	2.87	-1.42	0.49
Change in TTM COGS vs. Inventory Level		-0.03	0.63	-0.38	-1.29	-0.14	0.38
Change in TTM Sales vs. Accounts Receivable		1.30	-0.60	-0.06	-0.41	1.71	-0.30
Working Capital Accruals		1.08	2.34	-0.09	2.06	3.32	-0.35
1-yr Growth in TTM Free Cash Flow	Historical Growth	3.95	-1.06	0.42	-2.14	-0.07	0.70
Reinvestment Rate		5.32	3.10	1.35	0.61	4.59	1.89
Average Monthly Trading Volume-to-Market Cap	Liquidity, Risk & Size	-4.94	-3.75	-1.50	-9.80	-2.37	-0.50
60-Month Beta		4.26	3.78	1.62	4.38	7.04	0.16
Asset Quality Index		-1.03	-0.18	-1.25	-0.06	2.15	0.88
Operating Leverage		2.03	-1.09	-0.66	0.23	0.98	0.94
Natural Logarithm of Market Capitalization		-4.43	-5.68	1.32	-9.18	0.30	0.37
2-Year Ahead EPS Growth	Earnings Momentum	-1.30	-0.12	-1.24	0.33	0.65	-1.11
3-M Revision in FY2 EPS Forecasts		2.82	1.16	0.50	3.14	-0.67	0.40
Real Earnings Surprise		-1.28	2.40	0.78	-1.37	1.68	0.78
24-Month Value at Risk	Price Momentum	7.60	3.91	3.82	-0.36	2.73	1.79
5-day Industry Relative Return		-2.19	-1.39	-1.77	1.48	-1.35	-0.11
Industry-adjusted 12-month Relative Price Strength		1.57	0.86	0.29	-1.02	0.27	-0.01
Rational Decay Alpha		1.43	0.81	2.91	-1.13	7.36	-0.18
Demand Supply Ratio	Short Sentiment	3.68	-0.08	2.38	-2.57	-0.37	-0.26
Implied Loan Rate		2.44	1.83	-0.15	-1.07	-1.74	-1.39

Source: IHS Markit

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## United States

### US Large Cap

The US manufacturing PMI slipped to an eight-month low in May, registering at 52.7, down fractionally from 52.8 in April. The further loss in momentum reflected a moderation in new business growth, alongside relatively subdued increases in output and employment and more cautious inventory policies. In equity markets, technology shares continued to push stocks higher, with major indices overcoming a mid-month spike in volatility to finish the month in positive territory.

Euphoria is also reflected in the list of top performing factors in May (Table 2). Indeed, 52-Week High sat near the top, with a strong decile spread of 8.40% marking a 5 percentage point month-on-month spike in performance and also representing the largest spread over the past year (Figure 1). However, not all sectors are seeing highs, as Energy shares continued to trail the market, captured by another month of outperformance to Std Dev of FY1 EPS Estimates-to-Price given its negative active (D1-D10) exposure to the sector (-48%).

Sector exposures also plagued factors that occupied the list of underperforming signals for the month (Table 3). Long term price reversal metrics such as 36-Month Active Return with 1-Month Lag (-9.75%) were weighed down by Energy sector active exposures (43%), while deep value measures including Graham Number Fair Value Premium (-7.40%) suffered from outsized exposures to Financials (43%).

Table 2

#### US Large Cap top decile return spread factor performance, May 2017

Factor	Decile spread (%)	Factor group
Std Dev of FY1 EPS Estimates-to-Price	8.56	Earnings Momentum
52-Week High	8.40	Price Momentum
24-Month Active Return with 1-Month Lag	8.08	Price Momentum
24-Month Value at Risk	7.60	Price Momentum
4-52 Week Price Oscillator	7.54	Price Momentum
Std Dev of FY2 EPS Estimates-to-Price	7.45	Earnings Momentum
FY2 EPS Forecast Dispersion	7.44	Earnings Momentum
60-Month Trading Volume Trend	7.14	Liquidity, Risk & Size
26-Week Relative Price Strength	6.62	Price Momentum
Volatility-adj 3-yr Projected EPS Growth	6.38	Earnings Momentum
50-200 Day Stock Price Ratio	6.37	Price Momentum
1-Month Stock Return Interquartile Range	6.35	Liquidity, Risk & Size
3-yr Compound Annual Sales Growth	6.19	Historical Growth
FY1 EPS Estimates Dispersion	6.05	Earnings Momentum
15/36 Week Stock Price Ratio	5.99	Price Momentum

