

Continental Europe in a Growth-Tilted Regime: Finding Stocks That Work Updating the International Model Portfolio

A Further Regime Shift Reflected in Sector Performance

- In the aftermath of the Brexit vote stresses mounted quickly, and reflecting them our regime indicator for Continental Europe moved to a value-tilted stance. It remained there until October when it shifted back to a neutral position, and with optimism building at the end-of-February it returned to a growth-tilted stance. It's currently the only region with that bias, those in the U.K., U.S. and the global one remain in a neutral stance, while that for Japan is still value tilted.
- There's a dearth of obvious value opportunities left to exploit in Europe. The financials make up almost half of the top quintile of our valuation framework and without them few cyclicals look statistically cheap any longer. The Brexit fears proved unfounded and the subsequent narrowing in valuation spreads benefited the consumer durables and financials the most. Among the global cyclicals the industrial commodity issues came out on top, while energy and industrial capital goods stocks also outperformed.

A Cautious Market, Opportunities for Investors

- European companies have increased their operating leverage over time and offer more of that than their counterparts in other parts of the developed world. Their profit and cash generation is sensitive to the pace of the global recovery as more than 40% of their revenues are foreign sourced, compared to 33% for U.S. companies and 36% for Japanese ones. That combination of leverage and exposure explains why they tend to outperform their developed-world peers when activity picks up. Lately 60% of them are seeing margin expansion, with the cyclical sectors faring best.
- After a decade of disappointments the market remains cautious when assessing the potential of a European profit cycle. Earnings estimates have been revised up recently, a rarity, and companies have generated earnings surprises consistently over the past three years. What stands out is that those with superior incremental margins don't command a valuation premium.
- The regime shift has directed our focus to growth stocks, but we prefer cyclical growth rather than that of the stable variety and we're trying to exploit skepticism. Fundamentally-stable issues remain highly valued and we believe that in *today's* growth-tilted regime keeping an eye on valuation is more important than in prior episodes. In addition, in growth-tilted regimes, incremental free cash flow margins usually carry considerable weight, and that ties in well with our view that European companies are well positioned to benefit from a continuation of the global economic expansion.
- Appendix 1 on pages 12 and 13 lists attractive European stocks as judged by our Global Stock Selection Model. They're sorted by free cash flow yield and margin ranks to highlight where skepticism is greatest.

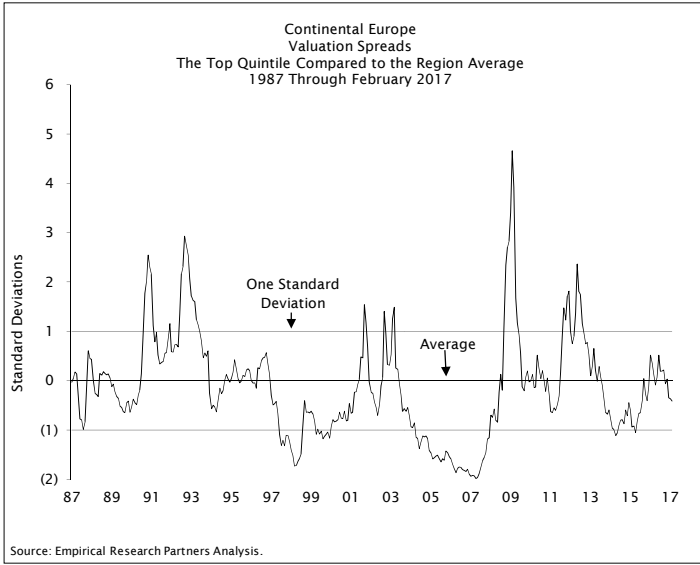
Updating our International Large-Capitalization Model Portfolio

- We launched our International Large-Capitalization Portfolio last June and since then it's outperformed that universe by +73 basis points. In the last six months it led by +330 basis points, owing to our bet on the financials, offsetting the drag experienced in the aftermath of the Brexit vote. Exhibit 31 on page 11 provides the updated portfolio.

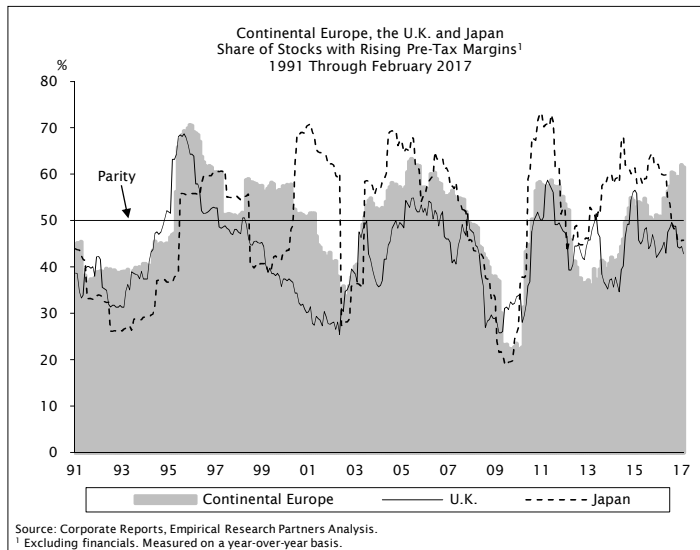
Sungsoo Yang (212) 803-7925 Nicole Price (212) 803-7935 Yi Liu (212) 803-7942 Yu Bai (212) 803-7919 Yuntao Ji (212) 803-7920 Iwona Scanzillo (212) 803-7915

Conclusions in Brief

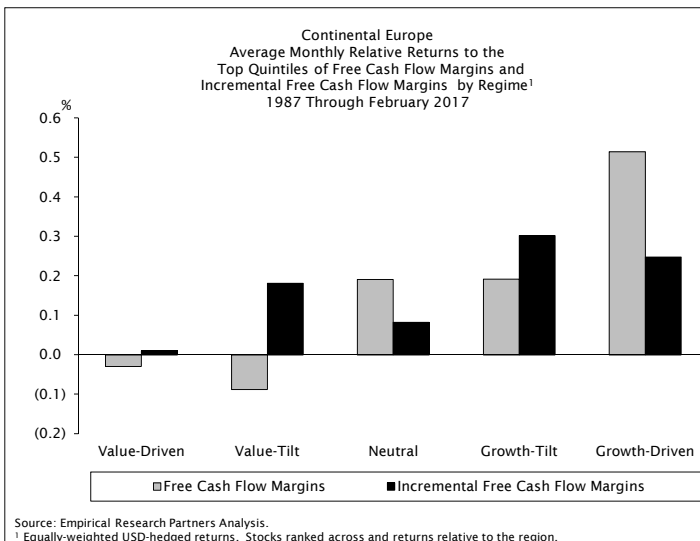
- Valuation spreads narrowed and our regime moved to a growth-tilted stance...



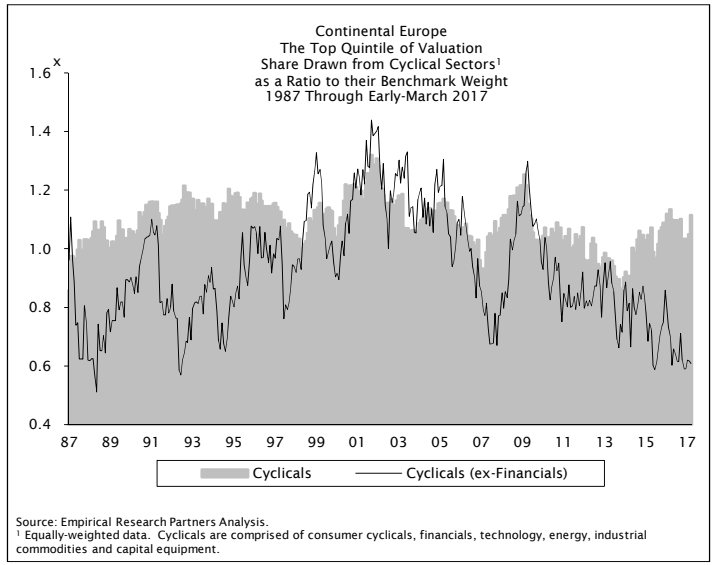
- Margin gains have been more palpable in Europe:



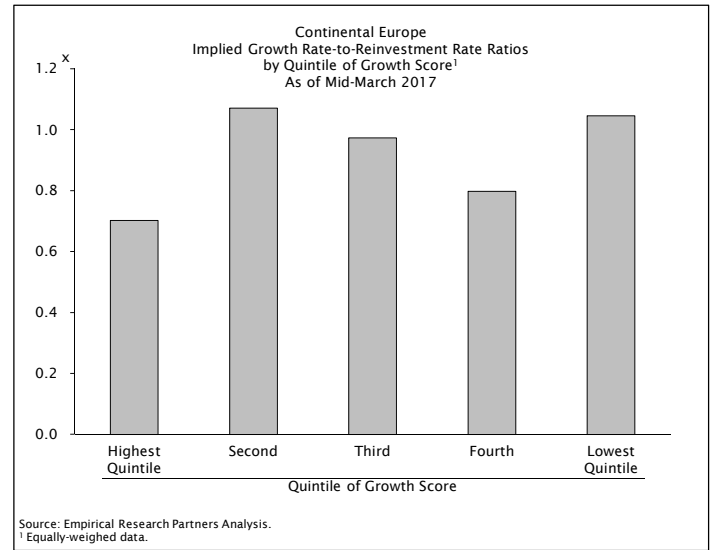
- A combination of high base and incremental free cash flow margins is helpful in growth-tilted regimes:



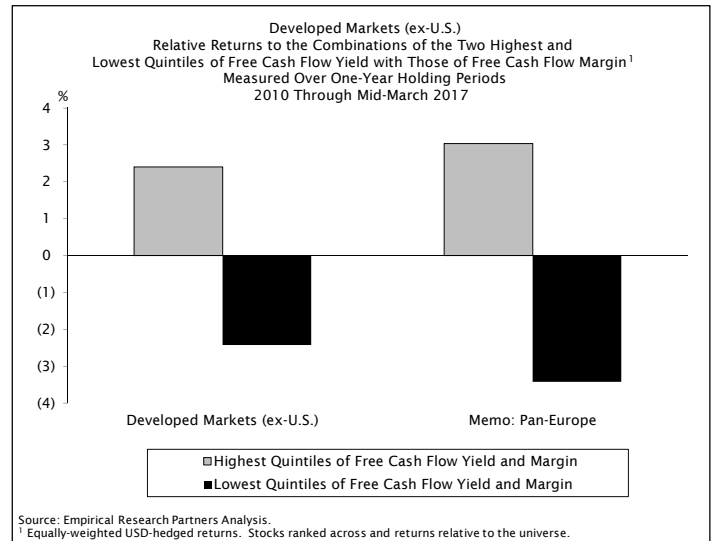
- ...And if we exclude the financials few cyclicals are statistically cheap:



- The market remains cautious about the prospects for growth stocks there:



- So does skepticism in the face of strong margins:



Continental Europe in a Growth-Tilted Regime: Finding Stocks That Work

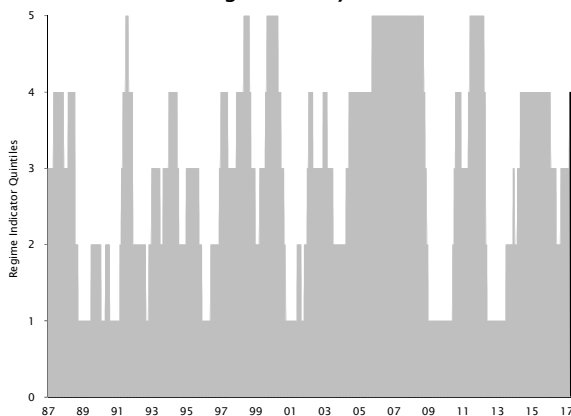
The Market Psyche is Slowly Changing

Our regime forecasting systems are engineered to anticipate the psyche that will prevail when choosing stocks. They do so by incorporating signals received from key fundamental factors such as valuation spreads and profit margins, along with indicators that describe investor sentiment as well as macroeconomic developments.

In the aftermath of the Brexit vote, the regime in Continental Europe moved to a value-tilted stance as worries about the recovery and political uncertainty led stresses to mount and valuation spreads to widen. It remained in that stance until October, when it shifted back to a neutral position as the concerns eased. At the end-of-February it moved to a growth-tilted stance, a position it's had in about a quarter of all months since 1987 (see Exhibit 1). It last occupied that stance in the period from June 2014 through February 2016, a stretch when valuation spreads widened by +1.5 standard deviations as concerns about the viability of the Chinese economy increased. The regime in Continental Europe is currently the only region with a growth-tilted setting, those in the U.K., U.S. and the global one remain in a neutral stance, while that of Japan is still value-tilted.

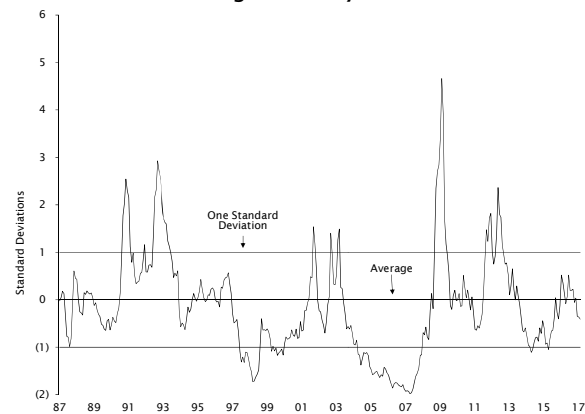
A few rationales underpin the regime shift in Europe. First, valuation spreads have narrowed and now stand 4/10th of a standard deviation below their mean (see Exhibit 2). That's equivalent to their position in the U.S. They're particularly narrow within cyclical and growth-oriented sectors, where investors are no longer being paid abnormal amounts to make value bets.

**Exhibit 1: Continental Europe
Growth Regime Indicator
(5=Growth-Driven; 1=Value-Driven)
1987 Through February 2017**



Source: Empirical Research Partners Analysis.

**Exhibit 2: Continental Europe
Valuation Spreads
The Top Quintile Compared to the Region Average
1987 Through February 2017**



Source: Empirical Research Partners Analysis.

By contrast, there's been a widening of profitability differentials across the market, as measured by returns-on-invested capital (see Exhibit 3). Similarly, sector-level dispersions in free cash flow margins are for the most part wide (see Exhibit 4). In a context of narrow valuation spreads the most-profitable companies may have an edge. Finally, the penalty assessed by the market for big capital spending growth has lessened as confidence has improved. Private sector lending has picked up as well and is now growing at a +2% clip, the fastest rate in the post-Crisis era, and since last summer manufacturing output has expanded markedly. Discernible growth has finally taken center stage.

A Regime Shift Reflected in Sector Performance, Not Much Value Left to Exploit

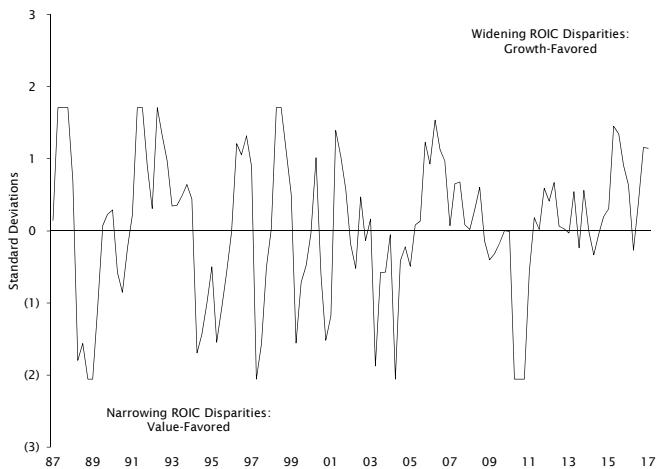
A lot of what remains in the value bucket in Europe is the financials, that make up about 45% of the lowest quintile of our valuation framework (see Exhibit 5). That's double the level of four years ago as the ideas drawn from other sectors have worked out. The profitability of the banks is in serious doubt and their earnings yields are now +3 percentage points higher than the market's, a top 5% reading (see Exhibit 6). We believe European banks are uniquely positioned to benefit from a rate normalization cycle and their beta to the movements in the yield curve is higher than that of their U.S. peers.¹ Without them, few of the cyclicals look statistically cheap (see Exhibit 7).

¹ Global Portfolio Strategy January 2017. "Pan-European Banks: A Barbell Strategy."

Last summer valuation spreads in Europe widened by half a standard deviation as the Brexit vote heightened fears of recession. Those fears proved (temporarily) unfounded and the subsequent narrowing benefited the consumer durables and financials the most, outperforming by +32 and +30 percentage points, respectively. Among the global cyclicals the industrial commodity issues came out on top, leading the market by +29 percentage points, while energy and industrial capital goods stocks led by +15 and +26 points, respectively.

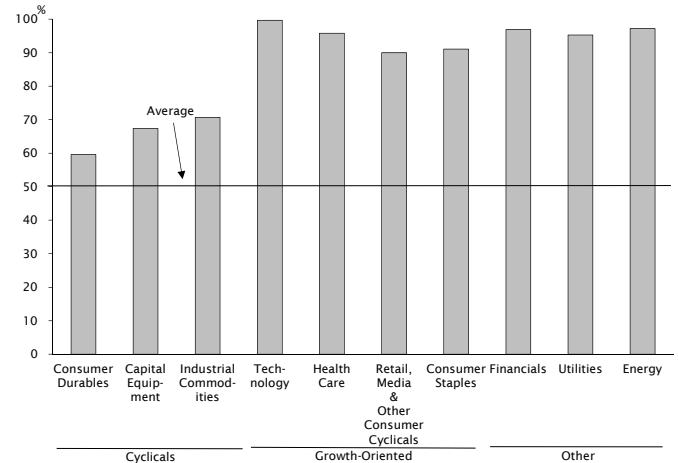
Despite the revaluation of the energy issues the skepticism about the integrity about their book values is hard to miss, and they sell at a (54)% discount to the market's price-to-book ratio, excluding financials from that composite (see Exhibit 8). We favor those energy companies that've reduced their capital spending in the face of a downward shift in the cost curve produced by the U.S. shale producers.² For the industrial commodity stocks the discount is about a third of that, the same level as that in the second quarter of 2011, just before commodity prices nose-dived. None of the industrial commodity issues reside in the lowest-quintile of our valuation framework any longer.

**Exhibit 3: Continental Europe
Returns on Invested Capital
High Versus Low: Quarterly Differentials
1987 Through February 2017**



Source: Empirical Research Partners Analysis.

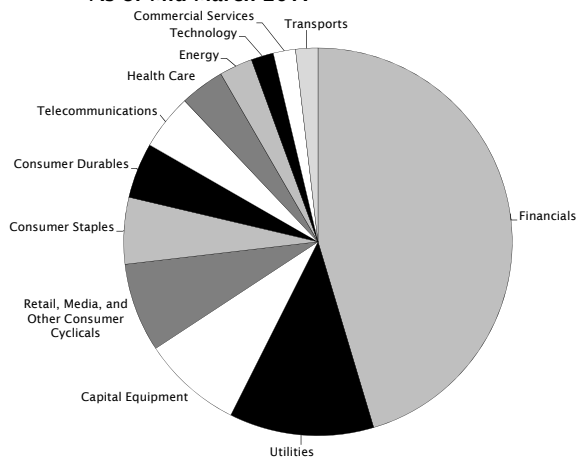
**Exhibit 4: Continental Europe
Intra-Sectoral Free Cash Flow Margin Spreads¹
Top-Third Relative to the Median
Current Readings Compared to Long-Term History
Percentiles (1=Narrowest, 100=Widest)
1987 Through Mid-March 2017**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data. ROE spreads are used for the financials.

