

Analysing the Impact of Financial Ratios on a Company's Financial Performance

Dr. A.H.N. Kariyawasam

Senior Lecturer, Department of Accounting, Faculty of Management Studies and Commerce, University of Sri Jayewardenepura
harendrak@sjp.ac.lk

Abstract- *This study was conducted to analyze the relationship between several chosen financial ratios and the financial performance of companies. Chosen financial indicators were Current Ratio, EPS, Firm size, Leverage Ratio and BV/MV Ratio. Financial performance of the companies was assessed through growth of the net profit margin. Ten companies which were registered in Colombo Stock Exchange which were categorized as diversified holdings were chosen as the sample. Financial data from 2013-2018 were considered for this study. A panel data analysis was used to determine the relationships between the independent variables and the dependent variables with given consideration to time series analysis and cross sectional analysis. According to the results of the study only current ratio, leverage and the firm size had significant relationships with the financial performance of the company. Current ratio and firm size positively impacted the company's profitability, where as leverage impacted negatively. This study aims to enable informed decision making of the financial actors of an organization to enhance the profitability of the given organization.*

Keywords- *Financial ratios; financial performance; current ratio; Earnings per Share (EPS); leverage ratio; firm size; BV/MV Ratio*

1. INTRODUCTION

Businesses in the world can be categorized in to two parts mainly; profit oriented and non-profit oriented. Regardless of the profit oriented motive or social welfare motive, financial performance plays a key role in an organization in the path to achieve their goals. Information regarding financial performance will shape the decisions regarding the future of the organization. That is why accounting has been evolving to cater the financial information needs of the business organizations around the world, providing information about financial performance to enable better decision making. Financial ratios can be mentioned as an accounting tool which will help the various decision makers to take decisions regarding the financial performance of the company. Financial ratios will enable the managers to assess the organizations' operations, growth, and benchmark the organization with its competitors. Analyzing the ratios will also help them in planning future performance by taking the current period's performance into consideration. According to Erdogan et Al. (2015)[5], analyzing the financial ratios and performance becomes one of the main responsibilities of the managers due to the above reasons. Green (1978)[6] has mentioned in his study, that financial ratios of the failed firms differed from the successful firms as early as five years prior to the failure. Therefore, to avoid bankruptcy, it is important to analyze the financial ratios of a business organization. The aim of this study is to analyze the relationship between some of the financial ratios and the

organization's financial performance. The relationship identified, will help the managers and the decision makers to predict the future performance of the company through the financial ratios of the organization. This will enable them to take corrective actions to rectify and bring back the organization to the correct path, if it is not performing in line with the goals and objectives. For this study, current ratio, earnings per share ratio, gearing ratio, firm size and market to book value ratio were used as the financial ratios. To assess the company's financial performance, net profit margin was used, as it was recommended and used by many other researchers such as Erdogan (2015)[5] and Green (1978)[6]. Depending on these variables and the available literature, hypotheses were built for this study which will be mentioned in the methodology section. This paper consists of six sections. In the introduction section, the background and the aim of the study will be explained. The available literature will be discussed in the literature review section. Methodology section will explain the research approach, sample, hypotheses, and the variables. Data analysis section will discuss the data analysis method and the results section will be dedicated to present the findings of the study. Discussion section will be used to compare and contrast the findings of the study with the available literature and conclusion section will summarize the findings and will include the concluding remarks.

2. REVIEW OF LITERATURE

According to the study of Myšková and Hájek (2017)[11], financial ratios are the most popular method of financial analysis due to their use as an input for complex mathematical models. Predictive models such as Altman model and Ohlson model are based on financial ratios. In the study of Nwanyanwu, (2017)[13] ratios are interpreted as being a yardstick or an index to compare two or more items. Using the prepared financial statements, ratios serve as an analytical tool providing solution of clarity. Barrigner and Ireland has stated that ratio analysis is the most practical way to interpret a company's financial statements. According to Mcleaney & Atrill (2005)[9], financial ratios are used to provide a quick picture of the financial health of a business based on their ability to highlight the areas of good and bad performance. Therefore, as mentioned in the earlier section of this article, it is important to analyze the financial ratios to get a clear picture about the financial performance of the company. This study will analyze the relationship of each chosen variable with the financial performance, to enable the managers to predict the future financial performance with past financial data and ratios.

