

Dividend forecasting factor introduction

April 2017

Research Signals

IHS Markit's Dividend Forecast dataset provides announcements and forecasts for dividend amounts and dates for more than 8,000 stocks globally. Forecasts are calculated using a rigorous methodology based on fundamental analysis and the latest market news, taking into account a broad range of inputs enhanced by proprietary data.

We have extended Research Signals' factor library using these proprietary dividend forecasts in the construction of yield, growth and payout measures. This report details the dividend forecasting methodology, highlights its accuracy and analyses the different signals and usefulness of these factors for dividend investors in the US, Emea, and Apac. Our findings suggest that accurate forecasts of dividend amounts can be additive to the investment process by identifying surprises in dividend payments and as inputs to quantitative factors.

- Dividend forecasting accuracy was the highest in the US with 93.4% of forecasts within 2% of the reported amount 1-month out, and developed Europe and Pacific within 10% for roughly three-quarters of forecasts
- Dividend payers with forecasted cuts underperformed their peers expected to grow dividends in the US and Europe by annual margins of 9.47% and 2.55%, respectively, underscoring the usefulness of accurate dividend forecasting as part of a holistic investment strategy
- During our backtest period, dividend growth measures were effective long term alpha predictors in the US and Europe, while yield was a stronger signal in Europe and especially developed Pacific

Contacts

Research Signals · research-signals@markit.com

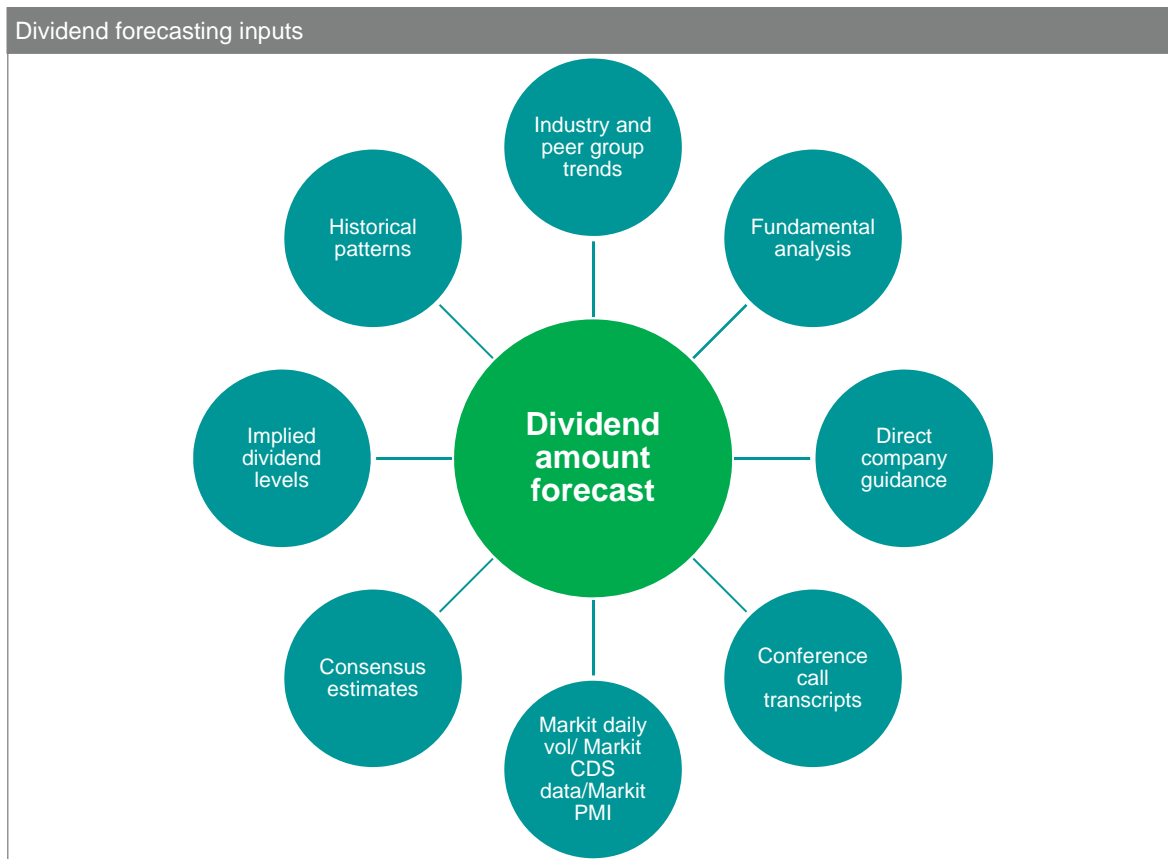
Dividend forecasting methodology

A low interest rate environment since the financial crisis has increased the interest in high yield strategies across various asset classes, including high dividend paying equities. Underscoring this trend is the sharp rise in the number of dividend focused exchange traded funds (ETFs), which saw record inflows of over USD 25 bn in 2016. However, the challenging macro environment of recent years, especially the plunging oil price, means previously “safe” dividend payers have had to cut or suspend policies. As a result, selection on the backward looking trailing dividend yield no longer offers the insight it once did (see Markit dividend forecasts and their value, November 2015).

IHS Markit’s Dividend Forecasting service provides independent, discrete forecasts for dividend amounts and dates up to four years in the future. The product was established over ten years ago and covers over 8,000 stocks globally, including emerging markets, ADRs, and US listed ETFs (see Figures A1 and A2 in Appendix for regional breakdowns).

Dividend forecasts are created using a bottom-up, research-led methodology to provide the highest level of accuracy for both amount and dates. They are based on the inputs in Figure 1, including latest market news and direct company guidance, combined with fundamental analysis, historical observations, conference call statements and peer group trends. Forecasts are further enhanced by a number of proprietary datasets available within IHS Markit, from consensus OTC implied dividends and short interest data to macro PMI and credit spread data.

Figure 1



IHS Markit Dividend Forecasting is the benchmark forecasting service used by major derivatives exchanges for pricing instruments, including ICE, MEFF and ASX. Customers can also subscribe to a dividend point service, which allows them to predict the impact future dividends will have on equity index values.

In the following sections, we focus in particular on the forecast amounts. We begin by detailing statistics surrounding the accuracy of Markit's dividend forecasts followed by an introduction of Research Signals factors constructed from the underlying data.

Forecasting accuracy

Having outlined the robustness behind the dividend forecasting methodology, we examine forecasting accuracy of the underlying dividend forecasts and compare the results with the mean estimate provided by IBES. For this analysis we cover three major regions including the US Total Cap¹, Developed Europe² and Developed Pacific³ along with the Emerging Markets⁴ universes. For the US only, we limit our coverage to names with forecasts from both data sources given that enough coverage was available for this more robust approach, while more limited coverage prevented this approach in the remaining universes. Additionally, names forecasted to pay a zero dividend and names which pay no dividend are included in the results.

We report the percentage of forecasts since January 2011 which have been within 2%, 5% and 10% of the full year dividend at four points in time: 1, 3, 6 and 12 months before the final dividend in a fiscal year is announced (Table 2). Our results include all dividend forecasts aggregated for the full fiscal year compared with the actual value reported in the annual financial statement. This approach is used because consensus numbers from IBES are provided only on a fiscal basis, rather than at a specific payment level, as provided by IHS Markit. Consequently, depending on the frequency with which a firm pays dividends – which varies from region to region – the forecast at certain intervals might contain one or more dividends that have already been announced.

Dividend forecasting accuracy has been strong in the US. Estimates 1-month out were within a 2% threshold 93.4% of the time. A higher level was reached at the 3-month horizon at a 5% threshold (95.2%) while achieving 76.1% 12 months out. Beyond these fine-tuned limits, 98.3% of forecasts were within 10% of the reported amount 1-month out and remained at a high level at 12 months (84.8%). This high level of accuracy is in part due to the fact that the majority of dividend paying firms in the US pay regular quarterly dividends. Therefore, at the period 1-month before the last announcement, three of the four annual payments will have been announced.

Developed Europe and Developed Pacific forecasting, though somewhat more challenging, still proved successful. Forecast amounts resided within 5% of the declaration 1-month prior to the report date 65.8% (62.0%) of the time in developed Europe (Pacific). A 10% proximity was achieved 76.8% (72.9%) of the time over the same horizon and more than half of the estimates were within this interval out to 12 months at 58.3% (53.1%). In these regions it is common to pay just one annual payment, so even at the period 1-month out, no dividend information has been communicated. Lastly, we remark that, as may be expected, the emerging markets forecasting proved the most challenging, with less than half of the estimates hitting the various accuracy marks.