Source: IHS Markit

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Figure 1

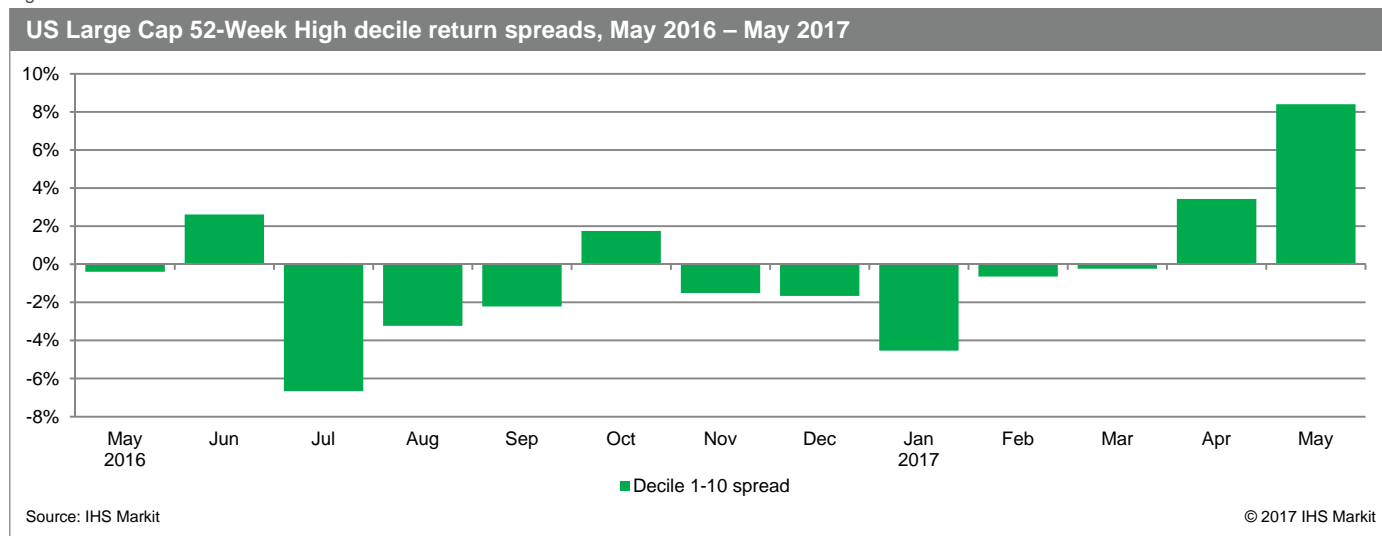


Table 3

**US Large Cap bottom sector-neutral decile return spread factor performance, May 2017**

Factor	Decile spread (%)	Factor group
36-Month Active Return with 1-Month Lag	-9.75	Price Momentum
3-Month Active Return	-8.42	Price Momentum
36-Month Sharpe Ratio	-7.72	Price Momentum
Sortino Ratio	-7.68	Price Momentum
60-Month Active Return with 1-Month Lag	-7.42	Price Momentum
Graham Number Fair Value Premium	-7.40	Deep Value
60-Month Alpha	-7.34	Price Momentum
14 Day Relative Strength Index	-7.19	Price Momentum
2-Month Active Return	-6.83	Price Momentum
Leading 12 Month Book Yield	-6.54	Price Momentum

Source: IHS Markit

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## US Small Cap

Small cap factor performance once again closely resembled that of large caps, with nearly the same Price and Earnings Momentum measures topping the lists of outperforming (Table 4) and underperforming (Table 5) measures in May. Factors with similar standings include 52-Week High (7.29%), Std Dev of FY1 EPS Estimates-to-Price (7.22%) and 36-Month Active Return with 1-Month Lag (-8.01%). Book value-based measures were also noteworthy underperformers. Leading 12 Month Book Yield was the weakest of the bunch with a double-digit decile spread of -10.93%, especially driven by the relative outperformance of overvalued names in the Telecommunications Services, Industrial, Cyclical Goods & Services and Technology sectors (Figure 2). However, while investors showed some apathy toward valuation, Forward 12-M EPS-to-Enterprise Value (5.95%) did appear on the list of top performers as earnings reports came in stronger than expected.