Profitability ratios measure the ability of the organization to earn profits in the short and long term in relation to either sales or the investments made, as found by Nwanyanwu, (2017)[13]. According to the Investopedia Stock Analysis (2018)[8], net profit margin is the ratio of net profit to revenues of a company or a particular business segment. Net profit margin is important to understand what percentage of revenue gets converted to net profit in an organization. In the study of Erdogan et Al. (2015)[5], they have used net profit margin as the indicator of financial performance to analyze the relationship between key financial ratios and the financial performance of the organizations. Net profit margin has been used to assess the financial performance in the pharmaceutical industry, in the study of Baltes and Minculete (2016)[2]. Therefore, in this study net profit margin will be used as the independent variable and following the method used in the study of Erdogan et Al. (2015)[5], the impact of the other financial ratios on net profit margin will be analyzed.

2.1. Current Ratio

The speed of transferring assets of an organization in to cash is referred to as liquidity, as stated in Durrah (2016)[4]. In the same study, current ratio is defined as the organization's ability to pay short term liabilities. In other words, the extent to which current assets cover the current liabilities of the organization is calculated in current ratio. The magnitude of the ratio will depict the liquidity position of the organization.

In the study conducted by Durrah et. Al in 2016, it was found that there was a weak positive relationship between current ratio and the net profit margin, due to the fact that components in current ratio such as trade receivables and trade payables had low impact on net profit. However in

the study of Erdogan et Al. (2015), it was found that there was a significant positive relationship between the current ratio and the net profit margin. It indicates that, increase in the current ratio will significantly increase the company profitability.

2.2. Earnings Per Share

Earnings per share ratio is calculated as Net profit after preference share dividends divided by outstanding number of ordinary shares. According to Sha(2017)[16], earnings per share showed a significant effect on share prices and net profit of an organization. Fama and French quoted in Erdogan et Al. (2015)[5], has also stated that, stock returns (EPS) has an association with company profitability. However, in the study conducted by Saputra (2019)[15], it has been mentioned that EPS did not have a significant impact on the profit margin of the company, which is contradicting with the findings of Sha and Erdogan's findings.

2.3. Gearing Ratio

According to the study conducted by Hill et. Al (1996), leverage or the gearing has been calculated as the ratio between total liabilities to total assets. The same has been used in the study of Erdogan et Al. (2015)[5]. It was found that the profitability and leverage had a negative significant relationship between. And according to Hill's study in 1996, higher the leverage, higher was the probability of a firm pacing towards bankruptcy. This might have been influenced by the higher finance cost resulting from the higher borrowings, which would have lead to lower profit ratios. In the study of Erdogan et Al. (2015)[5], this finding was proven. Their finding was that, higher gearing will deteriorate the company performance as lenders and banks related to the organization will perceive the higher leverage as having financial difficulties and as an indication of financial risk. Therefore, a higher leverage ratio would act as a red flag to the organization

2.4. Firm Size

Firm size can be measured in different ways. In the study done by Azhar and Ahmed (2019)[1], they have stated that the size of the firm includes the ability of the organization in context of amount and variety of production that it can offer to its clients simultaneously. Large firms have the advantage of economies of scale, which will improve the profitability. Study conducted by Azhar and Ahmed has used total sales and total assets as the indicators of firm size. According to Erdogan et Al. (2015), firm size can be determined through growth of sales.

Azhar and Ahmed (2019)[1] have found that there was no indicative relationship between the firm size and the firm profitability. This was in line with the findings of Niresh and Thirunavukkarasu (2014)[12], which was study done in Sri Lanka. However in the study of Erdogan et Al. (2015)[5], they found out that firm size positively influenced the firm's profitability.

2.5. BV/MV Ratio

In the study of Erdogan et Al. (2015)[5], market to book value ratio is also considered to impact the financial performance of an organization.

According to the study conducted by Mozdabadi and Zarandi (2012)[10], it was found out that there was a positive relationship between BV/MV ratio and excessive returns. Lam and Tam (2011) quoted in the above study has also stated that book to market ratio was one of the best model to describe the stock returns in Hong Kong stock market. In Erdogan's study (2015)[5] they have found that there is a positive relationship between the BV/MV ratio and net profit margin.

However, Pandey (1979) has stated a different idea about using financial ratios. Since financial ratios are calculated on past figures, they will not give a complete picture of the future performance given the volatile business environment. Relative figures might fail to give an absolute accurate picture due to the decimal places in calculations. If industry averages are not available, comparison will be difficult and when comparing with competitors a suitable basis for comparison should be found. Sometimes differences in accounting practices, standards and policies make comparing the ratios meaningless and impacts of inflation also can make the ratio analysis invalid. However, since most of the companies still use financial ratios and its advantages outrun the weaknesses, this research paper will use financial ratios to discuss their impact on financial performance.

