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Global Portfolio Strategy September 2016

September 8, 2016

Back to School: Is this a Turning Point?

Our Regimes Have Changed: It's a Key Move

- In June and July our regional regime indicators shifted away from growth towards value. In June the regime in Continental Europe moved one notch to value-tilted, Japan followed with a similar move in July. That same month the U.K. regime moved to full-blown value-driven, having been in a growth-driven state at the end of last year. These moves tend to last, so after a prolonged period with growth stocks in favor, the changes could reflect a new pattern.
- The regime changes are also important because they signal a shift in a more fundamental debate. We essentially find three cyclical sectors as sources of value opportunity in the non-U.S. developed world: banks, Pan-European household durables and Japanese capital goods and industrial commodities. By contrast the most stable sectors are underrepresented. We provide three appendixes for each of these cyclical opportunities on pages 16 and 17.
- The attractiveness of cyclicals isn't an unusual situation in a value-oriented market. Investors are paid to make a valuation bet when the market is too pessimistic and the most penalized stocks are poised to be rerated. We find that the relative performance of stable stocks has been an almost perfect mirror image to that of value as they offer investment opportunities for two opposing views of the cycle. This anticorrelation is extreme but we've not yet reached the levels seen immediately after the Financial Crisis and during the European Debt Crisis. Our sanguine view on the cycle is consistent our value strategy and advocates for cyclicals rather than stable stocks.

Regional Issues

- In Europe we think the main investment opportunity is provided by the fact that companies have increased their operating leverage and have managed to generate profits and free cash flow in a low-growth environment. The market though isn't fully pricing that behavior yet. It's important to underline that this view doesn't need a cyclical pickup, the current mediocre growth environment is sufficient to generate upward earnings surprises. So the bar is set low in terms of the economic scenario needed for the operating leverage argument to play out.
- In Japan, we find further evidence that companies are becoming more shareholder-friendly, with more appropriate cash management and improvement in profitability that goes beyond the simple Yen or cyclical effect. We also find signs that over the last few years the market changed its attitude and started rewarding companies that delivered on free cash flow production and earnings stability. The conjunction of the two could create a virtuous cycle and we have a reasonably high level of conviction that this will indeed be the case.

A Continuation of the Slow-Motion Cycle

- Our view on the cycle hasn't fundamentally changed, in a slow-motion world the profit margins are stable and don't show any sign of erosion typical of a cycle approaching its end. This tepid recovery owes much to the aftermath of the Crisis but it's also a function of companies being able to operate with a much more capital-lite business model. We see the trend continuing with at best mediocre top-line growth but solid margins. Free cash flow margins in particular remain impressive and stable.
- The change in our regional regimes is consistent with the market being skeptical about this narrative. A continuation of the trend would allow cyclical companies to keep producing the current level of profits; this would force skeptics to throw in the towel and the market to rerate those names.
- Importantly, if our call is to a large extent a cyclical one, we don't necessarily need an acceleration of the cycle: the mere status quo will suffice. So the burden of proof is on the bears, the current pricing of the cyclical names will be vindicated only if new information proves that the profit cycle deteriorates.

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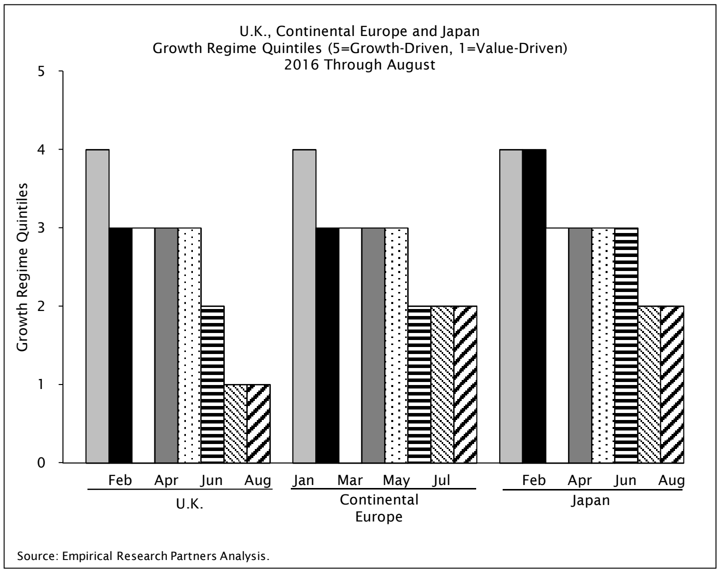
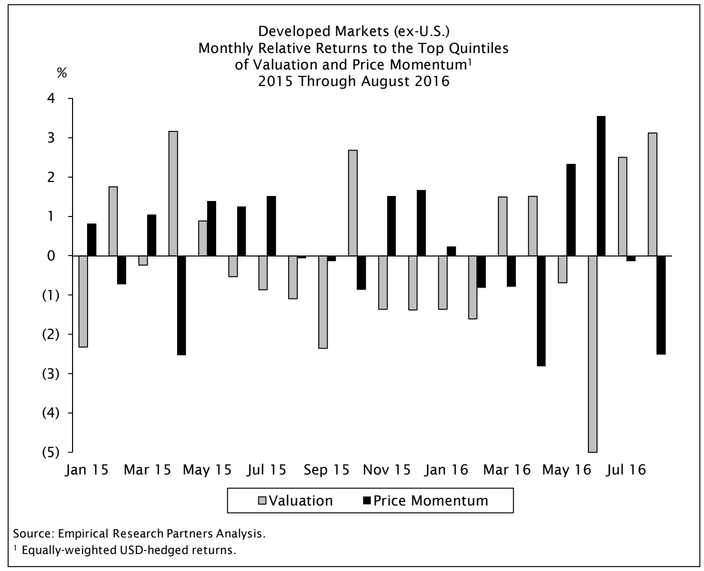
Conclusions in Brief

- Regional regimes have moved away from growth towards value:



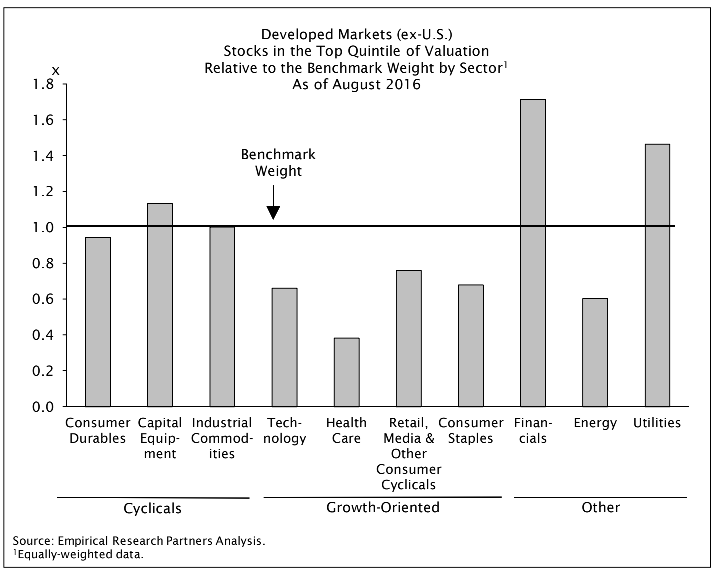
Source: Empirical Research Partners Analysis.

- Stocks with attractive valuation characteristics have outperformed, consistent with these regime changes:



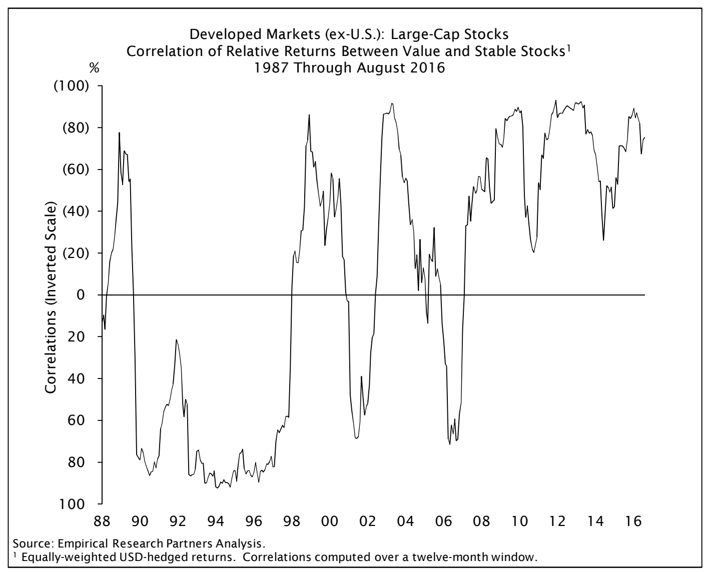
Source: Empirical Research Partners Analysis.
[1] Equally-weighted USD-hedged returns.

- Value opportunities are comprised of banks, Pan-European household durables and Japanese industrial cyclicals:



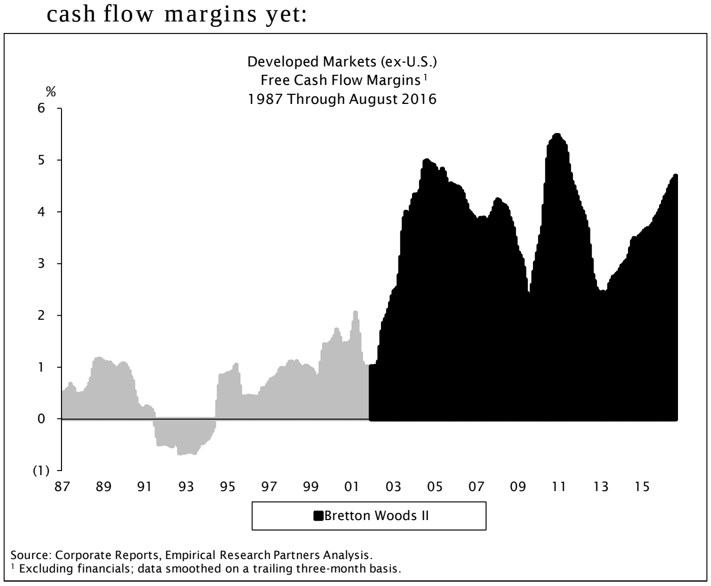
Source: Empirical Research Partners Analysis.
[1] Equally-weighted data.

- The relative performance of stable stocks has been an almost perfect mirror image to that of value:



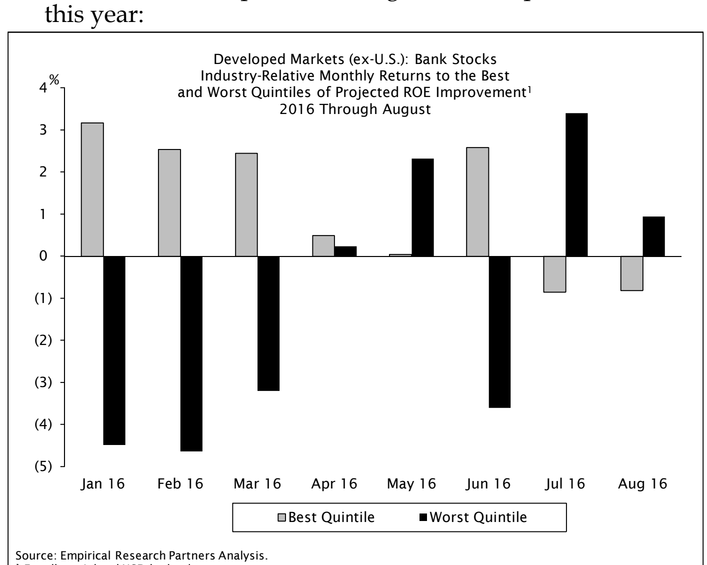
Source: Empirical Research Partners Analysis.
[1] Equally-weighted USD-hedged returns. Correlations computed over a twelve-month window.

- The slow-motion cycle continues, there's no erosion of free cash flow margins yet:



Source: Corporate Reports, Empirical Research Partners Analysis.
[1] Excluding financials; data smoothed on a trailing three-month basis.

- Our bank ROE improvement algorithm has performed well this year:



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

Back to School: A Market Turning Point?

