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Interrelationships between Financial Ratios and Dividend Policy: The Evidence of Healthcare Equipment and Service Sector in Malaysia

Misya Maisarah Mohd Syaharuddin, Nik Nur Shafika Mustafa, Syamsyul Samsudin, Zarith Sofia binti Jasmi, Faten Elina Binti Kamaruddin
Faculty Information Management, Universiti Teknologi MARA, 85000 Segamat, Johor
Email: misya.maisarah@gmail.com, niku518@uitm.edu.my, zarithsofia@uitm.edu.my, fatenelina@uitm.edu.my
Corresponding Author’s Email: syam681@uitm.edu.my

Abstract
A company’s dividend policy is measured by the dividend payout ratio which is the total amount of dividends paid out to its shareholders relative to the company’s net income. In contrast, the ability of a company to make a profit is measured by its financial performance, which is generated from the revenue and aggregate expenses line items on the income statement. The financial performance consists of calculating financial ratios analysis such as liquidity, activity, leverage and profitability ratio. The purpose of this study is to examine the relationship between financial ratios analysis and dividend of Malaysia’s healthcare equipment and services sectors. This study also wanted to examine the effects of the financial ratios that affect the dividend payout ratio of healthcare equipment and services companies that had been listed under Bursa Malaysia. The international economy, especially the healthcare industry, has recently been impacted by the COVID-19 outbreak. The significant business opportunities that have developed due to the pandemic have piqued the interest of investors in this industry. As a result, it is important to recognize the factors that influence healthcare companies' dividend policy in a developing market, especially in Malaysia (Latif et al., 2021). In this research, dividend payout ratio (DPR) is chosen as a dependent variable. It is measured by its independent variables which are current ratio (CR), total assets turnover ratio (TATO), debt ratio (DR) and return on investment ratio (ROI) respectively. The method used in this study is multiple linear regression, descriptive analysis, and correlation coefficient. The findings show that only the Current Ratio (CR) and Total Assets Turnover (TATO) have a significant relationship. For further studies, researchers can extend the research by changing the dependent variable from the healthcare sector to the financial sector or any other sector that was affected due to Covid-19.

Keywords: Dividend Policy, Financial Ratio, Covid-19, Healthcare Sector, Financial Performance
Introduction
A company’s dividend policy is measured by the dividend payout ratio which is the total amount of dividends paid out to its shareholders relative to the company’s net income. In contrast, the ability of the company to make a profit is measured by its financial performance, which is generated from the revenue and aggregate expenses line items on the income statement. The financial performance consists of calculating financial ratios analysis such as liquidity, activity, financial leverage and profitability ratio. The purpose of this study is to examine the relationships between financial ratios performance and dividends of Malaysia’s healthcare equipment and services sector. This analysis is also to investigate or establish the effects of the elements such as liquidity, activity, leverage and profitability ratios that affect the dividend payout ratio of healthcare equipment and services companies listed under Bursa Malaysia.

The Healthcare equipment and services sector is defined by Bursa Malaysia as manufacturers and distributors of healthcare equipment and providers of healthcare services including lab testing services and dialysis centres. It is undeniable that the healthcare sector is considered crucial for investments, especially in world-class amenities both in the private and public sectors in delivering specialized healthcare equipment and skilled services. According to Bernama (2021), healthcare and technologies beat the overall industries of Bursa Malaysia throughout 2020, earning 93.8 per cent and 91 per cent year-on-year on growing demands that were driven mostly by the COVID-19 outbreak, correspondingly. According to the Securities Commission (SC), the increment in market capitalization is mainly caused by an increment in demands for medical gloves, and other healthcare equipment as well as an increment in the usage of technology. There are three major theories that help in highlighting the dividend policy such as information asymmetries, tax-adjusted theory, and behavioural theories (Justyna, 2018). Amidu & Abor (2006) stated that signalling models, agency cost, and the free cash flow hypotheses are all part of the information asymmetries theory. Justyna (2018) also mentioned that the decision dividend payout could be influenced by the investors if the shareholders wish that this should be the case and it is supported by (Frankfurter and Lane, 1992).