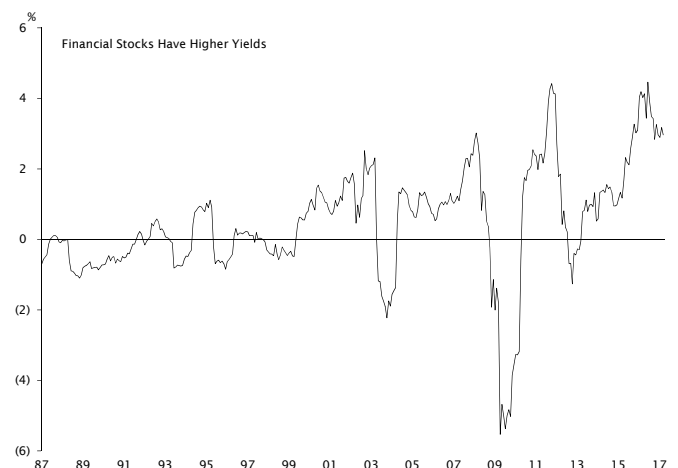
**Exhibit 5: Continental Europe
The Top Quintile of Valuation
Makeup by Sector¹
As of Mid-March 2017**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data.

**Exhibit 6: Continental Europe: Financial Stocks
Relative Trailing Earnings Yield¹
1987 Through Early-March 2017**

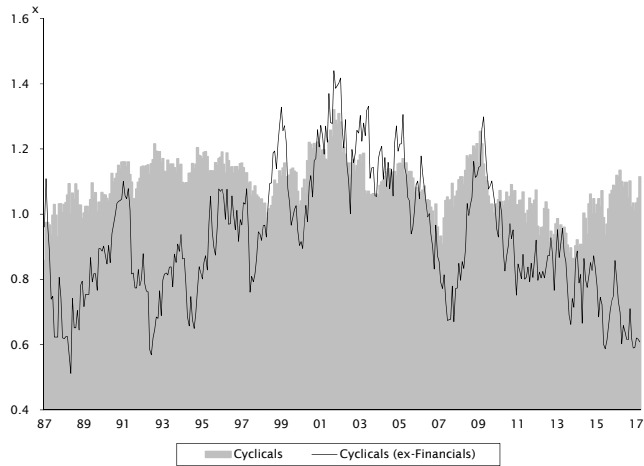


Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

² Global Portfolio Strategy March 2017. "Pan-European Integrations: Wrong Footed."

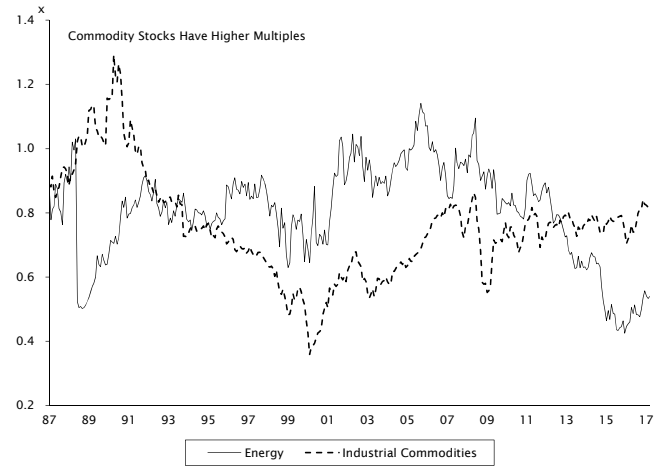
**Exhibit 7: Continental Europe
The Top Quintile of Valuation
Share Drawn from Cyclical Sectors¹
as a Ratio to their Benchmark Weight
1987 Through Early-March 2017**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data. Cyclicals are comprised of consumer cyclicals, financials, technology, energy, industrial commodities and capital equipment.

**Exhibit 8: Continental Europe: Commodity Stocks
Relative Price-to-Book Ratios¹
1987 Through Early-March 2017**

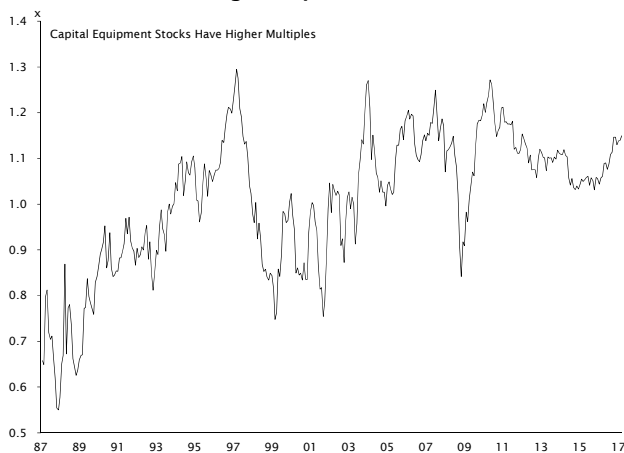


Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data excluding financials.

Exhibit 9 shows the time series of the relative forward-P/E ratios of the capital equipment stocks. They trade at a +15% premium to the market, a similar level to that of the pre-Crisis period and just (5)% shy of the peak reached just before the European Debt Crisis. Exhibit 10 does the same for the consumer cyclicals, a group that includes the autos, auto parts, household durables, apparel, luxury, media, retailers and hotels. The earnings skepticism is conspicuous and the stocks are being priced at an (8)% discount to the market, a reading in the top quintile of the distribution. When compared to pre-Crisis levels the discount is twice as deep. Some disbelief could still be exploitable here.

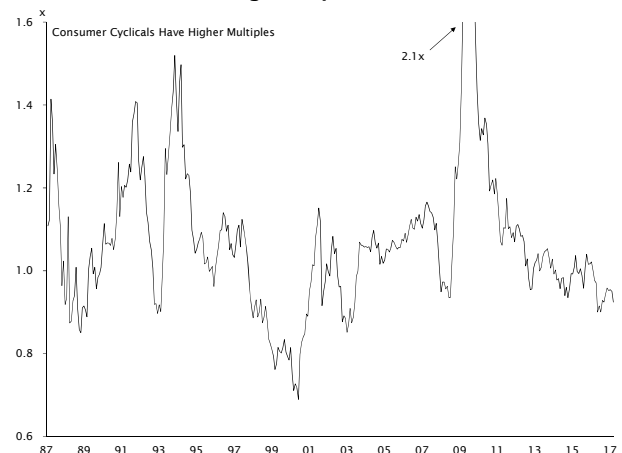
**Exhibit 9: Continental Europe: Capital Equipment Stocks
Relative Forward-P/E Ratio¹
1987 Through Early-March 2017**



Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

**Exhibit 10: Continental Europe: Consumer Cyclical Stocks
Relative Forward-P/E Ratio¹
1987 Through Early-March 2017**



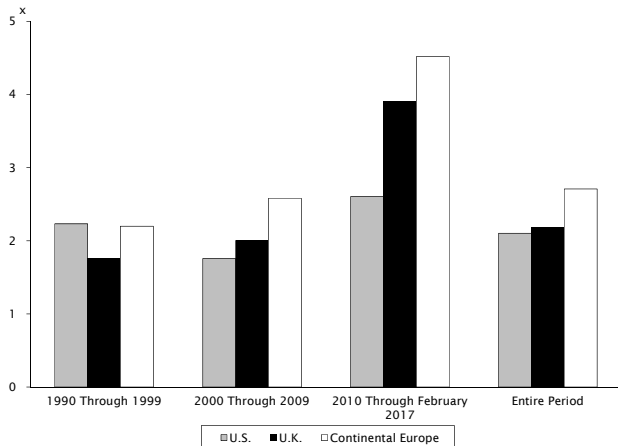
Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

Looking for Growth: Europe Is a Leveraged Play on the Global Recovery

Companies in Continental Europe have increased their operating leverage over the course of the last few cycles and it's now at higher levels than in other parts of the world. Taking the ratio of the pre-tax income growth rate to that of revenues in each of those previous cycles illustrates this idea (see Exhibit 11). In 2010 revenue growth in Continental Europe turned up and since then it's averaged +4%, paling in comparison to the U.S.'s +7% rate. Meanwhile the growth rate of pre-tax income over the same period has been almost +18% in Continental Europe, comparable to the +19% rate in the U.S. Despite the tepid growth margins for the core of the European market have held up (see Exhibit 12).

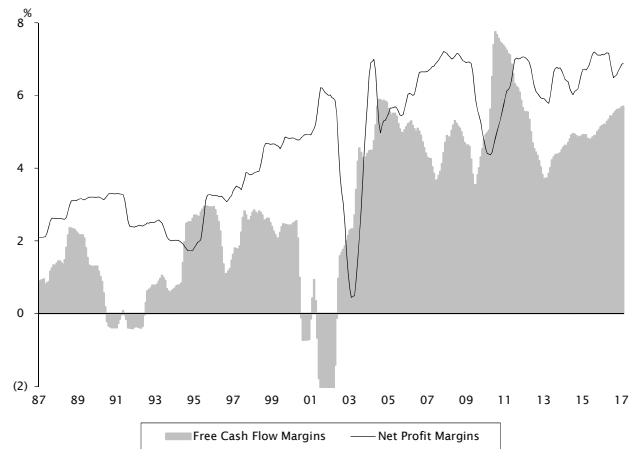
Exhibit 11: U.S., U.K. and Continental Europe
Operating Leverage: Ratio Between the
Year-over-Year Changes in Pre-Tax Income and Revenue¹
1990 Through February 2017



Source: Corporate Reports, Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

Exhibit 12: Continental Europe: The Core of the Market
Free Cash Flow and Net Profit Margins¹
1987 Through February 2017

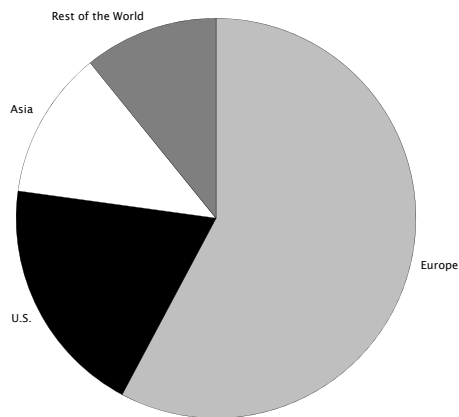


Source: Corporate Reports, Empirical Research Partners Analysis.

