

Sabrient Multi-cap Insider/Analyst Quant-Weighted Index

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Benefits:

- Enhances alpha and reduces risk
- Takes advantage of corporate insiders' knowledge
- Considers Wall Street analysts' opinion of the company
- Reduces volatility with 'defensive sentiment' overlay
- Gives higher weights to the best defensive stocks with quant-weighting

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INTRODUCTION

The Sabrient Multi-cap Insider/Analyst Quant-weighted Index is designed to help markets incorporate the dynamics of both insider behavior and analysts' earnings revisions into stock valuations. Companies are selected for inclusion in the 100-stock portfolio by using factor analysis in a process that extracts information from available insider activity and analyst estimates and confirms the information to avoid behavioral pitfalls of the insiders and analysts.

As a preliminary step, companies with very aggressive accounting practices, as identified by Sabrient's proprietary forensic accounting methodology, are removed from consideration. To increase the likelihood that the stocks will perform well in down markets as well as up markets, a "defensive sentiment" overlay is used to identify stocks from the previous pool of strong insider/analyst stocks that have strong free cash flow yield, strong dividend yield, and have performed well in weak markets over the past 60 days. (This defensive sentiment factor is measured each month at the time of rebalance, going back 60 days.) The final weight of each stock in the portfolio is also based on the defensive overlay.

The resultant *multi-cap* portfolio has had a risk profile slightly lower than the market (beta 0.987) with an historical +8.5% differential return per year vs. the S&P 500 Index.

The index is rebalanced monthly; there are no sector concentration restrictions and no turnover limitations.

TRACKING INSIDER TRADING

Although insider trading on *specific* non-public knowledge violates SEC regulations in the United States, it is perfectly legitimate for insiders to buy their company's stock, and doing so is usually a sign of confidence in the company's future. After all, employees will always have general knowledge of their company that may not be public, and unless trading in an employer's stock is totally prohibited, this knowledge will often be used in determining whether or not to make trades, and when to do so.

"Legitimate insider buying has proven to be a reliable predictor of stock price appreciation."

The insiders who are likely to know the most about their company's future prospects are corporate officers, especially the Chief Executive Officer (CEO), President, Chief Financial Officer (CFO), directors, and shareholders who own more than 5% of the company's securities.

Fortunately for those who track insider trading, these insiders are required by the Securities and Exchange Commission (SEC) to file a Statement of Changes in Beneficial Ownership of Securities (Form 4) by the end of the second business day following the day on which the trade is executed.

By tracking such insider transactions, one may discern valuable information about a company's prospects.

Legitimate *insider buying* has proven to be a reliable predictor of stock price appreciation.

However, insiders can overestimate the value of their special knowledge or be overly optimistic about their own firm's chances of success, which makes interpreting the knowledge gleaned from SEC Form 4 filings somewhat tricky. How much information is in these filings? Which are the salient numbers? How can they be best extracted? These are some of the questions that must be answered when building an index on an insider/analyst model.

“If an insider doubles or triples their holdings, then this is considered significant.”

Rather than using multiple regression and optimization, Sabrient Systems employs a non-linear, relevance scoring methodology within a scientific hypothesis-testing approach to test logical combinations of factors. In creating the Sabrient Multi-cap Insider/Analyst Quant-Weighted Index, our goal was to create a portfolio of 100 stocks that we felt had a higher probability of performing well in the medium term based on transactions of insiders.

The first problem is how to increase specificity of the insider purchases. Many of the Form 4 filings involve purchases as part of compensation (such as the exercise of options). Often, these are more related to liquidity needs than speculation on the company's performance. Open-market purchases, however, require insiders to take their own money and purchase stock on the open market.

By using only *open-market purchases* from the SEC Form 4, we have increased the predictive power of this factor.

TRACKING ANALYST SENTIMENT

Another group that has intimate knowledge of a company's future prospects is the Wall Street analysts who follow a company and its industry. We consider them another type of “insider” in that they publish quarterly estimates of a company's future earnings and revenues, based on their study and analysis of the company and its industry, including visits to corporate headquarters and conversations with corporate officers about the future of the company.

Analysts' estimates are the numbers that the investing public expects the company to meet and hopefully beat every quarter.

Analysts frequently make changes to their estimates when they learn something new— good or bad—about the company or its industry. *Positive* changes in analysts' estimates are another reliable predictor of stock price appreciation, so we decided to include Wall Street analysts' opinions as a check to the insider activity.

“Positive revisions in analysts' earnings estimates are another reliable predictor of stock price appreciation.”

If either corporate insiders or Wall Street analysts indicate positive results for a particular firm, then the company's stock is considered for inclusion in the index. If both the insiders and analysts indicate positive results, the stock will likely perform well.