Table 4

**US Small Cap top decile return spread factor performance, May 2017**

Factor	Decile spread (%)	Factor group
52-Week High	7.29	Price Momentum
Std Dev of FY1 EPS Estimates-to-Price	7.22	Earnings Momentum
Std Dev of FY2 EPS Estimates-to-Price	7.18	Earnings Momentum
1-Month Stock Return Interquartile Range	6.78	Liquidity, Risk & Size
TTM Gross Profit to Assets	6.02	Management Quality
Forward 12-M EPS-to-Enterprise Value	5.95	Deep Value
24-Month Active Return with 1-Month Lag	5.94	Price Momentum
Yearly TTM Total Sales Growth Rate	5.89	Historical Growth
39-Week Return with 4-week Lag	5.87	Price Momentum
Earnings Torpedo	5.82	Earnings Momentum
3 Year Change in Gross Profit Margin	5.74	Management Quality
Net Income per Employee	5.74	Management Quality
4-52 Week Price Oscillator	5.58	Price Momentum
TTM Growth Flow-to-Price	5.56	Deep Value
24-Month Residual Return Variance	5.52	Price Momentum

Source: IHS Markit

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Table 5

**US Small Cap bottom decile return spread factor performance, May 2017**

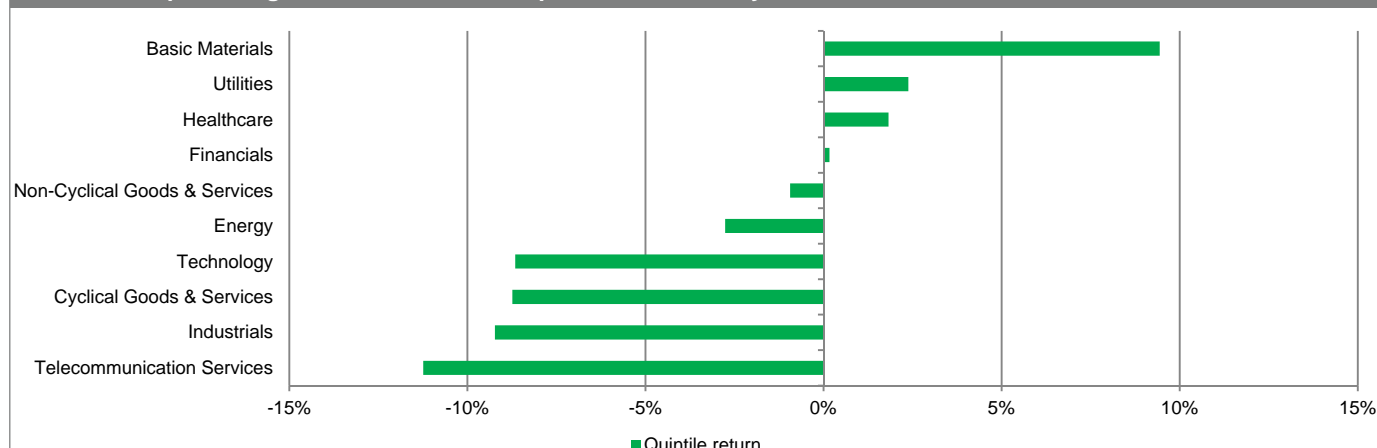
Factor	Decile spread (%)	Factor group
Leading 12 Month Book Yield	-10.93	Deep Value
3-Month Active Return	-8.66	Price Momentum
Price-to-Book Return-on-Equity Combination (PB-ROE)	-8.58	Deep Value
36-Month Active Return with 1-Month Lag	-8.01	Price Momentum
1-Month Active Return	-7.37	Price Momentum
Natural Logarithm of Closing Price	-6.95	Liquidity, Risk & Size
Price-to-Total Assets	-6.94	Deep Value
60-Month Alpha	-6.76	Price Momentum
2-Month Active Return	-6.72	Price Momentum
Time Weighted Book Yield	-6.61	Deep Value

Source: IHS Markit

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Figure 2

**US Small Cap Leading 12 Month Book Yield quintile returns, May 2017**



Source: IHS Markit

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## Europe

The ongoing expansion of the eurozone manufacturing sector gathered further momentum in May, with the PMI rising to a 73-month high of 57.0, up from 56.7 in April. Improved business conditions were signaled in seven of the eight nations covered, with Germany, Austria and the Netherlands continuing to top the rankings and Greece the sole country to signal contraction. Cyclical sectors led European shares, with stocks rallying to a fourth month of positive gains.