¹ The core excludes financials, energy, industrial commodities and utilities; data smoothed on a trailing three-month basis.

The strong operating leverage and the elevated base level of margins make the profit and cash generation cycle in Europe very sensitive to the pace of the recovery. They're levered to the *global* economy because more than 40% of their revenues are foreign sourced (see Exhibit 13). By comparison the equivalent numbers for the U.S. and Japanese companies are 33% and 36%, respectively. The performance of the stocks paint a similar story, as European stocks have tended to outperform their non-U.S. developed world peers when activity picks up (see Exhibit 14).

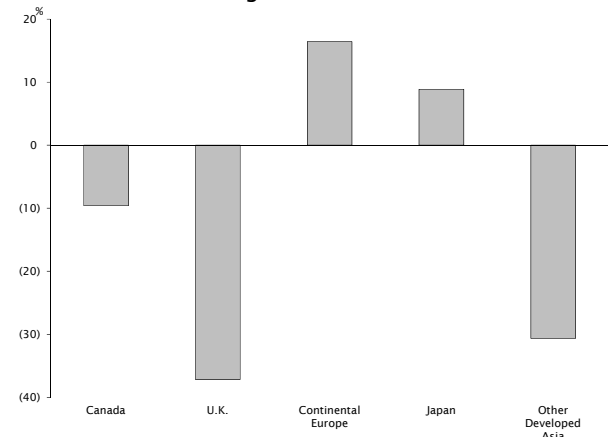
Exhibit 13: Continental Europe
Publicly-Held Company Revenues by Region¹
2015



Source: Corporate Reports, Empirical Research Partners Analysis and Estimates.

¹ Excluding financials.

Exhibit 14: Developed Markets (ex-U.S.)
Correlation of Year-over-Year Relative Returns
with the Year-over-Year Change in Real GDP of
OECD Economies¹
1987 Through 2016



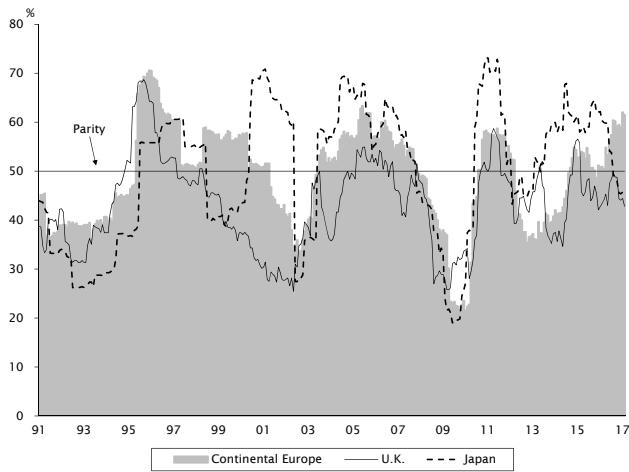
Source: Citigroup Global Markets, Bloomberg L.P., Empirical Research Partners Analysis.

¹ Correlations computed using capitalization-weighted USD-hedged returns.

We've already seen some of that take place as the strength in the macroeconomic data has led to an improvement in the margin expansion and 60% of European companies have seen gains (see Exhibit 15). In the U.K. and Japan that statistic is below half. Unsurprisingly, cyclical sectors have fared best (see Exhibit 16).

The fundamental reason why margins have held up owes much to globalization. We've highlighted in the past that companies have become more asset-light as they've optimized production worldwide and subcontracted the most capital-intensive and less-profitable part of the value chain to partners in the emerging markets (see Exhibit 17). In doing so they also benefited from lower input costs that have boosted margins. This hasn't been competed away. An academic paper disentangled the various global channels that impact the profitability of Euro-Area companies, and the authors found that as companies became more global their productivity went up (see Exhibit 18).

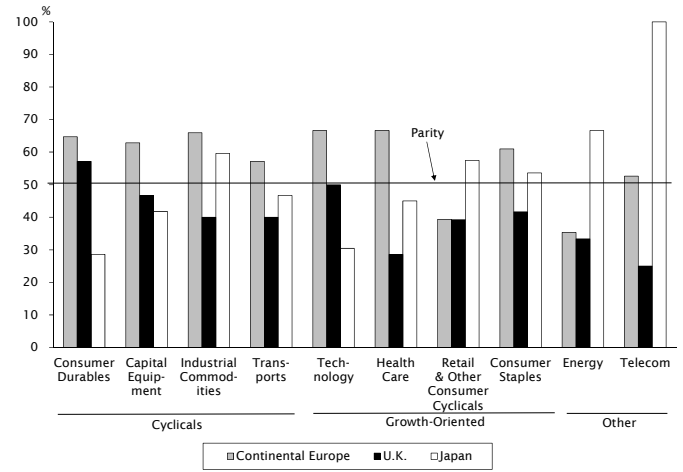
**Exhibit 15: Continental Europe, the U.K. and Japan
Share of Stocks with Rising Pre-Tax Margins¹
1991 Through February 2017**



Source: Corporate Reports, Empirical Research Partners Analysis.

¹ Excluding financials. Measured on a year-over-year basis.

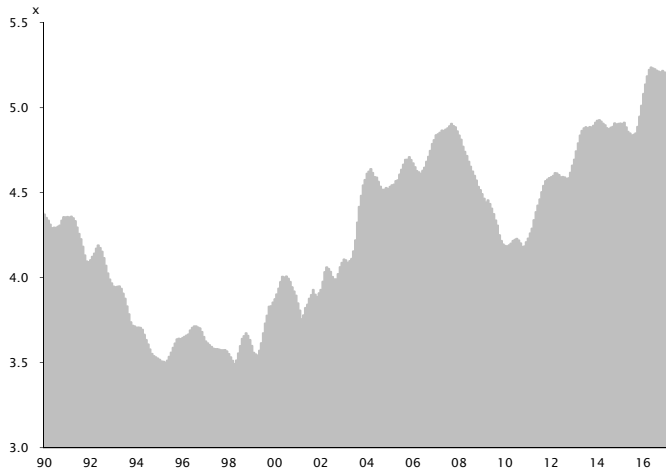
**Exhibit 16: Continental Europe, the U.K. and Japan
Share of Stocks with Rising Net Margins
by Sector¹
As of February 2017**



Source: Corporate Reports, Empirical Research Partners Analysis.

¹ Measured on a year-over-year basis.

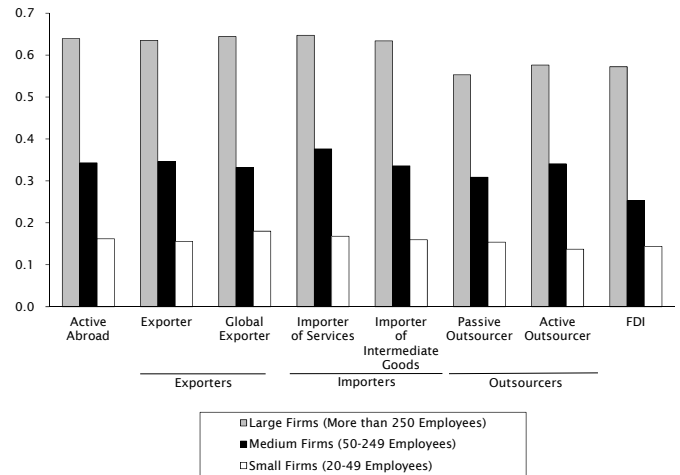
**Exhibit 17: Continental Europe
Asset Turnover: Revenue-to-Net Property, Plant
and Equipment Ratio¹
1990 Through February 2017**



Source: Corporate Reports, Empirical Research Partners Analysis.

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

**Exhibit 18: Euro Area
Total Factor Productivity Coefficients by Level of
International Activity and Firm Size¹
2008**



Source: Altomonte, C., Aquilante, T. and Gianmarco Ottaviano, July 2012. "The Triggers of Competitiveness: The EFIGE Cross-Country Report," Bruegel Blueprint 17.

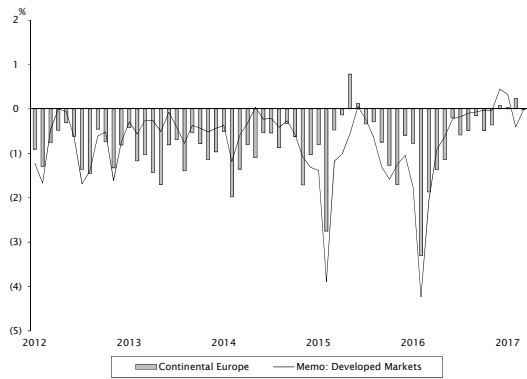
¹ Based on a regression of total factor productivity with respect to levels of international activity.

The Profit Recovery Is Not Fully Priced In?

We believe that after a decade of disappointments the market remains cautious in pricing the likely magnitude of a cyclical profit recovery in Europe. This can create opportunities.

