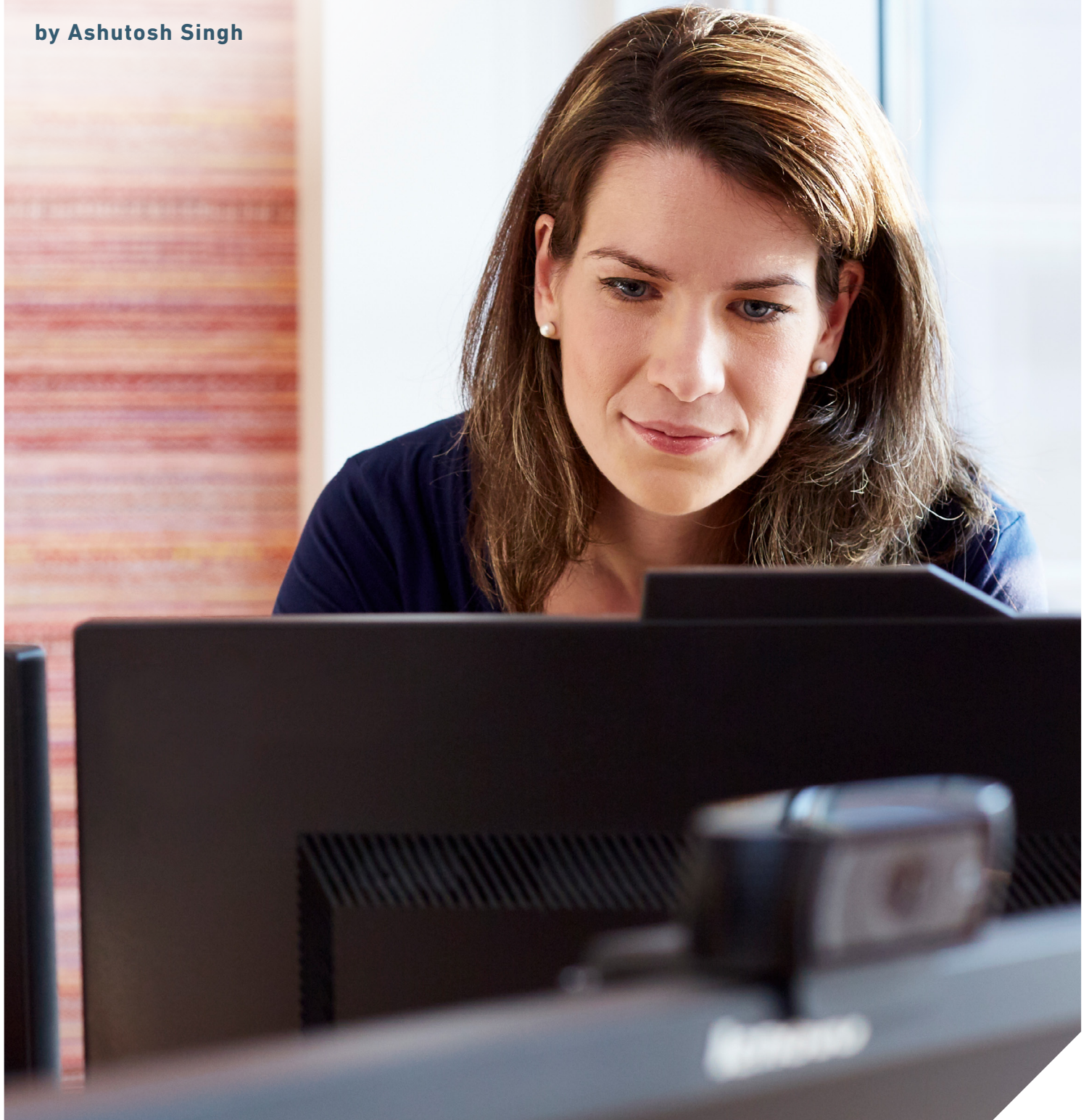


**PRODUCT INSIGHT**

# **INTRODUCING THE ANALYST SENTIMENT FACTOR**

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**MSCI** 

## ANALYST SENTIMENT: A SYSTEMATIC EQUITY STRATEGY FACTOR

In this Product Insight, we introduce the Analyst Sentiment factor, one of the Systematic Equity Strategy (SES) factors modeled by MSCI Equity Analytics Research. These factors aim to capture the risk and return attributes of certain investment strategies, such as value, quality and momentum. The Analyst Sentiment factor seeks to identify market inefficiencies that can occur during the lag between an analyst forecast and the time it takes investors to respond to a change in analyst views.

As our research shows, Systematic Equity Strategy factors have historically explained cross-sectional movement of asset prices. Furthermore, regardless of investment style, active managers often have exposure to these strategy factors. As a result, MSCI includes these factors in its next-generation suite of global equity models for improved risk and performance attribution. In addition, due to their popularity, these strategies are subject to crowding risk, which makes monitoring their effects especially important.

An MSCI research paper published in 2016 by Balint and Melas, “Using Systematic Equity Strategies,” produced these findings about the role of SES factors in portfolio risk and return:

- Most active U.S. mutual fund portfolios have had significant exposure to SES factors, regardless of the investment process they employ<sup>1</sup>.
- SES factors can enable managers to monitor risk exposures in a more granular fashion and conduct more precise performance attribution.
- SES factors may be used to enhance quantitative alpha models and fundamental security selection.

## HISTORY OF THE ANALYST SENTIMENT FACTOR

As early as 1968, Ball and Brown studied the presence of abnormal returns in the wake of analysts’ revisions of earnings announcements. Francis and Soffer (1997) pointed out that buy recommendations took longer to be reflected in stock prices than recommendations to sell. They further suggested that, when recommendations are positive, investors often seek additional information, such as earnings revisions, because they consider an optimistic view less accurate than a pessimistic one<sup>2</sup>.