Measures of uncertainty continued to top factor performance in the Developed Europe universe in May (Table 6). However, this time around 24-Month Residual Return Variance led the way, benefitting from a large active (D1-D10) Financials sector exposure (57%) as the sector was more highly favored versus its US counterpart. Not surprisingly, trend following (e.g., Rational Decay Alpha) also remained a positively rewarded theme during the market rally; however, the mostly highly shorted stocks residing in decile 10 of Short Interest did not participate (Figure 3).

Shares of firms with the highest exposure to international sales also trailed the market. The appearance of North America (-3.76%) and Asia-Pacific Sales Exposure (-3.39%) on the list of bottom performers (Table 7) demonstrates investors' preference for domestically focused firms (Figure 3) given recent euro strength in light of an improving eurozone economy and waning political risks. Lastly, we highlight 60-Month Alpha's second straight month as the weakest performer in our factor library, with this long-term price reversal metric reflecting the opposite side of the trend following trade.

Table 6

### Developed Europe top decile return spread factor performance, May 2017

Factor	Decile spread (%)	Factor group
24-Month Residual Return Variance	4.40	Price Momentum
Average Trading Volume in Preceding 6-month	4.37	Price Momentum
Trading Turnover Ratio	3.97	Liquidity, Risk & Size
24-Month Value at Risk	3.82	Price Momentum
1-yr Chg in Price-adj TTM Oper Cash Flow	3.61	Historical Growth
1-yr Chg in QTR Inventory as % of Sales	3.44	Historical Growth
Short Interest	3.26	Short Sentiment
Stock Return Volatility	3.24	Liquidity, Risk & Size
1-yr Change in Sales	3.17	Historical Growth
Cash Cycle	3.12	Management Quality
3-yr Compound Annual Sales Growth	3.02	Historical Growth
Rational Decay Alpha	2.91	Price Momentum
24-Month Active Return with 1-Month Lag	2.83	Price Momentum
3-yr Growth in TTM Earnings per Share	2.67	Historical Growth
Net Profit Margin	2.65	Management Quality

