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Empirical Research Partners

Global Portfolio Strategy November 2016

November 22, 2016

Portfolio Construction: Life After the U.S. Presidential Election

The Market's Playbook Remains Intact

- The state of the equity market has embodied a polarization among investors on two themes: the profit cycle and the direction of interest rates. The two are closely-linked as the rise in government bond yields in the U.S., Europe and Japan since summer owes much to higher growth expectations, that's good news for the profit cycle.
- More than usual the same wide chasm separates the global equity markets. Stocks acting as bond-proxies, offering fundamental stability or low-price volatility have a high commonality in their behavior. Their opposite numbers are another set of closely-related strategies: high-price volatility, anti-bond-proxies, value and cyclicals. The relative returns between those two opposing groups have been diametrically opposed, forcing us to take a side. There's no investable middle ground.
- The U.S. election, that was seen as an endorsement of large-scale fiscal stimulus, followed the playbook; and the anti-bond proxies and cyclicals outperformed while the bond-proxies lagged. We think that's poised to continue and Appendix 1 on page 11 provides a list of issues highly anti-correlated to the total return of U.S. Ten-Year Treasury Bonds that are also attractive in our modeling.

Value's Outperformance Doesn't Seem to Be Over Yet

- Value strategies and cyclical sectors began to outperform in July as the initial response to Brexit was revised and the U.S. presidential election has amplified that trend. So the question is whether value's outperformance is coming to an end or whether there's still more to come. The repricing that's taken place hasn't been large enough to change our views, our judgment is to hold on to our value winners for a while longer.
- Since July issues in the top quintile of our valuation framework have led by +13.5 percentage points, but this follows an extended period when they underperformed. Additionally, we expect the narrowing of valuation spreads to continue and our regional regime indicators haven't changed their stances. In Continental Europe the indicator remains in a neutral stance, in Japan it's value-tilted and in the U.K. it's full-blown value-driven. Our Global Regime Indicator, remains value-tilted as well. Finally, despite the sharp sector rotation, the sector pecking order hasn't changed, and outside the U.S. the representation of cyclicals in the value cohort is still unusually high. In short, the mispricing we highlighted in July has been partly corrected, but not enough to change our mind.
- The same is true at the sector level, and as a consequence, our sector bets haven't changed since summer. When our regional regime indicators moved to value-oriented settings back then, we highlighted three opportunities: banks, household durables in Pan-Europe and industrial cyclicals in Japan. Despite their outperformance since then, household durables in Pan-Europe still offer a lofty +3% free cash flow yield premium. Appendix 2 on page 12 provides a screen of these issues. In Japan, capital equipment and industrial commodity stocks have revalued rapidly over the last few months, but their valuations remain stretched and are currently in the top quintile of their historic range. Appendix 3 on page 12 shows the list of large-capitalization Japanese industrial cyclicals.

Globalization and Corporate Income Tax Cuts: More to Come?

- In the medium-term, the real threat for equity markets is mounting protectionism. In the Bretton Woods II era developed world companies embraced an increasingly capital-light operating model and benefited from declining input costs. A U-turn in globalization would endanger their free cash flow margins, potentially impacting their valuations. The market seems to have taken a sanguine view for now. We are more fearful than that, this is a real threat.
- Another aspect of globalization has been the falling corporate income tax rate. That's due to companies' optimization schemes but also due to a reduction in tax rates in OECD countries given governments' diminished ability to tax businesses in a globalized world. The lessening of the tax burden since the late-1980s is far from negligible, accounting for a third of the free cash flow production in Continental Europe and Japan and about a quarter in the U.K. There's evidence that may continue in the U.K. and the U.S., maintaining if not accelerating the race to the bottom in corporate taxes.

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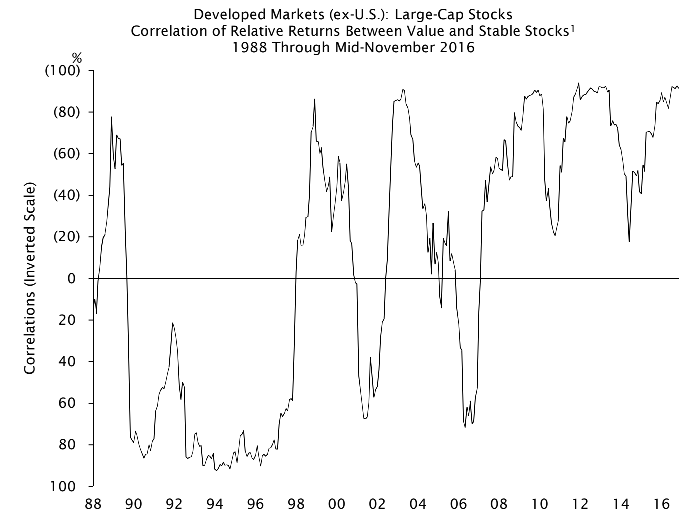
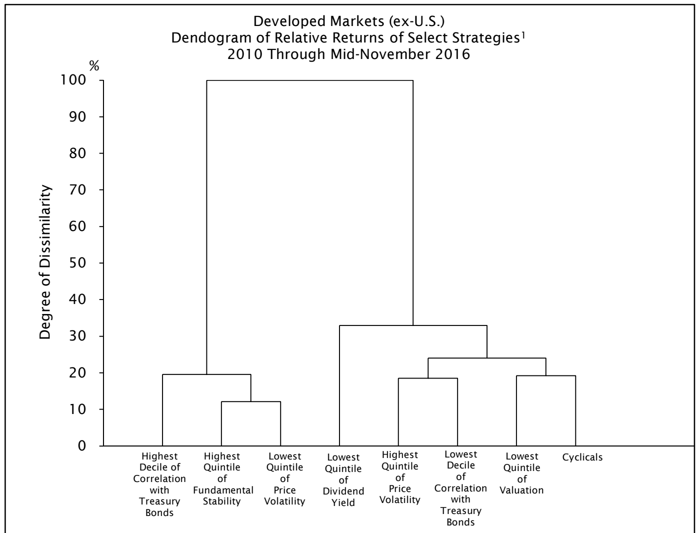
Conclusions in Brief

- The market has been very polarized:



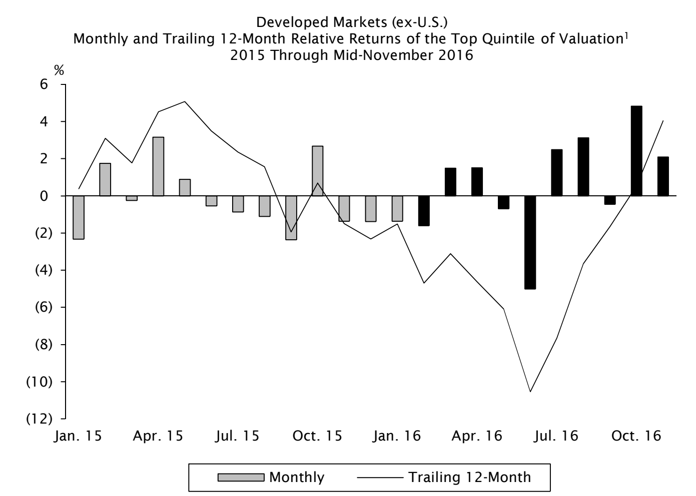
Source: Empirical Research Partners Analysis.
[1] Equally-weighted USD-hedged returns. Correlations computed over trailing twelve-month windows.

- With two opposite groups of strategies:



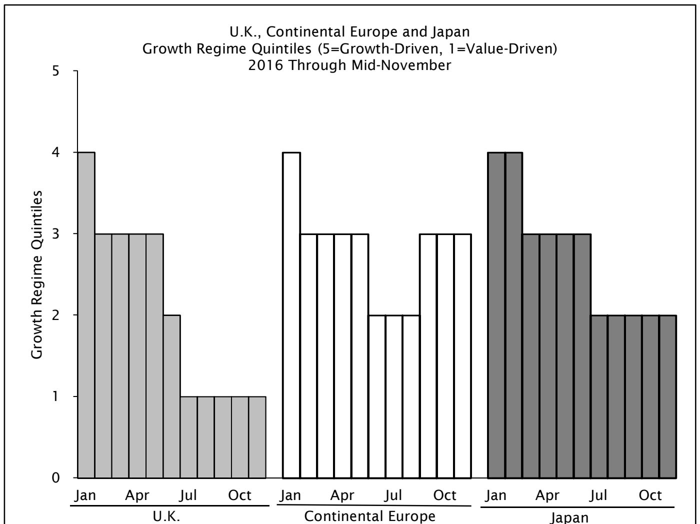
Source: Empirical Research Partners Analysis.
[1] Equally-weighted USD-hedged returns.

- The outperformance of value has been supercharged by the U.S. election results:



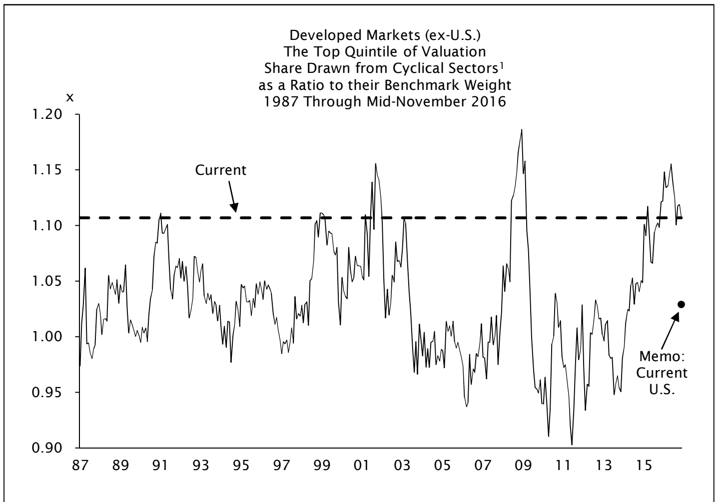
Source: Empirical Research Partners Analysis.
[1] Equally-weighted USD-hedged returns. The trailing 12-month returns are based on monthly compounded data. The black bars indicate months that our Global Regime Indicator has been in a value-tilt stance.