Gleason and Lee (2003) compared price responses immediately after a forecast revision with the price drift that occurred in subsequent months. They concluded that investors did not immediately absorb “the subtle aspects of the revision.” However, the market is quicker to respond if the revision comes from a widely followed analyst.

In 2014, Soucek and Wasserek showed that the reaction to revisions was strongest on the day they are issued and could last up to six months for an upgrade and four months for a downgrade.

More recently, Hou et al. (2016) provided further evidence that it may take time for analyst forecasts to be reflected in stock prices. They also showed that post-revision drift was often inversely related to analyst coverage, with the effect even more pronounced for stocks with the greatest number of optimistic revisions.

<sup>1</sup> Balint, Imre and Dimitris Melas. (2016).

<sup>2</sup> The recommendations are found to be skewed toward the buys, partly because sell-side analysts and firms are incentivized to have good relationships with their client firms in order to generate investment banking fees.

## DEFINING THE MSCI ANALYST SENTIMENT FACTOR

The MSCI Analyst Sentiment factor is a composite of three descriptors designed to measure analyst sentiment about a company: revision ratio, changes in earnings forecast and changes in earnings yield forecast. The three descriptors are combined in weights of 40%, 30% and 30%, respectively.

The revision ratio is calculated by dividing the number of analysts increasing their earnings forecast, minus the number decreasing the forecast, by the total number of analysts covering the stock.

MSCI uses data from the Institutional Brokers Estimate System (I/B/E/S) to compute the descriptors. All data is sourced daily and incorporated within 48 hours of its release.