¹ 98% of cumulative market cap

² 95% of cumulative market cap subject to a minimum market cap of USD 250 mn

³ 95% of cumulative market cap subject to a minimum market cap of USD 250 mn

⁴ 95% of cumulative market cap subject to a minimum market cap of USD 100 mn

Table 1

IHS Markit's dividend forecasting accuracy, 2011 – 2015

Region	Horizon	<=2%	<=5%	<=10%	>10%
US Total Cap	1 month	93.4%	96.7%	98.3%	1.7%
	3 month	91.3%	95.2%	97.3%	2.7%
	6 month	85.0%	91.2%	94.8%	5.2%
	12 month	66.1%	76.1%	84.8%	15.2%
Developed Europe	1 month	51.2%	65.8%	76.8%	23.2%
	3 month	48.5%	63.4%	74.3%	25.7%
	6 month	42.2%	57.5%	70.2%	29.8%
	12 month	28.6%	41.6%	58.3%	41.7%
Developed Pacific	1 month	53.9%	62.0%	72.9%	27.1%
	3 month	50.3%	58.5%	69.8%	30.2%
	6 month	46.3%	54.4%	65.3%	34.7%
	12 month	36.3%	43.6%	53.1%	46.9%
Emerging Markets	1 month	23.3%	33.6%	48.5%	51.5%
	3 month	21.0%	32.2%	47.3%	52.7%
	6 month	19.2%	29.0%	42.1%	57.9%
	12 month	13.1%	20.5%	31.2%	68.8%

Source: IHS Markit

© 2017 IHS Markit

In the next section we compare the accuracy of the IHS Markit forecasts with IBES consensus mean over the same time horizons and level of precision analysed above (Table 2).

We observe that US estimates outpaced IBES by large spreads. Forecasting accuracy reached the highest spread between estimates at the 2% level at the 3-month horizon (8.3%). The number of analysts contributing dividend forecasts to the IBES consensus is notably fewer in the US, which could explain the weak performance in this market.

Pacific and European regions and emerging markets saw higher accuracy over IBES in these more demanding regions for forecasting. In fact Dividend Forecasting amounts in developed Pacific exceeded IBES estimate accuracy at a 2% interval 12 months out by a double-digit spread of 16.1%. In Europe, the highest spreads in accuracy over IBES also occurred at the tightest 2% level, with spreads of 10.5% at the 1-month horizon and 7.5% out to six months, consistent with the overall success of the IHS Markit forecasts at this narrow range. Emerging markets 1-month forecast accuracy bested IBES by a 6.6% spread at the 2% level and as high as 8.8% at a 10% accuracy for 3-month forecasts.

Table 2

Spread between IHS Markit's dividend forecasting accuracy and IBES, 2011 – 2015				
Region	Horizon	<=2%	<=5%	<=10%
US Total Cap	1 month	7.4%	4.7%	3.2%
	3 month	8.3%	5.8%	3.6%
	6 month	7.6%	6.3%	4.4%
	12 month	2.2%	3.5%	4.5%
Developed Europe	1 month	10.5%	6.0%	2.6%
	3 month	10.0%	6.0%	2.7%
	6 month	7.5%	3.3%	1.6%
	12 month	3.2%	-1.5%	-1.1%
Developed Pacific	1 month	13.3%	8.0%	6.9%
	3 month	13.5%	8.4%	7.1%
	6 month	13.8%	8.9%	6.6%
	12 month	16.1%	11.2%	7.4%
Emerging Markets	1 month	6.6%	5.3%	5.8%
	3 month	6.4%	6.9%	8.8%
	6 month	6.8%	5.8%	7.2%
	12 month	2.4%	3.2%	3.9%

Source: IHS Markit

© 2017 IHS Markit

We round off this section by citing several examples demonstrating the Dividend Forecasting methodology in action. In particular we highlight the responsiveness of IHS Markit dividend forecasts to the latest news and policy changes, whereas by nature consensus figures are much less nimble.

In the US energy sector, IHS Markit was able to update forecasts in light of the low oil price and widespread cuts from peers. The following are examples where the dividend forecast team correctly forecasted a large cut well in advance of the company announcement. On February 3rd 2016, an intraday alert on Anadarko Petroleum (APC) was sent, with an update to the outlook on the dividend policy, just after stock prices tried to make a near-term rebound (see Figure A3 in the Appendix). IHS Markit's review pointed to expectations of a 44% dividend cut to \$0.15 to be announced in the following week. In fact, on February 9th, APC announced an 81% dividend cut to \$0.05, the first in the company's history. We note that our accuracy measures would not find this to be particularly strong, but the foresight of the cut proved to be the valuable piece of information.

Energy sector peer, Noble Corp (NE), was also included in an intraday alert on January 22nd 2016, with expectations for a dividend suspension to be announced at its next earnings announcement. NE first cut its dividend in October in fiscal year 2015 to \$0.15 and, although the company had only paid one quarter of the new dividend, IHS Markit believed that conditions deteriorated significantly enough to warrant further dividend action on the part of a traditionally conservative management. In April, the firm indeed slashed its dividend to \$0.02 and the stock price retreated (see Figure A4 in the Appendix) before eventually announcing the suspension of its dividend in October 2016.

Looking to Asia, a prominent dividend cut that IHS Markit correctly forecast was from Citic Limited in 2013. An analysis of the firm's increasing leverage level caused IHS Markit to forecast a cut of 22% as early as the midyear stage. Market consensus forecasts neglected to reflect this serious deterioration of fundamentals and forecast that the

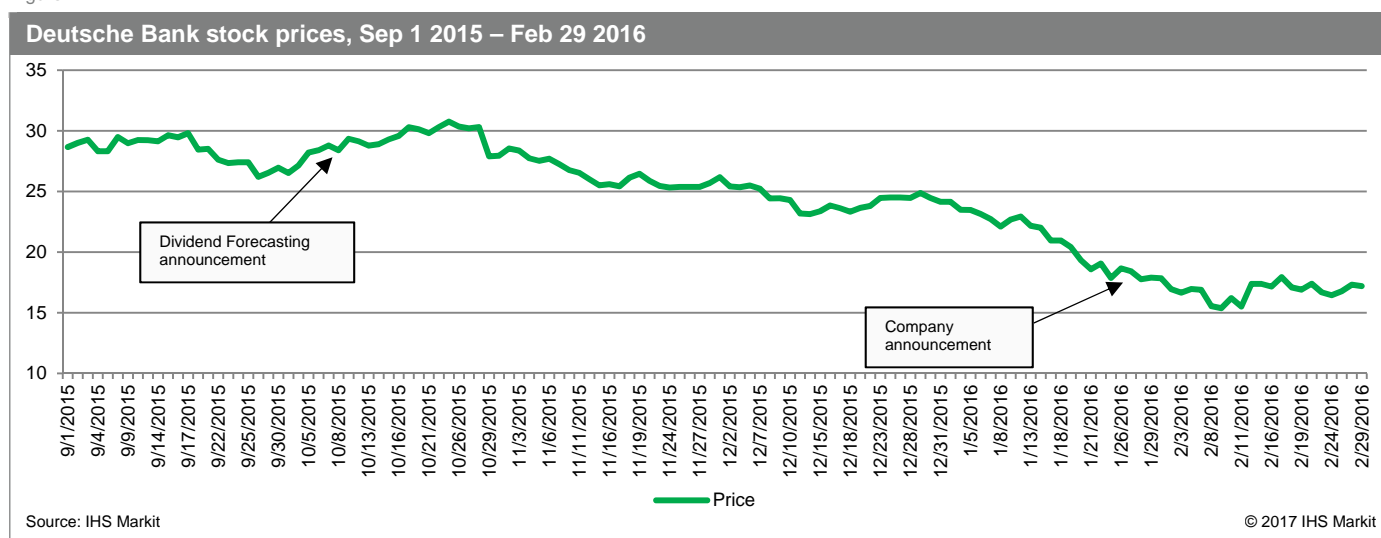
dividend would grow year on year.

We also highlight an example where IHS Markit evaluated the strength of management sentiment and how this qualitative aspect impacts the dividend decision. Regarding forecasting for conglomerate CK Hutchison Holdings, despite a sharp fall in profit, IHS Markit recognised management's commitment to shareholder return and correctly forecast that the firm would hold its 2012 dividend flat. Consensus data for this stock projected a severe 40% cut.

IHS Markit monitors one-off events and how they might impact dividend policy in future years. Hong Kong & China Gas paid a special dividend to celebrate its 150th anniversary in 2011, which led to the full year total being exceptionally high. IHS Markit forecasts reverted back to the base level from 2012, however the consensus data showed dividend estimates consistent with 2011, and consequently well above what was actually announced.

A final example in Europe highlights how responsive IHS Markit dividend forecasts are to company news. It correctly forecasted that Deutsche Bank's (DB) fiscal 2015 dividend would be suspended on October 8th 2015 following a profit warning and just prior to an extended downward trend in stock price (Figure 2). The bank announced a zero dividend on January 26th 2016, over three months out from the initial forecast. Meanwhile, consensus numbers three months out were €0.4 (mean)/ €0.3 (median).

Figure 2



Performance analytics

Given the importance of yield strategies in the industry, accurate dividend forecasting is a powerful tool for use as a conditional factor. The academic research on this topic is robust. For example, Conover, Jensen and Simpson (2016) find that high-dividend payers have the least risk yet return more than non-dividend payers, a strategy particularly benefitting growth and small cap stocks, contrary to expectations. Thus we turn next to a study of subsequent returns under various scenarios of directional changes in dividend forecasts. Our methodology is to evaluate at each month end the subsequent 1-month through 12-month returns (overlapping periods) and average these values for names with positive or negative changes in forecasted dividends for the current fiscal year compared with the dividends paid in the prior fiscal year. We also include names with no changes for a full analysis across the same US, European and Pacific universes (Figures 2 – 4, respectively).