Source: IHS Markit

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Figure 3

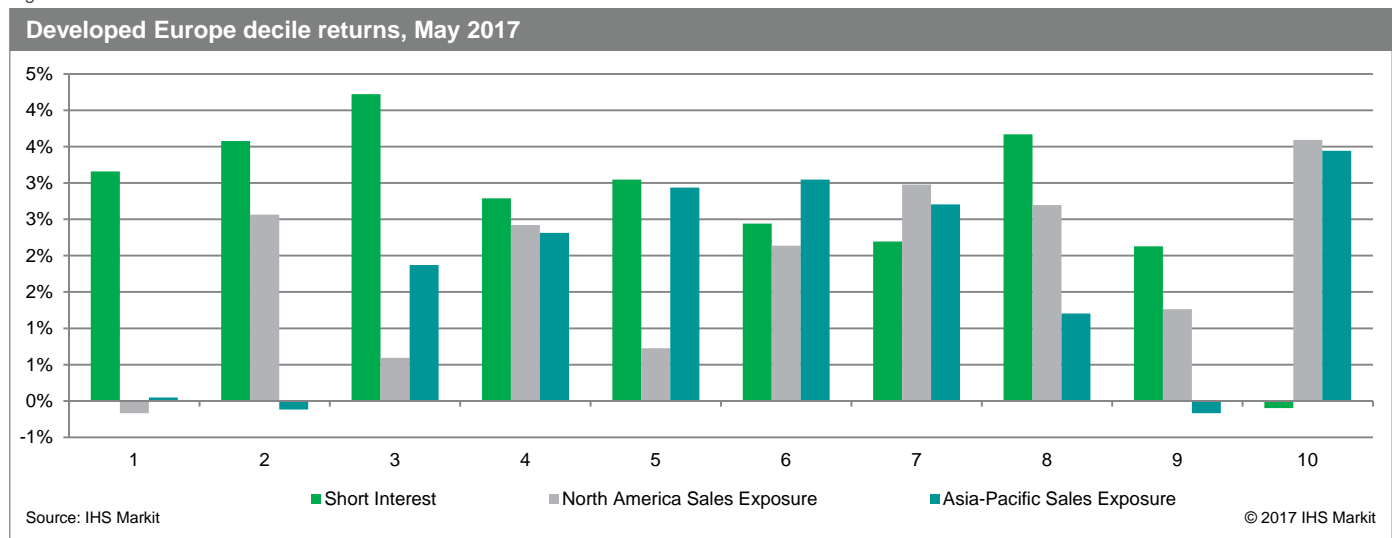


Table 7

**Developed Europe bottom decile return spread factor performance, May 2017**

Factor	Decile spread (%)	Factor group
60-Month Alpha	-4.27	Price Momentum
Yield Curve Slope Sensitivity	-4.14	Macro
1-Month Active Return	-3.85	Price Momentum
North America Sales Exposure	-3.76	Macro
4-week Industry Relative Return	-3.69	Price Momentum
60-Month Active Return with 1-Month Lag	-3.41	Price Momentum
Asia-Pacific Sales Exposure	-3.39	Macro
14 Day Relative Strength Index	-3.37	Price Momentum
36-Month Active Return with 1-Month Lag	-3.35	Price Momentum
2-Month Active Return	-3.33	Price Momentum

Source: IHS Markit

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## Asia-Pacific

Operating conditions at manufacturing companies in the two largest Asian economies continued to diverge in May. In Japan, the headline PMI improved to 53.1 compared with 52.7 in April, underpinned by faster rates of growth in output and new orders. Conversely, the China manufacturing PMI dropped below the neutral 50.0 value, registering at 49.6 in May, down from 50.3 in April, weighed down by slower increases in output and new orders. Asia-Pacific stocks sit on strong year-to-date returns as investors wait to see if economic growth has peaked in the region.

The largest sized firms were highly rewarded in Developed Pacific exJapan in May (Table 8). Decile returns across Natural Logarithm of TTM Sales (Figure 4) demonstrate investors' preference for the top end of the distribution. A bias to low beta was also captured by 60-Month Beta (4.38%). At the opposite extreme, factors which underperformed (Table 9) include 36-Month Active Return (-5.54%), with names sporting the weakest long term returns (decile 1) the only group to reside in negative territory (Figure 4).

Japanese investors continued to reward a broad range of fundamentally derived measures in May (Table 10), with top performers including Management Quality factors led by Profitability Ratio (8.93%) along with Yearly TTM Total Sales Growth Rate (6.63%) in the Historical Growth group. Other styles represented include 60-Month Beta (7.04%) and 24-Month Active Return with 1-Month Lag (6.60%). On the other hand, various measures of valuation occupied the totality of the list of underperformers (Table 11). Net Asset Value to Price was the weakest performer with a double-digit drawdown (-10.50%), as the most undervalued names (decile 1) spiked into negative territory (Figure 5).