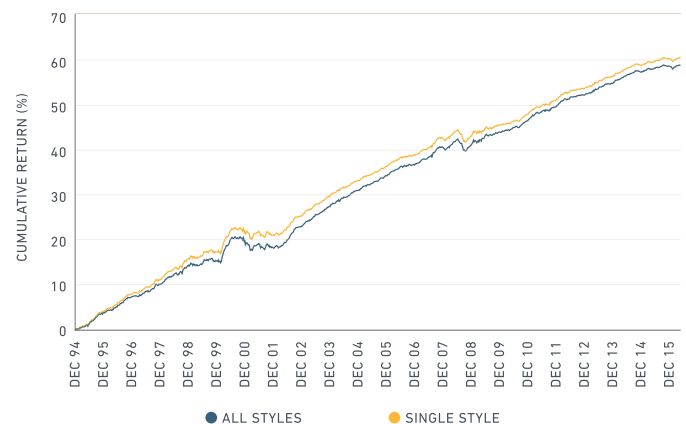
## EMPIRICAL RESULTS FOR THE ANALYST SENTIMENT FACTOR

In our study, we compared the performance of the Analyst Sentiment factor with that of the stocks of the MSCI ACWI IMI for the period from January 1995 to May 2016. As shown in Exhibit 4, though not indicative of future results, the factor had an annualized cumulative return of 2.61%. It demonstrated a low volatility of 1.01%, a high information ratio (IR) of 2.57 and a low correlation with the broader market of 0.14.

In Exhibit 1, the fact that the two lines – “All Styles” and “Single Style” – are very close to each other indicates that there was very low correlation between the results of exposure to Analyst Sentiment and exposure to other style factors.

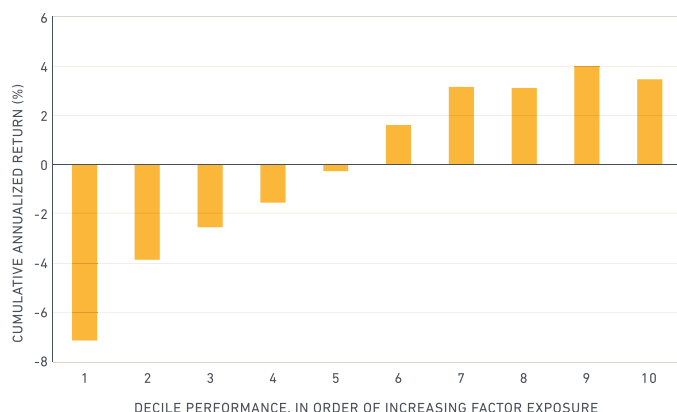
### EXHIBIT 1:

#### CUMULATIVE RETURN OF THE ANALYST SENTIMENT FACTOR (JANUARY 1995 TO MAY 2016)



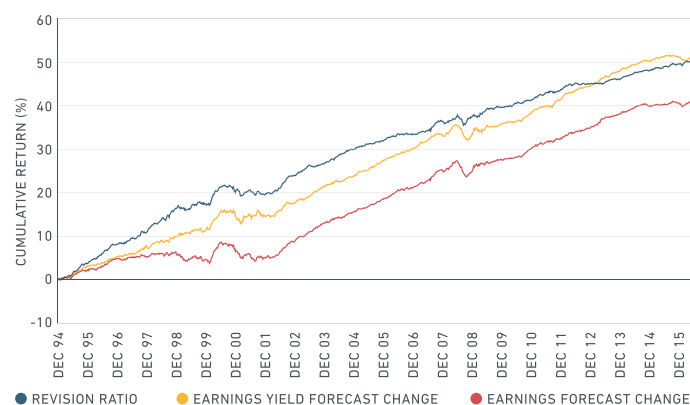
Source: MSCI Research

The decile chart in Exhibit 2 shows a skew in abnormal returns, where stocks having negative exposure to this factor were penalized more; the abnormal returns for stocks with positive scores were less marked.

**EXHIBIT 2:****DECILE PERFORMANCE FOR ANALYST SENTIMENT WITH EQUAL WEIGHTS (JANUARY 1995 TO MAY 2016)**

Source: MSCI Research

As shown in Exhibit 3, global stocks demonstrated a clear drift in the returns of all three descriptors during this study period of more than 20 years. The information ratio (IR) in the table shows that this sample portfolio provided a healthy risk-adjusted return over the period, with low volatility. Note that past performance is not indicative of future results, which may differ materially.