In the US, stocks with positive changes in forecasted dividends outperformed those with negative changes across subsequent 1-month through 12-month holding periods. At the 1-month horizon the spread between the two constituencies was 1.12%, and the spread grew to 9.47% out to 12-months. While a powerful signal, we do acknowledge the low interest rate and income chasing environment of our analysis period.

Positive versus negative changes in forecasted dividends was also an outperforming strategy in developed Europe, though to a lesser degree compared with the US. Nevertheless, stocks expected to growth their dividends outperformed those anticipated to cut their dividends by a margin of 2.56% on average over the subsequent year. In developed Pacific, there was no discerning difference between stocks with positive versus negative forecasted dividend changes over our analysis period.

Figure 3

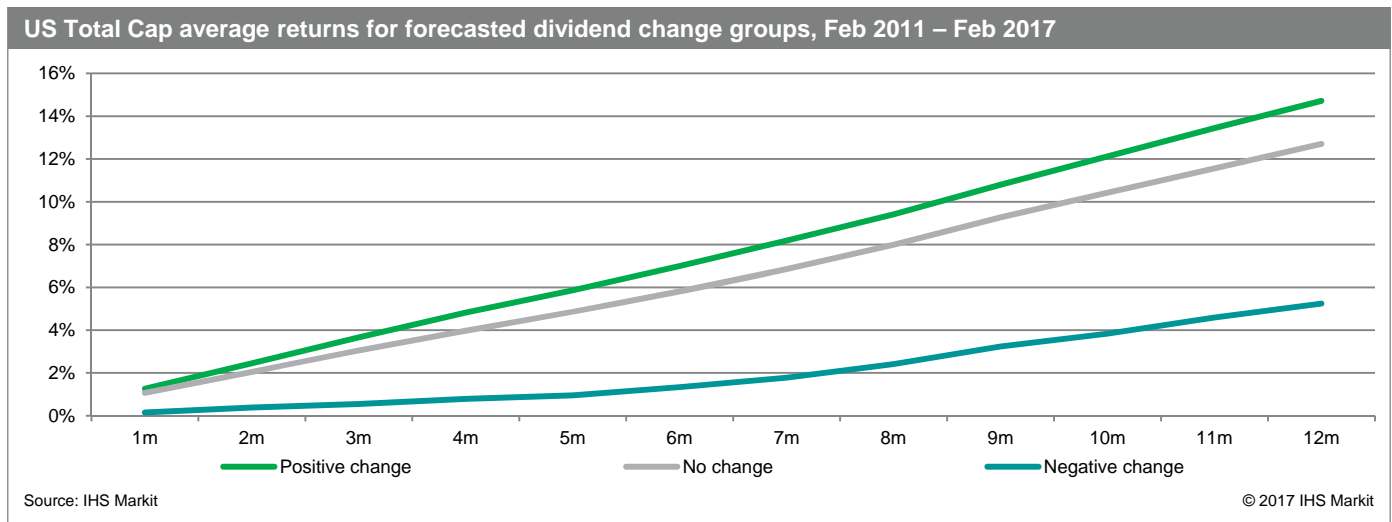


Figure 4

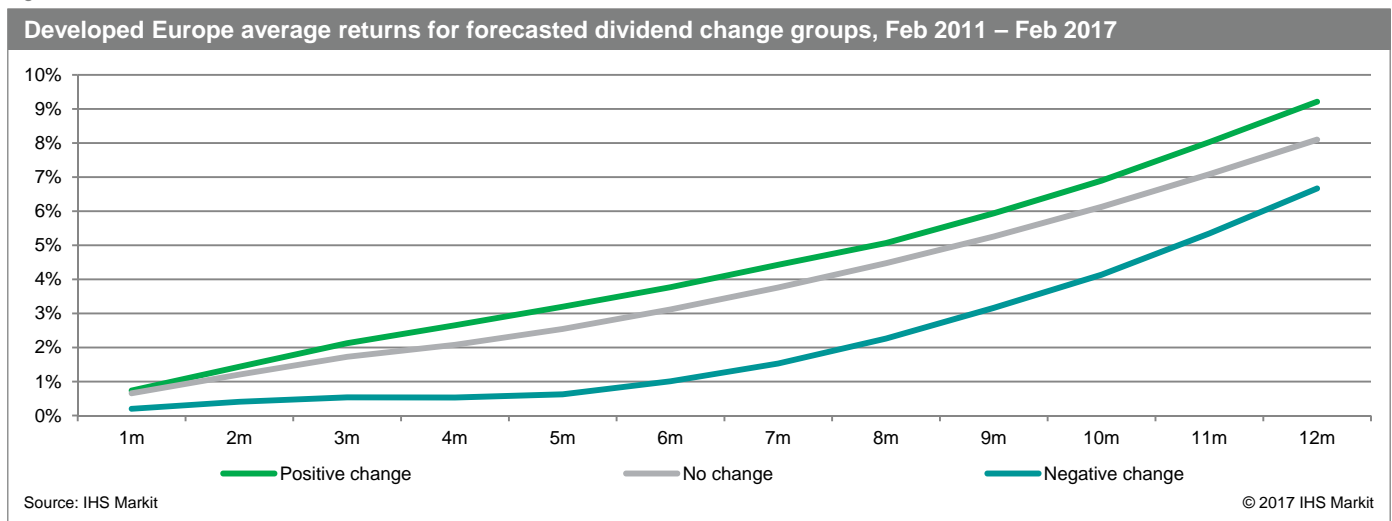
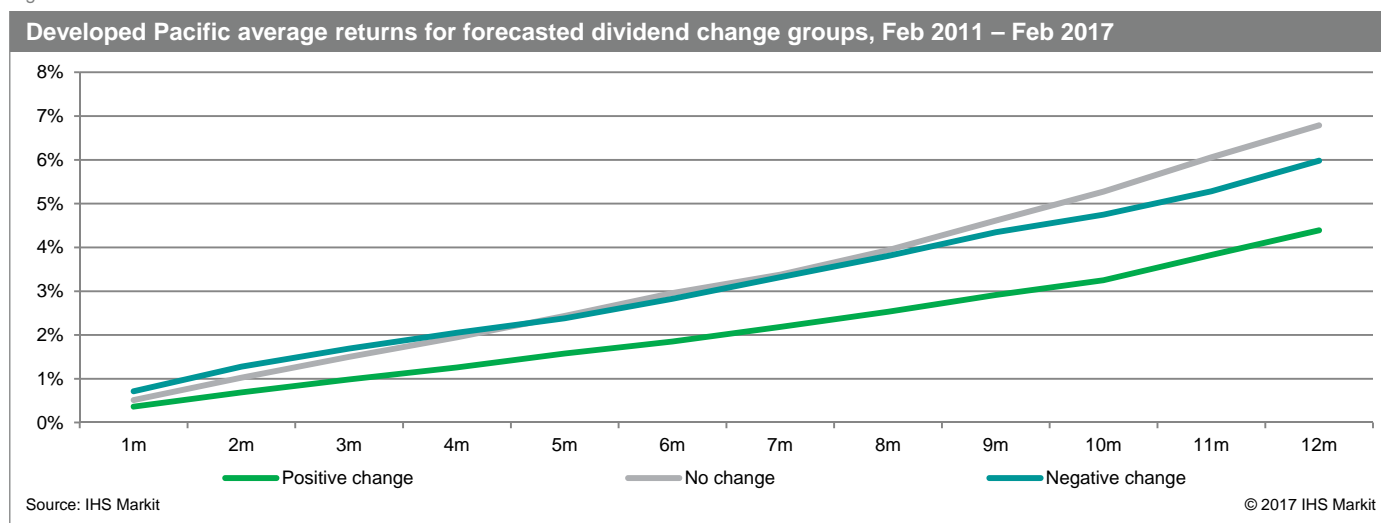


Figure 5



Factor introduction

With this background, we now tap into this valuable resource to develop quantitative factors within the Markit Research Signals platform, extending our support of security selection and strategy development. The platform provides a global factor library including 400+ indicators, which includes a continually expanding set of proprietary specialty metrics. We introduce the following eight factors that use input from IHS Markit Dividend Forecasting in their construction:

- **Leading 12-Month Total Dividend Yield:** forecasted total dividends including special dividends for the next 12 months scaled by price
- **Leading 12-Month Regular Dividend Yield:** forecasted regular dividends excluding special dividends and capital returns for the next 12 months scaled by price
- **1-Year Ahead Regular Dividend Growth:** forecasted regular dividends for the next 12 months less regular dividends paid in the past 12 months scaled by price
- **2-Year Ahead Regular Dividend Growth:** forecasted regular dividends for fiscal year 2 less forecasted regular dividends paid in the past 12 months scaled by price
- **Leading 1-Year Regular Dividend Payout:** forecasted regular dividends as a ratio of IBES forecasted earnings for the next 12 months
- **1-Year Growth in Dividend Payout:** forecasted regular dividends divided by IBES forecasted earnings for the next 12 months less regular dividends paid divided by earnings for the past 12 months
- **1-Year Percentage Growth in Regular Dividend:** percentage growth of forecasted regular dividends over next year versus the actual dividends over the previous year
- **2-Year Percentage Growth in Regular Dividend:** percentage growth of forecasted regular dividends for the 2-year ahead 12-month period versus the actual dividends over the previous year

All factors are ranked to favour higher values.