3. METHODOLOGY

The main aim of this study is to find the relationship of the previously mentioned financial ratios to the company's financial performance. The chosen financial ratios are

- Current Ratio
- Earnings Per share
- Gearing Ratio
- Firm Size
- Book Value to Market Value Ratio

3.1 Approach

A quantitative approach was taken for this study following the method followed by Erdogan's study (2015)[5] and Azhar and Ahmed (2019). A quantitative approach was taken to quantify and validate the relationship between the given financial ratios and financial performance of the company.

3.2 Variables

Independent variables- Independent variables of this study are the above mentioned financial ratios. These independent variables were chosen from the previously done studies which were mentioned in the literature review section. The method of calculation of the ratios mentioned is given below.

Table 1. Operationalization of the variables

Indicator	Calculation
Current Ratio (CR)	Current Assets/Current Liabilities
Earnings Per Share (EPS)	(Net profit-Preferred share dividends)/No. of outstanding ordinary shares
Gearing Ratio (LR)	Total debt/Total Assets
Firm Size (CS)	Growth of total sales
Book value to Market Value Ratio (BVMV)	Book value/Market Value

Dependent Variable is the financial performance of the company. Following the method used in the study of Erdogan (2015)[5], financial performance will be assessed through the growth of net profit margin. This will be calculated as given below.

Net profit Margin (NPM) = Growth of Net Profit Margin
Panel data analysis was used to analyze the relationship between the independent variables and the dependent variable. Both time series analysis and cross sectional analysis was used for this study. To analyze the financial ratios throughout a five year period, time series analysis was used. Since there was several companies involved in this study as explained below, a cross sectional analysis was done. As mentioned in Rendon (2012), using both time series analysis and cross sectional analysis will enhance the quality of the study. Model used for calculation is given below.

$$(NPM)_{it} = B_1 + B_2(CR)_{(t)} + B_3(EPS)_{(t)} + B_4(LR)_{(t)} + B_5(CS)_{(t)} + B_6(BVMV)_{(t)} + \varepsilon$$

This model was used in Erdogan (2015)[5] study. For each unit in the model, a unique constant coefficient has been calculated to offset the differences in the each unit itself. This is explained in the fixed effects model used in the previous studies.

Secondary data was used in this study since the data for financial ratios were available in the financial reports of the companies chosen to the sample. To enhance the quality and to capture the differences in time, financial data of five years were captured for this study.

3.3 Sample

To enable the easy access to financial data, this study was based on listed companies in Colombo Stock Exchange. There were 297 companies listed in Colombo Stock Exchange. For this study, companies in diversified holdings sector were chosen and there were nineteen companies listed under that sector. For this study, ten companies were randomly selected, to avoid choosing higher value companies within the sector. Financial data of 2013-2018 financial years were considered for this study.

3.4 Hypotheses

Based on the previous studies, following hypotheses were built for this study.

- H1-There is a significant positive relationship between current ratio and the growth of the net profit margin

- H2-There is a significant positive relationship between EPS and the growth of the net profit margin
 - H3-There is a significant negative relationship between Gearing Ratio and the growth of the net profit margin
 - H4-There is a significant relationship between Firm Size and the growth of the net profit margin
 - H5-There is a significant relationship between BVMV ratio and the growth of the net profit margin
- These hypotheses will be tested through the data analysis.

4. DATA ANALYSIS AND RESULTS

Descriptive statistics such as mean, standard deviation and minimum maximum boundaries were tested before the panel data analysis. Through that, an overall picture about the sample was obtained. Unit root test was used considering both time-series analysis and cross sectional analysis and Im-Pesaran-Shin unit root was used to analyze the unit root test.

Average net profit growth of the chosen companies is approximately 9%. Average current ratio is 1.72. The average leverage ratio is 40%.

Following the method used in Erdogan's study (2015)[5] random effects model was chosen in interpreting the results.

The growth of the net profit margin was the dependent variable and it was chosen as the representative of the financial performance. Through the analysis, it was found out that there was a significant positive relationship between the current ratio and the growth of net profit margin. This indicates that an increase in current ratio will result in higher growth of net profit margin. Adequacy of current assets to settle current liabilities is indirectly impacting the net profit growth in a positive manner. Higher current ratio indicates a higher inventory level which means higher closing inventory, which will lead to higher gross profit. Hence, higher liquidity ratio would positively affect the net profit growth.