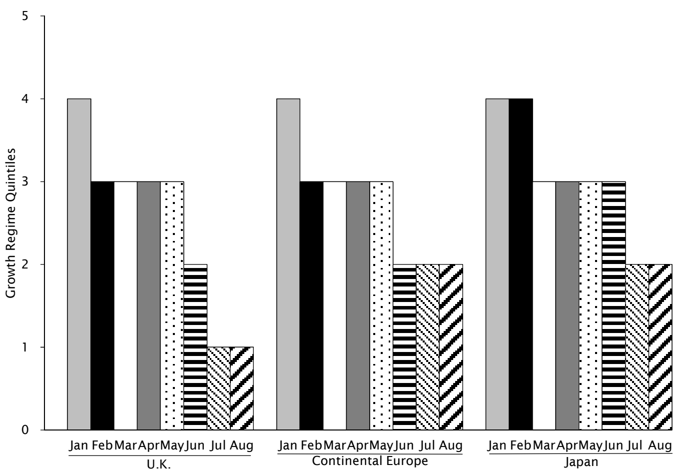
Our Regimes Have Changed: It's a Key Move

The summer was relatively calm, the post-Brexit frenzy abated rapidly and developed world equity markets have mainly traded sideways with volatility way below the historical average. This apparent calm could, however, be misleading; we think we could be at a turning point in terms of market behavior. With that in mind, in this research we review and update our past work with the aim of providing a summary of our main views.

A key change that occurred in June and July was the further move of our regional regime indicators away from growth towards value (see Exhibit 1). In June the regime in Continental Europe moved one notch to value-tilted, Japan followed with a similar move in July. That same month in the wake of the Brexit vote the U.K. regime moved to a full-blown value-driven stance, having been in a growth-driven state at the end of last year.

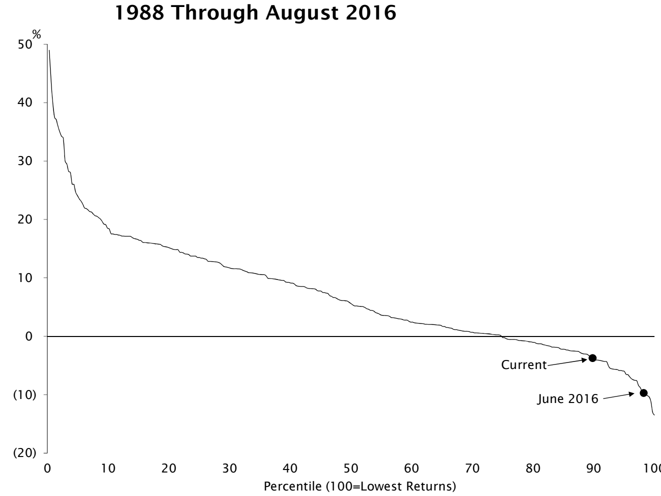
Remaining within the confines of the model, these regime shifts are important for three reasons. First, it had been a long time since the regimes were last in value-tilted mode, our regional regimes had remained growth-tilted or neutral for a considerable period of time: 13 consecutive months in the U.K., 27 months in Continental Europe and 20 months in Japan. Second, as a direct consequence, the performance of value had been unusually poor with the trailing twelve-month relative returns through June quite provocative (see Exhibit 2). Third, looking at past episodes, we find that a move to value-tilt or value-driven stances tend to last, with regimes tending to remain value-oriented for close to a year (see Exhibit 3). The duration of those stays is notoriously difficult to predict.

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



Source: Empirical Research Partners Analysis.

Exhibit 2: Developed Markets (ex-U.S)
Relative Trailing Twelve-Month Returns to the Top Quintile of Valuation[1]
Monthly Data Compounded
1988 Through August 2016



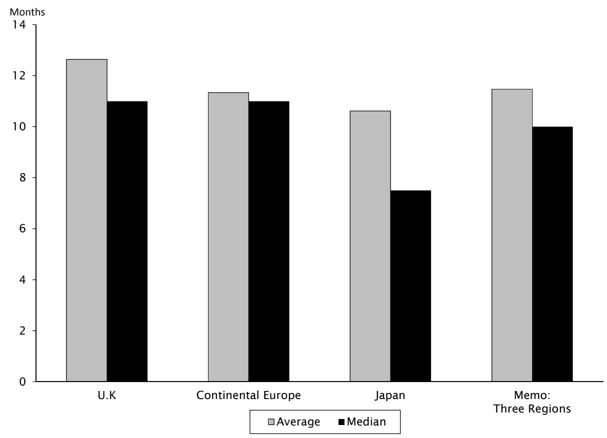
Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns.

As often, one of the main reasons behind the regime changes has been the movement in valuation spreads: they widened earlier this year with worries about China mounting and moved again in June as a result of the Brexit vote (see Exhibit 4). The current level of valuation spreads in the non-U.S. developed world remains moderate however, less than one standard deviation above the historical norm, except for Japan (see Exhibit 5). In terms of sectors, most of the controversy is concentrated, as it's been in the U.S., in financials, energy and cyclical sectors (see Exhibit 6). But in contrast to the U.S., valuation spreads in technology, health care and consumer cyclical are much more subdued in the non-U.S. developed world. This is because those sectors are more homogenous there, with for instance a more limited number of biotech companies in health care; while in the case of consumer cyclicals the market is currently indiscriminately pessimistic. With valuation spreads not extreme, other factors have also played a significant role in moving the needle; in particular the market's antipathy toward companies doing lots of capital spending (see Exhibit 7). The fear of reinvestment characterizes value-type regimes.

Since the regional regimes shifted to a value-tilted stance, stocks with attractive valuation characteristics have outperformed, consistent with these regime changes (see Exhibit 8).

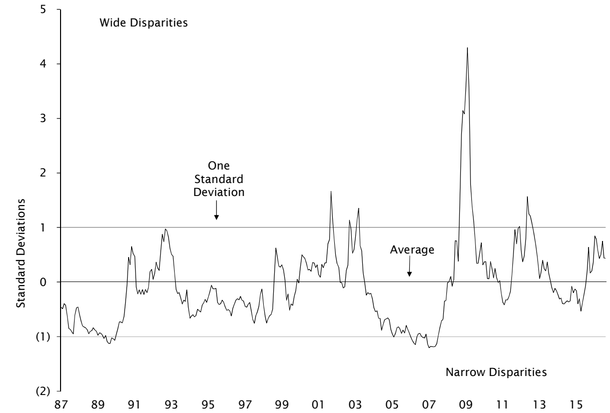
Exhibit 3: U.K., Continental Europe and Japan
Average and Median Duration of Value-Oriented Regimes[1]
1987 Through August 2016



Source: Empirical Research Partners Analysis.

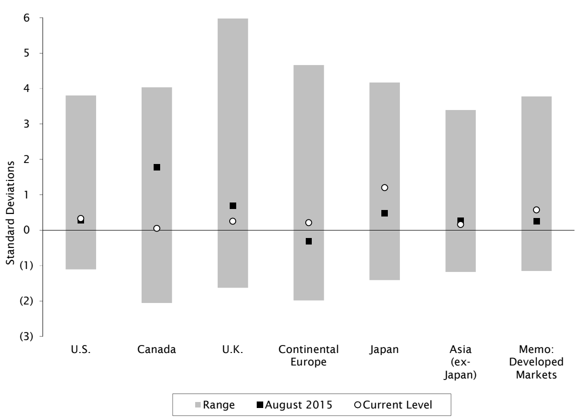
[1] Includes value-tilted and value-driven regime settings. Most recent moves to value-oriented regimes are excluded as they've not yet ended.

Exhibit 4: Developed Markets (ex-U.S.)
Valuation Spreads
The Top Quintile Compared to the Market Average
1987 Through August 2016



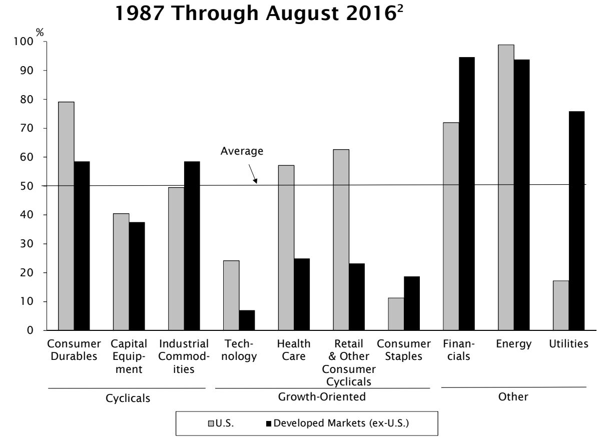
Source: Empirical Research Partners Analysis.

Exhibit 5: Developed Markets
Valuation Spreads by Region
Historical Range, August 2015 and Current Level
1987 Through August 2016



Source: Source: Empirical Research Partners Analysis.

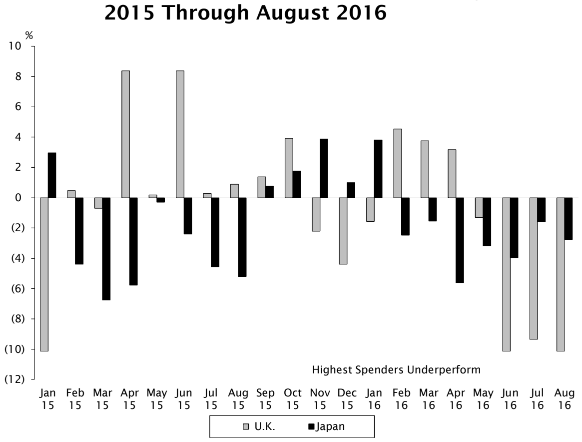
Exhibit 6: Developed Markets
Intra-Sectoral Valuation Spreads[1]
Current Readings Compared to Long-Term History
Percentiles (1=Narrowest, 100=Widest)
1987 Through August 2016[2]



Source: Empirical Research Partners Analysis.

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

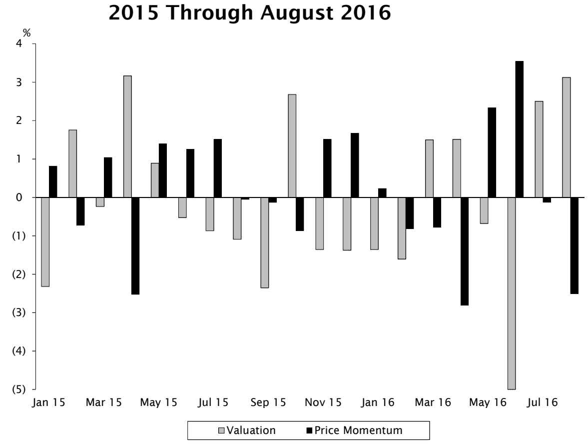
Exhibit 7: The U.K. and Japan
Three-Month Relative Return Spread Between Highest and Lowest Quintiles of Capital Spending-to-Depreciation[1]
2015 Through August 2016



Source: Empirical Research Partners Analysis.

[1] Capitalization-weighted USD-hedged returns.

Exhibit 8: Developed Markets (ex-U.S.)
Monthly Relative Returns to the Top Quintiles of Valuation and Price Momentum[1]
2015 Through August 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns.

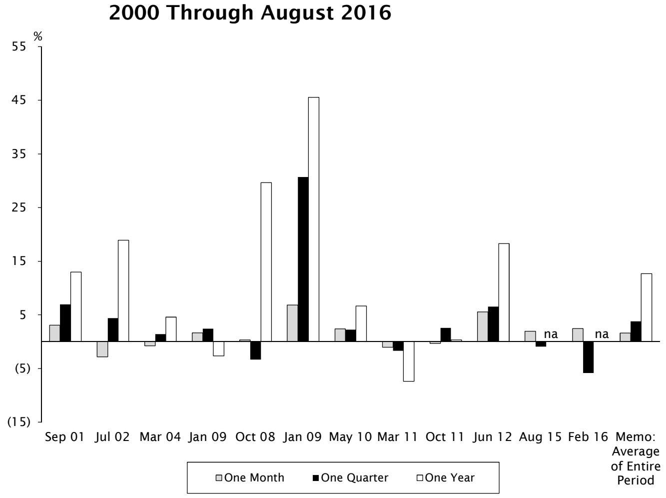
A Cyclical Bet?