Taking a look at factor performance, in the following sections we present results across the same three regions and holding periods including 1-, 3-, 6- and 12-month horizons (overlapping periods). We report decile spread statistics which are based on equal-weight decile return spreads (in US dollars) for an investment strategy going long the highest ranked stocks (decile 1) and shorting those with the lowest ranks (decile 10). In this report, we study the US Large Cap⁵ universe. We also have results available over the US Small Cap and US Total Cap universe, but they are not shown here due to the low number of small cap names that pay dividends which distorts decile 10 returns, and thus the spread statistics (60% of small caps were non-dividend payers as of January 31st 2017).

We detail factor performance for Leading 12 Month Total Dividend Yield, 1-Year Ahead Regular Dividend Growth and Leading 1-Year Regular Dividend Payout, along with a summary of decile spread and information coefficient (IC) results for all factors in the Appendix (see Tables A1 and A2, respectively). IC correlations with other common yield and growth factors are also included in the Appendix (see Tables A3 and A4, respectively). We remark that Leading 12-Month Regular Dividend Yield has a relatively high correlation in the US with Predicted Dividend Yield (0.87), though weaker than with TTM Dividend Yield (0.99), while the relationship falls off in developed Europe (0.61) and Pacific (-0.06). In addition, 1-Year Ahead Regular Dividend Growth has a neutral relationship with 5-Year Dividend Growth Rate in all three regions, thus providing an additional source of alpha.

US Large Cap

Consistent with the results cited above for firms with positive versus negative forecasted dividend changes, 1-Year Ahead Regular Dividend Growth was the most effective signal for US large caps (Figure 6). The 1-month spread was 0.56% (Figure 7) and increased across holding periods to 7.74% at the 12-month horizon. On the other hand, Leading 12 Month Total Dividend Yield and Leading 1-Year Regular Dividend Payout spreads were negative on average across each holding period over the analysis period.

For Leading 12 Month Total Dividend Yield in particular, we report an average spread of -2.88% based on one-year returns. However, this may partly be a function of exposures to the energy sector as this high dividend paying cohort suffered during the oil price rout which occurred over the analysis period, pushing a large percentage of firms into the undervalued decile 1 group, but only recovered more recently as oil prices rebounded in early 2016. In fact, the monthly active (decile 1 – decile 10) energy factor exposure was 1.7% on average through 2013 and spiked to 19.6% since 2014, thus the extreme returns to this sector were impactful on factor performance over this period (Figure 8). Furthermore, a comparison of decile 1 absolute returns with that of TTM Dividend Yield (Figure 9) demonstrates a 0.20 spread based on a growth of \$1 analysis over the analysis period.