Starting with the most recent data, the improvement in activity has prompted upward revisions of earnings estimates, with Europe showing more dynamism than the rest of the non-U.S. developed markets (see Exhibit 19). This is a rarity, since 1988 estimates in the non-U.S. developed markets have been revised down by (0.7)% per month, on average, and by close to (1)% in Continental Europe. Among the winners, we find once again the cyclical sectors; this reinforces the argument that the recent rise in estimates owes much to the global recovery gaining momentum (see Exhibit 20). While the revisions have only been a more recent phenomenon, for the last three years more companies have beaten, rather than missed, estimates (see Exhibit 21). This happened in a context of unusually stable, albeit mediocre, economic growth rates both in Europe and in the rest of the world.

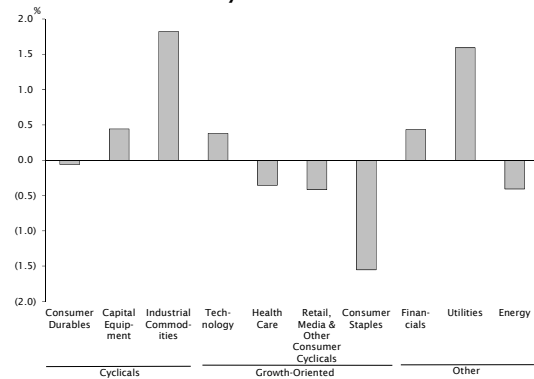
Exhibit 19: Continental Europe
Average Monthly Revisions in Earnings Estimates'
2012 Through Early-March 2017



Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

Exhibit 20: Continental Europe
Average Monthly Revisions in Earnings Estimates
by Sector'
As of Early-March 2017

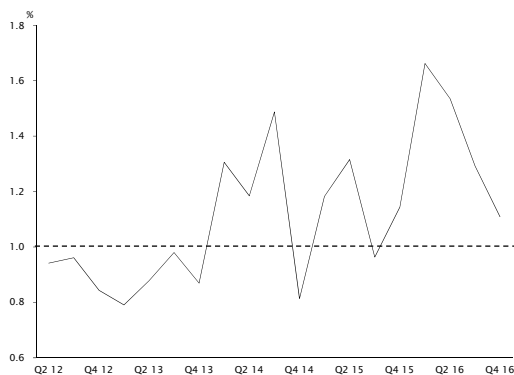


Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

The skepticism regarding the sustainability of margins is reflected in the valuations of those companies with superior or incremental margins. Using three definitions of incremental profitability (free cash flow, gross cash flow and ROE), we find that the issues with the highest levels don't command a premium to the market and they're slightly underrepresented in the most-expensive quintile of valuation (see Exhibit 22). The market is unwilling to give the benefit of the doubt to those companies and bet on a continuation of the margin expansion.

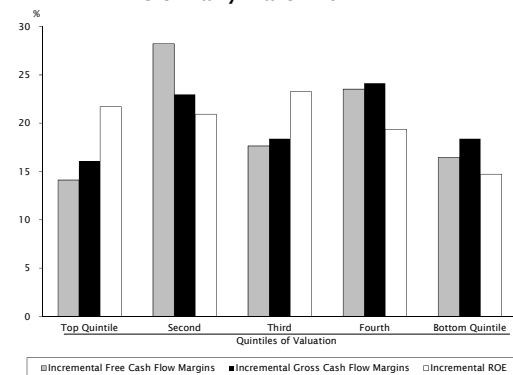
Exhibit 21: Continental Europe
Ratio of Companies Reporting Positive Earnings Surprises
to Those Reporting Negative Earnings Surprises'
Q2 2012 Through Q4 2016



Source: Corporate Reports, Empirical Research Partners Analysis.

¹ Equally-weighted data that exclude financials and utilities.

Exhibit 22: Continental Europe
Top Quintiles of Incremental Free and
Gross Cash Flow Margins and ROE
Share of Stocks by Quintile of Valuation'
As of Early-March 2017



Source: Corporate Reports, Empirical Research Partners Analysis.

¹ Equally-weighted data.

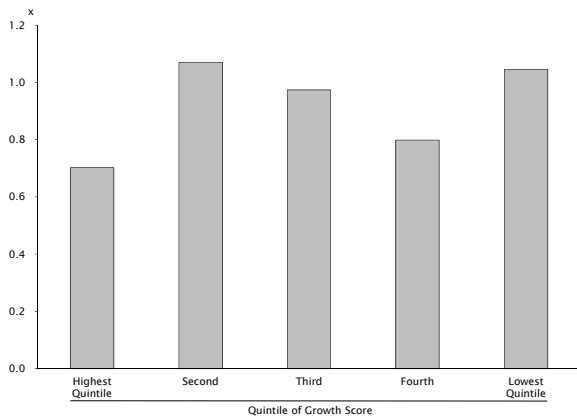
Investors aren't enthusiastic about the prospects of growth stocks in Europe (see Exhibit 23). That's apparent in the ratio of the implied growth rate (based on valuations) to the companies' reinvestment rates, a methodology we use to identify distrusted candidates, for the companies with the best growth characteristics. Potential growth seems underpriced.

Finally, the antipathy of foreign investors to European companies is reflected in last year's net outflows of U.S.-listed ETFs invested in that market, that've ebbed this year (see Exhibit 24).

We Prefer Cyclical Growth Rather Than the Stable Variety

In growth-tilted regimes results in the here and now count more, as the glaring mispricings have already been resolved. As a result we put more weight than usual in our earnings quality framework when choosing stocks. Companies with the highest free cash flow margins tend to remain at the top of the pecking order, as there's only a 20% yearly turnover among the issues that rank in the top quintile. This is a concern because it suggests that high free cash flow margins is a persistent characteristic, hence a portfolio biased to that factor would include fundamentally-stable companies, and while their pricing is less extreme today than it was a year ago, it remains quite demanding.

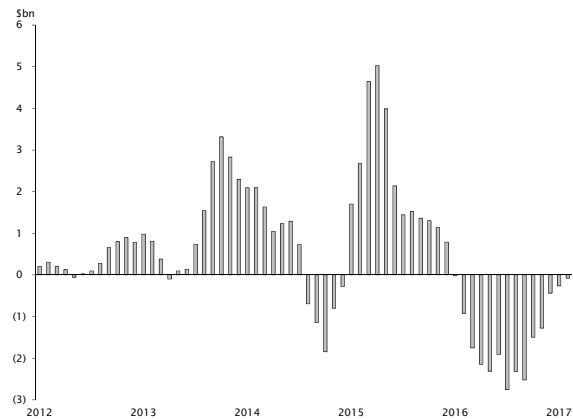
**Exhibit 23: Continental Europe
Implied Growth Rate-to-Reinvestment Rate Ratios
by Quintile of Growth Score¹
As of Mid-March 2017**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data.

**Exhibit 24: Top-Seven U.S.-Listed European Equity ETFs
Monthly Net Flows¹
2012 Through February 2017**



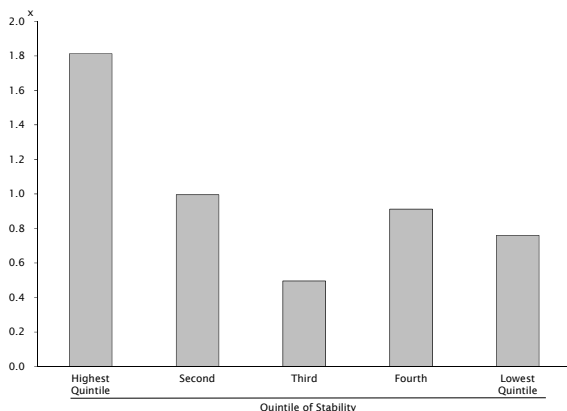
Source: Bloomberg L.P., Empirical Research Partners Analysis.

¹ ETFs comprise VGK, HEDJ, EZU, EWG, EWU, FEZ and IEV; smoothed on a trailing three-month basis.

To get a sense for how the stable stocks are being valued we used the same approach from Exhibit 23, finding that they're priced for perfection (see Exhibit 25). This is even more the case when they're compared to cyclical stocks, with the free cash flow yield differential between the two today at a top-decile reading (see Exhibit 26). Within our growth universe fundamentally-stable stocks tend to be highly-valued (see Exhibit 27). Fortunately, in growth-tilted regimes, incremental free cash flow margins carry considerable weight (see Exhibit 28). Those stocks offer more attractive valuations over ones with high *levels* of free cash flow margins (see Exhibit 29). Given the circumstances we're willing to bet on the trend rather than the level. Selecting issues that score well in both free cash flow and incremental free cash flow margins leads to a cohort of 25 names, with cyclicals well represented: there are four media stocks (Kabel Deutschland, Mediaset, Mediaset Espana Comunicacion and RTL Group), three transport stocks (Aena, Atlantia and Flughafen Zurich) as well as Nokian Renkaat and Novozymes.

Keeping a valuation component in our approach allows to exploit the market's skepticism. Since 2010 non-U.S. developed world companies with low valuations in the face of high profitability have outperformed by +2.4 percentage points per annum, while unprofitable ones with rich valuations have been penalized by a similar amount (see Exhibit 30). The combination of valuation and profitability factors exposes investors to optionality thanks to the asymmetry of returns: if the market is correct to be cautious and companies fail to deliver, the underperformance is limited as valuations reflect that outcome already, but if the market's cautiousness was overdone, the outperformance could be substantial.

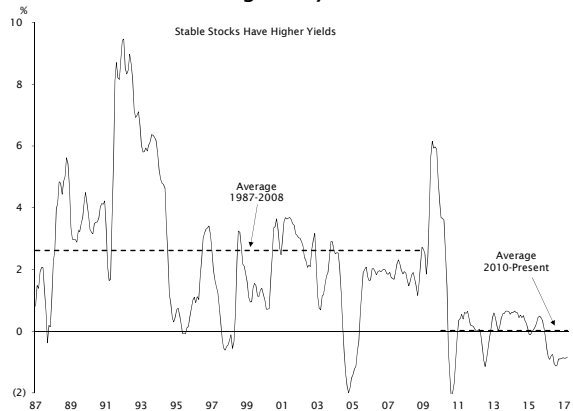
**Exhibit 25: Continental Europe
Implied Growth Rate-to-Reinvestment Rate Ratios
by Quintile of Stability¹
As of Mid-March 2017**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data. Stocks are drawn from the largest 425 developed markets (ex-U.S.) stocks with market capitalizations above \$10bn.

