Predicting Stock Prices Using Future EPS Estimates and Historical PE Ratios: A Dual-Bound Approach

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Abstract

This paper introduces a practical stock valuation method that combines the 52-week average Price/Earnings (PE) ratio with future Earnings Per Share (EPS) estimates to predict stock price movements over a two-year horizon. Traditional valuation techniques, such as Discounted Cash Flow (DCF) and PE ratio analysis, often encounter challenges due to their complexity or oversimplification. By utilizing the 52-week average PE ratio and future EPS estimates, this approach aims to provide a balanced and realistic forecast, mitigating the extremes of market volatility. Through the analysis of two case studies—NSE: IEX and NSE: CMSINFO—the paper demonstrates the effectiveness of this method in assessing whether stocks at their all-time highs are overvalued and in predicting future price appreciation. The applications of this method extend to evaluating stock purchase timing, setting investment targets, risk assessment, market trend analysis, and portfolio management. Despite its advantages, the method's limitations include dependence on accurate EPS estimates, sensitivity to market sentiment, sector variability, and potential short-term volatility. Overall, the proposed method offers a valuable addition to traditional stock valuation techniques, providing investors with a practical tool for informed decision-making.

Introduction

Stock valuation is a fundamental aspect of investment decision-making, guiding investors in determining the potential value of their investments. Traditional valuation methods such as the Discounted Cash Flow (DCF) model and Price/Earnings (PE) ratio analysis provide frameworks for estimating stock value, yet they often face challenges of complexity or oversimplification. This paper introduces a practical method that leverages the 52-week average PE ratio and future Earnings Per Share (EPS) estimates to predict stock price movements over a two-year horizon. By focusing on average values, this approach aims to offer a balanced and realistic forecast, mitigating the extremes of market volatility.

Methodology
Data Collection

1. <u>EPS Estimates:</u> Obtain average future EPS estimates for the next two years from credible sources such as analyst consensus reports, company guidance, or financial databases.
2. <u>52-Week Average PE Ratio:</u> Calculate the average PE ratio over the past 52 weeks using historical stock price and EPS data.

Calculation

1. <u>Average Future EPS Estimate</u>: Compute the average EPS estimate for the next two years.
2. <u>52-Week Average PE Ratio</u>: Calculate the average PE ratio over the past 52 weeks to smooth out short-term volatility and provide a more stable valuation metric.

Formula

Future Price Estimate = Average Future EPS × 52-Week Average PE Ratio

Implementation

1. Applying this approach on a stock at All-Time-High to check if its the right price to buy

We take NSE: IEX stock as an example . Below is the 5 year price chart of the stock taken from trendlyne.com

Let's assume that we are on 6th December 2021 when the stock made its all time high of 295.25.

A. Calculating the last 52 week (7th December 2020 - 6th December 2021) average PE
we get it to be 59.25

B. Average EPS estimates for 2022 and 2023 are 3.3, 3.3 .This data is collected from trendlyne.com Forcaster.

C. Using the above suggested formula we find the maverage share price to be 195.5 for 2022 and 2023.

This approach indicates that the all-time high of 295.25 may be overvalued, suggesting caution in buying.

2. Applying this approach to a stock with an ascending price to find future price movement

We take NSE: CMSINFO stock as an example. Below is the price chart of the stock taken from Trendlyne.com

Let's assume a random date of 16 January 2023. The closing price of the stock on that day was 310.10.

A. 52 week (17 January 2022 - 16 January 2023) average PE is found to be 17.55

B. Average EPS estimates for 2023 and 2024 are 18.6, 22.7 .This data is collected from trendlyne.com Forcaster.

C. Using the above suggested formula we find the average share price to be 326 and 422.22 for 2023 and 2024.

This approach indicates a clear price appreciation which can also be seen in the graph

Application

1. **Evaluating Stock Purchase Timing:** This strategy assists investors in determining if a stock now at or around it's all-time high is overvalued or still has potential for growth.

2. **Setting Investment Targets**: This strategy can help investors set realistic price targets for their investments.

3. **Risk Assessment:** This approach presents a range of potential future stock prices, allowing investors to analyze the risk of holding or purchasing a stock.

4. **Market Trend Analysis**: Analysts and researchers can use this method to study market trends and stock performance over time.

5. **Portfolio Management**: Portfolio managers can use this strategy to assess the growth prospects of various stocks in their portfolio.

Discussion

The use of the 52-week average PE ratio and average future EPS predictions addresses the drawbacks of extreme PE ratios while also providing a balanced picture. This strategy provides a middle-ground valuation that can assist investors better predict future stock values while minimizing the biases induced

by short-term market swings. By focusing on average values, this method provides a more accurate picture of the stock's prospective performance.

Limitations

While this approach offers a balanced method for predicting future stock prices, it has certain limitations:

1. **Dependence on Accurate EPS Estimates:** The accuracy of future price predictions is strongly dependent on the trustworthiness of EPS forecasts. Any significant variation in actual EPS can result in inaccurate price estimates.
2. **Market Sentiment and External Factors:** The strategy does not take into account sudden market swings, economic changes, or other external variables that could cause stock prices to rise above historical averages.
3. **Sector Variability**:Different sectors may have varying degrees of volatility and growth, which our method may not fully convey. Applying a uniform average PE ratio across sectors may result in inconsistent projections.
4. **Short-Term Volatility**:While the average PE ratio smoothes out short-term volatility, it may still miss sharp market falls or rallies that have a major impact on stock prices.

Conclusion

The proposed method of using the 52-week average PE ratio multiplied by the average future EPS estimate provides a balanced and realistic approach to forecasting stock prices. This technique mitigates the impact of market volatility and extreme values, offering investors a practical tool for making informed decisions. By focusing on average values, the method captures a more accurate picture of the stock's potential performance, making it a valuable addition to traditional valuation techniques.

References

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