⁵ 90% of cumulative market cap

Figure 6

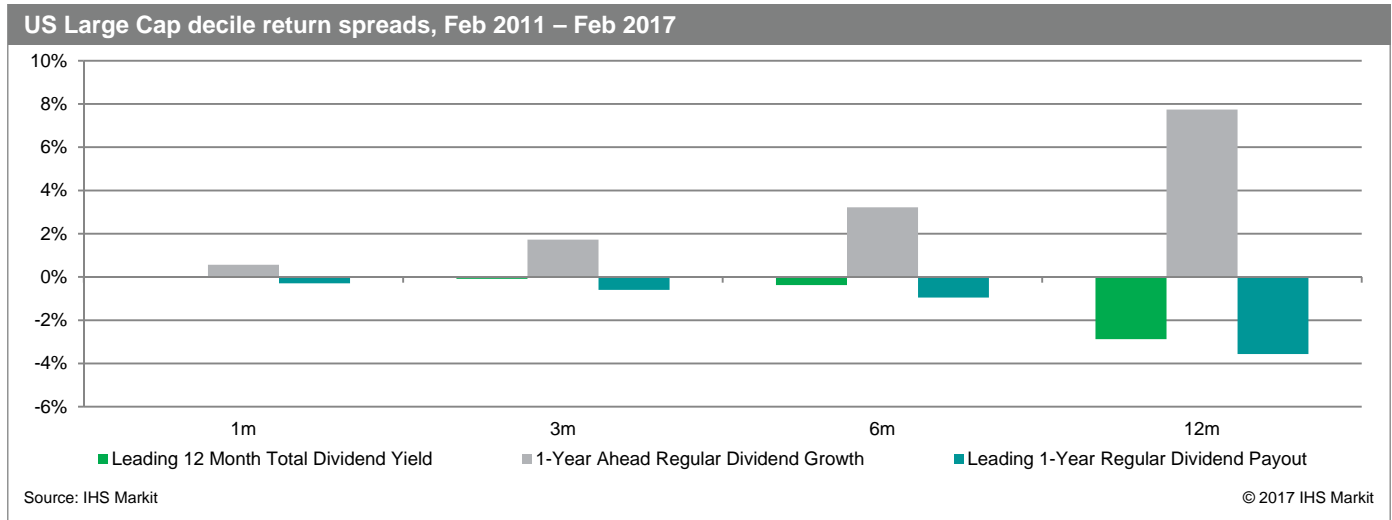


Figure 7

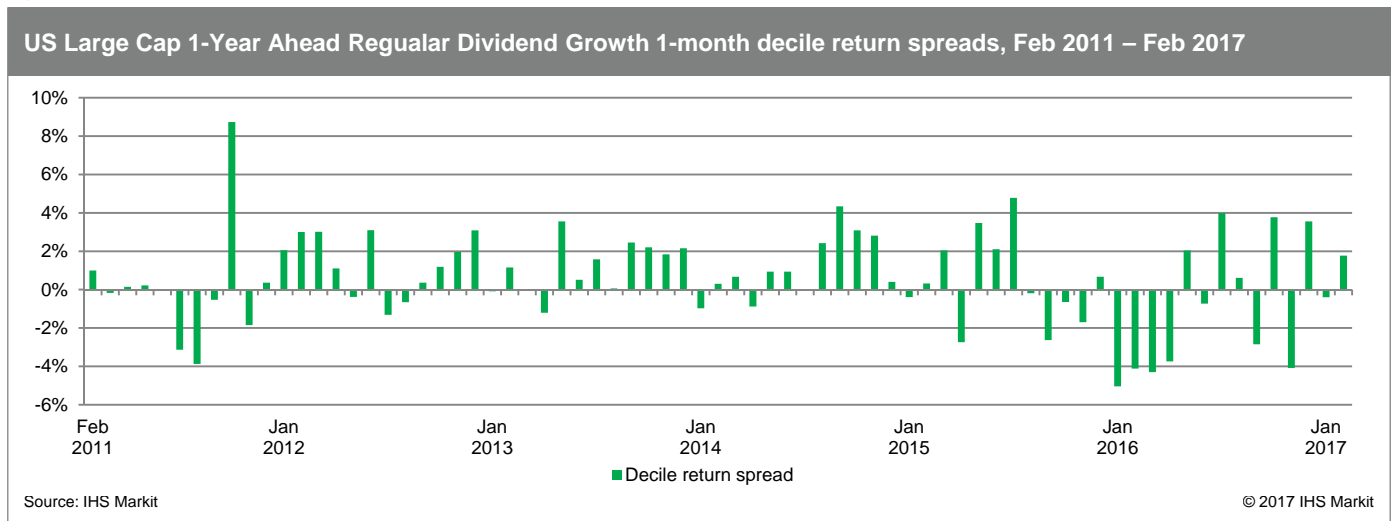


Figure 8

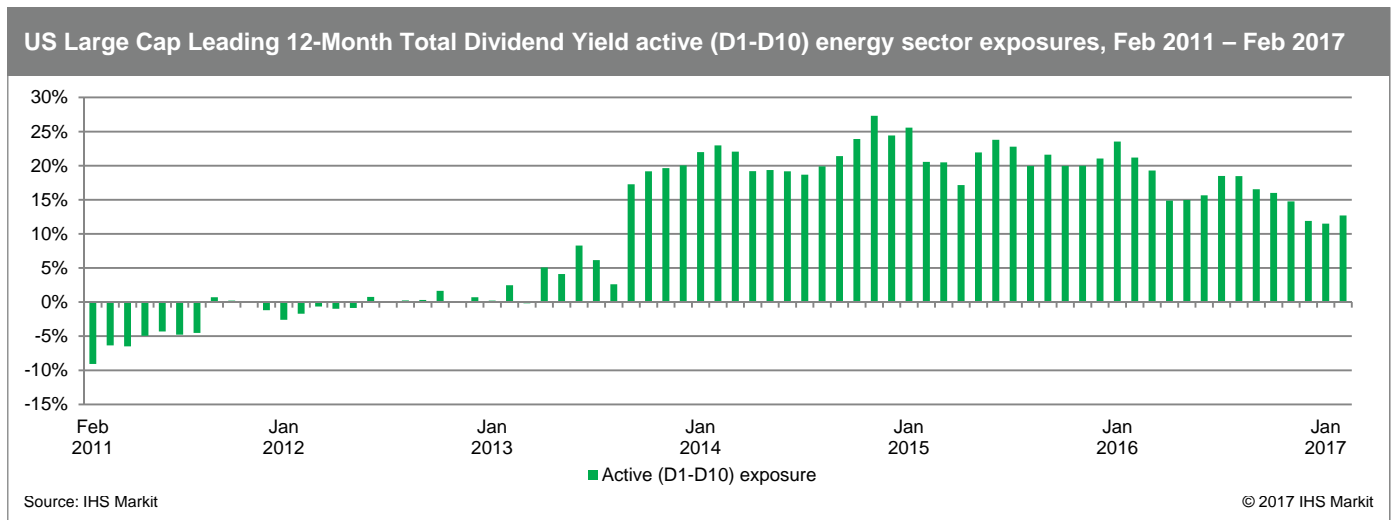
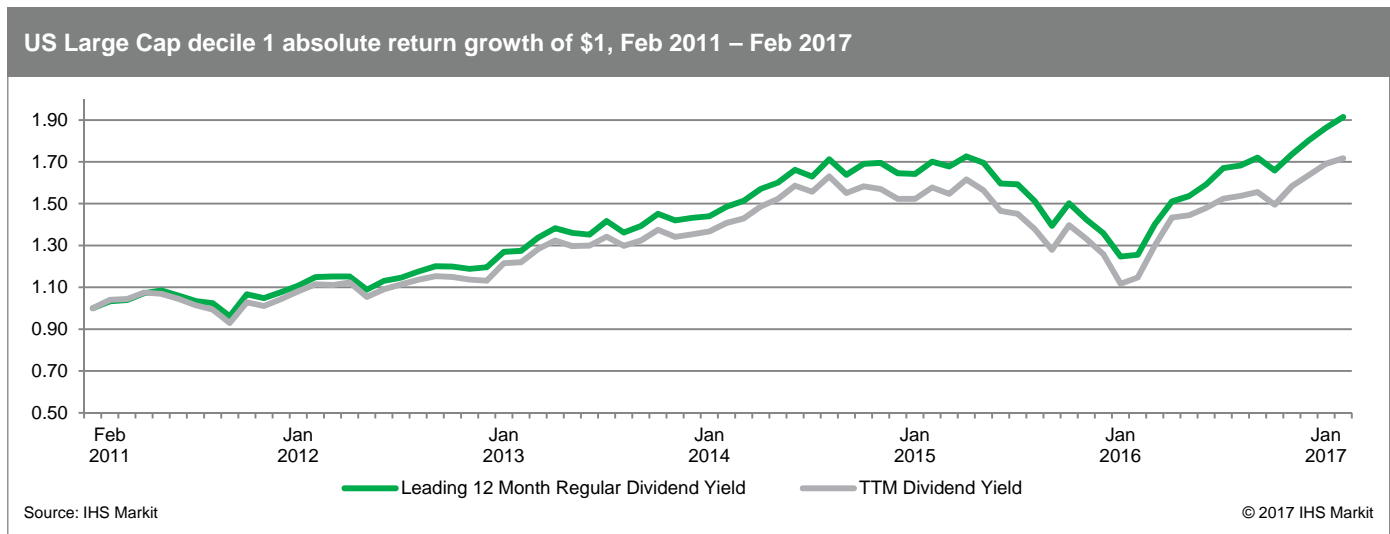


Figure 9



Developed Europe

Empirical results for Leading 12-Month Total Dividend Yield (Figure 10) point to positive performance on average across various holding periods in developed Europe since February 2011. The universe posted a 1-month spread of 0.24% which increased to 1.31% for 12-month holding periods. Conversely, Leading 1-Year Regular Dividend Payout was a negative signal over this timeframe, recording an average monthly spread of -0.34%.

As with US large caps, 1-Year Ahead Regular Dividend Growth was the most effective signal in developed Europe. In fact, markets saw a similar 1-month spread of 0.36% (Figure 11) that grew to 4.20% for a 12-month holding period. Furthermore, a sector breakout of 12-month quintile return spreads for these two universes confirms robustness of the signal, capturing positive attributes in general across sectors (Figure 12).

Figure 10

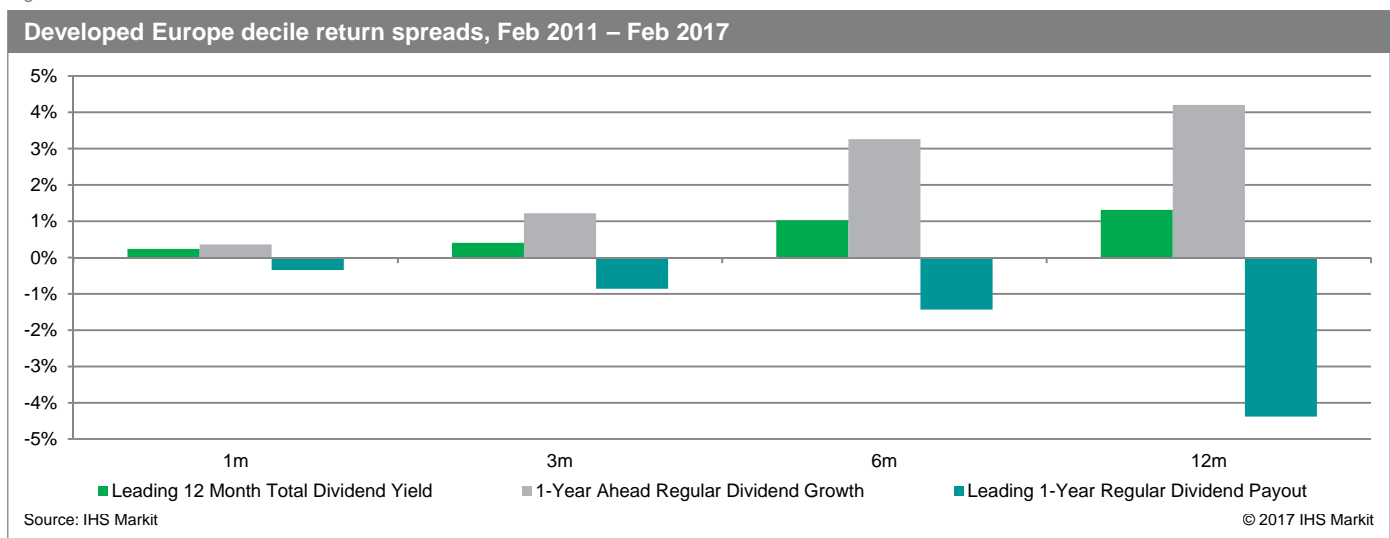


Figure 11

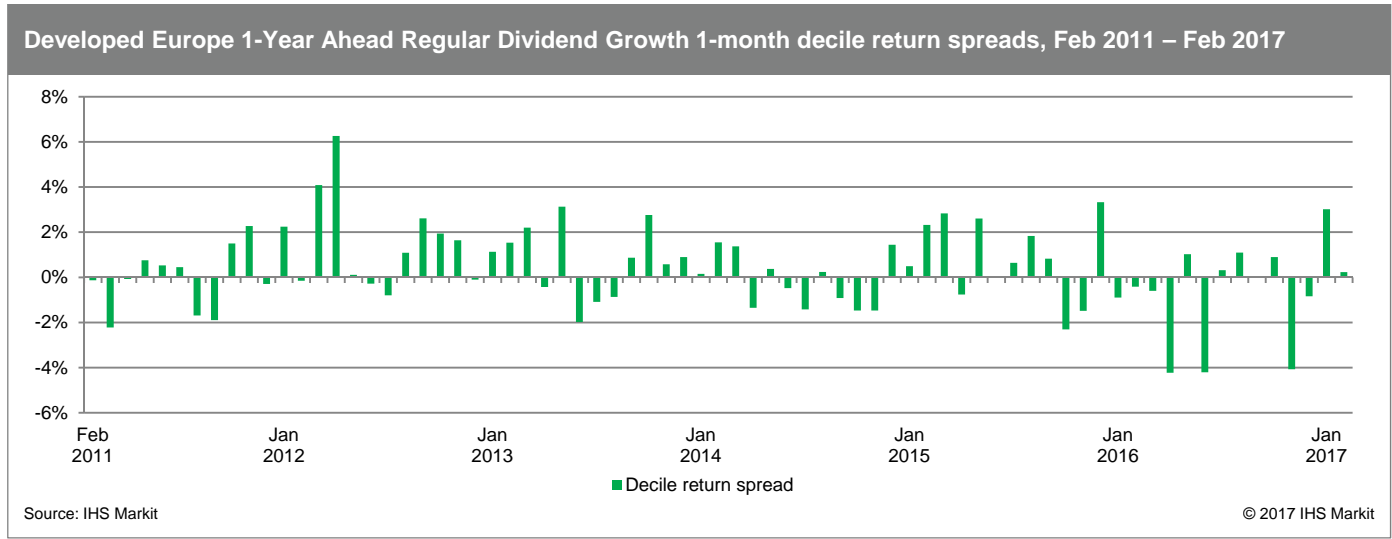
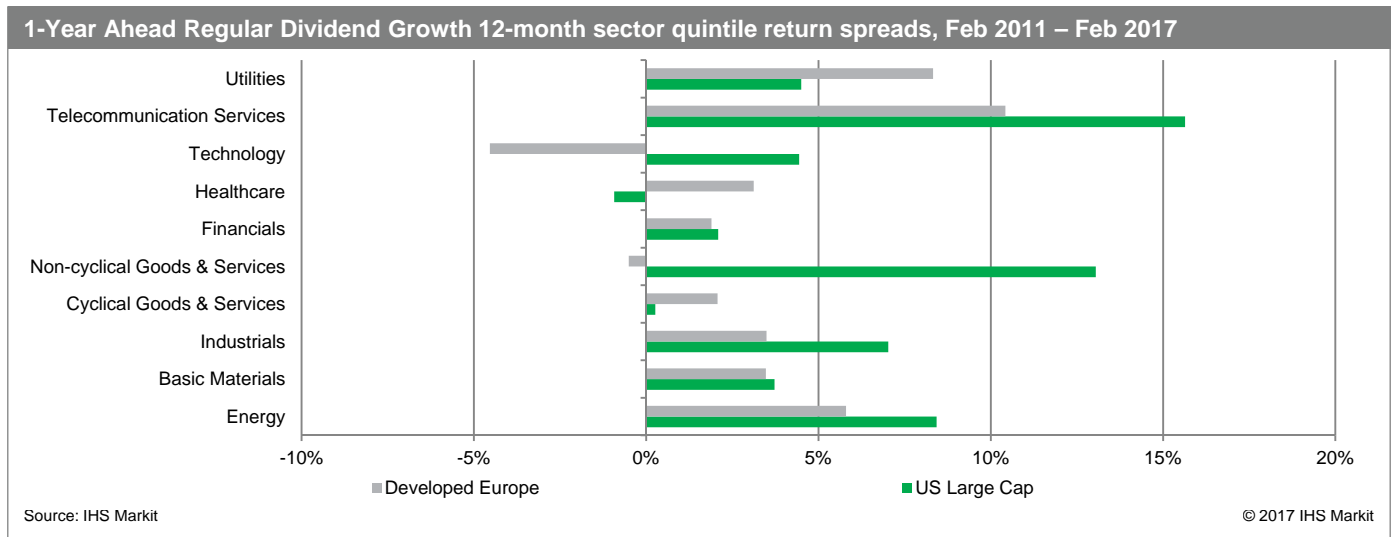


