

Project Report

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Investigation Findings

Subject: Analysis Report on Fluffy Toys Ltd

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1. Introduction

This report outlines the investigation conducted on Fluffy Toys Ltd, including the methodologies used, analysis performed, limitations and recommendations based on the findings.

2. Objectives of the Investigation

The primary objective of this investigation was to focus on the opening and closing stock price over a twelve-year period. This investigation aims to determine basic analytics to help predict possible company stock price trends in the future.

3. Methodology

To conduct this investigation, I employed the following methodologies:

- **Descriptive Analysis:** Utilized descriptive statistics to summarize the data and identify trends over time. The missing values were replaced with interpolated values to maintain the continuity of the data. Furthermore, it was decided to retain all the outliers as in stocks analysis they represent realistic market information.
- **Comparative Analysis:** Conducted a comparative analysis of average closing price and average volume over time and studied historical performance to identify discrepancies.
- **Forecasting Models:** Used the Simple Moving Averages to indicate change in price trends overtime and identify if there is any upcoming change in near future. A combination of 50 and 100 SMA were used for this. Furthermore, developed predictive models using linear regression to project future financial outcomes based on current trends.

4. Analysis and Findings

Following key findings were revealed:

- The prices display a high positive correlation with each other. However, the volume is negatively correlated with the price.
- The stock price is highly volatile with 46.66% volatility, which shows the high risk associated with the stocks.
- There has been a downward trend for the first three years after which the price remains almost constant for the next three years. For the next two years the price skyrockets and crosses its previous highest price. For the next two years the price sees a small downward trend until the year 2017 when it climbs up aggressively again to cross the price of 70. Moreover, from the forecasting model utilizing simple moving averages it is interpreted that the price is going to stay in an uptrend in the near future.

5. Limitation and Recommendations

Limitation:

As mentioned above the volume is negatively correlated to the prices, it is Obvious that volume is not the influencing factor in price, which shows that there are other factors influencing the price. Therefore, the dataset does not have other features to identify the factors influencing the price.

Recommendation:

Based on the findings, I have following recommendations:

- Add new features in the dataset to identify potential influential factors on the price.
- Encourage more investment on the stocks as most probably the uptrend is going to continue. Good marketing strategy could enhance the chances of a continued uptrend.
- Investigate further for influential factors on prices, which are not quantifiable to find the ones which are affecting the price.