OTHER CONSIDERATIONS

To ameliorate the risk of volatility, we decided to remove from consideration companies with very aggressive accounting practices, as identified by Sabrient's proprietary forensic accounting methodology. To strengthen the likelihood that stocks favored by insiders will perform well, we use a "defensive sentiment" overlay to identify stocks with strong insider sentiment that also have strong free cash flow yield, strong dividend yield, and historically have performed well in weak markets. The "defensive score" from this step corroborates the sentiments of the corporate insiders and the Wall Street analysts.

Finally, we decided to "quant-weight" each of the 100 stocks that make it to the final portfolio. We weight each position in a piecewise exponential fashion so that the top 50 represent a range of 2.6% (for the highest ranked stock) to 0.96% for the 50th ranked stock; then we flat-weight the bottom 50 stocks so that each represents 0.35% of the index. This captures the benefit of exponential weighting without under-representing the bottom stocks and ensures adequate diversification and liquidity.

ELIGIBILITY CRITERIA FOR INDEX COMPONENTS

The Sabrient Multi-cap Insider/Analyst Quant-Weighted Index is comprised of a mix of large-cap, mid-cap, and small-cap stocks taken from a universe of 1500 stocks with the largest market capitalization. There are no sector concentration limits on the selected stocks.

QUANTITATIVE METHODOLOGY

Quantitative factors derived from raw data feeds are used in a fixed algorithm to select stocks for inclusion in the Sabrient Multi-cap Insider/Analyst Quant-Weighted Index. The process, simplified, is as follows:

First Cut

Starting with the 1500 stocks with the largest market capitalization, we eliminate stocks of companies with very aggressive accounting practices, as identified by Sabrient's proprietary forensic accounting methodology.

Second Cut

The following four factors used are used to narrow this 1500 stock universe to 100 stocks. At least one of the four factors must be positive for a stock to make the cut.

(1) *Number of Purchasers*: The number of insiders that have purchased company stock on the open market is considered very important. The more insiders purchasing shares on the open market,

the greater the significance, as we assume insiders are making informed purchase decisions, and we rely upon insiders' collective intelligence to find interesting candidates for the index.

(2) *Percent Increase in Holdings*: In addition to the number of insiders that purchase over a given time frame, the percentage gain in shares is considered significant. If an insider purchases just a tiny amount compared with their current holdings, then this is not a strong vote. On the other hand, if an insider doubles or triples their holdings, then this is considered significant.

(3) *Number of Positive Analyst Revisions*: A factor based on the number of Wall Street analysts who revise expectations positively, especially earnings estimates, is used to corroborate the insiders' vote of confidence with their purchases. If both corporate insiders and Wall Street analysts agree that the stock is due for price appreciation, then this is considered highly significant.

(4) *Percent increase in Analyst Expectations*: As with the insider purchases, the amount that expectations are revised by analysts is important. If analysts increase their expectations of earnings per share by a large amount, then this may be of importance and is dealt with accordingly.

The top 100 stocks from this second cut are used to populate the index.

Final Ranking

A "defensive sentiment" overlay is used to rank the final 100 stocks. This overlay rewards stocks that historically have performed well in weak markets and have strong free cash flow yield and strong dividend yield. The top 50 stocks are weighted exponentially so that the top 50 represent a range of 2.6% (for the highest ranked stock) to 0.96% for the 50th ranked stock, and each of the bottom 50 stocks is given a flat-weighting of 0.35% in the index.

BACKTESTED RESULTS OF SBRQAM

The backtested results of the Sabrient Multi-cap Insider/Analyst Quant-weighted Index, based on the factors discussed above, are very impressive.

Returns

The gross return series (value of \$1 invested) for SBRQAM and the S&P 500 Index are plotted below for the period April 3, 2000 through August 1, 2012.

Over this period, the S&P 500 Index has experienced a yearly average return of -0.6%, while experiencing an annualized volatility of 17.8%.