Figure 12



Developed Pacific

Leading 12-Month Total Dividend Yield (Figure 13) was a robust indicator in developed Pacific over the analysis period, particularly compared with 1-Year Ahead Regular Dividend Growth, perhaps as yield is demanded of relatively riskier assets by region in these markets. Indeed, investors awarded firms with the highest yield versus the lowest with a 1-month spread of 0.76% (Figure 14) and reaching 4.78% out to 12 months, while dividend growth was a mostly neutral signal.

Also contrary to the US and Europe, Leading 1-Year Regular Dividend Payout was an effective signal in developed Pacific markets (Figure 12). Monthly spreads averaged 0.54% and extended to 4.48% at the 12-month horizon. Taking a closer look at the contributions from the top and bottom deciles, we find that performance was particularly driven by decile 10 underperformance (Table 3). Not only was the magnitude directionally larger for decile 10 (negative) than decile 1 (positive), performance was also more consistent as demonstrated by the hit rate statistics (percent of months with positive excess returns). For example, the factor correctly posted positive decile 10 excess returns in only 36% of months for 1-month holding periods and only 29% of months at the 12-month horizon, again suggesting a stronger conviction against firms with high retained earnings.

Figure 13

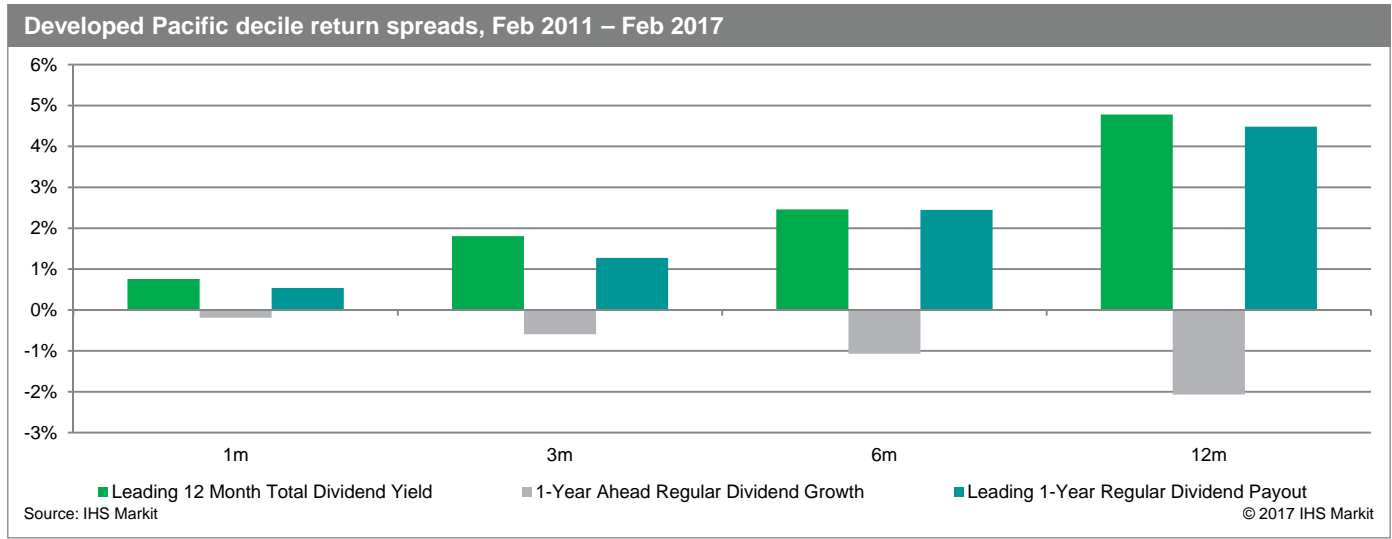


Figure 14

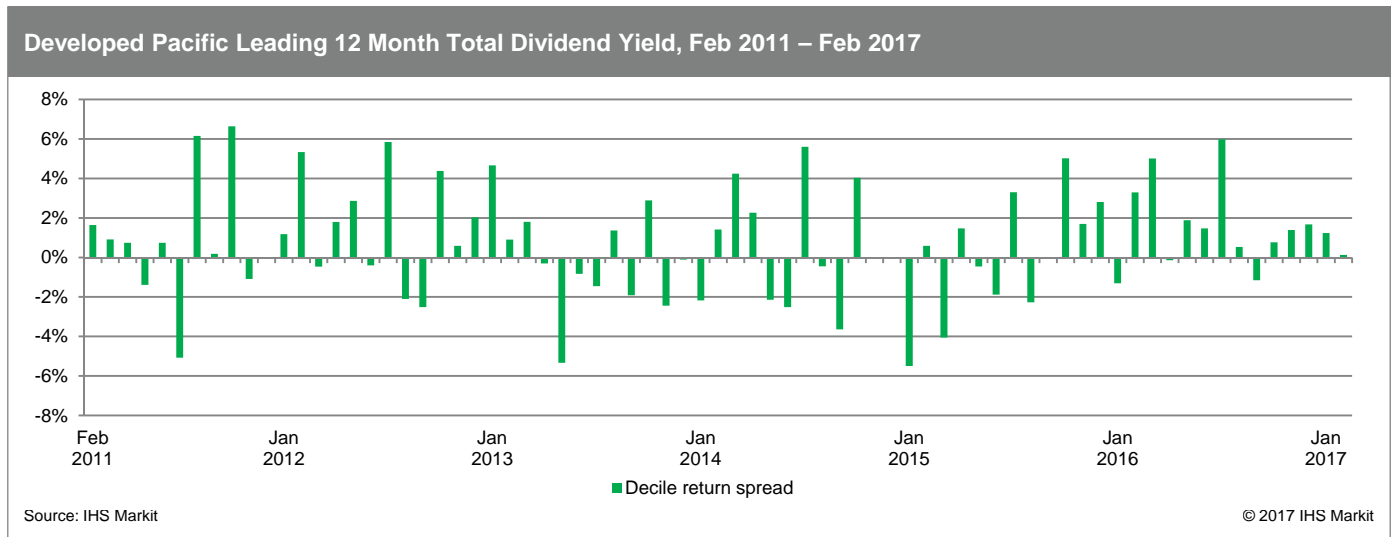


Table 3

Decile	Statistic	1 month	3 month	6 month	12 month
Decile 1	Average	0.08%	0.08%	0.18%	0.88%
	Hit rate	51%	52%	47%	56%
Decile 10	Average	-0.46%	-1.19%	-2.27%	-3.61%
	Hit rate	36%	30%	28%	29%

Source: IHS Markit

© 2017 IHS Markit

Lastly, we acknowledge that many practitioners would use dividend yield as one input to stock selection. Therefore, of greater importance is its use in applications such as multi-factor frameworks, options pricing and high yield directed products, among others, which we look to address in subsequent publications.