The regime changes are also important because they signal a shift in a more fundamental debate. Most of the valuation ideas are concentrated in cyclical sectors: banks, household durables in Pan-Europe, and capital goods and industrial commodities in Japan.[1] By contrast the most stable sectors are underrepresented.

The attractiveness of cyclicals isn't an unusual situation in a value-oriented market. Investors are paid to make a valuation bet when the market is too pessimistic and the most penalized stocks are poised to be rerated. Exhibit 9 shows that after volatility jumped in Europe, a return to a normal and less-stressful environment was indeed usually associated with value subsequently outperforming. We've also noted in past research that the relative performance of stable stocks has been an almost perfect mirror image to that of value as they offer investment opportunities for two opposing views of the cycle (see Exhibit 10).[2] That is again a symptom of a more fundamental debate on the fate of the cycle as stable stocks offer downward protection, meanwhile the cohort of value stocks, mainly cyclical issues, provides exposure to the upside. This anticorrelation remains elevated despite not at the extreme levels reached immediately after the Financial Crisis and during the European Debt Crisis. Our sanguine view on the cycle is consistent our value strategy and advocates for cyclical stocks rather than stable ones.

Stable stocks offer protection against further market turmoil and a decelerating cycle, they're appealing for bearish investors. The cohort of value stocks, being populated mainly by cyclical issues, will provide exposure to the upside, so they're suited for bullish investors.

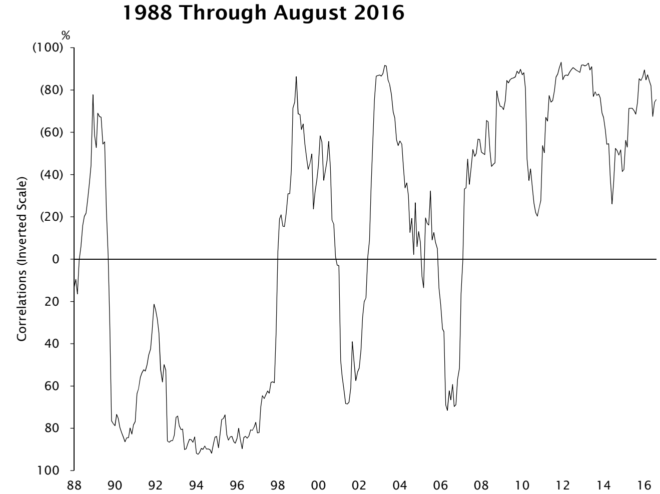
Exhibit 9: Continental Europe
Relative Returns to the Best Quintile of Valuation
After Peaks in the Volatility Index of 35 or Higher[1]
2000 Through August 2016



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

[1] Equally-weighted USD-hedged returns. Peaks in the Euro Stoxx 50 Volatility Index (VSTOXX) are measured on a daily basis within the month. Excludes most recent peak of June 2016 as the returns for the next quarter and year aren't yet available.

Exhibit 10: Developed Markets (ex-U.S.): Large-Cap Stocks
Correlation of Relative Returns Between Value and Stable Stocks[1]
1988 Through August 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns. Correlations computed over a twelve-month window.

We've been regularly asked what catalyst is needed to trigger a narrowing of valuation spreads and a value rally. The answer is simple: *none*. Wide valuation spreads are a symptom of the market being worried and aggressively underpricing stocks with issues. For valuation spreads to remain wide, those worries have to persist, but if they don't materialize, valuation spreads are poised to return to a more normal level as gravity takes hold. This is like pulling an elastic band, a force is needed to keep it stretched, without it the elastic just returns to its normal form. Put it differently, the burden of proof is on the pessimists, a catalyst is needed to keep spreads wide and market stress elevated, but in the absence of one spreads will narrow and the stress level will abate.

Three Main Sources of Value Opportunities

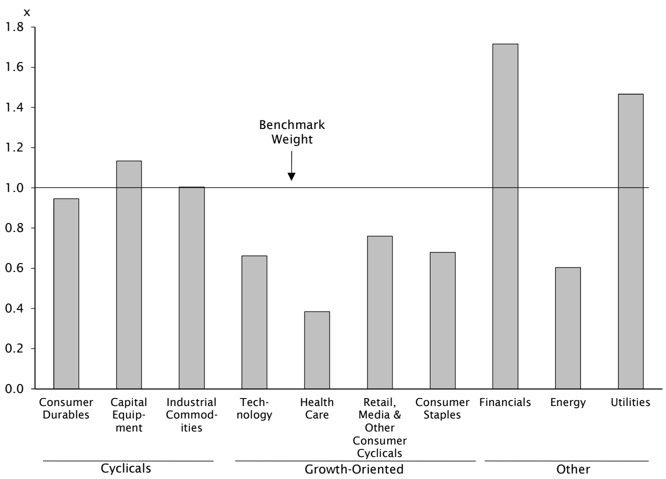
We find three cyclical sectors as sources of value opportunity in the non-U.S. developed world: banks, Pan-European household durables and Japanese capital goods and industrial commodities.

[1] *Global Portfolio Strategy*, July 2016. "More Regime Migration Towards Value: Is the Bet a Cyclical One?"

[2] *Global Portfolio Strategy*, June 2016. "Europe: Operating Leverage Has Improved, But The Market Is Overlooking It."

A disproportionately high number of value opportunities that've appeared across the non-U.S. developed world are concentrated in the financial sector, most specifically among banks (see Exhibit 11). We remain very cautious on this industry in aggregate as we believe it's plagued with a lack of profitability. With a return on equity below their cost of equity, banks are destroying value (see Exhibit 12). So, even if the value rally in July and August lifted these issues as well, we believe that a value call on the entire industry could be too simplistic of an approach (see Exhibit 13). However, we've also shown that identifying banks poised for ROE improvement is a helpful way to choose stocks in this industry.[3] The algorithm we built has performed well this year and even more so in June during the market turmoil It's a typical outcome as the algorithm screens for quality of earnings, it usually performs well when market worries increase (see Exhibit 14).

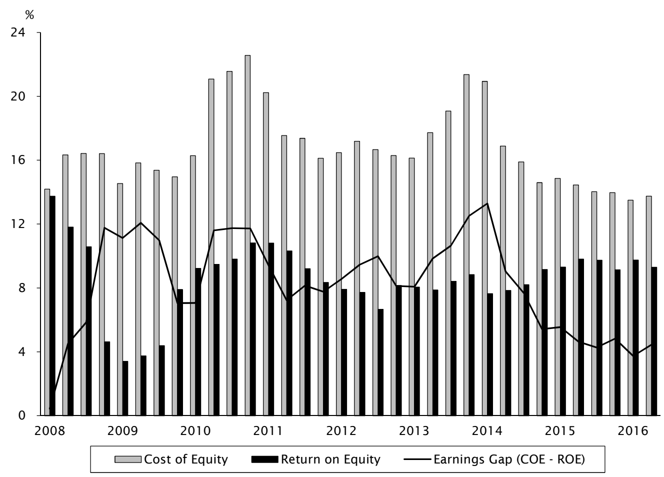
Exhibit 11: Developed Markets (ex-U.S.) Stocks in the Top Quintile of Valuation Relative to the Benchmark Weight by Sector[1] As of August 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data.

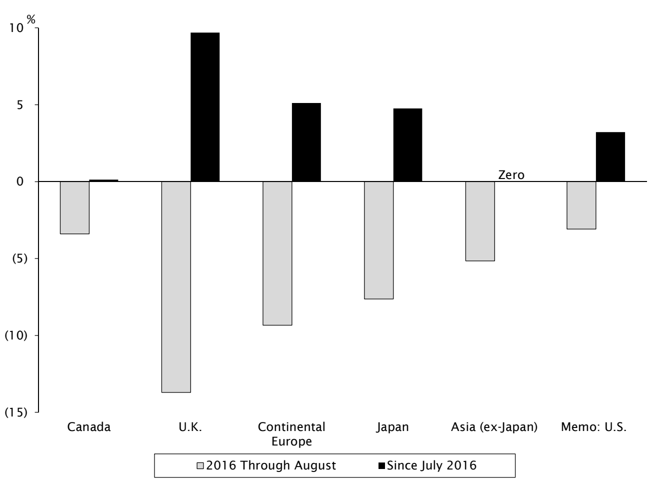
Exhibit 12: Developed Markets (ex-U.S.): Bank Stocks Cost of Equity and Return on Equity[1] 2008 Through Q2 2016



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

[1] Capitalization-weighted data.

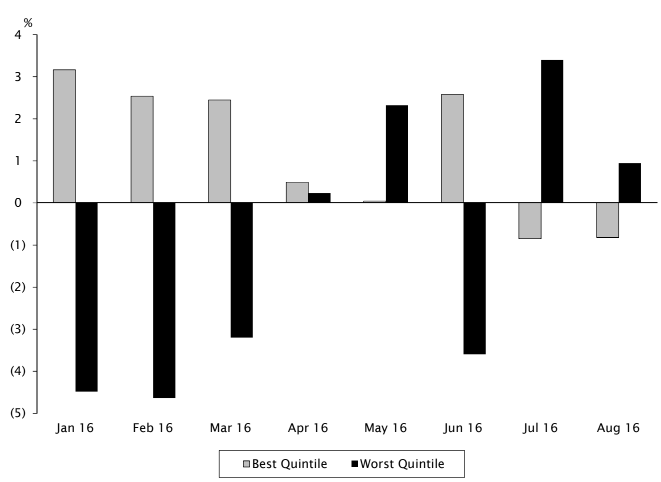
Exhibit 13: Developed Markets (ex-U.S.): Financial Stocks Relative Returns[1] Monthly Data Compounded 2016 Through August



Source: Empirical Research Partners Analysis.

[1] Capitalization-weighted USD-hedged returns relative to each region.

Exhibit 14: Developed Markets (ex-U.S.): Bank Stocks *Industry*-Relative Monthly Returns to the Best and Worst Quintiles of Projected ROE Improvement[1] 2016 Through August



Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns.

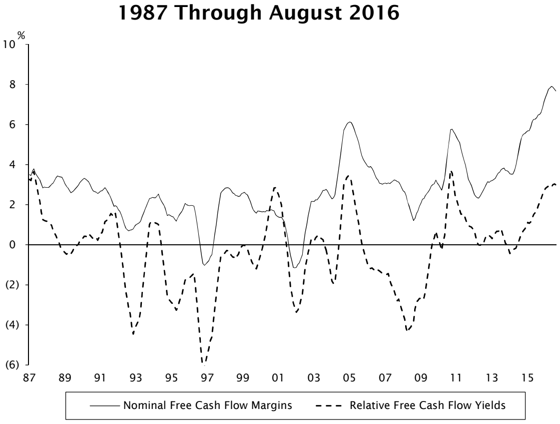
[3] *Global Portfolio Strategy*, July 2016. "Banks: Value Trap or Opportunity?"

We continue to believe that's the correct approach in picking among bank stocks: cherry picking those with a potential to increase their ROE rather than an aggregate shotgun approach. Appendix 1 on page 15 lists the stocks in the top two quintiles of our projected ROE improvement algorithm. Banks in Continental Europe and non-Japan developed Asia are overrepresented.

But value opportunities aren't exclusively concentrated among the banks. A second source of value ideas is to be found among household durables in Pan-Europe. Our definition of household durables in Pan-Europe includes issues most tied to the durables and housing cycle, we compiled a list drawn from the traditional household durables, construction and building industries; auto and auto parts companies aren't included. This sector has been successful at improving profitability in a low-growth environment; increasing their free cash flow margins to an unprecedented level (see Exhibit 15). Free cash flow yields, however, are high as well: so the market is unconvinced by the sustainability of these margins.