Prior research suggests factors to determine dividend pay-out policy is still significant because it’s part of an important component that potential investors examine as well as an indicator of a company’s performance (Afza and Nazir, 2008). Not many studies investigate the reasons for dividend payout policy and find various unmatched results (Tahir et al., 2020). This scenario is well shown by some literature to continued discussions on factors determining dividend payout at the firm level (Baker et al., 2019; Driver et al., 2020; Tran, 2020). Nevertheless, Khan (2020) stated that most of the past research on the Malaysian market has concentrated just on whole market sectors or even across numerous sectors. However, the international economy, especially the healthcare industry, has recently been impacted by the COVID-19 outbreak. The significant business opportunities that have developed as a result of this pandemic have piqued the interest of investors in this industry. As a result of a study by Latif (2021), it is important to recognize the factors that influence the dividend policy of healthcare equipment and services companies in a developing market, especially in Malaysia. This may need the conduct of research to cover relevant topics. The research has become one of the types which have now studied the financial performance of the healthcare equipment and services companies and their implications on it using the appropriate measurements. This
study may help in filling gaps within the current literature as well as helping in the understanding of these hazards and creating solutions to deal with them. Furthermore, the latest results might demonstrate how much the financial performance of the companies give impacts dividend policy, which may assist the managers in taking the necessary actions to cope with financial performance and enhance the related efficiency in finance of the companies as it is important, especially for investors and shareholders to make investment decisions.

Literature Review

Dividend Policy

Dividend is defined as amount of price that a company pays to an investor for the capital invested by them in the participating company (Franc-Dbrowska et al., 2020). Dividend policy or dividend payout ratio is interrelated with finance and investment decisions as it is one of the important decisions to be made in corporate. Hafiz et al (2021) are suggesting that dividend has always even been one of the issues for debate especially in the study of financial and it has begun several conflicts in drawing hypotheses, theories as well as explanations. Based on Salah and Jarboui (2021), although dividend payment decisions are vital in contributing to corporate success but there were no consensus exists on the determinants of payout policy (Barros et al., 2020; Dewasiri et al., 2019). Previous study found that the determinants of dividend pay-outs and their stability has revealed that the company could pay cash dividend which became one of the major factors that influence on the decisions of dividend payments (Syed et al., 2018). In the point of view of investors, the higher dividend payout will be more attractive for investors to invest their money in the company. The strong and consistent dividend payout is one of the proofs that the company is highly profitable. Therefore, it also makes the company’s shares able to be hedged against inflation as Investors are becoming more confident when the company is stable in paying out dividends to their shareholders. Zhang (2020) stated that current ratio is one of the measurement tools in determining dividends based on current liabilities calculations. According to Geetanjali and Shailesh (2019), it is suggested that companies with higher profitability and low leverage ratios are likely to distribute higher dividends. The outcome by Annisa and Dedi (2021) also stated that dividend is important to the company because it may define its long-term stability, explain its ability to generate profits from its operations, and manage its funds through dividend payments. Furthermore, it is stated in many studies that in recent decades, several research have reported on the use of such related variables in dividend policy measurement. In this study, the set of independent variables has been selected such as liquidity, activity, leverage and profitability ratio.

Liquidity Ratio

According to Brigham & Ehrhardt (2017), the liquidity ratio is related to the notion of how much further a financial profit could be used to meet its liabilities. Kamierska-Jowiak (2015) stated that in dividend signal theory, companies with greater cash available are typically paid larger dividends than those exhibiting lower liquidity levels. In addition, the liquidity ratio is also reliant on the company’s capacity to turn its inventories into cash in order to fulfil its current obligations or even other liabilities (Ahmed, 2015). According to Maldajian and El Khoury (2014), a company with liquid assets could produce substantial and consistent cash flows, also increasing its capacity to pay dividends to its shareholders. Yong and Mustapha (2016) demonstrated that the current ratio is one of the crucial determinants in determining
a company's dividend payout ratio. Hadianto and Sahabuddin (2016) as well as Gunawan and Tobing (2018) demonstrated liquidity ratio has a significant positive effect on the dividend payout ratio. Mehar (2002), on the other hand, found a negative association between liquidity and dividend payouts in his research of businesses listed on Pakistan's Karachi Stock Exchange. This is supported by Hashim (2017), that the liquidity ratio has no relationship with a company's dividend payout. Hence, this paper will study the interrelationships between liquidity ratio and dividend payout of the healthcare equipment and services sector in Malaysia. In this study, the current ratio (CR) is used as the independent variable for the liquidity ratio.

H0: There is no significant relationship between liquidity ratio and dividend payout.
H1: There is a significant relationship between liquidity ratio and dividend payout.

Activity Ratio
Studies by Brigham & Ehrhardt (2017) highlighted the activity performance of a company is conceptually related to its asset ratio, which is to quantify how well the company manages its assets while achieving its profits. This suggested that activity performance is one of the drivers of dividend policy through effective management of assets. Prior literature reports company’s activity performance measured by total asset turnover positively and significantly affects the dividend policy of the company (Firdaus & Handayani, 2019; Simanjuntak, 2016; Rizal & Triyanto, 2021). However, in the other study, Arsyad et al (2021) showed that the activity performance of a company has no bearing on its dividend payout. Few studies analyze the performance of healthcare equipment and the service sector; therefore, it is important for this paper to identify the effects of activity ratio on the dividend policy of this industry. The hypothesis is as follows.