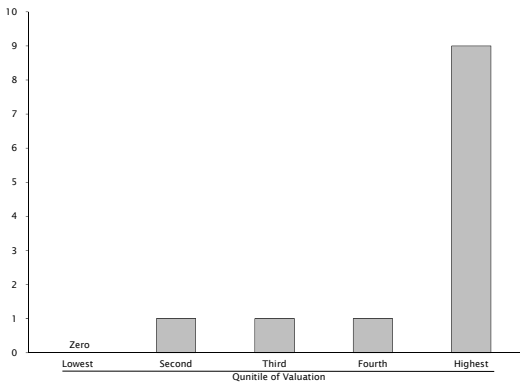
**Exhibit 26: Continental Europe: Large-Cap Stable Stocks
Free Cash Flow Yields Relative to Those of
Cyclical Stocks¹
1987 Through Early-March 2017**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data; smoothed on a trailing three-month basis. Cyclicals include consumer cyclicals, capital equipment, energy, industrial commodities, technology and transports.

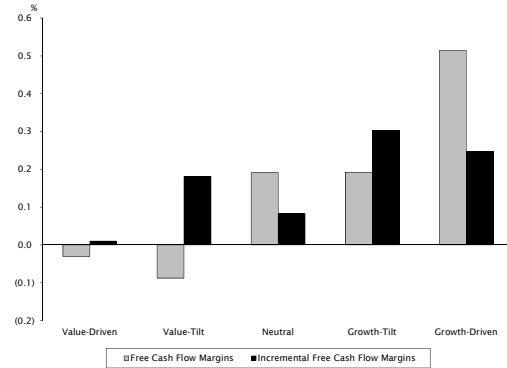
Exhibit 27: Continental Europe: Large-Cap Stable Stocks
Number of Issues in the Top Quintile of Growth Score by Quintile of Valuation¹
As of Early-March 2017



Source: Empirical Research Partners Analysis.

¹ Stocks are ranked across the developed markets (ex-U.S.).

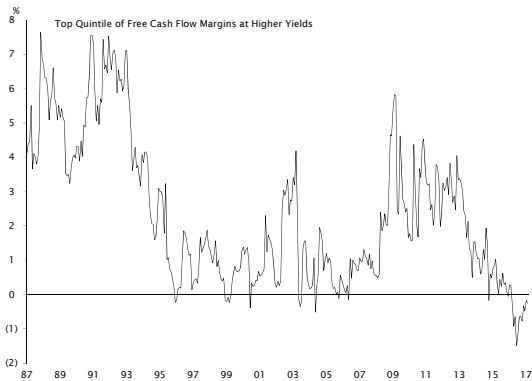
Exhibit 28: Continental Europe
Average Monthly Relative Returns to the Top Quintiles of Free Cash Flow Margins and Incremental Free Cash Flow Margins by Regime¹
1987 Through February 2017



Source: Empirical Research Partners Analysis.

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

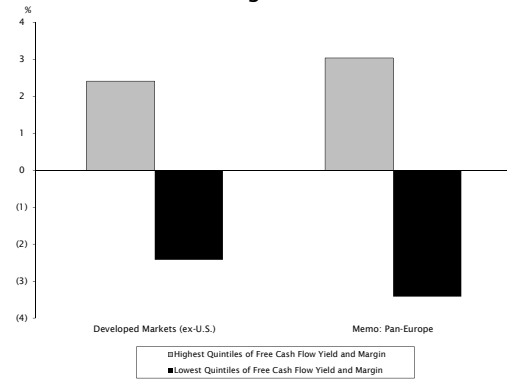
Exhibit 29: Continental Europe
Top Quintiles: Free Cash Flow Versus Incremental Free Cash Flow Margins Spread of Free Cash Flow Yields¹
1987 Through Mid-March 2017



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data.

Exhibit 30: Developed Markets (ex-U.S.)
Relative Returns to the Combinations of the Two Highest and Lowest Quintiles of Free Cash Flow Yield with Those of Free Cash Flow Margin¹
Measured Over One-Year Holding Periods 2010 Through Mid-March 2017



Source: Empirical Research Partners Analysis.

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

Conclusion: A Slow Shift, Not a Revolution

The regime shift in Continental Europe has turned our attention to growth stocks. Arguably, however, the setting is more complex than usual. While valuation spreads have narrowed to a level 4/10^{ths} of a standard deviation below their mean, the valuations of some other strategies, notably fundamentally-stable stocks, remain stretched. This creates a dilemma for investors, as those companies that offer earnings visibility, the stable growers, command a big premium to the market, to an extent that makes us nervous about their true potential. Hence we believe that in *today's* growth-tilted regime keeping an eye on valuation is more important than in prior episodes.

We think that a simple growth-strategy would prove too naive here as there's more opportunity in growth of the cyclical sort rather than of the stable one. It ties in well with our fundamental view. We believe that European companies, owing to their higher leverage to global activity, are better placed to benefit from global economic acceleration. Meanwhile the market remains very cautious and doesn't give the benefit of the doubt to those companies expanding margins. Exploiting market skepticism has proven to be a successful approach in the past. As a result, we see the move in our regime indicator as a gradual shift, putting more focus on cyclical growth while keeping valuation in the equation, this is certainly not a revolution.

Appendix 1 on pages 12 and 13 lists attractive stocks in Continental Europe as judged by our Global Stock Selection Model. As we did in February when our Regional Allocation Indicator shifted to favor Continental Europe we sort the stocks by their free cash flow yields and margins, highlighting those where the skepticism is greatest.

Updating the International Large-Capitalization Model Portfolio

Betting on Europe and Cyclical

We are updating our International Large-Cap Model Portfolio, the product of our quantitative model and judgment, comprised of between 60 and 80 positions, with a $\pm 3.5\%$ to 6% tracking error and an investment horizon of about one year. The goal of the portfolio is to outperform by +4% to +5% per annum before transaction costs, in line with the live performance of the best quintile of our International Stock Selection Model since its inception in 2008.

The portfolio was launched on June 17th last year and since then it's outperformed that universe by +73 basis points. In the last six months it led by +330 basis points, owing to our bet on the financials and cyclical, notably consumer durables and industrials. Those gains offset the sizeable drag of the portfolio experienced in the aftermath of the Brexit vote. The updated portfolio is presented in **Exhibit 31** and its regional allocation is detailed in **Exhibit 32**. The portfolio has a median free cash flow yield of 10.2%, compared to just 4.3% for the large-cap universe from where it's drawn. On a P/E basis it's valued at 12.5x trailing earnings, while the universe is valued at 23.0x. In terms of profitability, the ROE of the portfolio is 13.8% versus 9.6% for the universe, and also offers a free cash flow margin advantage of +1.2 percentage points against the universe's 8.2% level.