Conclusion

IHS Markit's Dividend Forecasting service provides independent, discrete forecasts for dividend amounts and dates. Our research suggests that accurate dividend forecasts are valuable additions to the investment process as inputs to quantitative factors and as signals of surprise dividend payments or cuts that may influence market reactions. Focusing in particular on details of the forecast amounts, we find forecasting accuracy was the highest in the US with 93.4% of forecasts within 2% of the reported amount 1-month out and 98.3% within 10%. At the 12-month horizon, 84.8% of forecasts were within 10% of the reported amount. Compared with IBES, 7.4% (3.2%) more of dividend forecasts in the US were within 2% (10%) of the reported amount at the 1-month (12-month) horizon. For developed Europe (Pacific), dividend forecast accuracy was within 5% for 65.8% (62.0%) of observations one month out, while 76.8% (72.9%) were within 10%; however, both universes tended to see higher accuracy over IBES, particularly at tighter ranges, in these more demanding regions for forecasting.

In the US, stocks with positive changes in forecasted dividends outperformed those with negative changes across subsequent 1-month (1.12% spread) through 12-month (9.47% spread) holding periods. In developed Europe, stocks forecasted to grow their dividends outperformed those expected to cut by a margin of 2.55% on average over the subsequent year, while in developed Pacific no clear differentiation was found.

Using IHS Markit's Dividend Forecasting dataset, we also introduce eight factors to the Research Signals factor library capturing dividend yield, growth and payout characteristics. Leading 12-Month Total Dividend Yield was most successful in developed Pacific followed by developed Europe, posting 12-month decile return spreads of 4.48% and 1.31%, respectively, while underperforming among US large caps (-2.88%), partly as a consequence of energy sector exposures. However, 1-Year Ahead Regular Dividend Growth was an effective signal for US large caps with a 12-month spread of 7.74% and was also relatively strong for developed Europe (4.20%). Developed Pacific results were more neutral for this factor, while Leading 1-Year Regular Dividend Payout performance more closely matched the former factor.