- Regimes are still consistent with a continuation of the trend:



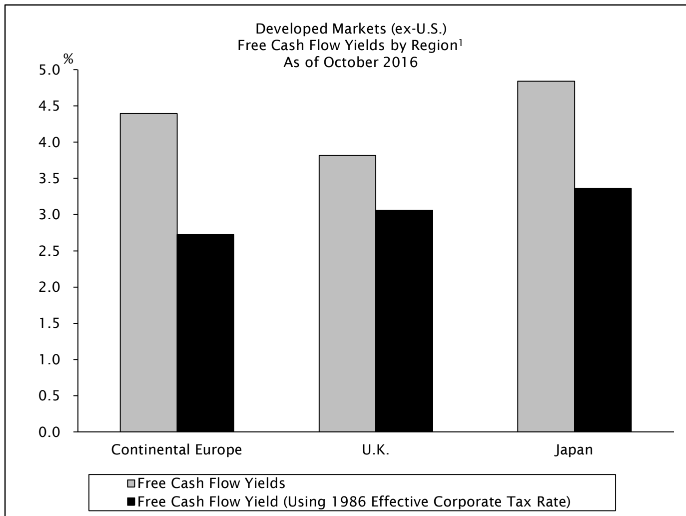
Source: Empirical Research Partners Analysis.

- And the sector pecking order hasn't changed:



Source: Empirical Research Partners Analysis.
[1] Cyclicals are comprised of financials, consumer cyclicals, capital equipment, energy, industrial commodities and technology.

- One benefit of globalization that's likely to last is the decline in corporate taxes:



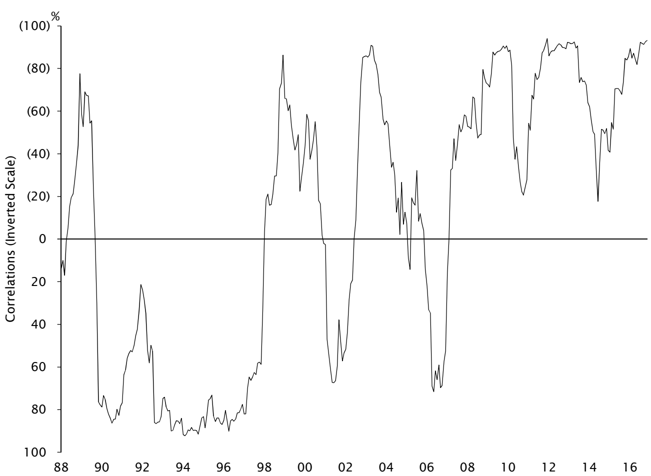
Source: Corporate Reports, Empirical Research Partners Analysis.
[1] Excluding financials and utilities.

Global Strategy: Life After the U.S. Presidential Election

The Market's Playbook Remains Intact

Despite the moves following the U.S. presidential election, the playbook in the non-U.S. developed world that we've highlighted in the past remains intact.[1] The state of the market has been formed by a polarization among investors on two themes: the profit cycle and the direction of interest rates. On the first one, similar to the case of the U.S., the relative performance of fundamentally-stable stocks has been an almost perfect mirror image to that of value, anti-correlated by more than 90%, as they offer investment opportunities for two opposing views of the profit cycle (see Exhibit 1). On the second theme, the low-rate environment has been a key reason for the success of the "bond-like" strategies. The latter are comprised of issues with relative returns that are positively correlated to the performance of bonds and they've been priced at a significant premium over the last few years while anti-bond proxies are by comparison cheap (see Exhibit 2). At the end of June, when the relative trailing-P/E multiples of the bond proxies peaked, those in Pan-Europe were valued at a +20% premium to that market while in recent weeks that premium has come all the way down to zero. In Japan the premium has gone from about 30% to a 5% one over that same period. The valuations of the anti-bond proxies have moved the other way but by a lesser amount.

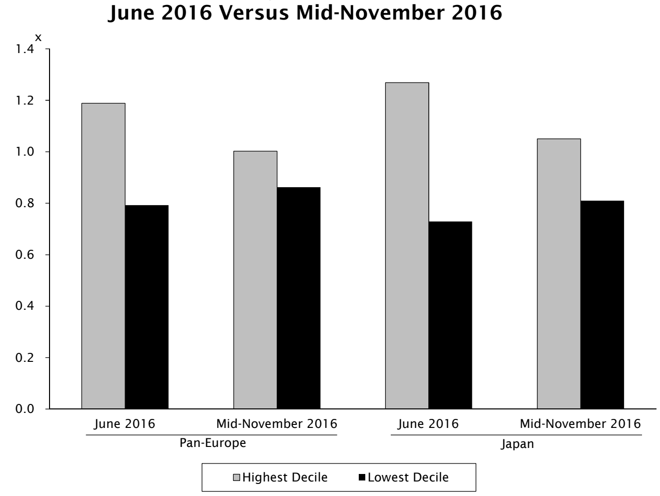
Exhibit 1: Developed Markets (ex-U.S.): Large-Cap Stocks
Correlation of Relative Returns Between
Value and Stable Stocks[1]
1988 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns. Correlations computed over trailing twelve-month windows.

Exhibit 2: Pan-Europe and Japan
Highest and Lowest Deciles of Relative Return
Correlation with the Performance of Ten-Year
Treasury Bonds
Relative Trailing-P/E Ratios[1]
June 2016 Versus Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data. Correlations computed using returns relative to each region over trailing twenty-four month windows.

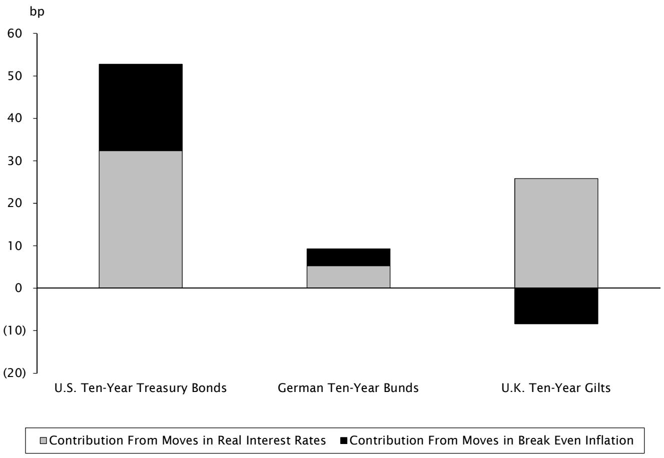
The profit cycle and the rate cycle themes are closely-linked. Since the U.S. presidential election, government bond yields have moved up, essentially on the back of higher growth expectations (see Exhibit 3). They've also constituted supportive news for the profit cycle.

Using a cluster analysis to identify similarities across different investment strategies, we find that those based on bond-proxies, fundamentally-stable stocks and low-price volatility have a high commonality in their behavior. On the opposite side, we find that four strategies are also closely related: high-price volatility, anti-bond-proxies, value and cyclicals (see Exhibit 4). The behavior of the high-dividend yielders has been more unstable, shifting from one group to the other since 2010, although in the past few months they've performed as bond-proxies.

This playbook is consistent with the market's behavior post-election: the strategies within each of the two groups shown in Exhibit 4 have remained highly correlated with each other, while the returns between the two groups have been a mirror image of each other. With the market's growth expectations now revised upward, and with rates moving up, the set of strategies on the right side of the chart, particularly the anti-bond proxies, have outperformed markedly (see Exhibit 5).

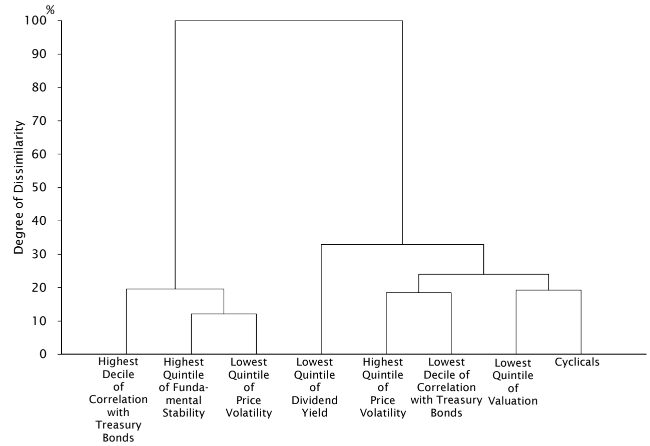
[1] *Global Portfolio Strategy* October 2016. "A Great Equity Rotation? If Rates Move Up."

Exhibit 3: Select Developed Markets
Decomposition of the Rise in Ten-Year Government Bond Yields
November 1st Through November 18th 2016



Source: Bloomberg L.P., Empirical Research Partners Analysis.

Exhibit 4: Developed Markets (ex-U.S.)
Dendrogram of Relative Returns of Select Strategies[1]
2010 Through Mid-November 2016

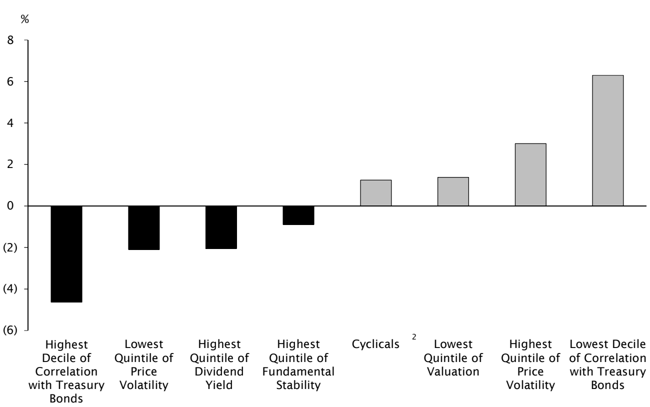


Source: Empirical Research Partners Analysis.

