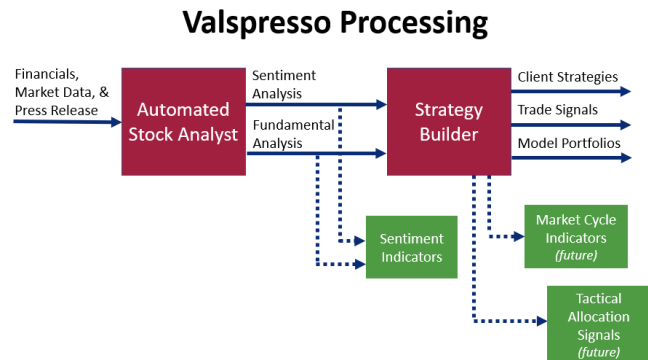


## Valspresso Sentiment Data

The edge you need to design persistent alpha strategies

Valspresso’s technology analyzes all publicly traded companies on the U.S. major exchanges every day. This daily automated analysis includes a patented price sentiment analysis as well as deep fundamental analysis. Valspresso’s sentiment indicators empower subscribers to design and deploy alpha-generating strategies. Our proprietary technology and patented methods make it easy for quants, analysts, and portfolio managers to integrate our indicators and signals into new or existing trading strategies with the objective of reducing risk and improving returns. Historical values are available from 2004 to present along with back tested results for example strategies using our indicators.



### Price Sentiment Analysis

Most sentiment analyses try to measure how people “feel” by analyzing what they “say” and use that as a proxy for what people will “do” regarding investment decisions. We all know that what people “feel”, “say”, and “do” are not always aligned. This is especially true in competitive marketplaces.

We believe that the best measure of investors’ sentiment is the price they are willing to pay for a stock. Implicit in the price that investors pay for a stock on any given day is a forecast of a company’s future operating performance (earnings). Valspresso was granted U.S patent 7,966,241 for this method of measuring price sentiment.

Our primary metrics for price sentiment analysis are Sentiment Index (SI) and Sentiment Quotient (SQ). SI is used to project expected earnings growth. For example, an SI value of 4 means that the company’s stock price reflects an expectation that earnings are expected to grow by a factor of 4. SQ is used to quantify the portion of a company’s stock price that is attributable to future earnings growth. For example, an SQ of 0.8 implies that 80% of the company’s stock price is attributable to expectation of future earnings growth and 20% to current fundamentals. SI and SQ are standardized (i.e. normalized) values uniformly applicable to all companies at all points in time.

Obviously, no one knows the future of a stock price, but Valspresso’s sentiment indicators provide a useful and powerful framework to assess investors’ optimism or pessimism reflected in a stock price. The uniform applicability and standardized values mean that they can easily be integrated into new or existing trading strategies with the objective of reducing risk and improving returns. Valspresso has used the sentiment framework to deliver sustained alpha and lower beta in both simulated and live portfolios.

### Fundamental Analysis

To provide context and veracity for the use of Sentiment, Valspresso’s Automated Stock Analyst performs deep financial analysis of publicly traded U.S. companies. This context is important to manage your strategy’s risk. Let’s say that one of your strategy’s holdings is a stock with a high expected earnings growth. If that company’s financial quality is poor, it is less likely to achieve or sustain that growth and therefore should be considered riskier. In that case, additional risk mitigation measures would need to be employed to achieve investment objectives.

Our system automatically assesses profitability, solvency, and management by inspecting each public company’s financial statements filed with the Securities and Exchange Commission (SEC) and classifies the quality of companies’ financials as

High, Medium, or Low.

Financial statements tell a complicated and nuanced story, which is often missed when simply looking at the top and bottom lines. Valspresso's Automated Analyst looks deeply at related information on the financial statements to cross check those high-level values to compose a holistic understanding of the health of the company. The factors of financial health underpin the long-term success of any business. Regardless of the size of companies or the industry sector in which they operate, those health factors are relevant. The automated assessments are applied uniformly to all companies in all sectors, and across all market conditions. Valspresso covers all publicly traded U.S. companies and assesses their financial health every day.

## Delivering Persistent Alpha Across Market Cycles

Valspresso's price sentiment analysis and deep fundamental analysis are used by subscribers to build strategies that deliver persistent alpha across market cycles.

### Example Use Case

Only hold stocks whose:

- Price Sentiment is Pessimistic
- Fundamental Health (Quality) is High
- Actual GAAP Earnings Growth is Exceeding Sentiment

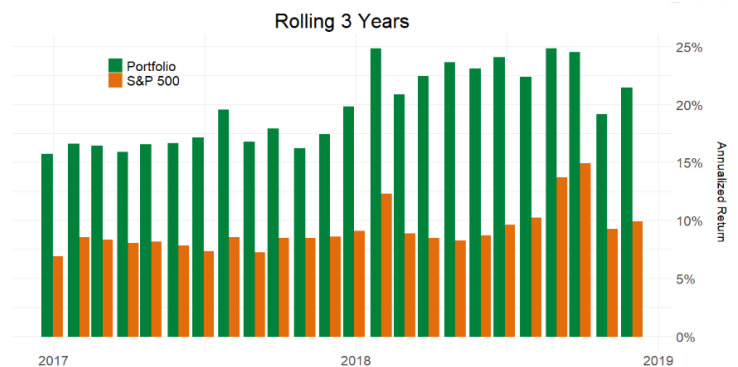
By applying the above rules to the components of the S&P 500 from 2014 to 2018, back tested results demonstrate the alpha-generating power of Valspresso's composite sentiment classifications. The results of the back test are displayed in this section.

### Win rate over various periods

Rolling Months	Win Rate
1	63%
3	69%
6	85%
9	92%
12	100%
18	100%
24	100%
36	100%

### Performance (2014 to 2018)

	Portfolio	S&P 500
Ann. Return	17.2%	6.9%
Ann. Std Dev.	13.9%	12.9%
Sharpe Ratio	1.24	0.53
Alpha	10.2%	
Beta	0.96	
Information Ratio	1.37	
Tracking Error	7.5%	



## Coverage and Frequency

Valspresso covers all publicly traded U.S. companies. Automated analysis is performed daily. Data feeds are delivered before the opening bell of U.S. markets (9:30am ET).

## About Us

Valspresso is a financial technology and investment strategy development firm based in Reston, Virginia. Its two decades of research and innovation culminated to the grant of a U.S. patent and the development and deployment of a suite of rules-based artificial intelligence software applications that automates the entire asset management process—from analysis to portfolio constructions to trade execution—with a clear objective: reduce risk and improve returns.

**Valspresso, Inc.**

11921 Freedom Drive, Suite 550  
Reston, VA 20190  
rnosegbe@valspresso.com  
(703) 675-7722