The relationship between company size and the financial performance was also a significant positive one. This indicates the apparent economies of scale in the companies of this section in Colombo Stock Exchange. Companies with diversified holdings are expected to be a larger scale compared to others and since their operations run into different segments, economies of scale are expected to occur in operations. Adequacy of working capital and the scale of operations are influencing the financial performance in a positive manner.

The results of this study suggest a significant negative relationship between the leverage ratio and the financial performance of the companies. Higher the debt, higher the finance cost and will affect the net profit negatively. Therefore, if the managers want to improve the financial performance of the company, they will have to carefully consider the option of financing the growth through debt financing. Lenders will expect higher interest rates from companies who are already highly geared in compensation to the risk they will be undertaking.

The relationship between EPS and growth of net profit margin was not significant. EPS is considered to be an investor ratio and it will not be affecting the net profit margin that much according to the results of this study. The relationship between BVMV ratio and the growth of net profit margin is also not significant according to the results of this study. EPS and BVMV ratio will not affect the financial performance of the companies as significantly as leverage ratio, company size and current ratio.

5. DISCUSSION

The relationship between current ratio and the growth of net profit margin was a significant positive one. Therefore, H1 as mentioned in the previous section should be accepted. Findings of this study follow the findings of the study conducted by Erdogan in 2015. In that study also it was found that there was a significant positive relationship between the current ratio and the growth of net profit in nine companies traded in BIST-30. The findings of this study however, contradict with the findings of the study conducted by Durrah in 2016, where it was found that there was a weak positive relationship between the current ratio and financial performance.

EPS was found to be having a weak relationship with the growth of net profit margin. Saputra (2019)[15] has made a similar observation in his study on Indonesian Stock Exchange, where EPS didn't show a significant relationship with the financial performance. Most of the previous literature as French and Fama, Sha (2015) and Erdogan (2015)[5] have found that EPS having a significant positive relationship with the financial performance of the company, The results of this study contradicts with these findings.

Findings of the previous studies such as the study done by Hill in 1996 and the study done by Erdogan in 2015 has stated that the leverage ratio and the growth of net profit margin or the financial performance of the company have a significant negative relationship in between. This is due to the risk factor as discussed above. Results of this study follow the findings of the previous studies and have resulted in a significant negative relationship between the leverage and the financial performance of the companies operating as diversified holdings and listed in Colombo Stock Exchange.

In this study it was found out that there was a significant positive relationship between company size and the financial performance of the company due to the significant economies of scale. This finding follows the result stated in Erdogan's study in 2015 as mentioned above. However, Nireesh and Thirunavukkarasu's study in 2014[12] which was also conducted in Sri Lanka has resulted in a contradicting finding. In their study the size of the firm didn't impact the financial performance of the company significantly. Azhar and Ahmed (2019) [1] had a similar finding in their study. Diversified holdings in Sri

Lanka have economies of scale and they are impacting the profitability significantly, as found through this study. Most of the previous studies such as Erdogan (2015)[5] and Mozdabadi and Zarandi (2012)[10] have found that there is a positive relationship between BVMV ratio and the financial performance of the company. LAM and Tam (2011) have implied that there was a significant relationship between the two variables. However, this study has found out that there was no significant relationship between the BV/MV ratio and the financial performance of the company, which contradicts with Lam and Tam's findings.

6. CONCLUSION

In a volatile business environment, it is important that business organizations take the correct decisions to enhance their financial performance. The correct indicators should be chosen to take correct decisions about the financial performance. The correct indicators should have a significant relationship with the net profit or the basic financial performance measurement in order to optimize the use of scarce resources.

According to the results mentioned in the previous sections current ratio, leverage ratio and firm size have a significant relationship with the net profit growth of a company. Current ratio and firm size would positively impact the net profit growth but leverage will negatively impact the net profit growth. The findings of this study will enable the related parties of the business to take informed decisions and predict the financial performance through the financial ratios.

If the current ratio and firm size is increasing at a realistic pace, the chances are that the company will perform well financially in the upcoming years. Higher gearing will be an indicator that the company's profitability will decrease in the upcoming years if the company keeps on borrowing more. Organizations will face financial risks better if they plan their performance in a given period using the indicators, than the companies who will not plan at all.