As noted above, we don't need a catalyst for this sector to outperform, if free cash flow margins prove sustainable, the market will have to acknowledge it's been too cautious and the stocks will rerate: a status quo in margins is enough and we don't need economic acceleration. Since the move in our U.K. and Continental European regimes to value-tilt in June, this cohort has indeed outperformed (see Exhibit 16). Appendix 2 on page 16 provides a screen of the 23 issues in this cohort. Five of them, those in bold font, can also be found in our list of distrusted candidates.

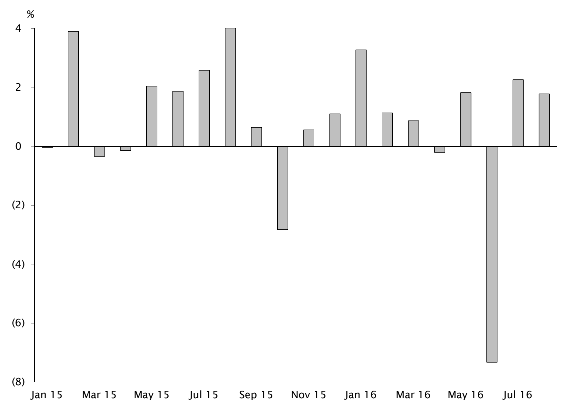
Exhibit 15: Pan-Europe: Household Durables[1]
Nominal Free Cash Flow Margins and
Relative Free Cash Flow Yields[2]
1987 Through August 2016



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 six-month basis.

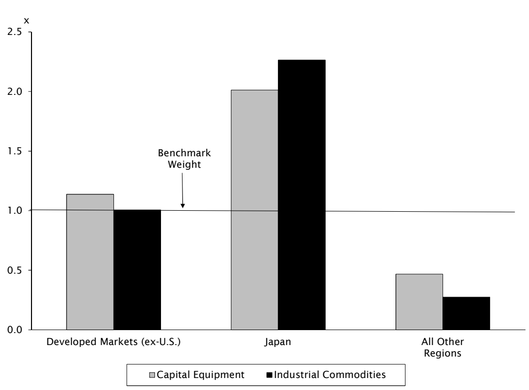
Exhibit 16: Pan-Europe: Household Durables[1]
Monthly Relative Returns[2]
2015 Through August 2016



Source: Empirical Research Partners Analysis.

[1] Drawn from the traditional household durables, construction and building industries.
[2] Capitalization-weighted USD-hedged returns relative to the region.

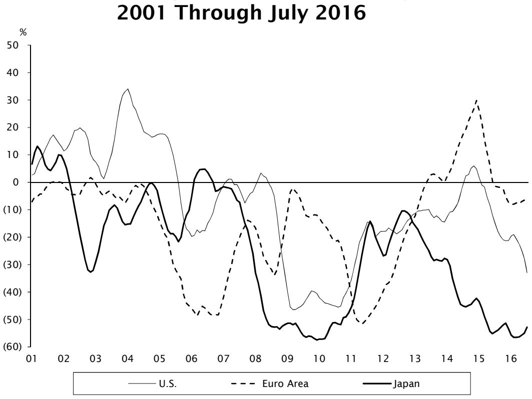
Exhibit 17: Developed Markets (ex-U.S.): Industrial Cyclicals
Stocks in the Top Quintile of the Valuation Super Factor
Relative to the Benchmark Weight[1]
As of August 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted data. Stocks are ranked across the developed markets (ex-U.S.).

Exhibit 18: U.S., Euro Area and Japan:
Large-Cap Capital Goods Stocks
Correlation of Monthly Relative Returns with the
Changes in Local Trade-Weighted Exchange Rates[1]
2001 Through July 2016



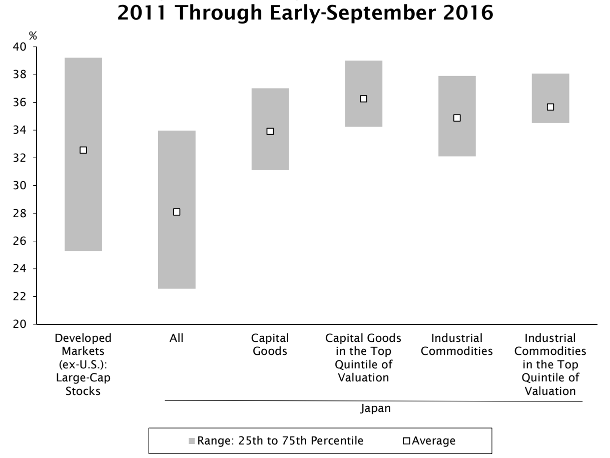
Source: Bank for International Settlements, Bloomberg L.P., Empirical Research Partners Analysis.

[1] Equally-weighted data relative to each region. Correlations computed using trailing twenty-four month windows; smoothed on a trailing six-month basis. Trade-weighted exchange rates against a broad-based set of currencies from developed and developing countries.

Finally, valuation opportunities in Japan are concentrated in capital equipment and industrial commodity stocks (see Exhibit 17 Overleaf). Cheapness in these sectors is the result of two main characteristics. First, it owes much to their correlation with the Yen, the appreciation over the past year being a severe headwind for the sector (see Exhibit 18 Overleaf). Second, stocks from these sectors are also highly correlated to the emerging markets and the worries about a Chinese hard-landing played a role too (see Exhibit 19).

Once again, for these stocks to outperform, we don't really need much of a catalyst: recent economic data from China point to a continuation of slow growth rather than a hard landing; it's been enough to prompt a rally in the stocks. The status quo here too is all we need. As in the case of Pan-European household durables, capital equipment and industrial commodity stocks in Japan have indeed outperformed since the move of our regime to value-tilt (see Exhibit 20). Appendix 3 on page 16 shows the list of large-capitalization Japanese industrial cyclicals along with the correlation of their relative returns vis-à-vis emerging market equities since 2011.

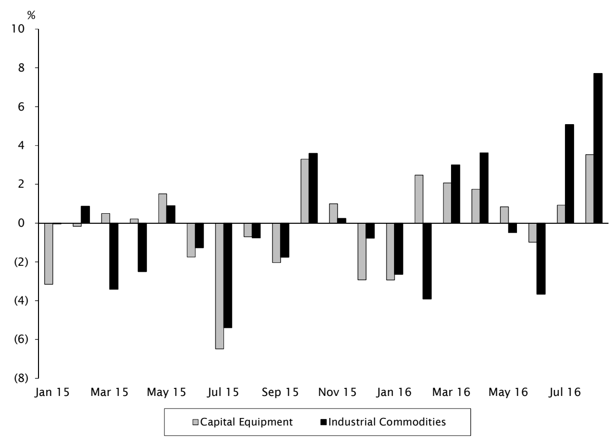
**Exhibit 19: Developed Markets (ex-U.S.): Large-Cap Stocks
Correlations of Equity Returns with those of the Emerging Markets[1]
Range and Average per Sector
2011 Through Early-September 2016**



Source: Empirical Research Partners Analysis.

[1] Correlation based on daily returns.

**Exhibit 20: Japan: Industrial Cyclicals
Monthly Relative Returns[1]
2015 Through August 2016**



Source: Empirical Research Partners Analysis.

[1] Capitalization-weighted USD-hedged returns relative to the region.

Despite recent outperformance in each of these three groups, current valuations show that there is further outperformance to come before these stocks are fairly valued.

What a Bizarre Cycle!

With the resilience of the cycle being an important aspect of our call, a health check of the economy is warranted. We called this recovery a slow-motion cycle because its main characteristic is an unusually slow growth rate with low economic volatility.[4]

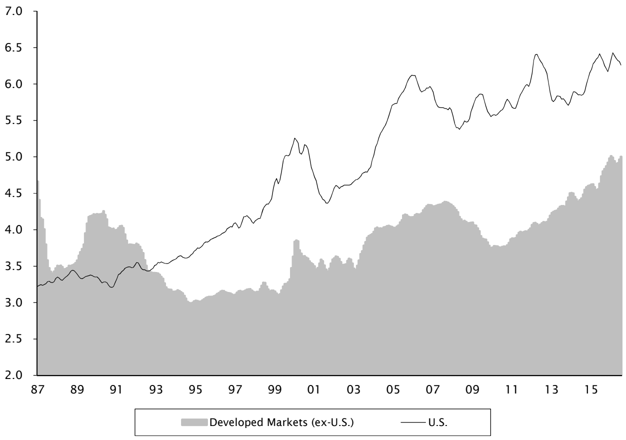
We rely largely on microeconomic evidence to inform our strategic and macroeconomic views and Exhibit 21 is one major input to our thinking on the economic cycle, it shows that the asset turns of companies in the developed economies have increased to an unprecedented level: companies have become asset-lite. The capital intensive part of the production has been subcontracted to the emerging markets, with developed market companies retaining only the capital-lite, and more profitable, part of the business.

That's important from a market point of view because higher asset turns imply a higher ROE and therefore profit margins should be higher during this cycle compared to prior ones (see Exhibit 22). So we don't adhere to the simple view that profit margins are mean reverting and are poised to return to their long-term average.

From an economic point of view this implies that companies are able to generate the same level of top-line with a much reduced stock of capital. So it's not surprising that the ratio of capital spending-to-sales is currently low (see Exhibit 23). This isn't due to a change in sector composition, as the ratio has declined across most sectors (see Exhibit 24). The result has been a much slower cycle, the GDP acceleration mainly comes from the investment component, and during this cycle that acceleration has been limited.

[4] *Global Portfolio Strategy*, December 2015. "Margin Resilience and a Slow-Motion Cycle, a Narrow and Growth-Oriented Market, Protecting Against a Reversal."

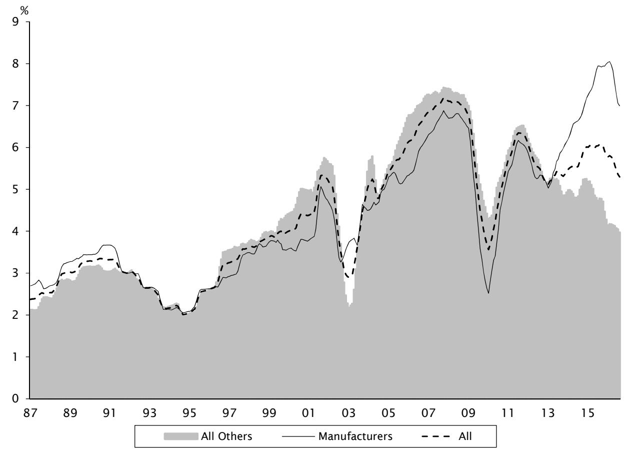
Exhibit 21: Developed Markets Asset Turnover: Sales-to-Net Property, Plant and Equipment Ratios[1] 1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Capitalization-weighted data that exclude financials and utilities; smoothed on a trailing three-month basis.

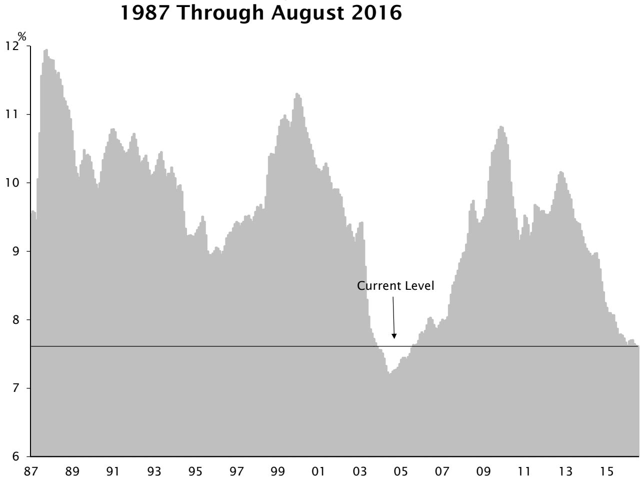
Exhibit 22: Developed Markets (ex-U.S.): Manufacturers and All Others Net Profit Margins[1] 1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

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

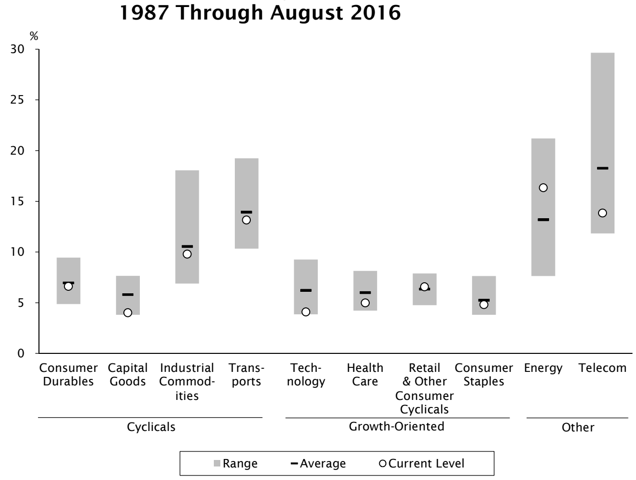
Exhibit 23: Developed Markets (ex-U.S.) Capital Spending as a Share of Sales[1] 1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Capitalization-weighted data that exclude financials and utilities; smoothed on a trailing three-month basis.