[1]Equally-weighted USD-hedged returns.

The return differentials between opposing strategies have been unusually large recently. The monthly returns of value stocks relative to stable ones in October (+7.7%) and November (+4.7%) have been in the top-decile of the historical distribution going back to 1987 (see Exhibit 6). Cyclical sectors have also outperformed. By contrast the most stable issues, and those sectors populated by bond-proxies, have underperformed significantly, so their valuations have become less stretched.

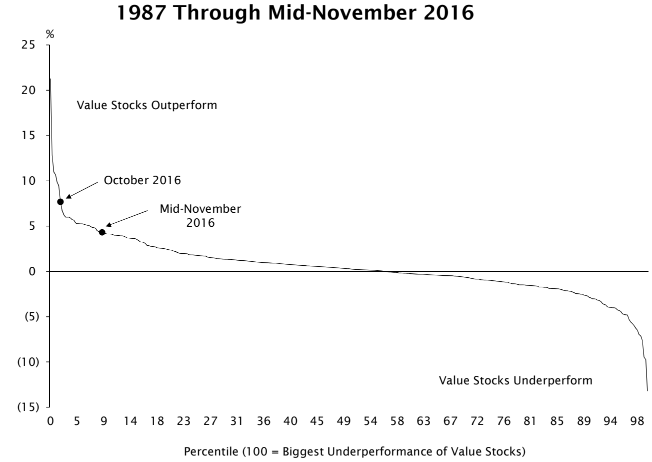
Exhibit 5: Developed Markets (ex-U.S.)
Relative Returns of Various Strategies[1]
November 9th Through November 18th 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted local currency returns.
[2] Comprises consumer durables, capital equipment and industrial commodities.

Exhibit 6: Developed Markets (ex-U.S.): Large-Cap Stocks
Monthly Return Differentials Between Value and Stable Issues[1]
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

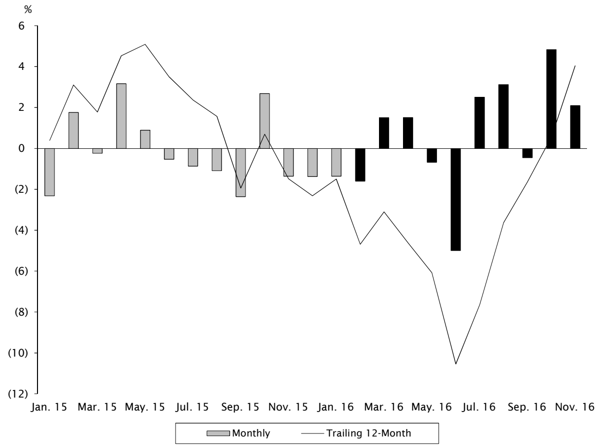
[1] Equally-weighted USD-hedged returns.

Value's Outperformance Doesn't Seem to Be Over Yet

Our regional regime indicators, designed to predict what mindset will prevail when picking stocks, moved from a neutral stance to value-tilt in July following the Brexit referendum. Since then non-U.S. developed world issues in the top quintile of our valuation framework have outperformed that market by +13.5 percentage points (see Exhibit 7). The black bars in the exhibit show the monthly relative returns of value stocks since our Global Regime Indicator moved to a value-tilt stance. The concentration of cyclical issues among value issues has increased the beta of that strategy and today it sits at 1.3, a top-decile reading, amplifying the recent results (see Exhibit 8).

So the question is whether this outperformance of value stocks and cyclicals is coming to an end or whether there's still some potential left.

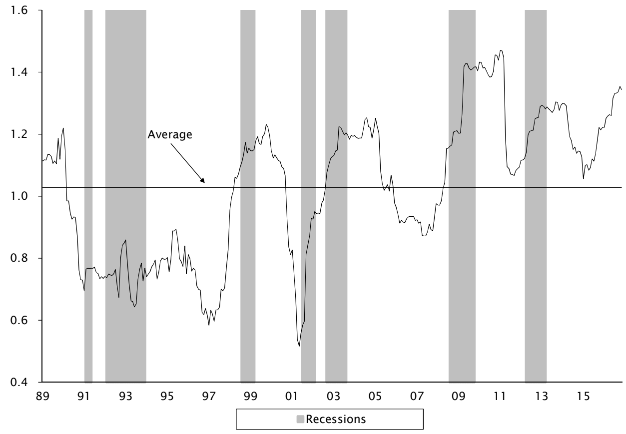
Exhibit 7: Developed Markets (ex-U.S.)
Monthly and Trailing 12-Month Relative Returns of the Top Quintile of Valuation
2015 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns. The trailing 12-month returns based on monthly compounded data. The black bars indicate months that our Global Regime Indicator has been in a value-tilt stance.

Exhibit 8: Developed Markets (ex-U.S.)
Beta of the Top Quintile of Valuation[1]
1989 Through Mid-November 2016



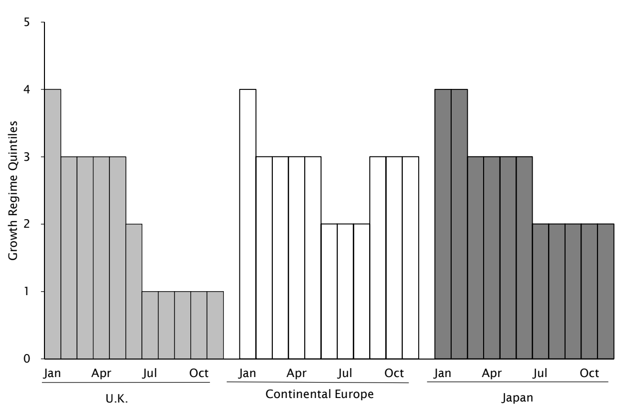
Source: Empirical Research Partners Analysis.

[1] Beta calculated over trailing two-year windows.

The recent outperformance of value has been remarkable with the trailing three-month relative returns in the top-decile of the outcomes since 1987. However this followed a prolonged period when value underperformed. Our regional regime indicators had not been at a value-oriented stance for an extended period of time, more than a year in the U.K., close to two years in Continental Europe and Japan resulting in an extended period of underperformance for value stocks. On a longer-term perspective the outperformance of value has been much less impressive, over the past twenty-four months it's been in the bottom quartile of the historic range. When seen through that prism value's outperformance isn't provocative.

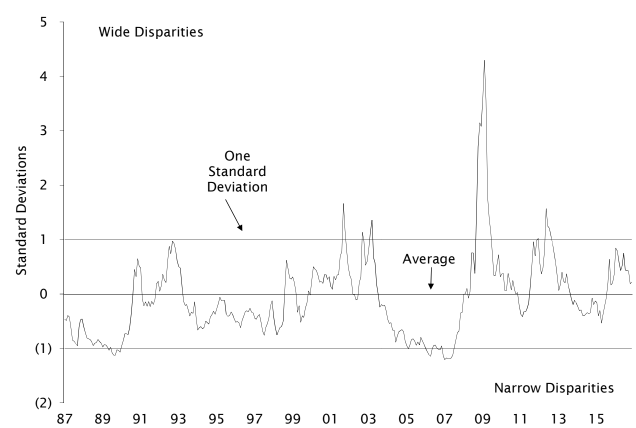
Additionally, despite the recent narrowing of valuation spreads in the non-U.S. universe, our regional regime indicators haven't changed their stances. The indicator in Continental Europe remains neutral, in Japan it's value-tilted and in the U.K. it's full-blown value-driven (see Exhibit 9). Our Global Regime Indicator, that incorporates the U.S., remains value-tilted as well. Those regimes point to a continuation of value's outperformance.

Exhibit 9: U.K., Continental Europe and Japan
Growth Regime Quintiles (5=Growth-Driven, 1=Value-Driven)
2016 Through Mid-November



Source: Empirical Research Partners Analysis.