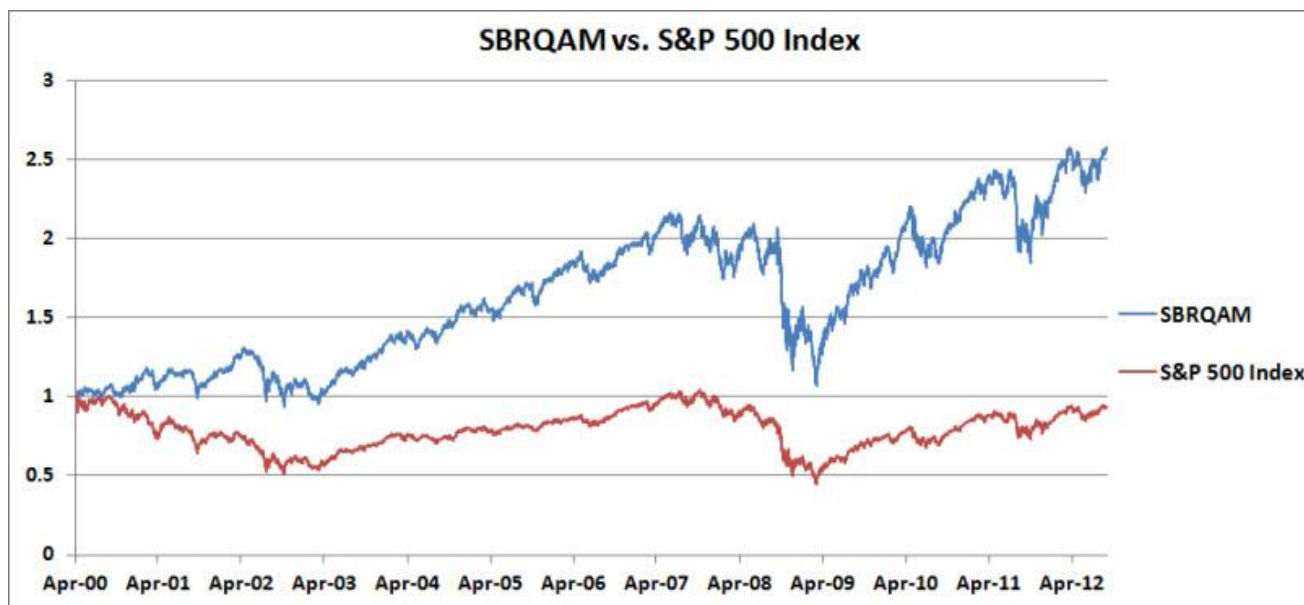


Figure 1: Return series for the Sabrient Multi-cap Insider/Analyst Quant-Weighted Index (SBRQAM) and the S&P 500 Index from April 3, 2000, to August 1, 2012.

During the same period, the 100-stock SBRQAM Index had an average return of +8.0% with an annualized volatility of 19.3%. The Sharpe ratio for SBRQAM vs. the S&P 500 was 1.06.

The returns only include price changes, so dividends and other disbursements of held stocks were not included in these figures.

Risk Considerations

SBRQAM has an estimated beta of 0.987—slightly lower than the S&P 500. This means that the risk of this portfolio from a single factor model point of view is slightly lower than the equity market overall.

Turnover

SBRQAM is rebalanced monthly to maximize information timeliness, and there are no limitations with regard to turnover.

SUMMARY

The Sabrient Multi-cap Insider/Analyst Quant-Weighted Index was created to help markets incorporate significant insider and analyst information into stock valuation. This is done by using a factor-based analysis to create a portfolio that best extracts and confirms publicly-available information on insider activity and analyst revisions. The insiders' sentiment is further strengthened by the "defensive sentiment" overlay. There are no sector concentration restrictions and no turnover limitations.

The resultant 100 stock portfolio has historically displayed a risk profile slightly lower than the market while providing from 8.5% average differential return per year vs. the relevant benchmark.

These reasonable betas and Sharpe ratios suggest that the observed differential returns are achieved not by taking on more systematic risk, but rather through taking advantage of information not priced into the securities at the time of their inclusion in the Sabrient index.

ABOUT THE AUTHORS

David Brown, Sabrient's founder, CEO, and chief market strategist, is a former NASA scientist and retired CEO of Telescan, Inc. David provides the vision behind our quantitative research and the overall strategic direction of the firm. He also writes the market letter "What the Market Wants" and manages the virtual portfolio "Sabrient Investor's Hedge." A lifelong investor, he designed and developed the critically acclaimed stock search program, ProSearch, and has documented his investing expertise in four books on investing, including *All About Stock Market Strategies* (McGraw-Hill, June 2002) and *Cyber-Investing: Cracking Wall Street with your Personal Computer* (John Wiley & Sons, 1994, 1997). David holds a B.S. degree in Engineering from the University of Pittsburgh and an MBA in Finance from the University of Houston.

Daniel Tierney, Sabrient's senior market strategist, builds and tests models for Sabrient's index and portfolio strategies, and builds and re-balances Sabrient indices. He has considerable experience building and testing models, writing software, and analyzing and trading securities. He holds a B.S. degree in Physics and Mathematics from Santa Clara University, and an M.S. degree in Physics from the University of California, Irvine.

ABOUT THE COMPANY

Sabrient Systems, LLC specializes in unbiased, fundamentals-based quantitative equity research for the benefit of investment professionals, hedge funds, and self-directed investors. The firm analyzes nearly 6,000 U.S. and 2000 Canadian traded stocks and identifies those that appear poised to outperform or under-perform the market. Sabrient first published its rankings in 2002, and its models have consistently outperformed relevant benchmarks over a broad range of investing styles, market caps, time frames and market conditions. Its long/short strategies have produced 10-year annualized returns ranging from 21% to 47%. Sabrient is based in Santa Barbara, California.

FOR FURTHER INFORMATION

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