Exhibit 24: Developed Markets (ex-U.S.) Capital Spending as a Share of Sales by Sector[1] 1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Capitalization-weighted data.

Exhibit 25 shows the consequence from all this; companies have been able to maintain high and stable free cash flow margins in a low-growth environment. This has been rewarded by the market as free cash flow yield has been consistently one of the most efficacious factors in our model while the market also rewarded companies with low capital spending intensity (see Exhibit 26).

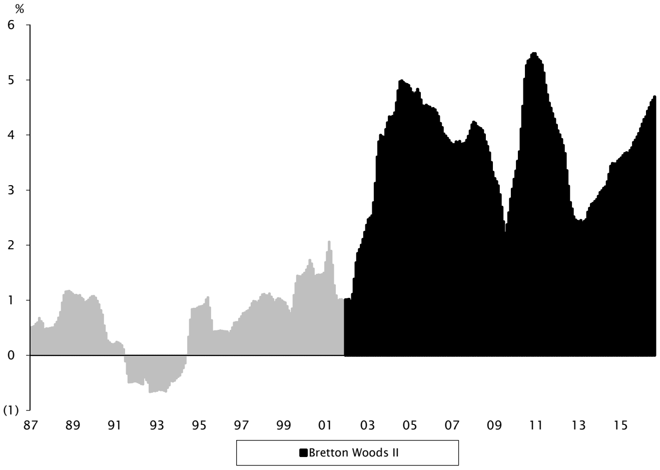
Finally, this slow-motion cycle could also last much longer, and indeed if we date the bottom of the cycle from early-2009, the economy isn't showing, seven years later, any convincing signs that it's approaching its end. This is evidenced again by Exhibit 25 that shows that there's no erosion of free cash flow margins yet.

Regional Issues

In Europe we think the main investment opportunity is provided by the fact that companies have increased their operating leverage and have learned to generate profits in a low-growth environment. The market though isn't fully pricing that behavior yet.

Free cash flow margins in Europe have continued to expand (see Exhibit 27). Looking at net profit margins, we find that this expansion is widespread across sectors but is especially true in the case of cyclical ones (see Exhibit 28). This is consistent with past research where we showed that the ratio between top-line growth and profit growth has improved over the past two decades in Europe, a sign of improved operating leverage.

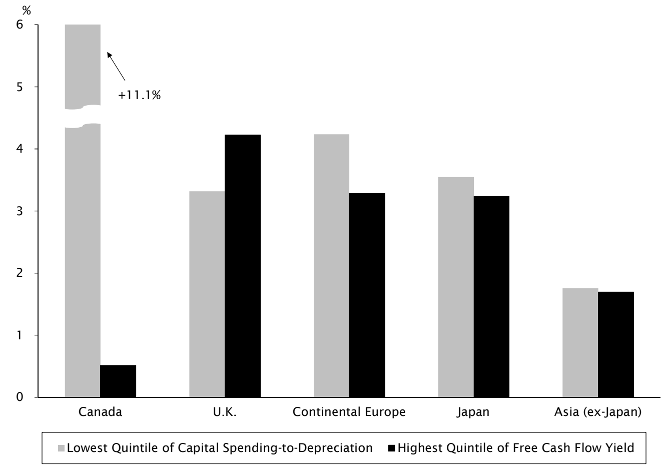
Exhibit 25: Developed Markets (ex-U.S.)
Free Cash Flow Margins[1]
1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Excluding financials; data smoothed on a trailing three-month basis.

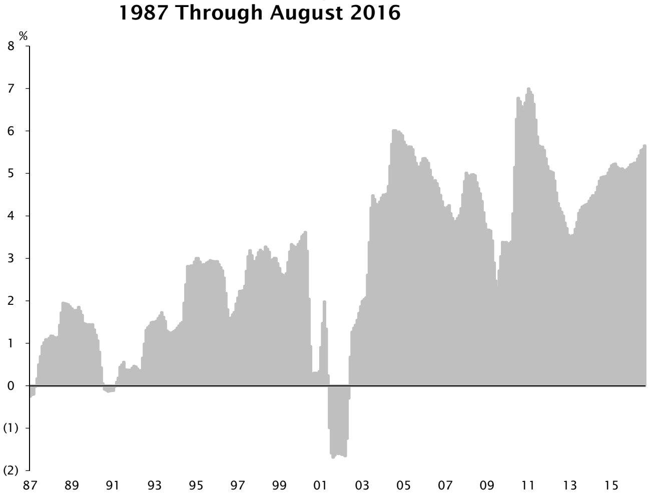
Exhibit 26: Developed Markets (ex-U.S.)
Relative Returns to the Lowest Quintile of Capital Spending-to-Depreciation and Highest Quintile of Free Cash Flow Yield by Region[1]
Monthly Data Compounded to Annual Periods
2010 Through August 2016



Source: Empirical Research Partners Analysis.

[1] Equally-weighted USD-hedged returns. Stocks are ranked across the universe and returns are relative to the region.

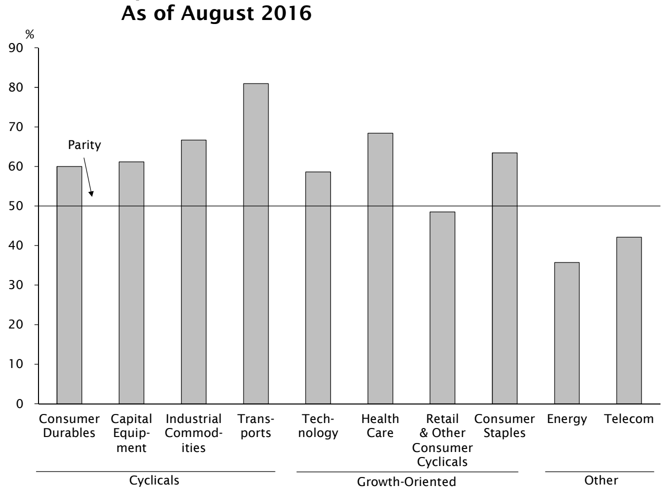
Exhibit 27: Continental Europe
The Core of the Market[1]
Free Cash Flow Margins
1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] The core excludes the financial, energy and industrial commodity sectors; data smoothed on a trailing three-month basis.

Exhibit 28: Continental Europe
Share of Stocks with Rising Net Profit Margins by Sector[1]
As of August 2016



Source: Empirical Research Partners Analysis.

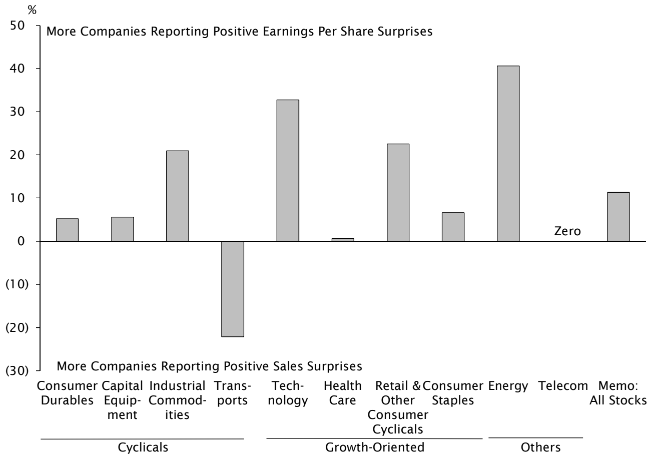
[1] Measured on a year-over-year basis.

Importantly, the operating leverage of companies continues to surprise on the upside, so it wasn't fully expected nor priced by the market. Exhibit 29 shows that there are more positive earnings surprises than positive top-line ones. By definition the ratio between the two has thus been underestimated by analysts, and operating leverage was better than expected. The ability to over-deliver on top-line and profits is rewarded by the market (see Exhibit 30).

It's important to underline that this view doesn't need a cyclical pickup, the current mediocre growth environment is sufficient to generate upward surprises. So the bar is set low in terms of the economic scenario needed for the operating leverage argument to play out. Again, the burden of proof is more on the pessimists: an economic deceleration is needed to validate the current cautious market pricing.

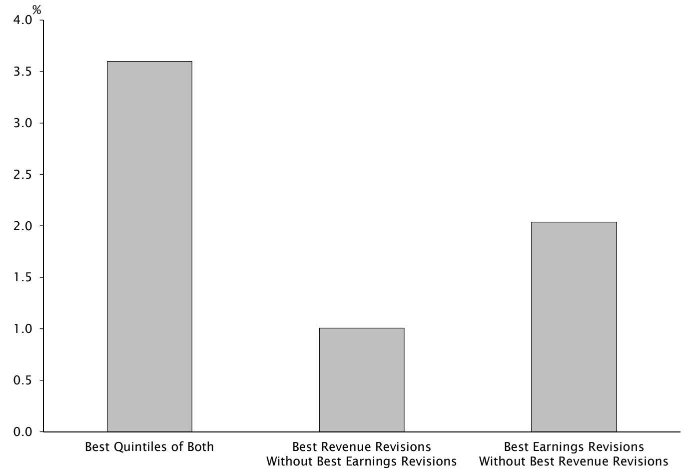
Turning our attention to Japan, we find evidence that companies are becoming more shareholder-friendly, we also find signs that the market is rewarding the profitability gains.

Exhibit 29: Continental Europe
Share of Companies Reporting Positive Earnings Surprises Less the Share Reporting Positive Sales Surprises by Sector[1]
Q2 2016



Source: Corporate Reports, Empirical Research Partners Analysis.
[1] Equally-weighted data. Data exclude financials and utilities.

Exhibit 30: Continental Europe
Relative Returns to Revenue and Earnings Revisions Combined[1]
Measured Over One-Year Holding Periods
2000 Through Late-August 2016

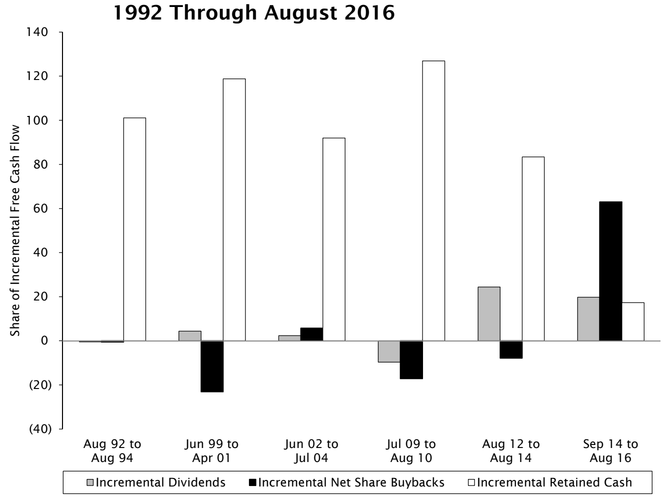


Source: Empirical Research Partners Analysis.
[1] Equally-weighted USD-hedged returns.