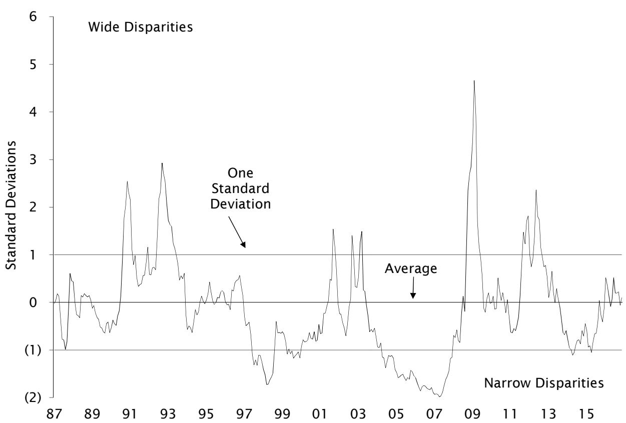
Exhibit 10: Developed Markets (ex-U.S.)
Valuation Spreads
The Top Quintile Compared to the Market Average
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

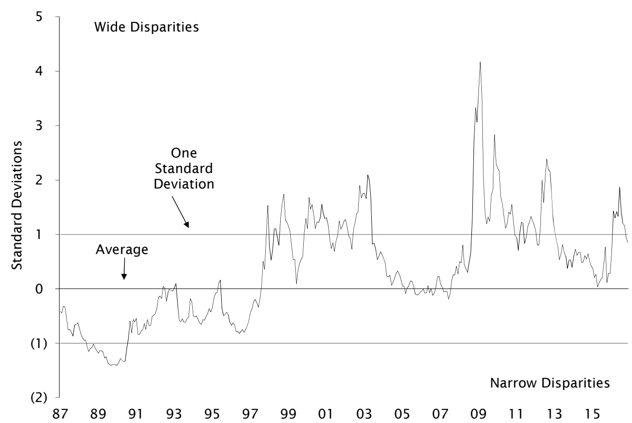
Valuation spreads are a key input in our regime indicators. They've contracted since July, and we'd expect the momentum in place to drive them narrower (see Exhibit 10). There's however a noticeable difference between Continental Europe and Japan with spreads in the former close to average while in the latter there're about 9/10ths of a standard deviation above the mean (see Exhibits 11 and 12). In fact historical precedents suggest that the end-point when valuation spreads narrow isn't usually zero (i.e., the historical average), as they tend to stabilize at a lower level. In Continental Europe, periods when valuation spreads have narrowed to near-zero levels have been followed, on average, by value outperforming by +8 percentage points over the subsequent twelve months. Other inputs to the regime indicators are also supportive of the value call. For instance, in the U.K. with the future uncertain there's now an unusually heavy penalty put on companies with high capital spending.

Exhibit 11: Continental Europe
Valuation Spreads
The Top Quintile Compared to the Market Average
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

Exhibit 12: Japan
Valuation Spreads
The Top Quintile Compared to the Market Average
1987 Through Mid-November 2016

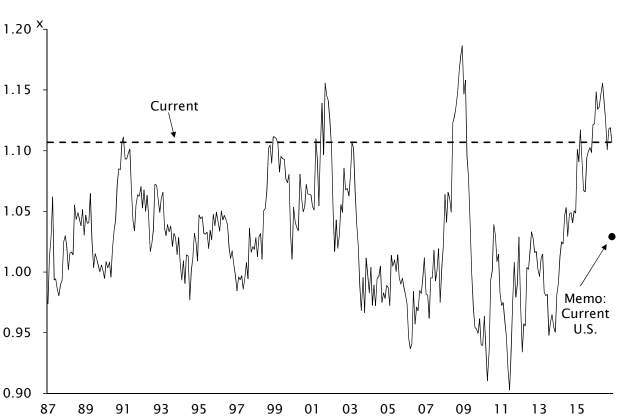


Source: Empirical Research Partners Analysis.

Finally, although the sector rotation has been provocative during the days following the U.S. presidential election, the pecking order hasn't changed significantly. Cyclical stocks are still overrepresented among the value cohort (see Exhibit 13). The current level isn't unprecedented, but is equivalent to what happened in 2001 and 2008, two periods of crisis unlike today's setting. By comparison in the U.S. market the share of cyclicals among cheap issues has come down and is closer to benchmark weight, near its long-term average.

In the non-U.S. developed world a lot of what constituted value before the U.S. election remains so after it. Using free cash flow yield as the valuation discriminator to suppress the impact from the financials in the result, we see little evidence of a reshuffle among the cheapest issues: some cyclical stocks have exited the high free cash flow yield cohort while some utilities and telecom issues have joined it (see Exhibit 14). The scale of that migration hardly changes the overall picture, so we are prone to hold onto our favorite sectors as there's no convincing argument emerging yet for a rebalancing.

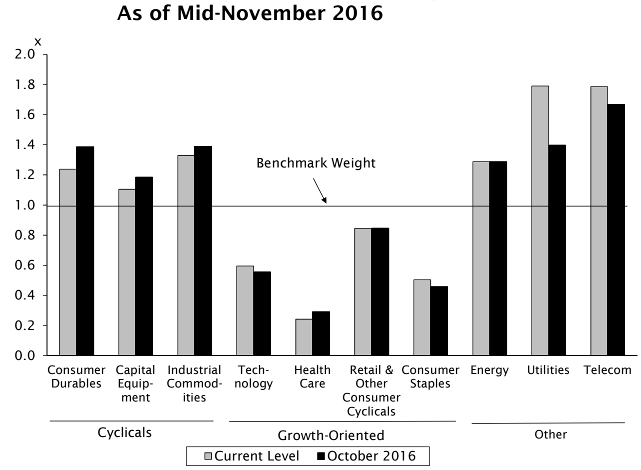
Exhibit 13: Developed Markets (ex-U.S.)
The Top Quintile of Valuation
Share Drawn from Cyclical Sectors[1]
as a Ratio to their Benchmark Weight
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Cyclicals comprise financials, consumer cyclicals, capital equipment, energy, industrial commodities and technology.

Exhibit 14: Developed Markets (ex-U.S.)
Ratio of Stocks in the Top Quintile of
Free Cash Flow Yield
Relative to the Benchmark Weight by Sector[1]
As of Mid-November 2016



Source: Empirical Research Partners Analysis.

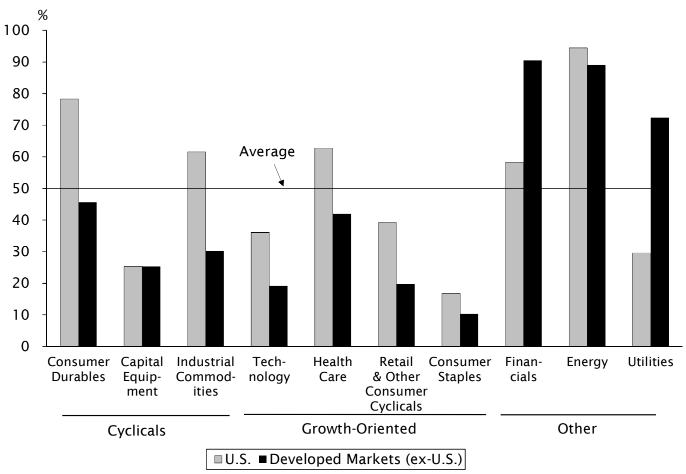
[1] Equally-weighted data.

In conclusion, the pricing action in the market post-election doesn't seem large enough to change our views, at the moment we stick to our guns and hold on to our value winners for a while longer. There's little evidence in the non-U.S. developed markets that the outperformance from value is over. The over-stretched state of the bond-proxy strategies we've highlighted in the past has become less provocative, but hasn't been eliminated yet. This is in contrast to the U.S. market where most of the glaring anomalies have been cured. The U.S. regime indicator moved to value-tilted in February of this year, five months before a similar move in the U.K. and Continental Europe and six months ahead of Japan. The success of the value strategy is thus more mature in the case of the U.S.[2] Appendix 1 on page 11 provides a list of issues highly anti-correlated to the total return of the U.S. Ten-Year Treasury Bond that are attractive in our modeling.

Our Sector Bets

When our regime indicators shifted to value in July, we identified three opportunities in the non-U.S. developed world: banks, Pan-European household durables and Japanese industrial cyclicals. That's still the case today. In the non-U.S. developed world the most visible stress is concentrated in the financial and energy sectors (see Exhibit 15). Exhibit 16 shows how banks are priced depending on the level of regional government bond yields. There's a similar pattern among the U.S., the U.K., Continental Europe and Japan. The recent increase in government bond yields has provided support to the banks. We remain of the view that identifying banks that're able to increase their ROE is the correct way to approach the sector, the use of our algorithm to predict ROE improvement has proven to be useful in the past.[3]

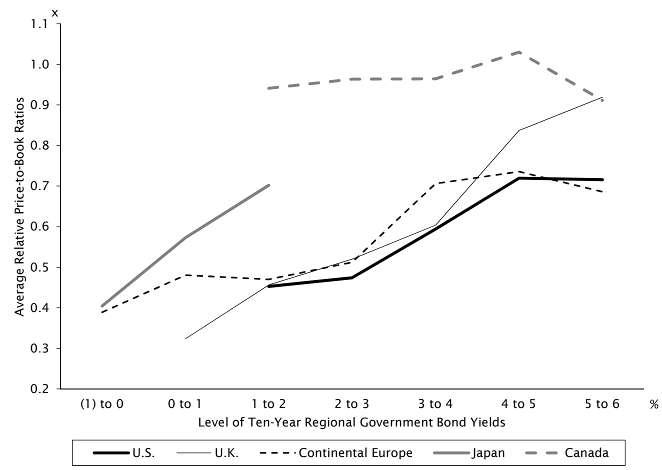
Exhibit 15: Developed Markets
Intra-Sectoral Valuation Spreads[1]
Current Readings Compared to Long-Term History
Percentiles (1=Narrowest, 100=Widest)
1987 Through Mid-November 2016[2]



Source: Empirical Research Partners Analysis.

[1] Top quintile compared to sector average.
[2] U.S. data from 1952.

Exhibit 16: Developed Markets: Bank Stocks
Average Relative Price-to-Book Ratios by
Level of Ten-Year Regional Government Bond Yields[1]
2000 Through October 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Price-to-book ratios are relative to the region.