Appendix

Figure A1

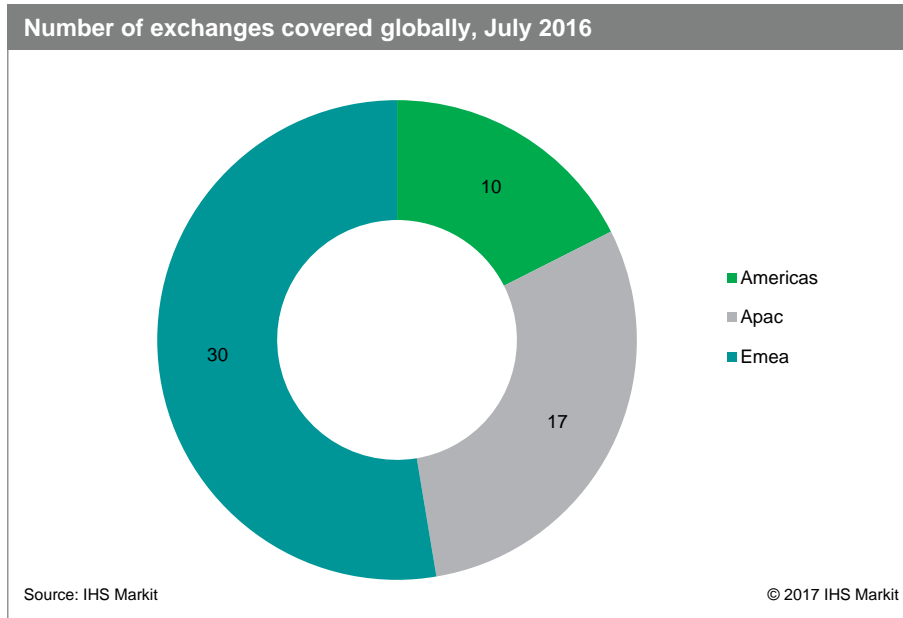


Figure A2

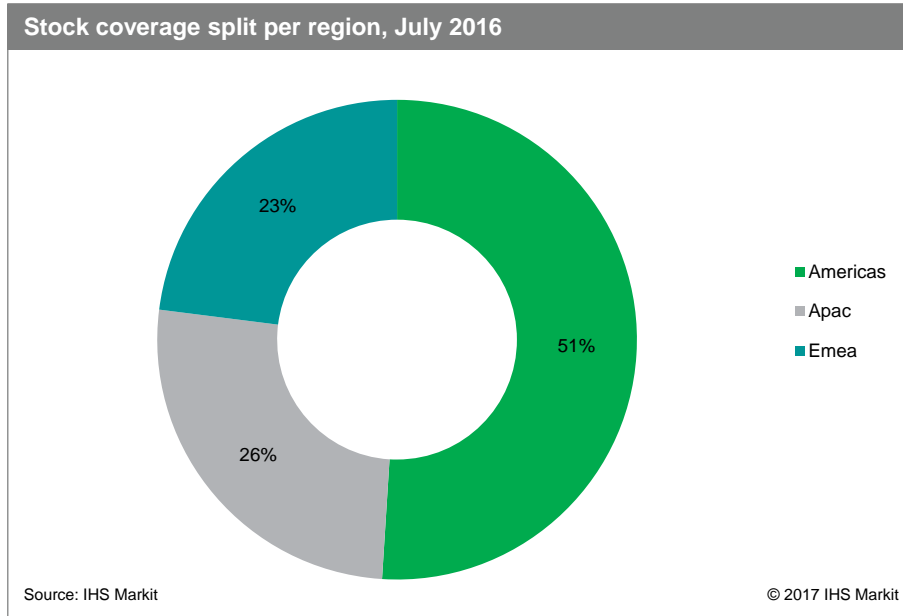


Figure A3

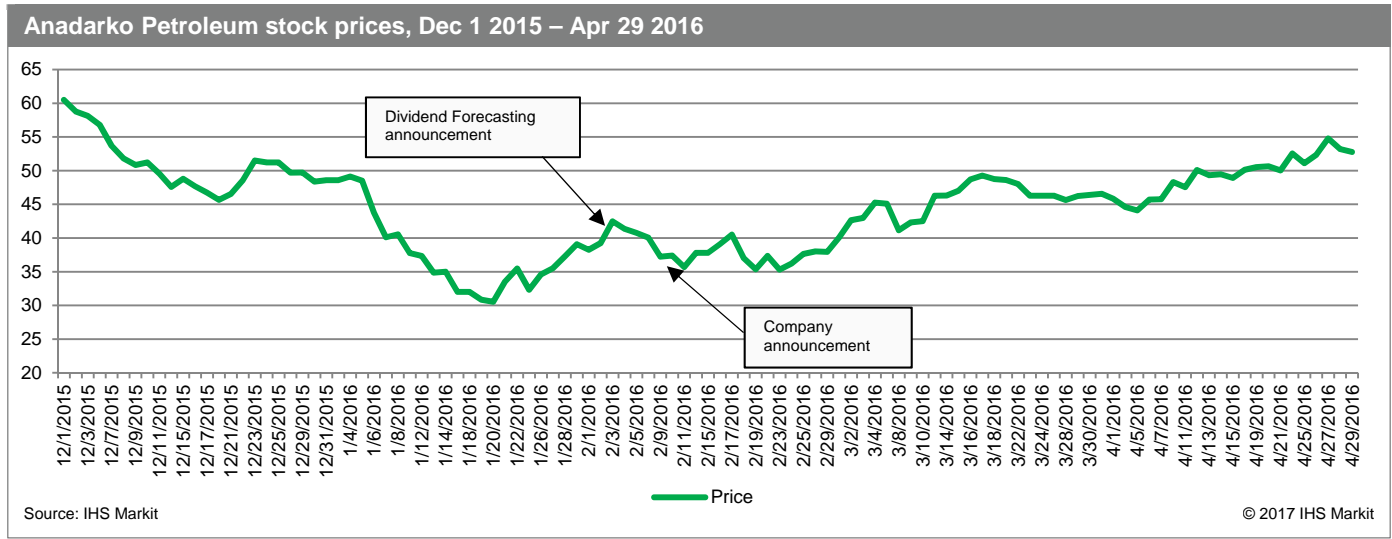


Figure A4

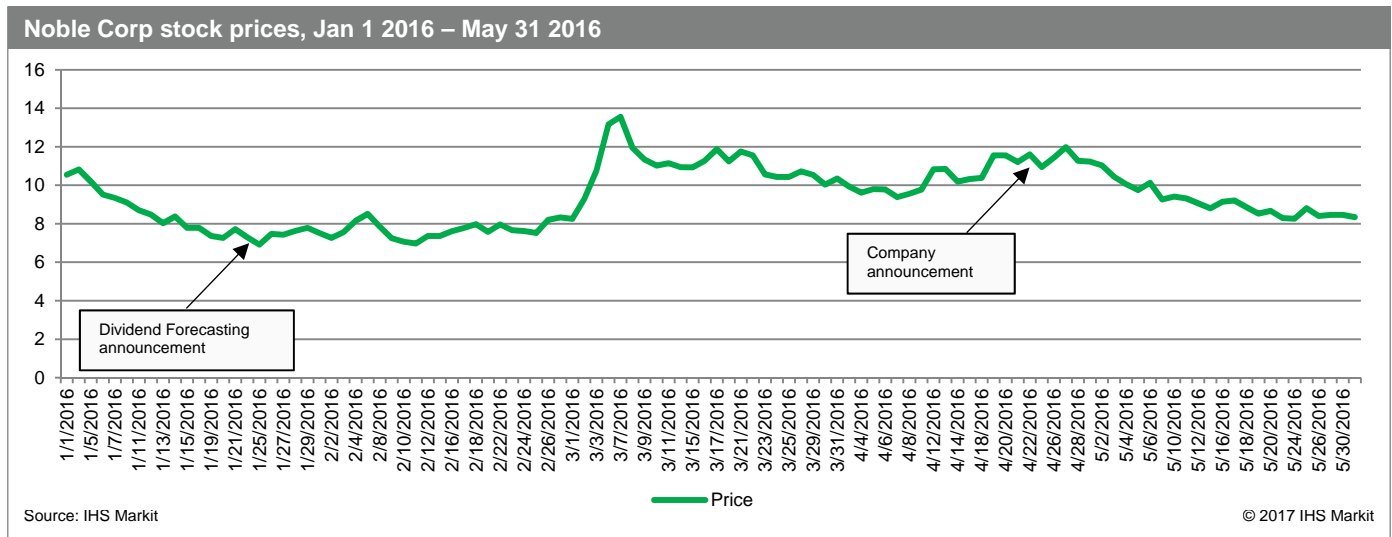


Table A1

Decile return spreads, Feb 2011 – Feb 2017

Region	Factor	1 month	3 month	6 month	12 month
US Large Cap	Leading 12-Month Regular Dividend Yield	0.03%	0.08%	-0.01%	-2.10%
	Leading 12-Month Total Dividend Yield	-0.02%	-0.09%	-0.37%	-2.88%
	1-Year Ahead Regular Dividend Growth	0.56%	1.72%	3.22%	7.74%
	2-Year Ahead Regular Dividend Growth	0.27%	0.67%	1.24%	3.29%
	Leading 1-Year Regular Dividend Payout	-0.29%	-0.59%	-0.95%	-3.56%
	1-Year Growth in Dividend Payout	0.11%	0.14%	0.29%	2.31%
Developed Europe	Leading 12-Month Regular Dividend Yield	0.22%	0.36%	1.18%	1.83%
	Leading 12-Month Total Dividend Yield	0.24%	0.40%	1.03%	1.31%
	1-Year Ahead Regular Dividend Growth	0.36%	1.22%	3.26%	4.20%
	2-Year Ahead Regular Dividend Growth	0.35%	1.24%	2.93%	3.75%
	Leading 1-Year Regular Dividend Payout	-0.34%	-0.86%	-1.43%	-4.38%
	1-Year Growth in Dividend Payout	0.14%	0.55%	1.39%	2.34%
Developed Pacific	Leading 12-Month Regular Dividend Yield	0.74%	1.77%	2.51%	4.98%
	Leading 12-Month Total Dividend Yield	0.76%	1.81%	2.46%	4.78%
	1-Year Ahead Regular Dividend Growth	-0.19%	-0.59%	-1.07%	-2.07%
	2-Year Ahead Regular Dividend Growth	-0.50%	-1.53%	-2.74%	-3.61%
	Leading 1-Year Regular Dividend Payout	0.54%	1.27%	2.45%	4.48%
	1-Year Growth in Dividend Payout	-0.14%	-0.65%	-1.67%	-1.39%

Source: IHS Markit

© 2017 IHS Markit

Table A2

ICs, Feb 2011 – Feb 2017						
Region	Factor	1 month	3 month	6 month	12 month	
US Large Cap	Leading 12-Month Regular Dividend Yield	0.010	0.020	0.035	0.038	
	Leading 12-Month Total Dividend Yield	0.009	0.018	0.032	0.033	
	1-Year Ahead Regular Dividend Growth	0.021	0.032	0.045	0.059	
	2-Year Ahead Regular Dividend Growth	0.019	0.031	0.047	0.059	
	Leading 1-Year Regular Dividend Payout	-0.002	0.003	0.015	0.018	
	1-Year Growth in Dividend Payout	0.000	0.004	0.006	0.019	
Developed Europe	Leading 12-Month Regular Dividend Yield	0.014	0.019	0.032	0.039	
	Leading 12-Month Total Dividend Yield	0.016	0.020	0.029	0.033	
	1-Year Ahead Regular Dividend Growth	0.018	0.041	0.052	0.040	
	2-Year Ahead Regular Dividend Growth	0.013	0.027	0.035	0.021	
	Leading 1-Year Regular Dividend Payout	-0.015	-0.017	-0.017	-0.034	
	1-Year Growth in Dividend Payout	0.006	0.013	0.018	0.017	
Developed Pacific	Leading 12-Month Regular Dividend Yield	0.032	0.048	0.060	0.072	
	Leading 12-Month Total Dividend Yield	0.033	0.049	0.060	0.072	
	1-Year Ahead Regular Dividend Growth	-0.018	-0.025	-0.027	-0.044	
	2-Year Ahead Regular Dividend Growth	-0.022	-0.027	-0.035	-0.050	
	Leading 1-Year Regular Dividend Payout	0.031	0.047	0.066	0.086	
	1-Year Growth in Dividend Payout	-0.003	-0.005	-0.015	-0.014	

Source: IHS Markit

© 2017 IHS Markit

Table A3

Dividend yield factor IC correlations, Feb 2011 – Feb 2017									
	US Total Cap			Developed Europe			Developed Pacific		
	Leading 12 Month Regular Dividend Yield	TTM Dividend Yield	Predicted Dividend Yield	Leading 12 Month Regular Dividend Yield	TTM Dividend Yield	Predicted Dividend Yield	Leading 12 Month Regular Dividend Yield	TTM Dividend Yield	Predicted Dividend Yield
Leading 12 Month Regular Dividend Yield	--	0.99	0.88	--	0.89	0.61	--	0.89	-0.06
TTM Dividend Yield	0.99	--	0.87	0.89	--	0.64	0.89	--	0.12
Predicted Dividend Yield	0.88	0.87	--	0.61	0.64	--	-0.06	0.12	--

Source: IHS Markit

© 2017 IHS Markit

Table A4

Dividend growth factor IC correlations, Feb 2011 – Jan 2017

	1-Year Ahead Regular Dividend growth		
	US Large Cap	Developed Europe	Developed Pacific
5-Year Dividend Growth Rate	-0.03	-0.05	-0.04
1-Year Ahead EPS Growth	0.37		

Source: IHS Markit

© 2017 IHS Markit

References

- Ang, Andrew, and Geert Bekaert. 2007. “Stock Return Predictability: Is It There?” *Review of Financial Studies*, vol. 20, no. 3 (May): 651–707.
- Arnott, Robert D., and Clifford S. Asness. 2003. “Surprise! Higher Dividends = Higher Earnings Growth.” *Financial Analysts Journal*, vol. 59, no. 1 (January/February): 70–87.
- Campbell, John Y., and Robert J. Shiller. 1988. “The Dividend– Price Ratio and Expectations of Future Dividends and Discount Factors.” *Review of Financial Studies*, vol. 1, no. 3 (July): 195–228.
- Conover, Mitchell C., Gerald R. Jensen, and Marc W. Simpson. 2016. “What Difference Do Dividends Make?” *Financial Analysts Journal*, vol. 72, no. 6 (November/December): 28–40.

IHS Markit Customer Support:

Support@markit.com

Americas: +1 877 762 7548

Europe, Middle East, and Africa: 00800 6275 4800

Asia and the Pacific Rim: +65 6922 4210

Disclaimer

The information contained in this presentation is confidential. Any unauthorized use, disclosure, reproduction, or dissemination, in full or in part, in any media or by any means, without the prior written permission of IHS Markit Ltd. or any of its affiliates ("IHS Markit") is strictly prohibited. IHS Markit owns all IHS Markit logos and trade names contained in this presentation that are subject to license. Opinions, statements, estimates, and projections in this presentation (including other media) are solely those of the individual author(s) at the time of writing and do not necessarily reflect the opinions of IHS Markit. Neither IHS Markit nor the author(s) has any obligation to update this presentation in the event that any content, opinion, statement, estimate, or projection (collectively, "information") changes or subsequently becomes inaccurate. IHS Markit makes no warranty, expressed or implied, as to the accuracy, completeness, or timeliness of any information in this presentation, and shall not in any way be liable to any recipient for any inaccuracies or omissions. Without limiting the foregoing, IHS Markit shall have no liability whatsoever to any recipient, whether in contract, in tort (including negligence), under warranty, under statute or otherwise, in respect of any loss or damage suffered by any recipient as a result of or in connection with any information provided, or any course of action determined, by it or any third party, whether or not based on any information provided. The inclusion of a link to an external website by IHS Markit should not be understood to be an endorsement of that website or the site's owners (or their products/services). IHS Markit is not responsible for either the content or output of external websites. Copyright © 2017, IHS Markit™. All rights reserved and all intellectual property rights are retained by IHS Markit.

