Wall Street Analysts: Blinded Prophets? Assessing Abnormal Returns from S&P100 Stock Recommendations

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Abstract

This study investigates the performance of investment strategies based on Wall Street analyst recommendations for stocks within the S&P100 index during the period 2012-2013. Four distinct portfolios, constructed based on varying analyst recommendation criteria, were evaluated using two asset-pricing models: the Capital Asset Pricing Model (CAPM) and the Fama-French Three-Factor Model (FF3M). The findings document that these portfolios delivered statistically significant abnormal returns (Alpha). Crucially, these positive returns were not explained solely by the stocks' systematic risk but were largely attributed to a value investing process, as evidenced by the high loading on the HML factor. This outcome contradicts the semi-strong form of the Efficient Market Hypothesis (EMH) and suggests that a simple, public-information-based strategy of buying the analysts' most highly rated stocks would have made it possible to consistently beat the market. The paper concludes by arguing that behavioral finance provides a more compelling framework for explaining the persistence of these market inefficiencies.

1 Introduction

The Efficient Market Hypothesis (EMH), specifically its semi-strong form, is a cornerstone of modern financial theory, arguing that asset prices fully reflect all publicly available information. In this framework, earning abnormal returns from public data, such as widely disseminated analyst recommendations, should be impossible. However, the financial industry places immense value on these recommendations, which guide billions of dollars in investment decisions. This disparity between theory and practice provides a fertile ground for empirical investigation.

This research focuses on the S&P100 index, a liquid and highly scrutinized segment of the US stock market, to test the profitability of investment strategies built upon analyst consensus recommendations. The study aims to determine if a strategy of buying highly-rated stocks, held over a sustained period (2012-2013), generates statistically significant risk-adjusted returns, or Alpha. A positive finding would imply a rejection of the semi-strong EMH and highlight a persistent market anomaly.

2 Literature Review

2.1 The Efficient Market Hypothesis

The EMH, pioneered by Fama (1970), is generally categorized into three forms: weak, semi-strong, and strong. This study directly tests the **semi-strong form**, as analyst recommendations represent publicly available research. If the market is semi-strong efficient, these

recommendations should be immediately priced into the stock, leaving no room for subsequent abnormal profits. Early work by Jensen (1968) and Sharpe (1964) established the need for risk adjustment, leading to the development of the Capital Asset Pricing Model (CAPM) as the primary tool for measuring abnormal performance.

2.2 Analyst Performance and Market Anomalies

Empirical evidence on the predictive power of analyst recommendations is mixed. While some studies find a high correlation between analyst activity and liquidity, others show evidence of bias, often attributed to maintaining relationships with corporate clients (buy-side bias). Critically, research by Womack (1996) and Jegadeesh, Kim, and Krische (2004) demonstrated that changes in analyst recommendations often lead to significant short-term price movements, though the long-term profitability of consensus-driven portfolios remains contentious. The observation that analyst-recommended portfolios often exhibit a **value tilt** has become a recognized anomaly, leading to the adoption of multi-factor models to properly disentangle true stock-picking skill from exposure to known risk factors.

3 Methodology

3.1 Data and Portfolio Construction

The dataset comprises monthly closing prices, market data, and analyst consensus recommendations for S&P100 stocks between 2012 and 2013.

Four distinct portfolios (A, B, C, and D) were constructed, with criteria emphasizing different degrees of analyst consensus and recommendation strength. The portfolios were rebalanced periodically to reflect changes in recommendations. To ensure robustness, all portfolios were analyzed using three weighting schemes:

1. **Equal Weights:** Simple arithmetic mean of returns.
2. **Price Weights:** Weights proportional to the stock's market price.
3. **Market Capitalization Weights:** Weights proportional to the stock's market value, mimicking real-world index construction.

3.2 Testing for Abnormal Returns (Alpha)

To isolate the performance attributable to the analyst recommendations from returns generated by systematic risk, two established asset-pricing models were employed. The excess return of the portfolio ($R_i - R_f$) is regressed against market factors.

3.2.1 Capital Asset Pricing Model (CAPM)

The CAPM serves as the baseline model. Alpha (α) measures the excess return after accounting for market risk (β).

$$R_i - R_f = \alpha_i + \beta_i(R_m - R_f) + \epsilon_i$$

Where:

- R_i: Portfolio return
- R_f: Risk-free rate (e.g., T-bill rate)
- R_m: Market return (e.g., S&P 500 return)
- β_i: Portfolio's systematic risk
- α_i: Jensen's Alpha (Abnormal Return)

3.2.2 Fama-French Three-Factor Model (FF3M)

The FF3M (Fama and French, 1993) expands the CAPM by including two factors that capture size and value risk premiums, crucial for controlling potential market anomalies.

$$R_i - R_f = \alpha_i + \beta_1(R_m - R_f) + \beta_2(SMB) + \beta_3(HML) + \epsilon_i$$

Where:

- SMB (Small Minus Big): The historical excess return of small-cap companies over large-cap companies.
- HML (High Minus Low): The historical excess return of value stocks (high book-to-market ratio) over growth stocks (low book-to-market ratio).

A significant positive Alpha ($\alpha > 0$) in the FF3M provides stronger evidence against the EMH, as it suggests the returns are not merely compensation for size or value risks.

4 Results and Analysis

4.1 Evidence of Abnormal Returns

Across all four portfolios and all weighting schemes, the regression analysis demonstrated a consistently positive and statistically significant α (Alpha) under the CAPM. This initial finding suggests that a passive strategy based on analyst recommendations successfully outperformed the market on a risk-adjusted basis.

4.2 Factor Loading Analysis (FF3M)

When the FF3M was applied, the raw Alpha values diminished but remained statistically significant for several portfolios, confirming the existence of a true abnormal return component. The key finding, however, was the high positive loading on the HML factor across the majority of the portfolios.

The high β_3 (HML coefficient) confirms that the basket of highly-rated stocks selected by Wall Street analysts during this period was heavily skewed toward **value stocks**. The significant portion of the "abnormal" returns explained by the HML factor indicates that analysts were effectively identifying stocks that market participants perceived as undervalued—a clear value-investing strategy.

5 Conclusion and Future Work

This dissertation concludes that, for the S&P100 stocks during 2012-2013, an investment strategy based on consensus analyst recommendations generated statistically significant abnormal returns. The fact that a large part of these returns was captured by the HML factor suggests that the market does not immediately process publicly available information about a stock's value characteristics, allowing analysts to capitalize on this inefficiency.

This outcome represents a clear empirical challenge to the semi-strong form of the EMH. The persistence of these mispricings points toward the need for models that incorporate human behavior. **Behavioral Finance** is crucial here, as it offers explanations rooted in investor psychology. Specifically, the observed phenomena may be due to:

- **Investor Underreaction:** Slow digestion of public information, allowing value stocks to remain undervalued for an extended period.

- **Analyst Herding:** Analysts may tend to follow peer recommendations, leading to a strong consensus on certain undervalued stocks that creates a concentrated market signal.

Future research should focus on extending this analysis across different economic cycles and market segments to determine the longevity and robustness of the analyst-induced value anomaly.

6 References

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