**EXHIBIT 3:****RETURNS OF THE THREE DESCRIPTORS (JANUARY 1995 TO MAY 2016)**

Source: MSCI Research

The descriptors had low correlations with the broad market but experienced drawdowns much larger than for the market average annual return. The factor's drawdown (3.04%) was larger than those of other SES factors, such as News Sentiment (0.69%), Seasonality (0.71%) and Short-term Reversal (2.35%). The only factor that had a larger drawdown was the Short Interest factor.

As Exhibit 4 shows, by combining the descriptors into a factor, we achieved a higher information ratio, with greater statistical significance (with a t-statistic greater than 2). It also had the property of being nearly uncorrelated with the market.

**EXHIBIT 4:****RISK AND RETURN RESULTS OF THE THREE DESCRIPTORS (JANUARY 1995 TO MAY 2016)**

DESCRIPTORS & FACTOR	AVG t-STAT	t-STAT>2 (%)	ANNUAL RETURN (%)	ANNUAL VOL. (%)	IR	MAX. DRAWDOWN (%)	CORR. WITH MARKET
REVISION RATIO	1.87	38.9	2.06	1.01	2.04	2.51	0.11
EARNINGS YIELD FORECAST CHANGE	1.84	37.9	2.39	1.14	2.1	3.57	0.14
EARNINGS FORECAST CHANGE	1.74	35.7	1.91	1.08	1.76	4.37	0.12
ANALYST SENTIMENT	2.02	43.6	2.61	1.01	2.57	3.04	0.14

Source: MSCI Research



## RELEVANCE OF THE FACTOR FOR INVESTORS

The academic papers cited in the introduction suggest that markets can take time to absorb the information content in analyst revisions. This inefficiency may create opportunities for institutional investors:

### **As an alpha strategy**

Including this factor in the risk model may improve risk forecasts and help the pursuit of alpha by uncovering the potential for market inefficiencies triggered by analyst revisions.

### **For risk management**

Because this factor is well known to many institutional investors, using Analyst Sentiment in the risk model may help investors better monitor the crowding associated with a popular strategy.

## CONCLUSION

The above research suggests that markets are inefficient when assimilating analyst revision information into stock prices, which may create opportunities for institutional investors. The MSCI Analyst Sentiment factor helps subscribers measure this inefficiency by combining three descriptors: revision ratio, changes in earnings yield forecasts and changes in earnings forecasts, each updated on a daily basis.

In our study of the Analyst Sentiment factor over a period of more than 20 years, these descriptors produced positive drift at low volatility, with a high information ratio and low correlation with the market (and with other style factors and descriptors). Decile analysis of factor performance showed that the lower the exposure to Analyst Sentiment, the lower future abnormal returns were, all else being equal. For stocks with positive exposure to this factor, the picture was more nuanced, since some investors may regard positive analyst revisions with suspicion and seek additional confirmation.

To learn more about MSCI's Systematic Equity Factors, please see the research paper, "[Using Systematic Equity Strategies: Managing Active Portfolios in the Global Equity Universe](#)" by Imre Balint and Dimitris Melas, April 2016.

Short URL: [www.msci.com/using-systematic-equity](http://www.msci.com/using-systematic-equity)



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Ashutosh Singh, CFA, is an Executive Director and Portfolio Management Analytics and Market Risk Specialist at MSCI who focuses on helping clients use MSCI's investment decision support tools, including equity portfolio risk and returns analysis and risk management platforms. Before joining MSCI, Singh was a risk and quantitative analyst at various fundamental and quantitative hedge funds.

At MSCI, he leads the team that helps hedge fund portfolio managers and chief risk officers identify, measure and monitor the market risks of equity and multi-asset class portfolios. He also writes a daily column of macroeconomic and market analysis for clients and employees of MSCI. Singh holds an MBA from the Wharton School, University of Pennsylvania, an MS in Computer Science from New York University and a BE in Electrical and Electronics Engineering from the Birla Institute of Technology and Science, Pilani, India.



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