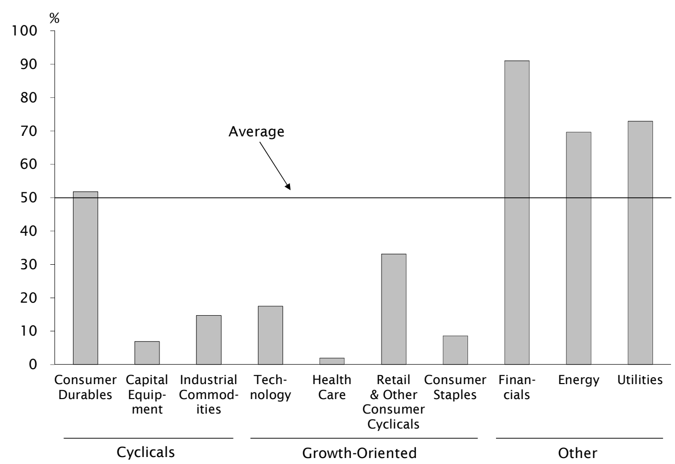
In the case of Pan-Europe, valuation spreads within the consumer durables, although close to average, stand out compared to other cyclical sectors (see Exhibit 17). Despite their outperformance since summer, when the Continental European and U.K. regimes switched to value-tilt, Pan-European household durables still offer a +3% free cash flow yield premium to the market (see Exhibit 18). Appendix 2 on page 12 provides a screen of the Pan-European household durables.

In Japan, capital equipment and industrial commodity issues remain under pressure (see Exhibit 19). The stocks have revalued since July as the sector has outperformed; the two main headwinds have abated with fears of a Chinese hard-landing receding and the Yen depreciating. Their valuations looks less extreme now although they remain stretched, in the top 15% of the historic range (see Exhibit 20). Appendix 3 on page 12 shows the list of large-capitalization Japanese industrial cyclicals.

[2] *Portfolio Strategy* November 2016. "Where We Stand: Counting Cards."

[3] *Global Portfolio Strategy* June 2016. "Banks: Value Trap or Opportunity?"

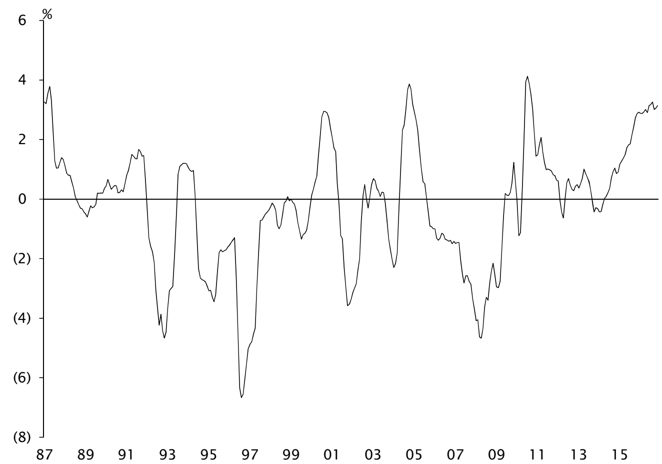
Exhibit 17: Pan-Europe
Intra-Sectoral Valuation Spreads[1]
Current Readings Compared to Long-Term History
Percentiles (1=Narrowest, 100=Widest)
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1]Top-third compared to the sector average.

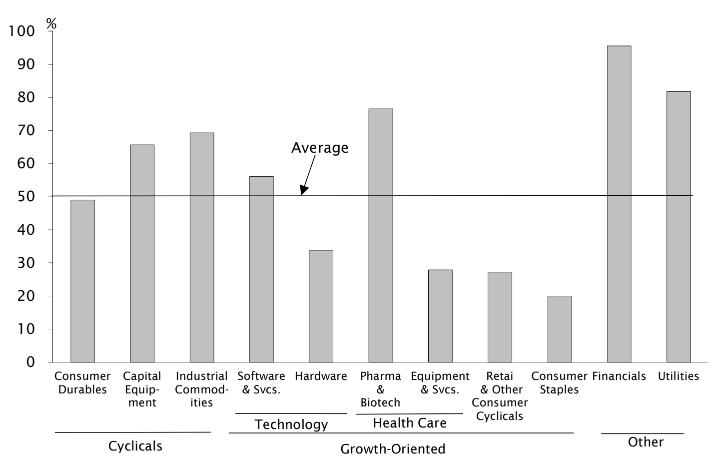
Exhibit 18: Pan-Europe: Household Durables[1]
Relative Free Cash Flow Yields[2]
1987 Through Mid-November 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Drawn from the traditional household durables, construction and building industries.
[2] Capitalization-weighted data; smoothed on a trailing three-month basis.

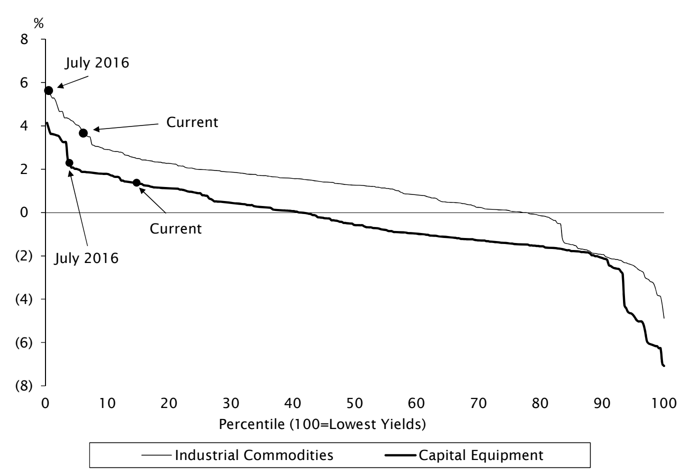
Exhibit 19: Japan
Intra-Sectoral Valuation Spreads[1]
Current Readings Compared to Long-Term History
Percentiles (1=Narrowest, 100=Widest)
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Top-third compared to sector average.

Exhibit 20: Japan: Industrial Cyclical Stocks
Relative Free Cash Flow Yields[1]
1987 Through Mid-November 2016

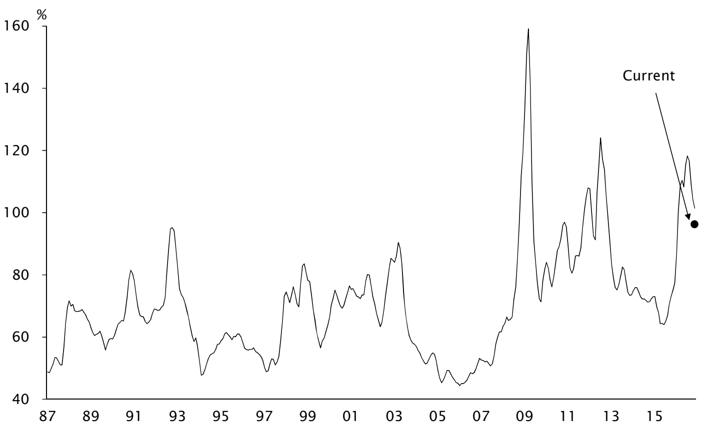


Source: Empirical Research Partners Analysis.

[1] Capitalization-weighted data.

In the non-U.S. developed world valuation differentials have narrowed since July, by most in traditional cyclical sectors. The post-election rotation is essentially an acceleration of a trend that started last summer. In the case of the energy and financial sectors, the narrowing of spreads started a few months ago from a very high level, we believe there's still ample room for a further contraction (see Exhibits 21 and 22). A similar pattern has emerged among industrial commodity issues, providing an additional example of trend acceleration, although in that case valuation spreads are now somewhat narrow (see Exhibit 23). The list of opportunities in this sector is shrinking and largely concentrated among Japanese stocks. The spread narrowing in other sectors has been more limited, among the consumer durable stocks they've converged to a low level (see Exhibit 24).

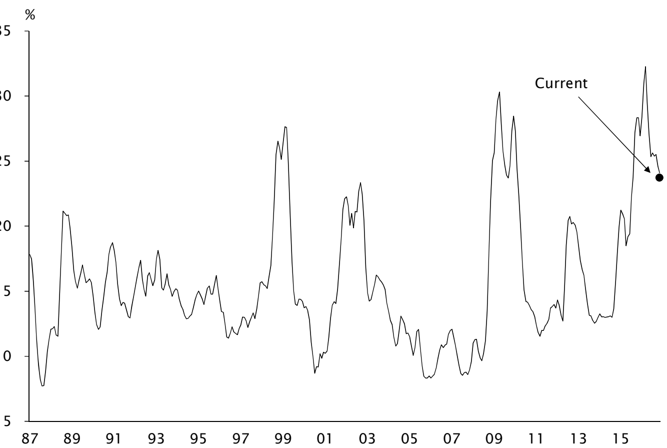
Exhibit 21: Developed Markets (ex-U.S.): Financial Stocks
Differential in Book Value Yields[1]
Highest Quintile Compared to the Sector Average
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data; smoothed on a trailing three-month basis.

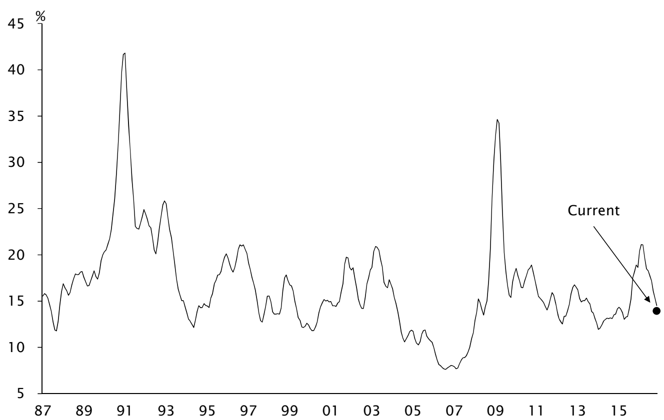
Exhibit 22: Developed Markets (ex-U.S.): Energy Stocks
Differential in Gross Cash Flow Yields[1]
Highest Quintile Compared to the Sector Average
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data; smoothed on a trailing three-month basis.