**Exhibit 31: The International Large-Capitalization Model Portfolio
As of Late-March 2016**

Symbol	Company	Weight	Price at Inclusion (Local)	Price 03/22/17	Local Currency Code	Developed Markets (ex-U.S.) Index Weight	Symbol	Company	Weight	Price at Inclusion (Local)	Price 03/22/17	Local Currency Code	Developed Markets (ex-U.S.) Index Weight
CYCLICALS													
Consumer Cyclical													
Consumer Durables and Apparel													
UG FP	Peugeot SA	2.1 %	13.09	18.57	EUR								
FCA IM	Fiat Chrysler Automobiles N.V.	2.1	5.94	10.09	EUR								
7261 JP	Mazda Motor Corp.	2.1	1,654.00	1,578.00	JPY								
		6.3 %				6.0 %							
Retail and Other Consumer Cyclical													
JCNC SP	Jardine Cycle & Carriage Limited	0.9 %	33.15	44.31	SGD								
MKS LN	Marks and Spencer Group plc	0.9	359.60	324.90	GBP								
SW FP	Sodexo SA	0.9	91.78	103.85	EUR								
PNDORA DC	Pandora A/S	0.3	927.00	749.50	DKK								
		3.0 %				6.0 %							
Media													
None		0.0 %				1.7 %							
Capital Equipment													
8015 JP	Toyota Tsusho Corp.	2.3 %	2,255.00	3,330.00	JPY								
8053 JP	Sumitomo Corporation	2.2	1,011.00	1,482.50	JPY								
ACS SM	Actividades de Construcción y Svcs.	2.1	26.87	30.52	EUR								
8002 JP	Marubeni Corporation	1.7	475.00	702.50	JPY								
ATCOA SS	Atlas Copco AB Class A	1.6	205.90	300.60	SEK								
		9.8 %				9.5 %							
Commercial Services													
RAND NA	Randstad Holding NV	1.8 %	55.53	55.53	EUR								
		1.8 %				1.6 %							
Industrial Commodities													
4188 JP	Mitsubishi Chemical Holdings	2.1	503.10	839.80	JPY								
4005 JP	Sumitomo Chemical Co. Ltd.	1.0	453.00	631.00	JPY								
UPM FH	UPM-Kymmene Oyj	0.6	16.66	22.62	EUR								
		3.7 %				7.0 %							
Transports													
LHA GY	Deutsche Lufthansa AG	2.1	11.29	14.58	EUR								
RMG LN	Royal Mail plc	1.6	519.00	408.50	GBP								
9022 JP	Central Japan Railway Company	1.3	18,570.00	18,290.00	JPY								
		4.9 %				3.4 %							
GROWTH-ORIENTED													
Technology													
Software and Services													
None		0.0 %				2.8 %							
Hardware and Semiconductors													
None		0.0 %				3.1 %							
Health Care													
Pharmaceuticals and Biotechnology													
ATLN VX	Actelion Ltd.	2.2 %	156.20	275.00	CHF								
BAYN GY	Bayer AG	0.9	88.06	105.05	EUR								
JAZZ US	Jazz Pharmaceuticals Plc	0.7	148.57	142.52	USD								
		3.8 %				7.8 %							
Health Care Equipment and Services													
2784 JP	Alfresa Holdings Corporation	2.9 %	2,292.00	1,943.00	JPY								
		2.9 %				1.7 %							
GROWTH-ORIENTED (Cont.)													
Consumer Staples													
IMB LN	Imperial Brands PLC	2.4 %	3,613.00	3,827.00	GBP								
WN CT	George Weston Limited	2.1	112.88	113.87	CAD								
MEO GY	METRO AG	2.1	27.84	28.61	EUR								
FCG NZ	Fonterra Co-operative Group	2.1	5.47	6.19	NZD								
MRW LN	Wm Morrison Supermarkets plc	2.1	180.90	232.30	GBP								
CO FP	Casino Guichard-Perrachon SA	0.9	50.04	49.79	EUR								
SAP CT	Saputo Inc.	0.5	37.79	45.63	CAD								
		12.3 %				11.2 %							
OTHER													
Financials													
Banks, Consumer Finance and Other													
CC FP	Credit Industriel et Commercial SA	2.5 %	165.50	183.00	EUR								
INGA NA	ING Groep NV	2.5	9.97	13.82	EUR								
BMO CT	Bank of Montreal	2.4	82.52	98.40	CAD								
DANSKE DC	Danske Bank A/S	2.2	180.50	235.00	DKK								
CM CT	Canadian Imperial Bank of Commerce	2.1	102.02	116.02	CAD								
4 HK	Wharf (Holdings) Ltd.	2.1	44.35	68.05	HKD								
83 HK	Sino Land Co. Ltd.	2.1	12.04	13.84	HKD								
SWEDA SS	Swedbank AB Class A	2.0	220.80	220.80	SEK								
ABN NA	ABN AMRO Group N.V.	2.0	22.56	22.56	EUR								
8316 JP	Sumitomo Mitsui Financial Group Inc.	1.9	3,154.00	4,150.00	JPY								
INVEB SS	Investor AB Class B	1.8	364.00	364.00	SEK								
8591 JP	ORIX Corporation	1.8	1,392.00	1,703.50	JPY								
KN FP	NATIXIS	1.6	5.58	5.58	EUR								
8304 JP	Aozora Bank Ltd.	1.1	354.00	416.00	JPY								
HSBA LN	HSBC Holdings plc	0.5	430.90	647.50	GBP								
		28.6 %				15.5 %							
Capital Markets													
ICM CT	ICM Financial Inc.	2.8 %	36.65	40.30	CAD								
III LN	3i Group plc	0.3	541.00	711.50	GBP								
		3.1 %				2.7 %							
Insurance													
SREN VX	Swiss Re AG	2.2 %	81.60	89.35	CHF								
MPL AU	Medibank Private Ltd.	1.7	3.17	2.85	AUD								
		4.0 %				5.4 %							
Energy													
Integrated, Oil Service, Refiners and Other													
REP SM	Repsol SA	2.2 %	11.17	14.46	EUR								
5020 JP	JX Holdings Inc.	2.1	415.90	529.00	JPY								
		4.3 %				4.5 %							
Exploration and Production													
None		0.0 %				0.8 %							
Telecommunications													
9432 JP	Nippon Telegraph and Telephone	2.7 %	4,529.00	4,923.00	JPY								
8 HK	PCCW Limited	1.6	5.10	4.55	HKD								
		4.3 %				5.3 %							
Utilities													
9502 JP	Chubu Electric Power Company	2.5 %	1,516.50	1,473.50	JPY								
EOAN GY	E.ON SE	2.2	7.33	7.10	EUR								
9503 JP	Kansai Electric Power Company	1.5	1,238.50	1,238.50	JPY								
EDF FP	Electricite de France SA	1.1	9.87	7.67	EUR								
		7.2 %				4.1 %							
TOTAL													
		100.0 %				100.0 %							

Source: Empirical Research Partners Analysis.

**Exhibit 32: The International Large-Capitalization Model Portfolio
As of Late-March 2016**

	Continental			Asia		
	Canada	U.K.	Europe	Japan	(ex-Japan)	Israel
Portfolio Weight	9.9 %	7.7 %	42.7 %	29.1 %	10.6 %	0.0 %
Benchmark Weight	7.8	13.0	41.5	22.8	10.3	4.5

Source: Empirical Research Partners Analysis.

Appendix 1: Continental Europe: Large and Mid-Capitalization Stocks

Top Quintile of Global Core Model
Sorted by Free Cash Flow Yield and Margin
As of Mid-March 2017

