## RELATION BETWEEN EARNING PER SHARE AND STOCK PRICES AS A MEASURE OF FIRM'S PERFORMANCE AT NIKE

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### Introduction

Earnings per share (EPS) is a method to see how much firm makes for each share of its stock. It is one of the main factors to determine a share's price and is also used to calculate price-to-earnings ratio which tells an investor the value of a stock in terms of how much the market is willing to pay for each dollar of earnings. There are mainly two kinds of EPS which are Basic EPS and Diluted EPS. The main difference between them is that diluted EPS assumes that all shares that are outstanding have been issued. Basic EPS takes into consideration the company's outstanding common shares but the diluted EPS considers all convertible securities. There may be chances that the company may have convertible preferred shares that could be converted into common stock. In this scenario, the EPS would decrease and thus diluted EPS will always be lower than the basic EPS.

As EPS shows how much a firm makes for each share of its stock, so higher the EPS, the better it is as it means the company has more funds available for their use be it for reinvesting purposes or giving them as dividends. Even though it is a very important aspect, it still has some limitations just like everything else. The companies can manipulate their EPS by buying back their own shares as it reduces the outstanding number of shares without increasing the income. Also, EPS does not take into account the capital needed to generate that kind pf earning.

### Literature Review

Baldwin(1984) examined whether users of financial statement were able to predict EPS better after the Securities and Exchange Commissions'(SEC) disclosure requirements. The users could use the financial information to evaluate better the size and timings of the future profits. Also, Grames et al. (2010) provided evidence on a potential source of an analyst's superiority that humans could use past earnings data to predict future earnings more

accurately than a mechanical time series model. Murphy (1966) examined the correlation between growth in earnings per share in one period and the growth in earnings per share in the succeeding period. Studies showed that if that correlation was positive, the companies that recorded a high EPS in one period will also record a high EPS in the next period. This study analysed about the application of EPS as a method to measure a firm's performance specifically being Nike, Inc.

**Objective of the study**

The objective of the study is to see the application of EPS for Nike, Inc.

1. To check the impact of EPS on stock prices.
    a. Hypothesis:
        i. $H_0$: There is no significant relationship between EPS and stock prices.
        ii. $H_1$: There is a significant relationship between EPS and stock prices.
2. To see the relation between EPS and debt to equity ratio
    a. Hypothesis:
        i. $H_0$: There is no significant relationship between EPS and debt to equity ratio.
        ii. $H_1$: There is a significant relationship between EPS and debt to equity ratio.
3. The last objective is to forecast the earning per share and stock prices for Nike, Inc. for the upcoming five years using the data of past six years.

**Data and Methodology**

The data has been collected and used is secondary and collected from Yahoo Finance, www.macrotrends.com and www.marketwatch.com.

|  | EPS | Stock price | debt to equity |
|---|---|---|---|
| 2014 | 1.49 | 40.43 | 0.09 |
| 2015 | 1.85 | 55.13 | 0.15 |
| 2016 | 2.16 | 56.25 | 0.28 |
| 2017 | 2.51 | 55.71 | 0.3 |

Statistical Tools Used:

The statistical tools that used were

- Minitab

- Jamovi

- Microsoft Excel

**Analysis and Results**

o To check the impact of EPS on stock prices.

    a. Hypothesis:

      i. $H_1$: There is no significant relationship between EPS and stock prices.

      ii. $H_0$: There is a significant relationship between EPS and stock prices.

      For this, a correlation test using the software "Jamovi" and got the following output:

## Correlation Matrix

Correlation Matrix

|   |   | A | B |
|---|---|---|---|
| A | Pearson's r | — | |
|   | p-value | — | |
|   | 95% CI Upper | — | |
|   | 95% CI Lower | — | |
| B | Pearson's r | 0.242 | — |
|   | p-value | 0.644 | — |
|   | 95% CI Upper | 0.881 | — |
|   | 95% CI Lower | −0.709 | — |

*Note.* \* $p < .05$, \*\* $p < .01$, \*\*\* $p < .001$

- Pearson's correlation coefficient tells us about the strength of the linear relationship between the earning per share and the stock prices.

- In this case, the correlation coefficient is 0.242 which is substantial.

- It is positively correlated but a lower side.

o To see the relation between EPS and debt to equity ratio

    a. Hypothesis:

        i. $H_0$: There is no significant relationship between EPS and debt to equity ratio.

        ii. $H_1$: There is a significant relationship between EPS and debt to equity ratio.

        For this also, the same test was conducted using Jamovi and I got the following output:

# Correlation Matrix

Correlation Matrix

|   |   | A | C |
|---|---|---|---|
| A | Pearson's r | — | |
|   | p-value | — | |
|   | 95% CI Upper | — | |
|   | 95% CI Lower | — | |
| C | Pearson's r | 0.407 | — |
|   | p-value | 0.424 | — |
|   | 95% CI Upper | 0.916 | — |
|   | 95% CI Lower | −0.604 | — |

Note. * $p < .05$, ** $p < .01$, *** $p < .001$

- In this case, the coefficient correlation is 0.407.
- It is positively correlated and more as compared to EPS and stock prices.

o Forecasting EPS and stock prices

The study used the forecasting function in excel to calculate the future values of the next four years using the data from the past four years data.

**EXPECTED EPS AND STOCK PRICES**

| YEAR | EPS | STOCK PRICES |
|------|-----|--------------|
| 2018 | 2.28 | 89.64 |
| 2019 | 2.15 | 97.31 |
| 2020 | 1.93 | 116.81 |
| 2021 | 2.01 | 149.34 |

**Conclusion**

1. From this study, it has been observed that the importance and the application of earnings per share in Nike, Inc.

2. There was an increase in earnings per share from 2014 to 2017 because the net income was spread over fewer shares of stock. But it is expected to fell in 2020 as the company's net income increased but the number of shares increased at a higher rate.

3. The relation between EPS and stock prices which was positive

4. The relation between EPS and debt-to-equity ratio which also was positive but was slightly on the higher side.

5. As far as forecasting goes, the values for the next five years were fine except for the value of stock price in 2021 which is exceptionally high

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