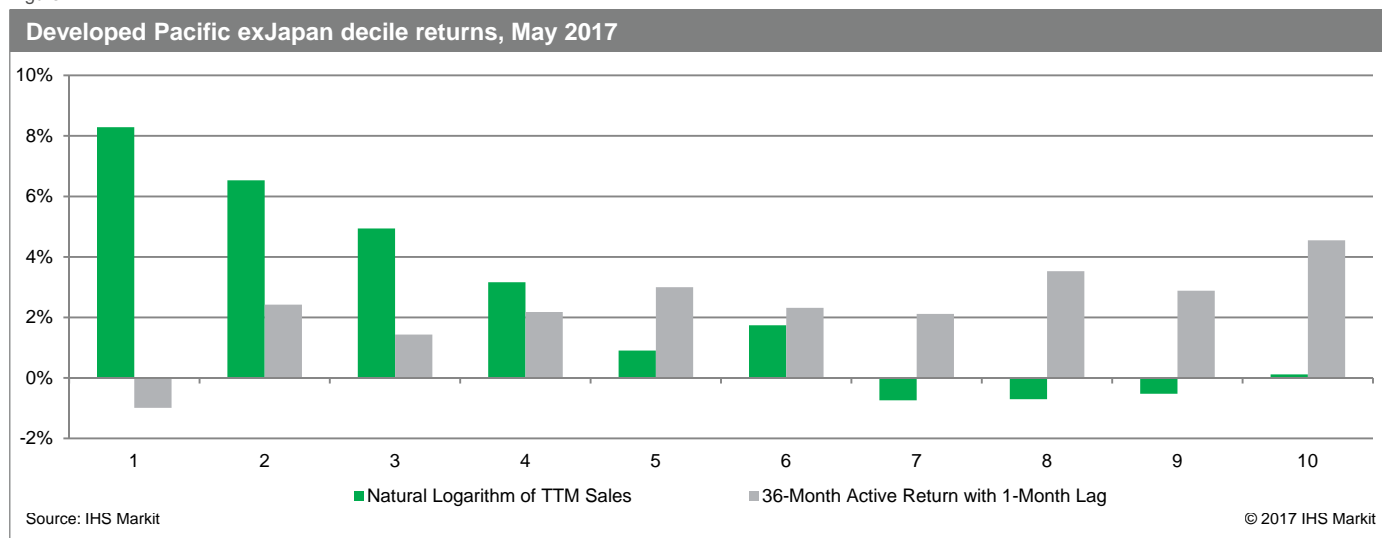
Table 8

Developed Pacific exJapan top decile return spread factor performance, May 2017		
Factor	Decile spread (%)	Factor group
Market Cap per Analyst	8.28	Liquidity, Risk & Size
Natural Logarithm of TTM Sales	8.17	Liquidity, Risk & Size
Natural Logarithm of Total Assets	8.05	Liquidity, Risk & Size
Revenue per Employee	4.98	Management Quality
Product of Beta and Sigma	4.69	Liquidity, Risk & Size
Inflation Sensitivity	4.62	Macro
Dividends- to-Cash Flow	4.58	Management Quality
Industry Relative TTM Sales-to-Price	4.44	Relative Value
6-Month Nominal Change in 36-Month Alpha	4.39	Price Momentum
60-Month Beta	4.38	Liquidity, Risk & Size
Earnings Torpedo	3.97	Earnings Momentum
Number of Analyst Coverage	3.96	Liquidity, Risk & Size
Market Volatility Sensitivity	3.93	Macro
Demand Value Concentration	3.73	Short Sentiment
Net Asset Value to Price	3.66	Deep Value

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 2017**

<b>Factor</b>	<b>Decile spread (%)</b>	<b>Factor group</b>
Natural Logarithm of Closing Price	-9.84	Liquidity, Risk & Size
Average Monthly Trading Volume-to-Market Cap	-9.80	Liquidity, Risk & Size
Natural Logarithm of Market Capitalization	-9.18	Liquidity, Risk & Size
Stock Illiquidity	-7.71	Liquidity, Risk & Size
36-Month Active Return with 1-Month Lag	-5.54	Price Momentum
FY1 EPS Estimates Dispersion	-5.19	Earnings Momentum
14 Day Relative Strength Index	-5.05	Price Momentum
FY2 EPS Forecast Dispersion	-4.81	Earnings Momentum
60-Month Active Return with 1-Month Lag	-4.65	Price Momentum
Average Trading Volume in Preceding 6-month	-4.64	Price Momentum

Source: IHS Markit

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Table 10

**Japan Standard Cap top decile return spread factor performance, May 2017**

<b>Factor</b>	<b>Decile spread (%)</b>	<b>Factor group</b>
Profitability Ratio	8.93	Management Quality
Return on Assets	8.34	Management Quality
EBITDA-to-Debt	7.54	Liquidity, Risk & Size
Rational Decay Alpha	7.36	Price Momentum
Assets Turnover Ratio	7.09	Management Quality
60-Month Beta	7.04	Liquidity, Risk & Size
Forward Return on Equity	7.03	Management Quality
Cash Flow Return on Invested Capital	6.86	Management Quality
Yearly TTM Total Sales Growth Rate	6.63	Historical Growth
24-Month Active Return with 1-Month Lag	6.60	Price Momentum
Net Operating Asset Turnover	6.35	Management Quality
Return on Invested Capital	6.31	Management Quality
Return on Equity	6.20	Management Quality
Pretax Return on Net Operating Assets	6.12	Management Quality
Sustainable Growth Rate	6.06	Historical Growth