Symbol	Company	Price (Local)	Local Currency Code	Free Cash Flow Yield	Free Cash Flow Margin	Quintiles (1=Best; 5=Worst)					Forward P/E- Ratio	YTD Return (Local)	Market Capitalization (USD Million)
						Super Factors							
						Composite Valuation	Capital Deployment	Earnings Quality and Trend	Market Reaction	Core Model			
Top Two Quintiles of Free Cash Flow Yield and Margin													
PSM GY	ProSiebenSat.1 Media SE	39.50	EUR	1	1	1	1	1	5	1	15.6 x	7.9 %	\$10,049
VER AV	VERBUND AG Class A	15.86	EUR	1	1	3	2	1	2	1	18.7	4.5	5,956
SUBC NO	Subsea 7 S.A.	129.70	NOK	1	1	1	1	1	1	1	23.3	18.7	5,016
MS IM	Mediaset S.p.A.	3.94	EUR	1	1	1	1	1	5	1	NM	(4.1)	5,015
LNZ AV	Lenzing AG	156.75	EUR	1	1	4	1	1	1	1	16.2	36.3	4,449
TDC DC	TDC A/S	36.94	DKK	1	1	1	3	1	3	1	13.9	4.7	4,326
SAZ GY	STADA Arzneimittel AG	56.13	EUR	1	1	1	2	1	2	1	17.4	14.1	3,762
ACE IM	Acea S.p.A.	12.23	EUR	1	1	1	1	1	1	1	10.9	5.9	2,833
NOS PL	NOS SGPS SA	4.93	EUR	1	1	1	3	1	5	1	22.5	(12.6)	2,745
ICOV GY	Covestro AG	70.07	EUR	1	2	3	2	1	1	1	15.6	7.5	14,218
UPM FH	UPM-Kymmene Oyj	23.31	EUR	1	2	2	2	1	2	1	14.5	(0.1)	13,715
EDP PL	EDP-Energias de Portugal SA	2.86	EUR	1	2	1	2	2	4	1	11.1	(1.1)	11,203
TKA AV	Telekom Austria AG	6.16	EUR	1	2	1	2	1	2	1	13.2	9.9	4,421
FCC SM	Fomento de Construcciones y Contratas S.A.	8.27	EUR	1	2	1	3	1	2	1	21.7	9.5	3,318
BEKB BB	Bekaert SA	46.90	EUR	1	2	2	4	1	2	1	16.2	21.9	3,317
AMS SM	Amadeus IT Group SA Class A	46.20	EUR	2	1	2	3	1	3	1	21.0	7.8	22,127
KD8 GR	Kabel Deutschland Holding AG	112.00	EUR	2	1	4	3	1	1	1	NM	2.8	10,688
TNET BB	Telenet Group Holding NV	55.52	EUR	2	1	3	4	1	2	1	27.4	5.3	7,081
DLG GY	Dialog Semiconductor plc	49.08	EUR	2	1	3	1	2	1	1	19.4	22.2	4,004
SOW GY	Software AG	36.70	EUR	2	1	2	1	1	4	1	14.7	6.4	3,065
BAYN GY	Bayer AG	106.85	EUR	2	2	1	3	1	3	1	13.9	7.8	96,557
HEN3 GY	Henkel AG & Co. KGaA Pref	121.25	EUR	2	2	4	1	1	2	1	17.8	7.1	52,916
SAND SS	Sandvik AB	131.90	SEK	2	2	4	4	1	1	1	20.6	17.0	19,137
CPA US	Copa Holdings S.A. Class A	110.73	USD	2	2	2	2	2	1	1	14.1	22.5	4,717
HAV FP	Havas SA	8.27	EUR	2	2	2	1	4	1	1	16.6	3.3	3,785
DFDS DC	DFDS A/S	396.00	DKK	2	2	3	4	1	1	1	13.6	22.8	3,461
NVG PL	Navigator Company SA	3.60	EUR	2	2	2	3	1	1	1	13.7	10.3	2,838
The Rest (ex-Financials)													
RNO FP	Renault SA	78.65	EUR	1	3	1	2	4	2	1	5.5 x	(6.9) %	\$25,786
REP SM	Repsol SA	14.56	EUR	1	3	1	1	1	1	1	10.6	8.5	23,896
UG FP	Peugeot SA	18.95	EUR	1	3	1	1	4	1	1	8.1	22.3	18,017
NESTE FH	Neste Corporation	34.64	EUR	1	3	1	1	3	2	1	13.3	(5.1)	9,799
AKE FP	Arkema SA	92.40	EUR	1	3	3	2	2	1	1	14.3	(0.6)	7,650
FGR FP	Eiffage SA	70.58	EUR	1	3	1	4	3	3	1	14.9	6.5	7,569
LXS GY	LANXESS AG	64.77	EUR	1	3	3	2	2	1	1	20.5	3.9	6,529
SPM IM	Saipem S.p.A.	0.40	EUR	1	3	1	1	2	3	1	20.2	(24.4)	4,364
LIGHT NA	Philips Lighting NV	26.02	EUR	1	3	1	2	3	2	1	10.9	11.2	4,212
VALMT FH	Valmet Corp	14.96	EUR	1	3	2	1	3	1	1	16.3	7.0	2,516
TCH FP	Technicolor SA	3.99	EUR	1	3	1	1	5	5	1	12.5	(22.4)	1,797
ENEL IM	Enel SpA	4.21	EUR	1	4	1	1	3	3	1	12.0	2.7	46,429
ENGIE FP	ENGIE SA	12.48	EUR	1	4	1	1	5	5	1	12.9	3.0	32,943
FCA IM	Fiat Chrysler Automobiles N.V.	10.74	EUR	1	4	1	2	3	1	1	5.6	23.9	17,900
EOAN GY	E.ON SE	7.08	EUR	1	4	1	1	2	4	1	11.5	5.6	15,562
HOT GY	Hochtief AG	154.30	EUR	1	4	3	1	4	1	1	24.2	16.0	10,961
ACS SM	Actividades de Construcción y Servicios SA	31.03	EUR	1	4	1	1	5	3	1	12.8	4.6	10,690
SEV FP	SUEZ SA	13.68	EUR	1	4	1	1	4	5	1	17.5	(2.4)	8,161
LHA GY	Deutsche Lufthansa AG	15.29	EUR	1	4	1	1	5	4	1	6.9	24.6	7,828
STR AV	STRABAG SE	36.59	EUR	1	4	1	2	4	1	1	15.2	8.7	4,483
LOG SM	Compania de Distribucion Integral Logista Holdin	21.96	EUR	1	4	2	1	3	2	1	15.8	(0.2)	3,143
SIE GY	Siemens AG	124.35	EUR	2	3	3	2	2	1	1	15.6	9.7	116,494
CRH ID	CRH Plc	32.61	EUR	2	3	3	1	4	1	1	17.8	0.3	30,549
POST AV	Osterreichische Post AG	35.46	EUR	2	3	3	2	2	1	1	15.2	11.2	2,609
RAND NA	Randstad Holding NV	56.08	EUR	2	4	1	1	5	1	1	13.5	8.8	11,173
RE FP	Colas SA	156.55	EUR	2	4	1	2	3	1	1	NM	11.1	5,491
OUTI V FH	Outokumpu Oyj	9.92	EUR	2	4	4	2	4	1	1	11.1	16.6	4,598
MMB FP	Lagardere SCA	25.90	EUR	2	4	1	2	4	3	1	13.6	(1.9)	3,736
DUE GY	Durr AG	80.67	EUR	2	4	2	1	3	2	1	14.4	5.7	3,013
WIE AV	Wienerberger AG	19.65	EUR	2	4	2	2	4	1	1	17.5	19.1	2,581
ATCOA SS	Atlas Copco AB Class A	305.80	SEK	3	1	4	4	1	1	1	22.7	10.2	42,453
LUN DC	H. Lundbeck A/S	307.40	DKK	3	1	3	1	1	3	1	24.1	7.0	8,950
FHZN SW	Flughafen Zurich AG	215.00	CHF	3	1	4	3	1	1	1	26.8	13.8	6,722
TEMN SW	Temenos Group AG	79.20	CHF	3	1	4	2	1	1	1	33.5	11.7	5,639
LOGN SW	Logitech International S.A.	31.35	CHF	3	2	4	3	2	1	1	22.5	23.4	5,494
SFSN SW	SFS Group AG	94.00	CHF	3	2	4	2	2	1	1	18.8	13.1	3,584
OMV AV	OMV AG	36.50	EUR	3	4	2	1	1	1	1	12.6	8.8	13,009
ALPH SW	Alpiq Holding Ltd	88.45	CHF	3	5	2	1	5	2	1	65.0	4.7	2,490
ATLN VX	Actelion Ltd.	275.50	CHF	4	1	5	1	1	2	1	35.0	24.9	29,958
IPN FP	Ipsen SA	90.27	EUR	4	1	4	4	1	1	1	23.5	31.4	8,380
ORNBV FH	Orion Oyj Class B	51.50	EUR	4	1	4	1	1	1	1	31.1	21.8	7,916
KBHL DC	Kobenhavns Lufthavne A/S	6,135.00	DKK	4	1	5	5	1	1	1	NM	(1.0)	7,403
MONC IM	Moncler SpA	20.24	EUR	4	1	5	5	1	1	1	21.4	22.4	5,748
KER FP	Kering SA	240.15	EUR	4	3	4	1	2	1	1	20.1	13.3	33,248
EN FP	Bouygues SA	38.41	EUR	4	5	1	4	2	1	1	17.3	12.8	14,938
MEO GY	METRO AG	29.10	EUR	4	5	1	1	5	4	1	14.0	(4.8)	10,312
DKSH SW	DKSH Holding AG	80.40	CHF	4	5	2	1	5	1	1	24.3	14.9	5,260
EDF FP	Electricite de France SA	7.74	EUR	5	5	1	1	5	5	1	11.8	(13.8)	23,023
RWE GY	RWE AG	14.68	EUR	5	5	1	1	5	3	1	10.9	24.2	9,801
AKERBP NO	Aker BP ASA	140.90	NOK	5	5	3	3	1	1	1	16.3	(7.9)	5,683

Source: Empirical Research Partners Analysis.

Appendix 1(Cont.): Continental Europe: Large and Mid-Capitalization Stocks
Top Quintile of Global Core Model
Sorted by Free Cash Flow Yield and Margin
As of Mid-March 2017

Symbol	Company	Price (Local)	Local Currency Code	Free Cash Flow Yield	Free Cash Flow Margin	Quintiles (1=Best; 5=Worst)					Forward P/E- Ratio	YTD Return (Local)	Market Capitalization (USD Million)
						Super Factors							
						Composite Valuation	Capital Deployment	Earnings Quality and Trend	Market Reaction	Core Model			
Financials													
BNP FP	BNP Paribas SA Class A	60.28	EUR	na	na	1	2	3	3	1	10.2 x	(0.4) %	\$84,361
INGA NA	ING Groep NV	14.39	EUR	na	na	1	3	4	1	1	11.9	7.6	62,257
NDA SS	Nordea Bank AB	102.20	SEK	na	na	1	3	1	1	1	12.7	7.0	47,229
ACA FP	Credit Agricole SA	12.31	EUR	na	na	1	5	4	1	1	11.3	4.5	38,988
DANSKE DC	Danske Bank A/S	240.90	DKK	na	na	2	1	2	1	1	12.4	16.7	35,160
INVEB SS	Investor AB Class B	372.00	SEK	na	na	1	3	1	1	1	13.1	9.3	32,727
KBC BB	KBC Groupe SA	63.62	EUR	na	na	2	1	4	2	1	12.4	8.1	29,447
SWEDA SS	Swedbank AB Class A	222.40	SEK	na	na	2	2	1	1	1	13.7	1.0	29,165
DNB NO	DNB ASA	138.80	NOK	na	na	1	1	3	2	1	12.6	8.1	26,924
SEBA SS	Skandinaviska Enskilda Banken AB Class A	106.40	SEK	na	na	2	3	5	1	1	14.5	11.4	26,897
KN FP	NATIXIS	5.67	EUR	na	na	1	1	2	1	1	12.9	5.7	19,878
VNA GY	Vonovia SE	32.71	EUR	na	na	1	2	1	3	1	18.0	5.8	16,470
EBS AV	Erste Group Bank AG	30.03	EUR	na	na	1	1	5	3	1	10.8	7.9	14,324
CNP FP	CNP Assurances SA	18.74	EUR	na	na	1	3	4	1	1	10.9	6.4	14,177
AMUN FP	Amundi SA	53.80	EUR	na	na	2	2	3	1	1	15.1	11.4	11,935
MAP SM	Mapfre SA	3.15	EUR	na	na	2	2	2	1	1	11.7	8.7	10,626
SLHN VX	Swiss Life Holding AG	322.40	CHF	na	na	1	2	4	1	1	11.1	11.9	10,541
INDUA SS	Industrivarden AB Class A	202.10	SEK	na	na	2	3	1	1	1	23.3	12.2	9,897
TLX GY	Talanx AG	34.17	EUR	na	na	1	4	3	1	1	10.5	7.5	9,200
LUNDB SS	L E Lundbergforetagen AB Class B	595.50	SEK	na	na	3	3	1	2	1	NM	6.6	8,470
MB IM	Mediobanca S.p.A.	8.33	EUR	na	na	1	2	3	2	1	10.8	7.4	8,111
CC FP	Credit Industriel et Commercial SA	182.60	EUR	na	na	1	3	2	3	1	NM	5.1	7,598
SCR FP	Scor SE	35.79	EUR	na	na	1	3	3	2	1	11.7	9.0	7,522
RBI AV	Die Raiffeisen Bank International AG	22.01	EUR	na	na	3	3	2	1	1	10.3	26.6	7,259
ASRNL NA	ASR Nederland NV	27.73	EUR	na	na	1	1	4	1	1	9.7	22.7	4,503
VONN SW	Vontobel Holding AG	58.35	CHF	na	na	2	3	2	1	1	16.5	9.2	3,362
ENX FP	Euronext NV	40.71	EUR	na	na	2	1	1	2	1	14.6	3.8	3,118
UNI IM	Unipol Gruppo Finanziario S.p.A.	3.85	EUR	na	na	1	3	3	1	1	8.6	12.5	3,063
FABG SS	Fabege AB	147.50	SEK	na	na	2	3	1	3	1	28.6	(0.9)	2,713
UQA AV	UNIQA Insurance Group AG	7.35	EUR	na	na	1	3	5	2	1	11.1	2.1	2,474

Source: Empirical Research Partners Analysis.