TRUVALUE LABS™

New Alpha from ESG2.0™ Factors – U.S. Large Cap

Advances in Big Data and Artificial Intelligence have enabled the construction of new data sets for analyzing investments. It is now possible to look at qualitative factors such as Environmental, Social, and Governance (ESG) issues using machine learning techniques. ESG2.0 enables the user to look at company ESG performance derived from 3rd party sources rather than company disclosed ESG metrics.

SASB™ Factors

TruValue Labs is the first to use these techniques to measure ESG performance as it is happening, tied to measures developed by the Sustainability Accounting Standards Board™ (SASB™). SASB has worked with industry experts around the world to determine which ESG factors are the most material to company performance, by industry.

TruValue Labs' Pulse, Insight, and ESG Momentum Scores

Each day TruValue Labs scans tens of thousands of unstructured data sources on the Internet and composes a score for each of the SASB factors for over 8,000 companies. The Insight score is a moving average of the faster-moving, event-based Pulse score, designed for investment use. The ESG Momentum score is the relative ranking of the change in the Insight score over the past 12 months.

Portfolio Construction Methodology

Portfolio constituents are drawn from an underlying benchmark of S&P 500 stocks, based on monthly composition of that benchmark at the time.
Each month the portfolio starts with the top 40% of S&P 500 stocks according to volume of stories tagged with any of the TruValue Labs SASB categories. The Insight portfolio then excludes the bottom $1/6$ of companies with the lowest SASB Insight scores overall, yielding a portfolio with $1/3$ the constituents of

the S&P 500. The ESG Momentum portfolio begins with the constituents of the Insight portfolio and then selects the top 30% of companies according to ESG Momentum. For each portfolio, all stocks are equal weighted and rebalanced at the start of each month. Stocks that drop out of the multi-factor screens and/or leave the S&P 500 are dropped from the portfolio.

Historical Simulated Backtest Results

These backtest results show the total return from portfolio stocks, not including fees, transactions costs, commissions, taxes, or any other market frictions.
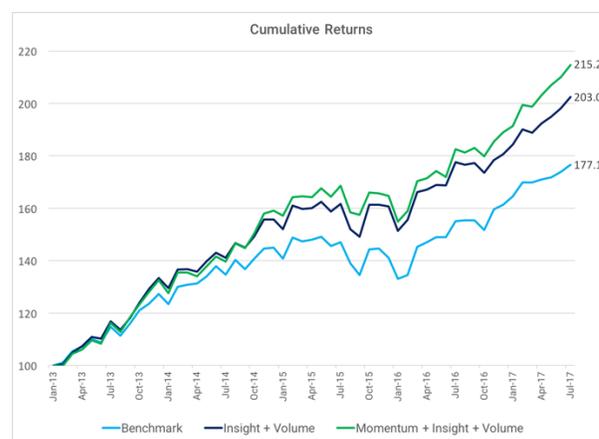
Cumulative Returns

		Cumulative Returns		Excess Returns	
Year	Benchmark	Insight	Momentum	Insight	Momentum
2013	27.2%	33.4%	32.6%	6.2%	5.4%
2014	14.0%	16.7%	20.1%	2.8%	6.1%
2015	-2.7%	3.2%	3.5%	5.9%	6.2%
2016	14.4%	12.3%	14.7%	-2.1%	0.3%
2017 YTD	9.4%	12.1%	13.6%	2.7%	4.2%
Since Inception	77.1%	103.0%	115.2%	25.9%	38.1%
Annualized	13.5%	17.0%	18.6%	3.5%	5.0%
Sharpe Ratio	1.00	1.29	1.36	0.29	0.36

The figure below shows the ramp-up of alpha generation over time for each portfolio. Alpha is defined here as raw excess performance relative to the equal-weighted S&P 500 benchmark.
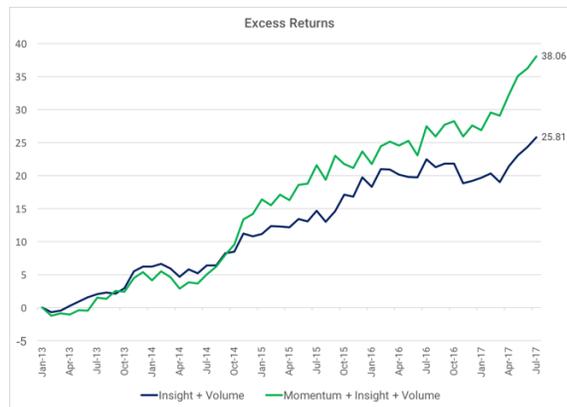
The Fama-French factors are typically used as a baseline for determining how correlated new factors are to those well established by academia and broad industry use. The figure below shows the range in betas (covariance with) these Fama-French factors. These relationships change significantly over time, moving from positive to negative and back, suggesting there is no systemic loading on any of these factors.

Potential Use as "Smart Beta" Factors

The TruValue Labs SASB Insight and ESG Momentum scores provide a way to quantify many factors missed by traditional quantitative analyses. Backtesting shows that the TruValue Labs' factors perform better than many traditional quant factors and are additive to a multi-factor investment approach.

Turnover is another key consideration for tradable portfolios. This initial backtest simply forms portfolios based on multi-factor screens with no attempts to mitigate turnover. Turnover is around 20% per month for the ESG Momentum portfolio but drops to around 5% per month for the Insight portfolio. There are several simple techniques that could lower this turnover rate significantly, including slowing down to quarterly rebalancing. Portfolio turnover also depends on how these factors are combined with other factors that may move more quickly or slowly, and in what proportions these are combined.

About TruValue Labs

TruValue Labs is the first company to apply artificial intelligence (AI) to uncover timely Environmental, Social, and Governance (ESG) data on a variety of asset classes. The company's mission is to deliver increased transparency to investment professionals by providing data and analytics that go beyond traditional fundamentals. The flagship product, Insight360™, delivers timely and investable insights by revealing intangible value and risk factors from unstructured data. The Insight360 data service provides a rich set of alternative factors that can be used to spot new opportunities with a high signal to noise ratio. Visit www.insight360.io to learn more about the SaaS product and data service.

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