Source: IHS Markit

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Table 11

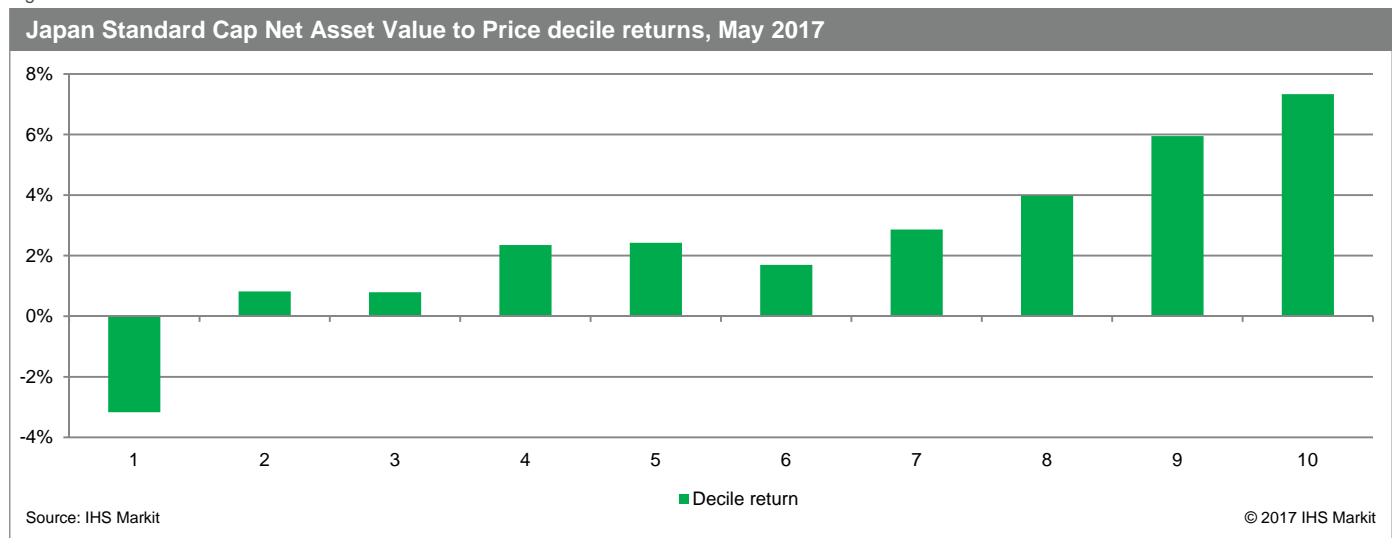
**Japan Standard Cap bottom decile return spread factor performance, May 2017**

<b>Factor</b>	<b>Decile spread (%)</b>	<b>Factor group</b>
Net Asset Value to Price	-10.50	Deep Value
Price-to-Total Assets	-10.42	Deep Value
Tobin q	-10.26	Liquidity, Risk & Size
Book-to-Market	-9.66	Deep Value
Leading 12 Month Book Yield	-9.41	Deep Value
60-Month Active Return with 1-Month Lag	-9.20	Price Momentum
60-Month Alpha	-9.17	Price Momentum
Time Weighted Book Yield	-8.93	Deep Value
36-Month Active Return with 1-Month Lag	-8.85	Price Momentum
Graham Number Fair Value Premium	-8.67	Deep Value

Source: IHS Markit

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Figure 5



## Emerging Markets

We wrap up our review with a look at top (Table 12) and bottom (Table 13) performing factors in the Emerging Markets universe in May. High quality and solid fundamentals were positive themes for stocks, with top return spreads awarded to measures such as Return on Invested Capital (2.81%), R Sqr of 5-yr TTM EPS Trend Line (2.62%) and Interest Coverage (2.16%). However, price did not matter as valuation factors such as Time Weighted Book Yield (-2.08%) struggled for a third month running (Figure 6).