First, we noticed that Japanese companies have started to return cash to shareholders in sharp contrast with past behavior (see Exhibit 31). It's important to underline however that the behavior isn't widespread as there are differences among the sectors (see Exhibit 32). More recently, we also find growing evidence of an even more important trend: the most profitable companies have improved their pre-tax margins while at the other end of the spectrum, those of the least profitable ones have barely changed (see Exhibit 33). This isn't only a cyclical effect nor a Yen effect, the reaction of profits to the top-line increase has been unusually high for a number of sectors: Japanese companies have become more profitable (see Exhibit 34). Once again the pattern is very differentiated by sector which suggests that the improvement in corporate behavior isn't homogenous in Japan. That's why we think this market is increasingly a stock picker's one.

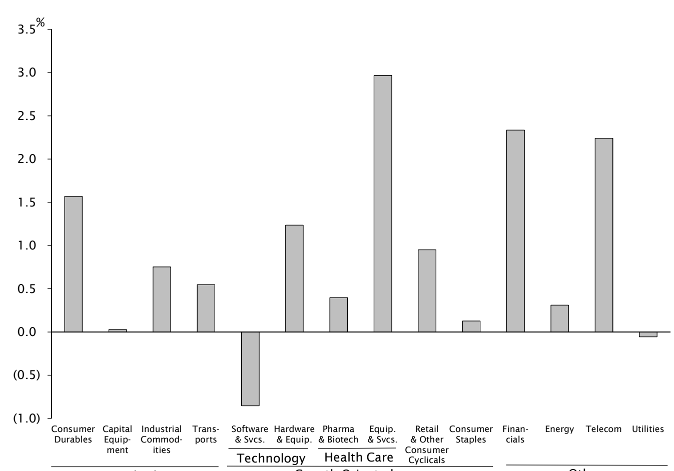
While corporate behavior is changing, the market's focus is shifting too. Over the past 25 years, it's been essentially focusing on valuations (see Exhibit 35). Buying cheap issues that were already pricing in bad news, was a means of protection against the ongoing flow of disappointing economic and corporate performance. But over the last few years the market changed its attitude and started rewarding companies that delivered on free cash flow production and earnings stability (see Exhibit 36).

Exhibit 31: Japan
Episodes of Rising Free Cash Flow
Net New Share Buybacks, Dividends and Retained Cash as a Share of Incremental Free Cash Flow[1]
1992 Through August 2016



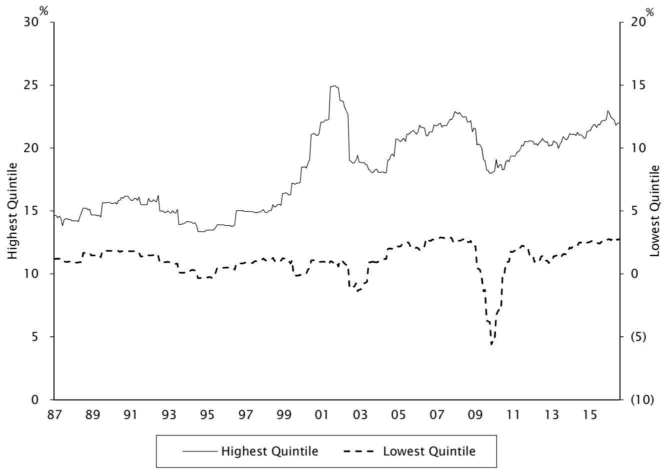
Source: Corporate Reports, Empirical Research Partners Analysis.
[1] Data exclude financials and utilities. Share buybacks net of share issuance.

Exhibit 32: Japan
Net New Share Buybacks as a Share of Market Capitalization[1]
September 2014 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.
[1] Share buybacks net of share issuance. Market capitalization as of August 2016.

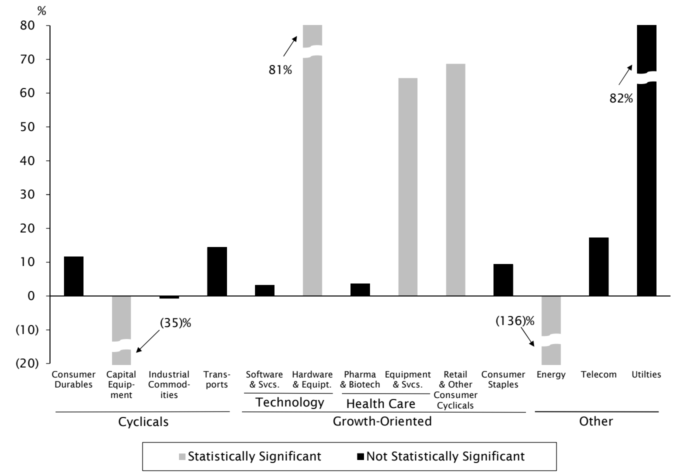
Exhibit 33: Japan
Pre-Tax Margins
Highest and Lowest Quintiles[1]
1987 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Equally-weighted data.

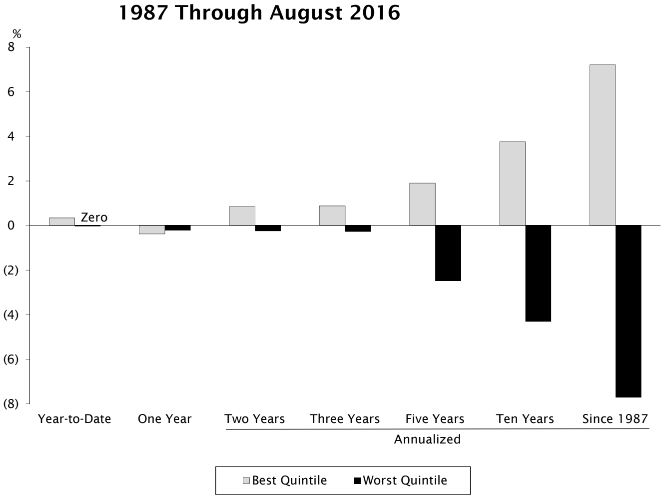
Exhibit 34: Japan
Current Level of Profits Compared to our Estimate of "Normal" Profits by Sector
1990 Through August 2016[1]



Source: Corporate Reports, Empirical Research Partners Analysis.

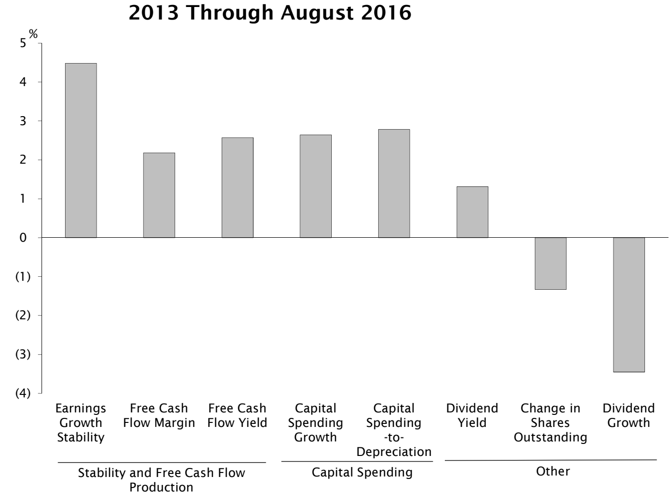
[1] Data exclude the extreme period from February 2009 through July 2010.

Exhibit 35: Japan
Relative Returns to the Best and Worst Quintiles of Valuation[1]
Monthly Data Compounded
1987 Through August 2016



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

Exhibit 36: Japan
Relative Returns to the Best Quintiles of Select Factors[1]
Monthly Data Compounded to Annual Periods
2013 Through August 2016



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

The change in Japan is thus twofold: on the one hand the market is changing and rewarding the improvement in profitability, while on the other hand we increasingly find signs that some companies are becoming more shareholder-friendly in their dividend and buyback policies and more profitable. The conjunction of the two could create a virtuous cycle and we have a reasonably high level of conviction this will be indeed the case.

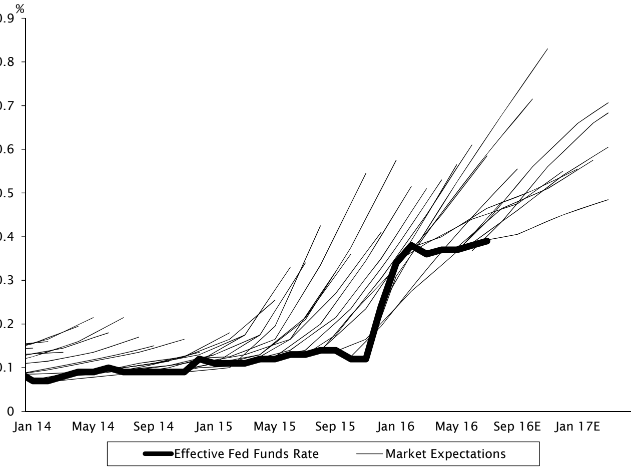
What to Look For? What Would Change Our Mind?

We think investors should have three items on their radar screens: a normalization of the yield curve, an economic downturn in Europe and a hard landing in China.

The market was consistently expecting some normalization of the Fed's policy rate and has been almost systematically disappointed (see Exhibit 37). We also showed that the QE implemented both by the ECB and the BoJ has reduced the availability of sovereign paper for investors, resulting in persistently-low yields.[5]

[5] *Global Portfolio Strategy*, August 2016. "What Recovery in Europe? Banks' Health is Key, Are Europe and Japan Responsible for the Bond-Like Strategies?"

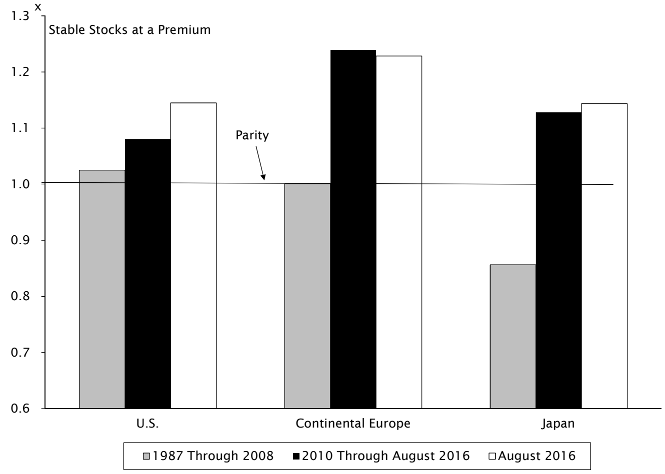
**Exhibit 37: Effective Fed Funds Rate
Actual Vs. Market Expectations[1]
2014 Through April 2017E**



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

[1] Market expectations for the Fed Funds Rate are derived from future contracts.

**Exhibit 38: Developed Markets: Large-Cap Stable Stocks
Relative Forward-P/E Ratios[1]
1987 Through August 2016**



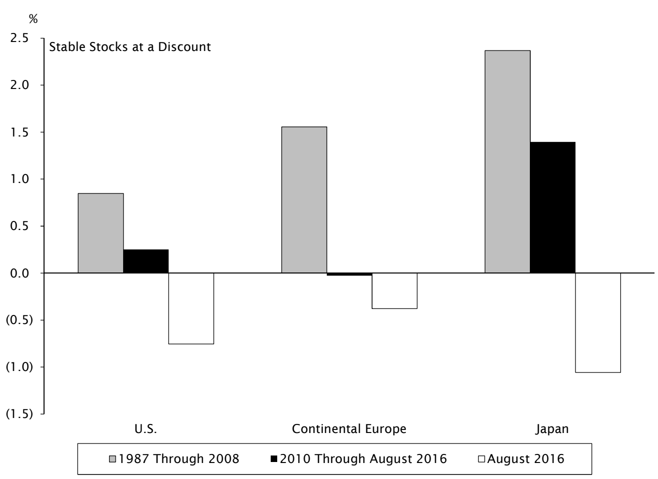
Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Equally-weighted data relative to the respective large-capitalization market excluding energy and financials.

This is one of the main reasons for the success of the "bond-like" strategies: stable stocks have been a popular investment strategy since the end of the Crisis and issues with a high correlation to bonds have become very expensive (see Exhibits 38 through 41). As we noted above those strategies have been highly anticorrelated with a value strategy. Hence a normalization of yields would be an important change to watch. The most likely scenario, if rate normalization materializes, would be on the back of the Fed moving rates, hence on the back of a stronger economic trend, which would add to our argument.