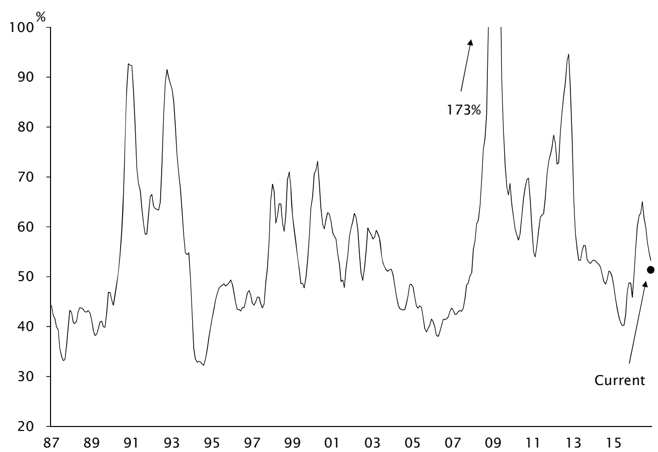
Exhibit 23: Developed Markets (ex-U.S.): Industrial Commodity Stocks
Differential in Gross Cash Flow Yields[1]
Highest Quintile Compared to the Sector Average
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data; smoothed on a trailing three-month basis.

Exhibit 24: Developed Markets (ex-U.S.): Consumer Durables
Differential in Book Value Yields[1]
Highest Quintile Compared to the Sector Average
1987 Through Mid-November 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data; smoothed on a trailing three-month basis.

Globalization and Corporate Income Tax Cuts: More to Come?

In the medium-term, the real threat for equity markets is mounting protectionism: the Brexit vote and the campaign of President-elect Trump points in that direction. The Bretton Woods II era has allowed companies to embrace an increasingly capital-light model and the rise in global value chains meant that imports to the manufacturing process in the developed world became cheaper, also boosting margins (see Exhibit 25 and 26). A U-turn in globalization would endanger free cash flow margins and eventually could have a large negative impact on their valuations.

The market seems to have taken a sanguine view on that possibility and isn't discounting a reversal in globalization. We are more nervous and would regard that trend as a major potential threat. These issues are discussed in more details in recently-published research.[4]

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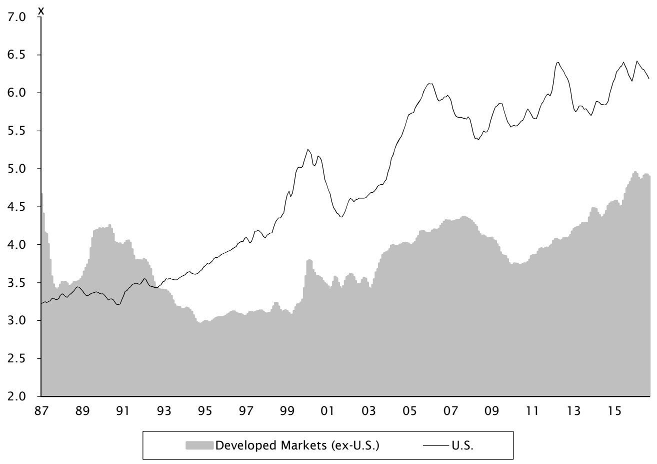
[4] *Portfolio Strategy* November 2016. "Where We Stand: Counting Cards."

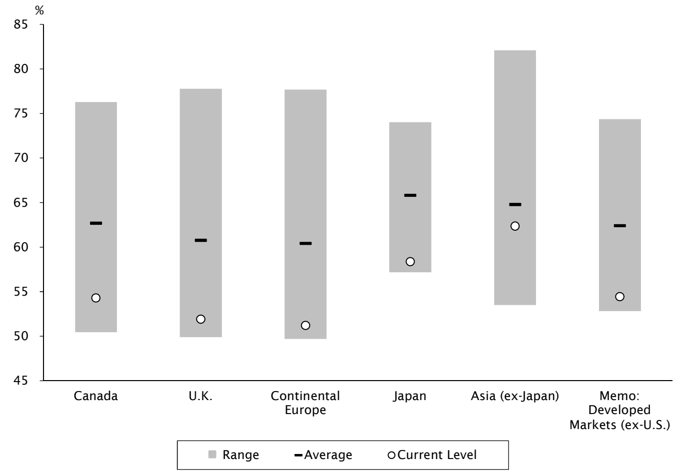
Exhibit 25: Developed Markets
Asset Turnover: Sales-to-Net P,P&E Ratios[1]
1987 Through October 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Excludes financials and utilities; capitalization-weighted data smoothed on a trailing three-month basis.

Exhibit 26: Developed Markets (ex-U.S.)
Cost of Goods Sold-to-Sales Ratios by Region[1]
Historical Range, Average and Current Level
1987 Through October 2016



Source: Empirical Research Partners Analysis.

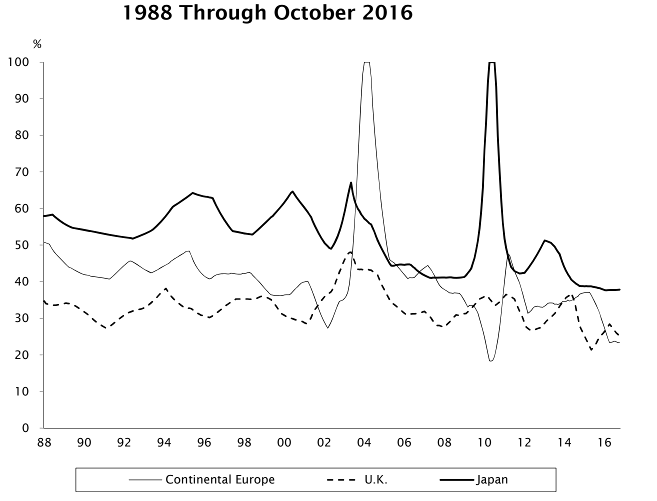
[1] Excludes financials and utilities; capitalization-weighted data.

Here we focus on another aspect of globalization: corporate income tax cuts. The effective tax rate of companies in Continental Europe, U.K. and Japan has been declining steadily over the past two decades (see Exhibit 27). This is the result of sending production to locales with low rates as well as a reduction in statutory rates in a majority of OECD countries (see Exhibits 28 and 29). With globalization, governments have lost some of their ability to set independent tax rates and were forced to cut them to attract or retain business. Rather, the tax burden has shifted to indirect taxes, such as for instance VAT, as consumers can't move to another country for their day-to-day purchases. It would take a major step back in globalization to reverse this trend. On the contrary, both the new British government and the forthcoming U.S. administration are pressing further on tax reductions.

The impact from corporate income tax cuts on profitability is far from negligible. Looking at free cash flow production, if we reverse the decline in tax over the sample to what was experienced in the mid-1980s, the current free cash flow yield of companies would be about a third lower in Continental Europe and Japan and about a quarter lower in the U.K. (see Exhibit 30). Further initiatives in the U.K. and in the U.S. would maintain if not accelerate the race to the bottom for corporate taxes.

In conclusion, while the recent votes are a risk to globalization and a potential major threat to the equity market in our view, one aspect of globalization is likely to endure, the race to the bottom for corporate taxes.

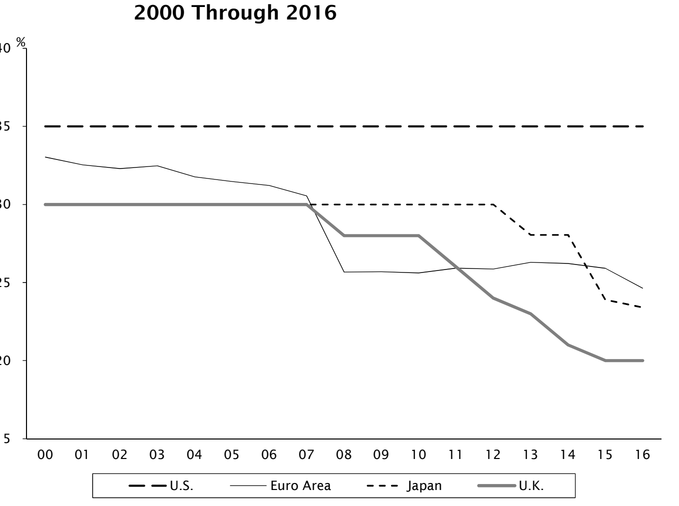
Exhibit 27: Developed Markets (ex-U.S.)
Publicly-Held Company Effective Tax Rates by Region[1]
1988 Through October 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

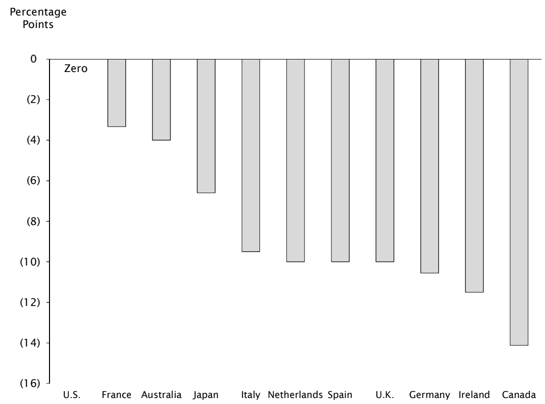
[1] Smoothed on a trailing twelve-month basis, excludes financials and utilities.

Exhibit 28: Select OECD Economies
Statutory Corporate Income Tax Rates
2000 Through 2016



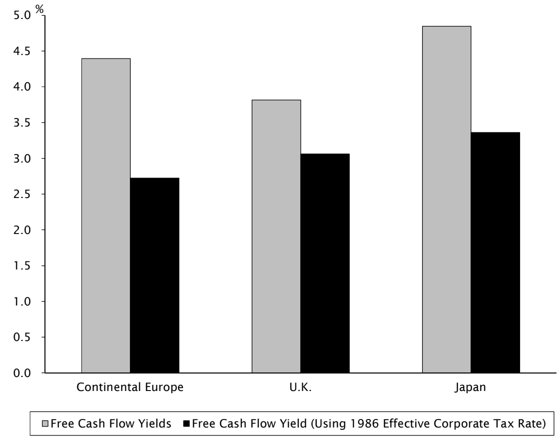
Source: OECD.