However, there will be differences in these findings, if these were to be applicable to a different industry. BV/MV ratio and EPS should be considered when taking decisions regarding investors even this study suggests that net profit is not significantly impacted by those two ratios. Hence, it is important to consider the financial ratios calculated on past financial information to take decisions about the future performance of a business organization. Past financial ratios will alert the decision makers about possible risks so that they can take protective measures against financial failures. This will also enable the investors to optimize their fund by investing them in the most profitable organizations.

7. REFERENCES

[1] Azhar, K.A. and Ahmed, N., 2019. Relationship Between Firm Size And Profitability: Investigation From Textile Sector Of Pakistan. International

Journal of Information, Business and Management, 11(2), pp. 62-73.

- [2] Baltas, N., and Minculete (Piko), G. (2016). Study on the financial performance of companies operating in the pharmaceutical industry in Romania. *Studia Universitatis „Vasile Goldis” Arad – Economics Series* 26, 1, 58-68, Available From: De Gruyter - Sciendo <<https://doi.org/10.1515/sues-2016-0005>> [Accessed 17 March 2019]
- [3] Barringer, B.R. & Ireland, R.D. (2013) *Entrepreneurship: Successfully Launching New Ventures* (Fourth Edition), New York, Pearson Education Limited.
- [4] Durrah, O., Abdul Aziz, A.R., Syed, A.J. and Nour, A.G., 2016. Exploring the Relationship between Liquidity Ratios and Indicators of Financial Performance: An Analytical Study on Food Industrial Companies Listed in Amman Bursa. *International Journal of Economics and Financial Issues*, 6(2),.
- [5] Erdogan, E.O., Erdogan, M. and Ömürbek, V., 2015. Evaluating the Effects of Various Financial Ratios on Company Financial Performance: Application in Borsa Istanbul. *Business and Economics Research Journal*, 6(1), pp. 35-42.
- [6] Green, D., 1978. To Predict Failure. *Management Accounting* (pre-1986), 60(1), pp. 39.
- [7] Hill, N.T., Perry, S.E. and Andes, S., 1996. Evaluating firms in financial distress: An event history analysis. *Journal of Applied Business Research*, 12(3), pp. 60.
- [8] Investopedia Stock Analysis: What's the difference between gross profit margin and net profit margin? 2018. Chatham: Newstex.
- [9] Mcleaney, E., & Atrill, P. (2005), *Accounting: An Introduction*, Harlow, Prentice – Hall.
- [10] Mozdabadi, S., Zarandi, H. (2012) 'A study on the effect of size and ratio of book value to market value on excessive return', *Management Science Letters*, 2(8), pp. 3067-3072 [Online]. Available at: <https://doaj.org/article/01191d220a1d439d8d87834b4ae569a8> (Accessed: 17th March 2019).
- [11] Myšková, R., Hájek, P. (2017) 'Comprehensive assessment of firm financial performance using financial ratios and linguistic analysis of annual reports', *Journal of International Studies*, 10(4), pp. [Online]. Available at: <https://doaj.org/article/b1749e52796f4092b39f8fb8e86ab4e19> (Accessed: 17th March 2019).
- [12] Nireesh, A., & Thirunavukkarasu, V. (2014). *Firm Size and Profitability: A Study of Listed Manufacturing Firms in Sri Lanka* (SSRN Scholarly Paper No. ID 2422441). Rochester, NY: Social Science Research Network. Retrieved from <https://papers.ssrn.com/abstract=2422441>
- [13] Nwanyanwu, L.A., 2017. Assessing Organizational Performance through Financial Ratios: The case of the Agricultural Sector in Nigeria. *International Research Journal of Applied Finance*, 8(1), pp. 21-28.

- [14] Rendón, H., 2012. Gujarati, Damodar y Porter. Basic Econometrics. Ensayos de Economía, 22(41), pp. 227-230.
- [15] Saputra I.S.D (2019) 'Analysis Of The Effect Of Return On Assets, Earnings Per Share, Inflation Rate, And Interest Rate On Stock Return: A Case Study Of Soe Banking Companies Listed In Indonesia Stock Exchange', Russian Journal of Agricultural and Socio-Economic Sciences, 85(1), pp. 24-34 [Online]. Available at: <https://doaj.org/article/a0df52364c79469b9ea2b01b0980686d> (Accessed: 17th March 2019).
- [16] Sha, T.L., 2017. Effects of Price Earnings Ratio, Earnings Per Share, Book to Market Ratio and Gross Domestic Product on Stock Prices of Property and Real Estate Companies in Indonesia Stock Exchange. International Journal of Economic Perspectives, 11(1), pp. 1743-1754