The second issue to track is Europe, with the risk of another crisis possibly emerging. Credit data however suggest that lending has passed an inflection point (see Exhibit 42). We also look at the banks' ability to expand lending; we think it depends on their earning reinvestment rate that is now in positive territory (see Exhibit 43). To the extent that the fate of the European recovery depends crucially on the health of the financial system, these data point to a mildly encouraging outcome and a continuation of the current mediocre recovery. We think Europe is probably not a source of systemic risk anymore, but would likely be an amplifier of a crisis if a shock were to impact the global economy. A cyclical downturn should be monitored, however, as it would put at risk our view that cyclical issues will perform well.

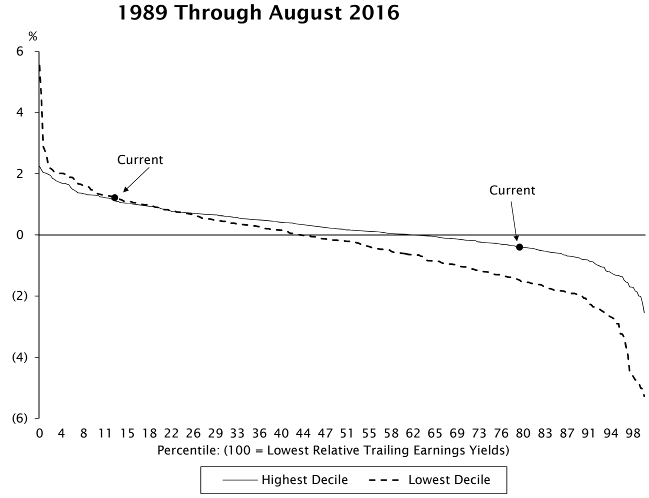
**Exhibit 39: Developed Markets: Large-Cap Stable Stocks
Relative Free Cash Flow Yields[1]
1987 Through August 2016**



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Equally-weighted data relative to the respective large-capitalization market excluding energy and financials.

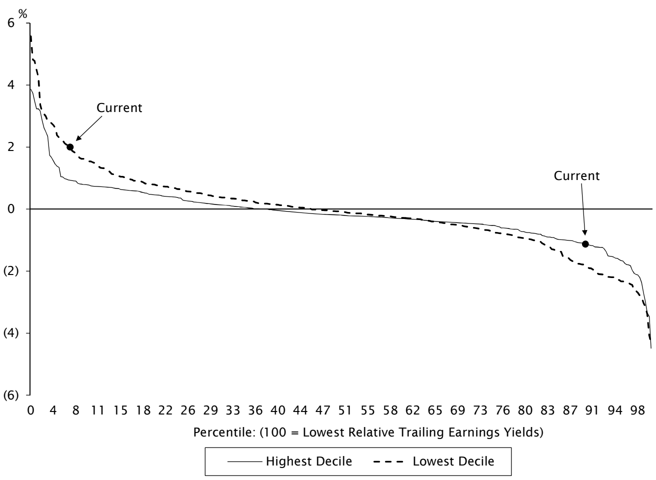
**Exhibit 40: Pan-Europe
Highest and Lowest Deciles of Return Correlation with Ten-Year Treasury Bonds[1]
Relative Trailing Earnings Yields
1989 Through August 2016**



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Equally-weighted data.

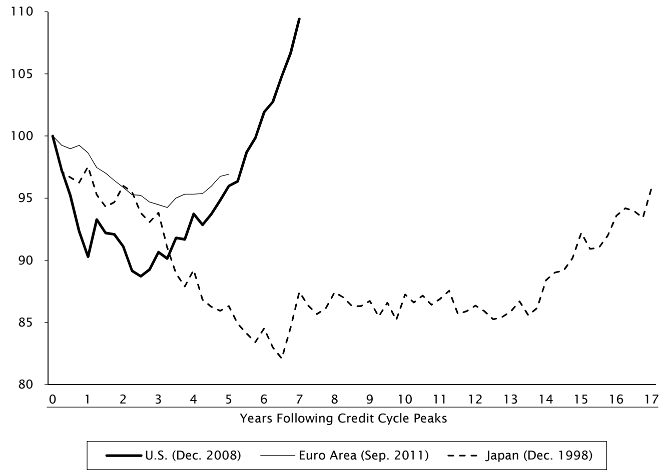
Exhibit 41: Japan
Highest and Lowest Deciles of Return Correlation with Ten-Year Treasury Bonds[1]
Relative Trailing Earnings Yields
1989 Through August 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

[1] Equally-weighted data.

Exhibit 42: The U.S., Euro Area and Japan
Change in Credit Outstanding to the Non-Financial Private Sector Following Credit Cycle Peaks[1]
(Prior Peak = 100)
December 1998 Through July 2016



Source: Bank for International Settlements, European Central Bank, Empirical Research Analysis and Estimates.

[1] Credit provided by domestic banks, all other sectors of the economy and non-residents. Includes loans, debt securities, currency and deposits. Data for the U.S. and Japan through 2015. 2016 data for the Euro Area are estimated.

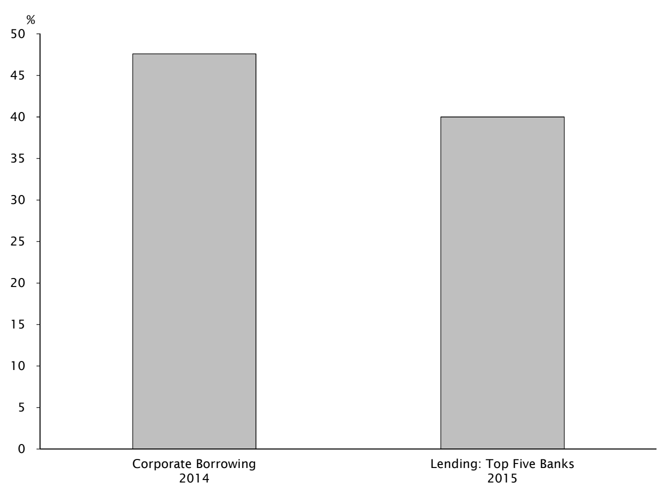
Finally, another potential risk could be a hard landing in China. This isn't our central case scenario and the latest data are more consistent with a continuation of the recent slow deceleration of growth. The case for a hard landing is essentially based on the view that the economy is too leveraged and will eventually run into a financial crisis. Exhibit 44 shows that the bulk of the debt is concentrated in state-owned entities; that means that the private sector leverage shouldn't be analyzed in the same way as a regular capitalistic country. The overall leverage of the government remains limited and the country has a large net positive external position. To that extent, we think the risk of a financial crisis in China is probably overestimated at this point.

Exhibit 43: Euro Area: Bank Stocks
Earnings Reinvestment Rate and the Year-Over-Year Change in Private Sector Loans Outstanding[1]
2002 Through August 2016

Source: Bloomberg L.P., European Central Bank, Empirical Research Partners Analysis.

[1] Earnings reinvestment rate calculated as ROE x (1-dividend payout ratio). Loan data through July 2016.

Exhibit 44: China
State-Owned Companies' Share of Corporate Bank Borrowing and Lending[1]
2015



Source: CEIC, Empirical Research Partners Analysis.

[1] Top-five banks' lending.

Conclusion: Changing Tides?

Our view on the cycle hasn't fundamentally changed, in a slow-motion world the profit margins are stable and don't show yet any sign of erosion typical of a cycle approaching its end. This tepid recovery owes much to the aftermath of the Crisis but it's also a function of companies being able to operate with a much more capital-lite business model. We see the trend continuing with at best mediocre top-line growth but solid margins. Free cash flow margins in particular remain impressive and stable.

The change in our regional regimes is consistent with the market being skeptical about this narrative. Most of the value plays are to be found in cyclical sectors where the market is unwilling to pay for the current level of profitability. A continuation of the trend would allow companies to keep producing the current level of profits; this would force skeptics to throw in the towel and the market to rerate those names.

What's important in this argument is that, if our call is to a large extent a cyclical one, we don't necessarily need an acceleration of the cycle: the mere status quo will suffice. So the burden of proof is on the bears, the current pricing of the cyclical names we highlighted will be vindicated only if new information proves that the profit cycle deteriorates.

Appendix 1: Developed Market (ex-U.S.): Large- and Mid-Capitalization Bank Stocks
Projected ROE Improvement Ranking Report
Best Two Quintiles of Projected ROE Improvement
Sorted by Projected ROE Improvement Rank and Market Capitalization in USD
As of Early-September 2016

				Quintiles (1=Best; 5=Worst)					
Symbol	Company	Price (Local)	Local Currency Code	**Projected ROE Improvement**	Current ROE	Core Model	Forward-P/E Ratio	YTD Return (Local)	Market Capitalization (USD Million)
RY CT	Royal Bank of Canada	81.50	CAD	**1**	1	4	11.6 x	13.5 %	$92,625
SAN SM	Banco Santander S.A.	4.10	EUR	**1**	4	4	9.5	(7.2)	66,077
2388 HK	BOC Hong Kong (Holdings) Limited	27.60	HKD	**1**	4	4	12.1	19.8	38,245
11 HK	Hang Seng Bank Limited	137.00	HKD	**1**	2	5	15.5	(1.7)	33,619
DANSKE DC	Danske Bank A/S	195.50	DKK	**1**	2	2	10.6	10.1	28,485
OCBC SP	Oversea-Chinese Banking Corporation Limited	8.59	SGD	**1**	2	3	10.2	1.7	26,323
SEBA SS	Skandinaviska Enskilda Banken AB Class A	84.80	SEK	**1**	3	4	11.8	1.0	21,580
UOB SP	United Overseas Bank Ltd. (Singapore)	18.00	SGD	**1**	2	3	9.6	(4.7)	21,260
23 HK	Bank of East Asia Ltd.	32.40	HKD	**1**	4	5	20.9	14.5	11,387
BKIA SM	Bankia S.A.	0.79	EUR	**1**	3	3	10.4	(25.0)	10,453
BKIR ID	Bank of Ireland	0.21	EUR	**1**	3	5	9.4	(39.1)	7,479
POLI IT	Bank Hapoalim BM	20.37	ILS	**1**	2	1	8.0	3.2	7,253
CC FP	Credit Industriel et Commercial SA	158.75	EUR	**1**	2	1	NM	(7.7)	6,768
BKT SM	Bankinter SA	6.70	EUR	**1**	1	5	14.3	3.8	6,760
JYSK DC	Jyske Bank A/S	325.20	DKK	**1**	3	2	11.1	6.0	4,667
8303 JP	Shinsei Bank Limited	166.00	JPY	**1**	3	3	7.4	(25.4)	4,490
8304 JP	Aozora BankLtd.	370.00	JPY	**1**	2	1	10.3	(10.3)	4,225
FBK IM	FinecoBank SpA	5.49	EUR	**1**	1	5	17.2	(25.4)	3,756
2356 HK	Dah Sing Banking Group Limited	14.40	HKD	**1**	2	2	9.1	7.0	2,636
CBA AT	Commonwealth Bank of Australia	70.91	AUD	**2**	1	4	12.7	(12.3)	91,440
8306 JP	Mitsubishi UFJ Financial Group Inc.	575.50	JPY	**2**	3	1	8.2	(22.7)	79,663
NAB AT	National Australia Bank Limited	27.14	AUD	**2**	1	4	11.3	(3.7)	54,621
NDA SS	Nordea Bank AB	85.60	SEK	**2**	2	2	10.8	(1.7)	40,562
CM CT	Canadian Imperial Bank of Commerce	104.03	CAD	**2**	1	1	10.4	16.9	31,477
DBS SP	DBS Group Holdings Ltd	15.03	SGD	**2**	2	2	8.9	(6.3)	27,939
SWEDA SS	Swedbank AB Class A	197.90	SEK	**2**	1	4	12.5	12.8	25,837
DNB NO	DNB ASA	101.60	NOK	**2**	1	2	9.6	(3.3)	19,824
UCG IM	UniCredit S.p.A.	2.35	EUR	**2**	5	4	15.7	(52.5)	16,405
SAB SM	Banco de Sabadell SA	1.24	EUR	**2**	3	5	8.8	(21.0)	7,831
BCVN SW	Banque Cantonale Vaudoise	654.50	CHF	**2**	2	4	18.7	8.0	5,830
POP SM	Banco Popular Espanol SA	1.23	EUR	**2**	5	5	NM	(54.4)	5,767
8358 JP	Suruga Bank Ltd.	2,474.00	JPY	**2**	1	5	13.9	(1.0)	5,583
8355 JP	Shizuoka Bank Ltd.	848.00	JPY	**2**	4	3	11.4	(27.4)	5,434
RBI AV	Die Raiffeisen Bank International AG	12.96	EUR	**2**	5	4	9.3	(4.7)	4,232
BOQ AT	Bank of Queensland Limited	10.58	AUD	**2**	2	4	10.9	(21.6)	3,038
MZTF IT	Mizrahi Tefahot Bank Ltd	45.40	ILS	**2**	2	2	8.1	(1.1)	2,791
8359 JP	Hachijuni Bank Ltd.	551.00	JPY	**2**	4	3	13.3	(24.7)	2,743
BP IM	Banco Popolare Societa Cooperativa SCRL	2.29	EUR	**2**	5	5	NM	(75.1)	2,116

Source: Empirical Research Partners Analysis.