Exhibit 29: Select OECD Economies
Changes in Statutory Corporate Income Tax Rates
2016 Versus 2000



Source: OECD, Empirical Research Partners Analysis.

Exhibit 30: Developed Markets (ex-U.S.)
Free Cash Flow Yields by Region[1]
As of October 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Excludes financials and utilities.

Appendix 1: Developed Markets (ex-U.S.): Large and Mid-Capitalization Stocks
International Core Model Ranking Report
Best Quintile of the Model with Top Quintile of Anti-Correlation of Relative Returns with Ten-Year Treasury Bonds[1]
Sorted by Anti-Correlation Greater Than or Equal to (40)%
As of Mid-November 2016

					Quintiles (1=Best; 5=Worst)							
					Super Factors							
Symbol	Company	Price (Local)	Local Currency Code	Anti-Correlation	Valuation	Capital Deployment	Earnings Quality and Trend	Market Reaction	Core Model	Forward-P/E Ratio	YTD Return (Local)	Market Capitalization (USD Million)
8316 JP	Sumitomo Mitsui Financial Group Inc.	4,133.00	JPY	(78) %	1	1	3	4	1	8.1 x	(6.3) %	$53,268
7003 JP	Mitsui Engineering & Shipbuilding Co.Ltd	155.00	JPY	(73)	1	1	5	3	1	13.2	(20.7)	1,178
8053 JP	Sumitomo Corporation	1,321.00	JPY	(69)	1	1	4	2	1	9.6	11.2	15,097
8411 JP	Mizuho Financial Group Inc.	197.90	JPY	(69)	1	2	5	5	1	9.0	(15.1)	46,059
8002 JP	Marubeni Corporation	601.60	JPY	(66)	1	2	5	3	1	6.6	(0.2)	9,615
8593 JP	Mitsubishi UFJ Lease & Finance Company Limited	515.00	JPY	(65)	1	2	2	3	1	8.3	(15.7)	4,226
8473 JP	SBI Holdings Inc.	1,370.00	JPY	(64)	1	1	5	3	1	11.2	7.7	2,786
8591 JP	ORIX Corporation	1,747.50	JPY	(62)	1	2	1	3	1	7.8	4.9	21,083
4208 JP	UBE Industries Ltd.	222.00	JPY	(62)	1	1	3	3	1	10.2	(11.5)	2,126
GLE FP	Societe Generale S.A. Class A	40.21	EUR	(61)	1	1	3	2	1	9.1	(0.4)	34,129
8595 JP	Jafco Co. Ltd.	3,725.00	JPY	(61)	1	1	1	5	1	21.1	(19.6)	1,647
4182 JP	Mitsubishi Gas Chemical Company Inc.	1,656.00	JPY	(61)	1	1	2	1	1	12.3	36.4	3,599
8015 JP	Toyota Tsusho Corp.	2,703.00	JPY	(61)	1	1	5	4	1	12.1	(2.7)	8,816
ACA FP	Credit Agricole SA	10.79	EUR	(60)	1	1	4	3	1	10.5	5.7	31,888
IAG CT	Industrial Alliance Insurance and Financial Services	55.63	CAD	(60)	3	4	4	1	1	11.5	29.8	4,178
6472 JP	NTN Corporation	402.00	JPY	(60)	1	2	5	5	1	11.5	(20.0)	1,981
BNP FP	BNP Paribas SA Class A	54.60	EUR	(59)	1	1	3	1	1	9.3	9.6	72,508
5706 JP	Mitsui Mining and Smelting Company Limited	237.00	JPY	(59)	1	3	4	2	1	13.2	8.3	1,236
8354 JP	Fukuoka Financial Group Inc.	486.00	JPY	(58)	1	4	5	2	1	10.4	(17.0)	3,803
8616 JP	Tokai Tokyo Financial Holdings Inc.	573.00	JPY	(58)	1	4	2	4	1	14.7	(19.0)	1,453
7261 JP	Mazda Motor Corp.	1,709.00	JPY	(58)	1	1	5	5	1	8.1	(31.1)	9,283
6305 JP	Hitachi Construction Machinery Co. Ltd.	2,303.00	JPY	(56)	2	2	1	2	1	31.2	22.3	4,521
4005 JP	Sumitomo Chemical Co. Ltd.	496.00	JPY	(56)	1	1	3	5	1	9.4	(27.3)	7,507
8524 JP	North Pacific Bank Ltd.	452.00	JPY	(56)	1	2	5	1	1	13.7	11.7	1,645
6702 JP	Fujitsu Limited	659.00	JPY	(55)	1	1	4	1	1	11.7	10.4	12,367
7267 JP	Honda Motor Co. Ltd.	3,156.00	JPY	(54)	1	1	5	5	1	10.0	(17.4)	51,200
7180 JP	Kyushu Financial Group Inc.	740.00	JPY	(54)	1	5	1	2	1	20.8	(11.1)	3,112
8308 JP	Resona Holdings Inc.	535.70	JPY	(52)	1	3	3	4	1	8.1	(5.5)	11,328
8601 JP	Daiwa Securities Group Inc.	659.60	JPY	(51)	1	1	5	5	1	11.4	(7.9)	10,487
GAM SW	GAM Holding AG	10.30	CHF	(50)	1	2	3	5	1	15.3	(35.1)	1,610
8058 JP	Mitsubishi Corporation	2,403.50	JPY	(49)	2	2	4	1	1	11.1	21.6	35,777
4004 JP	Showa Denko K.K.	1,505.00	JPY	(49)	1	1	4	3	1	14.1	6.0	2,018
5020 JP	JX Holdings Inc.	430.50	JPY	(48)	1	1	3	4	1	7.9	(12.0)	9,680
CS FP	AXA SA	22.17	EUR	(48)	1	2	3	4	1	9.3	(7.4)	57,412
8334 JP	Gunma Bank Ltd.	557.00	JPY	(47)	1	3	3	2	1	10.7	(19.2)	2,398
9104 JP	Mitsui O.S.K.LinesLtd.	283.00	JPY	(46)	1	1	4	5	1	28.9	(6.4)	3,038
NN NA	NN Group N.V.	30.02	EUR	(46)	1	1	5	3	1	9.8	(2.2)	10,644
4634 JP	Toyo Ink SC Holdings Co. Ltd.	510.00	JPY	(45)	1	2	4	1	1	11.9	6.7	1,410
BWY LN	Bellway p.l.c.	24.74	GBP	(43)	3	1	2	2	1	7.3	(11.6)	3,835
8012 JP	Nagase & Co. Ltd.	1,391.00	JPY	(43)	1	1	5	2	1	NM	(7.2)	1,618
4188 JP	Mitsubishi Chemical Holdings Corporation	703.10	JPY	(42)	1	1	5	3	1	9.5	(6.9)	9,723
6701 JP	NEC Corp.	299.00	JPY	(42)	1	1	5	5	1	11.7	(20.7)	7,297
7911 JP	Toppan Printing Co. Ltd.	1,004.00	JPY	(41)	2	1	5	5	1	17.3	(8.4)	6,420
5801 JP	Furukawa Electric Co. Ltd.	3,360.00	JPY	(40)	1	2	4	1	1	14.5	32.8	2,115
UQA AV	UNIQA Insurance Group AG	6.22	EUR	(40)	1	3	5	2	1	9.5	(10.8)	2,053
BDEV LN	Barratt Developments PLC	4.86	GBP	(40)	2	1	1	5	1	9.4	(17.1)	6,307
AC CT	Air Canada	13.74	CAD	(40)	1	4	3	1	1	3.7	34.6	2,798

Source: Empirical Research Partners Analysis.

[1] Correlations computed over the trailing 24-months.

Appendix 2: Pan-Europe: Large- and Mid-Capitalization Household Durable Stocks[1]
International Core Model Ranking Report
Sorted by Model Rank and Market Capitalization
As of Mid-November 2016