Table 12

### Emerging Markets top quintile return spread factor performance, May 2017

Factor	Decile spread (%)	Factor group
Return on Invested Capital	2.81	Management Quality
Fixed Assets Turnover Ratio	2.80	Management Quality
Return on Equity	2.63	Management Quality
R Sqr of 5-yr TTM EPS Trend Line	2.62	Historical Growth
60-Day Residual Risk	2.62	Liquidity, Risk & Size
Forward Return on Equity	2.40	Management Quality
Cash Flow Return on Invested Capital	2.23	Management Quality
3-yr Growth in TTM Earnings per Share	2.19	Historical Growth
Stability of 5-yr TTM Earnings per Share	2.17	Historical Growth
Interest Coverage	2.16	Liquidity, Risk & Size
Earnings Torpedo	2.14	Earnings Momentum
TTM Gross Profit to Assets	2.09	Management Quality
1-Month Stock Return Interquartile Range	2.08	Liquidity, Risk & Size
Change in TTM Sales vs. EPS	2.05	Earnings Quality
TTM Core Earnings-to-Price	2.03	Deep Value

Source: IHS Markit

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Table 13

**Emerging Markets bottom quintile return spread factor performance, May 2017**

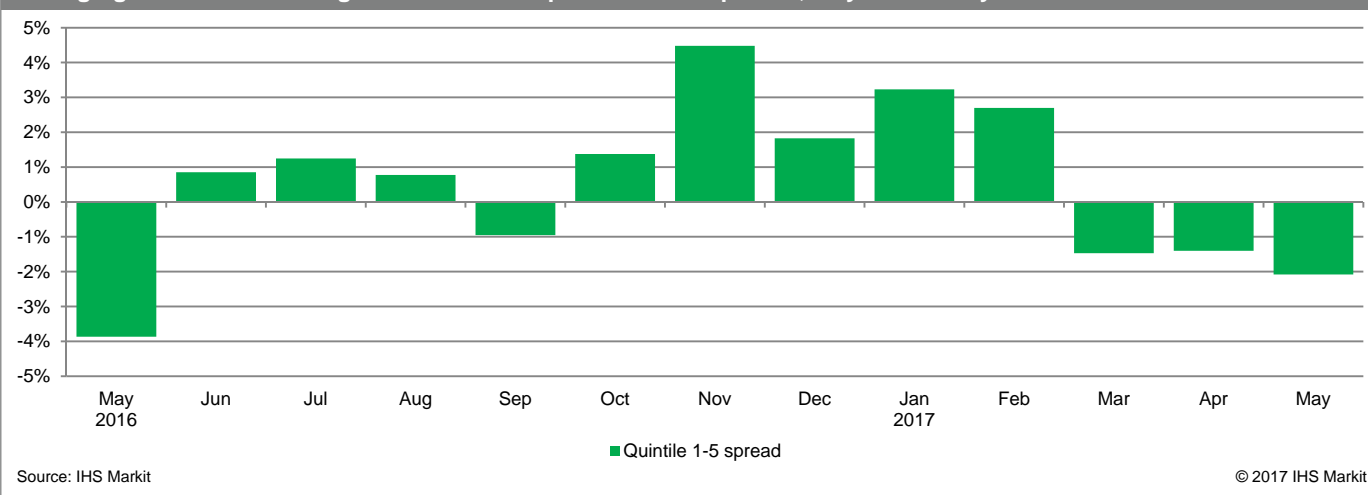
Factor	Decile spread (%)	Factor group
Asset Composition	-2.59	Liquidity, Risk & Size
60-Month Active Return with 12-Month Lag	-2.41	Price Momentum
60-Month Active Return with 1-Month Lag	-2.13	Price Momentum
Time Weighted Book Yield	-2.08	Deep Value
Leading 12 Month Book Yield	-1.98	Deep Value
Leading 12 Month Cash Yield	-1.94	Deep Value
Time Weighted Cash Yield	-1.87	Deep Value
Net Cash to Equity	-1.81	Liquidity, Risk & Size
Net Debt Ratio	-1.75	Management Quality
Market Leverage	-1.66	Liquidity, Risk & Size

Source: IHS Markit

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Figure 6

**Emerging Markets Time Weighted Book Yield quintile return spreads, May 2016 – May 2017**



Source: IHS Markit

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