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

Symbol	Company	Price (Local)	Local Currency Code	Quintiles (1=Best; 5=Worst) Super Factors: Valuation	Capital Deployment	Earnings Quality and Trend	Market Reaction	Core Model	Free Cash Flow Yield	Memo: Implied Growth Rate	Memo: Forward-P/E Ratio	YTD Return (Local)	Memo: Market Capitalization (USD Million)
EN FP	Bouygues SA	28.45	EUR	1	1	4	5	1	4	5.9 %	16.4 x	(17.9) %	10,989
HOT GY	Hochtief AG	121.70	EUR	2	1	3	1	1	1	7.8	22.6	44.3	9,539
ACS SM	**Actividades de Construccion y Servicios SA**	25.86	EUR	1	1	3	4	1	1	1.7	10.7	(0.4)	9,259
FGR FP	Eiffage SA	70.93	EUR	1	1	2	1	1	1	8.3	16.2	21.7	7,869
STR AV	Strabag Se	29.00	EUR	1	1	1	1	1	1	4.6	11.8	25.9	3,582
SKAB SS	**Skanska AB Class B**	188.00	SEK	2	3	1	2	2	1	5.0	14.2	19.2	9,229
PSN LN	**Persimmon Plc**	18.70	GBP	3	1	2	3	2	2	(2.4)	10.3	(2.7)	7,862
DG FP	**VINCI SA**	68.25	EUR	3	5	1	1	3	1	6.4	15.9	17.7	43,033
SGO FP	Compagnie de Saint-Gobain SA	39.43	EUR	2	2	4	3	3	2	4.1	15.7	2.1	24,552
GEBN VX	Geberit AG	424.70	CHF	5	5	1	2	3	4	9.0	26.1	27.8	15,888
ELUXB SS	Electrolux AB Class B	221.50	SEK	4	3	2	3	3	1	1.9	15.0	11.4	7,938
HUSQB SS	Husqvarna AB Class B	74.45	SEK	5	5	1	1	3	2	8.1	18.0	34.2	5,026
KSP ID	Kingspan Group Plc	24.31	EUR	4	4	1	4	3	2	9.9	17.4	1.2	4,823
BWY LN	Bellway p.l.c.	23.93	GBP	4	1	2	4	3	3	(1.6)	8.2	(14.5)	4,032
ASSAB SS	ASSA ABLOY AB Class B	173.10	SEK	5	3	2	2	4	3	12.4	22.8	(1.3)	22,584
TW/ LN	Taylor Wimpey plc	1.66	GBP	4	1	3	4	4	2	(2.8)	9.8	(13.7)	7,392
SK FP	SEB SA	120.85	EUR	5	5	2	1	4	3	10.5	19.8	29.6	6,849
BDEV LN	**Barratt Developments PLC**	5.00	GBP	3	2	3	4	4	2	(2.4)	9.7	(19.2)	6,754
DLG IM	De'Longhi S.p.A.	22.28	EUR	5	1	2	3	4	3	10.5	19.8	(17.6)	3,710
CFEB BB	Compagnie d'Entreprises CFE SA	82.50	EUR	2	4	5	5	4	4	6.5	15.3	(22.7)	2,338
WIE AV	Wienerberger AG	14.38	EUR	2	3	5	3	4	3	5.6	17.0	(14.8)	1,914
FER SM	Ferrovial S.A.	17.87	EUR	4	5	2	5	5	4	9.8	30.4	(13.2)	14,987
BKG LN	Berkeley Group Holdings plc	27.75	GBP	4	5	5	4	5	5	(3.3)	7.0	(21.8)	5,275

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[1]
International Core Model Ranking Report
Sorted by Correlation with Emerging Market Stocks Since 2011
As of Early-September 2016

Symbol	Company	Price (Local)	Local Currency Code	Correlation	Quintiles (1=Best; 5=Worst) Super Factors: 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.	1,894.00	JPY	43 %	1	2	1	5	1	21.4 x	0.3 %	$3,809
8031 JP	Mitsui & Co.Ltd	1,362.00	JPY	42	1	2	4	3	1	12.0	(3.5)	23,400
8058 JP	Mitsubishi Corporation	2,146.50	JPY	41	1	2	5	2	2	11.0	7.2	32,891
6301 JP	Komatsu Ltd.	2,214.50	JPY	41	3	4	1	3	4	19.0	12.8	20,547
8053 JP	Sumitomo Corporation	1,125.00	JPY	39	1	1	3	5	1	8.5	(7.4)	13,659
8002 JP	Marubeni Corporation	511.90	JPY	39	1	2	5	5	1	5.7	(16.7)	8,578
6503 JP	Mitsubishi Electric Corp.	1,338.00	JPY	38	2	3	3	5	3	12.4	5.9	27,563
6954 JP	Fanuc Corporation	17,325.00	JPY	37	5	5	5	3	5	27.1	(16.8)	33,531
7012 JP	Kawasaki Heavy Industries Ltd.	320.00	JPY	37	1	5	3	5	3	11.6	(27.7)	5,269
6471 JP	NSK Ltd.	1,062.00	JPY	37	1	1	3	5	2	11.9	(18.6)	5,647
8001 JP	Itochu Corporation	1,247.50	JPY	37	1	4	4	5	1	5.6	(12.0)	20,300
6473 JP	JTEKT Corporation	1,550.00	JPY	37	1	1	2	4	1	11.7	(21.6)	5,023
5802 JP	Sumitomo Electric Industries Ltd.	1,529.50	JPY	36	1	3	2	4	2	11.0	(10.1)	11,613
8015 JP	Toyota Tsusho Corp.	2,371.00	JPY	36	1	1	4	5	1	10.5	(15.8)	8,084
6326 JP	Kubota Corporation	1,539.50	JPY	36	3	4	2	5	5	13.5	(17.6)	18,504
6479 JP	Minebea Co Limited	1,017.00	JPY	36	3	3	3	5	4	11.0	(1.9)	3,879
6273 JP	SMC Corporation	28,565.00	JPY	35	5	4	3	3	5	19.1	(9.8)	18,166
6367 JP	Daikin Industries Ltd.	9,597.00	JPY	35	4	5	1	3	5	17.7	8.6	27,166
1963 JP	JGC Corp.	1,581.00	JPY	34	3	2	4	4	4	14.5	(13.1)	3,834
7011 JP	Mitsubishi Heavy Industries Ltd.	448.60	JPY	34	1	1	4	5	1	9.9	(14.7)	14,505
5201 JP	Asahi Glass Co. Ltd.	632.00	JPY	34	1	1	2	2	1	18.5	(7.7)	7,059
7205 JP	Hino MotorsLtd.	1,118.00	JPY	33	1	4	4	5	2	10.4	(19.5)	6,060
6586 JP	Makita Corporation	7,090.00	JPY	33	5	4	4	2	5	19.0	2.0	9,107
5486 JP	Hitachi Metals Ltd.	1,238.00	JPY	33	1	3	3	5	2	10.2	(16.8)	5,147
6502 JP	Toshiba Corporation	329.40	JPY	31	3	2	4	3	3	13.8	31.8	13,344
7013 JP	IHI Corporation	308.00	JPY	31	1	3	4	4	2	13.5	(8.6)	4,531
6594 JP	Nidec Corporation	9,180.00	JPY	31	5	4	2	2	5	23.8	4.4	26,199
5332 JP	TOTO Ltd	3,890.00	JPY	30	4	4	1	3	4	17.4	(8.4)	6,534
1803 JP	Shimizu Corporation	935.00	JPY	27	3	2	3	2	4	9.9	(4.5)	7,086
1812 JP	Kajima Corporation	706.00	JPY	26	3	4	3	1	3	9.5	(1.3)	7,208
5938 JP	LIXIL Group Corp.	2,107.00	JPY	25	1	4	2	5	2	13.1	(21.0)	6,363
1801 JP	Taisei Corporation	783.00	JPY	24	2	1	1	1	1	11.1	(0.7)	8,907
1802 JP	Obayashi Corporation	957.00	JPY	21	2	4	2	3	2	9.4	(13.5)	6,622
Industrial Commodities												
5713 JP	Sumitomo Metal Mining Co. Ltd.	1,323.00	JPY	42 %	3	1	3	2	3	13.5 x	(9.8) %	$7,515
5401 JP	Nippon Steel & Sumitomo Metal Corp.	2,213.50	JPY	39	1	1	4	5	2	12.1	(7.8)	20,389
5711 JP	Mitsubishi Materials Corp.	296.00	JPY	38	1	2	3	5	1	11.6	(21.8)	3,788
5901 JP	Toyo Seikan Group Holdings Ltd.	1,902.00	JPY	38	3	2	4	2	4	19.9	(15.6)	4,006
5406 JP	Kobe Steel Ltd.	96.00	JPY	38	1	1	5	5	2	10.5	(27.8)	3,393
4063 JP	Shin-Etsu Chemical Co Ltd	7,405.00	JPY	38	5	4	2	1	5	18.0	13.0	30,155
3405 JP	Kuraray Co. Ltd.	1,484.00	JPY	37	2	2	3	2	2	12.8	2.5	5,080
5411 JP	JFE Holdings Inc.	1,638.50	JPY	36	1	4	5	5	3	11.2	(14.1)	9,834
4183 JP	Mitsui Chemicals Inc.	475.00	JPY	36	1	1	3	2	1	9.7	(11.4)	4,529
3402 JP	Toray Industries Inc.	991.80	JPY	35	4	4	3	3	5	14.1	(11.6)	15,467
4188 JP	Mitsubishi Chemical Holdings Corporation	646.80	JPY	35	1	1	5	4	1	9.2	(15.4)	9,245
6988 JP	Nitto Denko Corp.	6,968.00	JPY	34	4	3	1	5	5	18.1	(21.0)	11,549
4005 JP	Sumitomo Chemical Co. Ltd.	467.00	JPY	34	1	1	2	5	1	8.7	(32.6)	7,454
4021 JP	Nissan Chemical Industries Ltd.	3,140.00	JPY	34	5	1	1	1	4	18.8	14.4	4,562
4202 JP	Daicel Corporation	1,276.00	JPY	32	2	4	1	4	3	10.9	(29.1)	4,212
4091 JP	Taiyo Nippon Sanso Corporation	1,031.00	JPY	32	2	4	2	2	3	12.7	(5.7)	4,209
4613 JP	Kansai Paint Co. Ltd.	2,245.00	JPY	32	5	1	3	1	4	21.4	22.3	5,822
3407 JP	Asahi Kasei Corporation	876.00	JPY	30	2	1	2	2	2	12.1	7.9	11,840
3861 JP	Oji Holdings Corp.	420.00	JPY	30	1	3	4	3	1	10.0	(13.2)	4,179
4612 JP	NIPPON PAINT HOLDINGS CO.LTD.	3,525.00	JPY	28	5	1	3	2	5	34.5	20.1	10,775

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