				Quintiles (1=Best; 5=Worst)						Memo:			
				Super Factors									
Symbol	Company	Price (Local)	Local Currency Code	Valuation	Capital Deployment	Earnings Quality and Trend	Market Reaction	Core Model	Free Cash Flow Yield	Implied Growth Rate	Forward P/E Ratio	YTD Return (Local)	Market Capitalization (USD Million)
ACS SM	Actividades de Construccion y Servicios SA	27.13	EUR	1	1	4	3	1	1	1.9 %	11.8 x	4.5 %	$8,991
HOT GY	Hochtief AG	131.50	EUR	2	1	3	1	1	1	7.9	23.7	55.9	8,920
FGR FP	**Eiffage SA**	62.01	EUR	1	4	2	3	1	1	5.5	13.7	6.4	6,419
BDEV LN	**Barratt Developments PLC**	4.86	GBP	2	1	1	5	1	1	(1.6)	9.4	(17.1)	6,307
BWY LN	Bellway p.l.c.	24.74	GBP	3	1	2	2	1	3	(1.6)	7.3	(11.6)	3,835
STR AV	STRABAG SE	30.38	EUR	1	1	1	1	1	1	5.5	12.4	31.9	3,566
EN FP	Bouygues SA	31.42	EUR	1	4	4	4	2	4	5.9	16.5	(9.4)	11,516
SKAB SS	**Skanska AB Class B**	206.10	SEK	3	3	1	2	2	2	6.1	15.6	30.7	9,318
PSN LN	**Persimmon Plc**	17.63	GBP	3	1	2	3	2	1	(2.4)	9.3	(8.2)	6,934
WIE AV	Wienerberger AG	16.53	EUR	2	3	2	3	2	2	7.5	17.6	(2.0)	2,074
DG FP	**VINCI SA**	61.35	EUR	3	3	1	4	3	1	5.5	14.0	6.8	38,539
SGO FP	Compagnie de Saint-Gobain SA	41.45	EUR	2	2	4	3	3	2	5.9	15.7	7.3	24,012
TW/ LN	**Taylor Wimpey plc**	1.52	GBP	4	1	2	5	3	2	(2.4)	9.0	(20.8)	6,397
KSP ID	Kingspan Group Plc	22.80	EUR	4	5	1	2	3	2	9.9	15.3	(5.1)	4,325
CFEB BB	Compagnie d'Entreprises CFE SA	98.49	EUR	3	4	4	2	3	4	7.7	19.1	(7.8)	2,672
GEBN VX	Geberit AG	405.40	CHF	5	5	1	2	4	4	9.0	24.2	22.0	14,797
ELUXB SS	**Electrolux AB Class B**	214.40	SEK	4	3	2	2	4	1	1.9	13.4	7.8	7,333
SK FP	SEB SA	127.00	EUR	5	5	2	1	4	3	10.5	18.2	36.2	6,798
HUSQB SS	**Husqvarna AB Class B**	67.75	SEK	5	5	1	2	4	2	6.4	15.8	23.9	4,166
DLG IM	De'Longhi S.p.A.	21.19	EUR	5	1	2	2	4	3	8.1	18.3	(21.6)	3,362
ASSAB SS	ASSA ABLOY AB Class B	171.20	SEK	5	3	2	4	5	3	12.4	22.0	(2.3)	20,733
FER SM	Ferrovial S.A.	16.72	EUR	3	5	4	5	5	4	11.4	29.6	(17.3)	12,966
BKG LN	Berkeley Group Holdings plc	24.78	GBP	3	5	5	5	5	5	(2.6)	6.6	(30.1)	4,348

Source: Empirical Research Partners Analysis.
[1] Drawn from the traditional household durables, construction and building industries. Distrusted candidates are shown in bold.

Appendix 3: Japan: Large-Capitalization Capital Equipment and Industrial Commodity Stocks
International Core Model Ranking Report
Sorted by Correlation with Emerging Market Stocks Since 2011[1]
As of Mid-November 2016

					Quintiles (1=Best; 5=Worst)							
					Super Factors							
Symbol	Company	Price (Local)	Local Currency Code	Correlation	Valuation	Capital Deployment	Earnings Quality and Trend	Market Reaction	Core Model	Forward-P/E Ratio	YTD Return (Local)	Market Capitalization (USD Million)
Capital Equipment												
6305 JP	Hitachi Construction Machinery Co. Ltd.	1,888.00	JPY	43 %	1	2	1	5	1	16.1 x	(24.0) %	$3,259
8058 JP	Mitsubishi Corporation	2,096.50	JPY	42	1	3	4	4	1	9.2	(3.1)	26,400
6301 JP	Komatsu Ltd.	2,028.50	JPY	42	1	4	2	5	2	13.8	(22.3)	15,755
8031 JP	Mitsui & Co.Ltd	1,536.00	JPY	40	1	3	5	4	1	11.0	(1.3)	21,955
8002 JP	Marubeni Corporation	707.50	JPY	40	1	5	5	4	2	6.1	1.1	9,807
6503 JP	Mitsubishi Electric Corp.	1,370.00	JPY	39	2	2	2	4	2	12.6	(3.3)	23,510
6954 JP	Fanuc Corporation	22,200.00	JPY	38	5	3	1	4	4	26.2	15.1	36,425
6367 JP	Daikin Industries Ltd.	8,880.00	JPY	38	4	3	1	2	2	17.0	15.5	20,716
8001 JP	Itochu Corporation	1,545.00	JPY	38	1	1	3	3	1	6.8	24.0	20,360
8053 JP	Sumitomo Corporation	1,350.50	JPY	38	1	5	4	4	1	7.4	13.1	13,220
8015 JP	Toyota Tsusho Corp.	2,943.00	JPY	38	1	4	5	3	1	11.4	6.4	8,167
6471 JP	NSK Ltd.	1,441.00	JPY	38	2	2	1	5	2	11.0	2.3	6,371
6326 JP	Kubota Corporation	2,005.50	JPY	37	4	4	2	3	4	16.0	15.8	19,768
5802 JP	Sumitomo Electric Industries Ltd.	1,763.00	JPY	37	2	2	4	4	2	11.8	19.1	10,871
7012 JP	Kawasaki Heavy Industries Ltd.	488.00	JPY	37	2	4	4	4	4	11.6	(9.7)	6,455
1963 JP	JGC Corp.	2,021.00	JPY	37	3	4	4	5	5	14.5	(18.2)	4,156
6273 JP	SMC Corporation	32,780.00	JPY	36	5	3	1	3	3	19.9	3.2	17,508
5201 JP	Asahi Glass Co. Ltd.	738.00	JPY	36	1	2	3	2	2	20.5	26.8	7,082
6473 JP	JTEKT Corporation	2,235.00	JPY	36	2	1	3	1	1	12.6	11.4	6,213
7011 JP	Mitsubishi Heavy Industries Ltd.	644.60	JPY	35	2	1	5	4	2	11.6	(1.8)	17,160
6479 JP	Minebea Co. Ltd.	1,454.00	JPY	35	4	4	3	5	4	10.3	(18.5)	4,766
7205 JP	Hino MotorsLtd.	1,487.00	JPY	34	1	3	2	4	1	9.6	(4.5)	6,784
5486 JP	Hitachi Metals Ltd.	1,562.00	JPY	34	1	2	1	5	1	11.4	(23.0)	5,283
6586 JP	Makita Corporation	6,800.00	JPY	33	4	3	5	1	4	17.7	26.4	7,476
6594 JP	Nidec Corporation	9,815.00	JPY	32	5	5	1	4	4	22.5	26.2	23,665
6502 JP	Toshiba Corporation	290.40	JPY	32	1	2	5	5	2	12.3	(43.3)	9,909
7013 JP	IHI Corporation	337.00	JPY	32	2	3	5	5	5	9.7	(44.6)	4,166
5332 JP	TOTO Ltd	4,380.00	JPY	31	4	3	2	1	3	20.2	58.0	6,015
1812 JP	Kajima Corporation	709.00	JPY	29	3	4	4	1	2	17.2	43.4	5,834
1803 JP	Shimizu Corporation	1,062.00	JPY	28	5	3	5	1	4	14.4	30.4	6,548
5938 JP	LIXIL Group Corp.	2,891.00	JPY	26	2	4	4	2	2	15.7	15.8	7,627
1801 JP	Taisei Corporation	779.00	JPY	25	3	3	4	1	3	15.6	14.9	7,205
9024 JP	SEIBU HOLDINGS INC	2,588.00	JPY	24	5	4	4	4	5	29.7	5.3	7,029
1802 JP	Obayashi Corporation	1,123.00	JPY	24	3	5	3	1	2	17.4	45.2	6,398
Industrial Commodities												
5713 JP	Sumitomo Metal Mining Co. Ltd.	1,369.00	JPY	43 %	1	3	3	5	2	7.9 x	(22.2) %	$6,287
5401 JP	Nippon Steel & Sumitomo Metal Corp.	2,483.00	JPY	40	1	1	4	5	1	8.9	(15.4)	18,100
5711 JP	Mitsubishi Materials Corp.	438.00	JPY	39	1	1	2	3	1	10.4	11.8	4,485
4063 JP	Shin-Etsu Chemical Co Ltd	7,174.00	JPY	38	4	4	1	4	4	19.0	(7.4)	24,696
5901 JP	Toyo Seikan Group Holdings Ltd.	2,412.00	JPY	38	5	3	5	1	4	34.3	60.8	4,054
5406 JP	Kobe Steel Ltd.	146.00	JPY	38	1	1	4	5	1	9.1	(28.5)	4,046
3402 JP	Toray Industries Inc.	1,126.00	JPY	37	4	3	2	2	3	17.2	17.6	14,653
3405 JP	Kuraray Co. Ltd.	1,600.00	JPY	37	4	5	5	3	5	13.4	17.5	4,532
5411 JP	JFE Holdings Inc.	1,971.50	JPY	36	1	3	2	5	1	8.8	(24.9)	9,302
4188 JP	Mitsubishi Chemical Holdings Corporation	826.20	JPY	35	1	1	3	2	1	11.9	43.4	9,883
6988 JP	Nitto Denko Corp.	8,346.00	JPY	34	5	2	2	3	4	14.1	25.5	12,437
4005 JP	Sumitomo Chemical Co. Ltd.	688.00	JPY	33	1	1	1	2	1	10.6	46.2	8,760
3407 JP	Asahi Kasei Corporation	773.60	JPY	31	1	1	2	5	1	9.7	(28.6)	8,588
4091 JP	Taiyo Nippon Sanso Corporation	1,220.00	JPY	31	3	1	3	4	3	17.4	(7.5)	4,249
4613 JP	Kansai Paint Co. Ltd.	1,979.00	JPY	31	5	3	4	3	5	18.6	6.6	4,217
3861 JP	Oji Holdings Corp.	573.00	JPY	28	1	1	5	2	1	14.3	34.9	4,787
4612 JP	NIPPON PAINT HOLDINGS CO.LTD.	3,060.00	JPY	27	5	5	3	5	5	26.2	(12.2)	7,860

Source: Empirical Research Partners Analysis.
[1]Stocks staying in the universe at least three years over the correlation measurement period.