H0: There is no significant relationship between activity ratio and dividend payout.
H1: There is a significant relationship between activity ratio and dividend payout.

Leverage Ratio
Previous studies (Al Shabibi and Ramesh, 2011; Victor, 2016) reveal there is no significant relationship between leverage ratio and dividend payout. Fakhra (2019) and Ruziah et al., (2021) reports leverage has a positive relationship with dividend payout. This is contradicted with findings by Al-Kuwari (2009); Rafique (2012); Manaf et al (2021) where financial leverage has a negative relationship with dividend payout because the companies with more leverage usually pay lower dividends. Thereupon, this study will examine whether this correlation exists in the healthcare equipment and services sector in Malaysia. The hypothesis is as follows.

H0: There is no significant relationship between leverage ratio and dividend payout.
H1: There is a significant relationship between leverage ratio and dividend payout.

Profitability Ratio
According to Issa (2015), the profitability of a company has a significant positive correlation with dividend payout. Arsyad et al (2021) proved that the return on investment (ROI) of a company has a significant and positive relationship with its dividend payout and the higher the value profitability ratio, the higher the value of dividend payout value obtained. But
Banarjee (2017); Fauzi & Rukmini (2018) reported there is no significant relationship between profitability and dividend payout of a company. Other studies by Herningsih (2020), and Putri & Ugut (2021) found that the profitability of a company has a negative but significant relationship with its dividend policy. Due to the conflicting outcomes of past studies, this study proposed to find the interrelationships between the profitability of the companies, especially in the sector Malaysia healthcare equipment and services and their dividend payout. The hypothesis is as follows.

H0: there is no significant relationship between profitability ratio and dividend payout.
H1: there is a significant relationship between profitability ratio and dividend payout.

Methodology
This paper is a quantitative study analyzing the determinants of financial performance of the healthcare equipment and services sector in Malaysia. The data is gathered from Bursa Malaysia and involves 90 observations of 10 years (2011 - 2020), from 9 listed companies - Adventa Bhd, Careplus Group Bhd, Hartalega Holdings Bhd, Kossan Rubber Industries Bhd, LKL International Bhd, Malaysian Genomics Resource Centre Berhad, Supercomnet Technologies Bhd, Supermax Corporation Berhad and Top Glove Sdn. Bhd. By using dividend policy as the dependent variable, this paper run a correlation matrix and multiple linear regression analysis to determine the effects of liquidity, activity, leverage, and profitability ratio on the financial performance of the healthcare equipment and services sector. For hypothesis testing, this paper also runs for t-test and f-test. The equation is as follows.

\[ DPR = \beta_0 + \beta_1 CR_{it} + \beta_2 TAT_{it} + \beta_3 DR_{it} + \beta_4 ROI_{it} + \epsilon_i \]  
(Eq 1)

Where DPR is a dividend payout ratio, \( \beta \) is a coefficient beta value as a constant term of y-intercept, \( x_1 \) is current ratio as a measurement for liquidity ratio, \( x_2 \) is total asset turnover as a measurement for liquidity ratio, \( x_3 \) is debt ratio as a measurement for profitability ratio, \( x_4 \) is the return on investment as a measurement for activity ratio and \( \epsilon \) is a residual error term.

Result and Discussion
Descriptive Analysis

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Descriptive Statistic of Selected Factor that Affect the Dividend Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DPR</td>
</tr>
<tr>
<td>Mean</td>
<td>21.9</td>
</tr>
<tr>
<td>Standard Error</td>
<td>3.41854</td>
</tr>
<tr>
<td>Median</td>
<td>0.000</td>
</tr>
<tr>
<td>Mode</td>
<td>0.000</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>32.43111</td>
</tr>
<tr>
<td>Sample Variance</td>
<td>1051.777</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>23.11062</td>
</tr>
<tr>
<td>Skewness</td>
<td>3.686212</td>
</tr>
</tbody>
</table>
Descriptive analysis helps to explain and understand the behaviour of a given data set with brief summarizations of the said sample and data set. It involves a sample and data set of nine companies with a time framework of ten years and a total observation of ninety. Table 1 displays the descriptive statistic for the entire variable used in this study which are dividend payout ratio (DPR), current ratio (CR), total asset turnover (TATO), debt ratio (DR) and returns on investment (ROI) respectively. As shown in the table above, the mean value for DPR is 21.90089 meanwhile for CR, TATO, DR and ROI are 3.180556, 4.030444, 22.23444, and 5.051111. DR have the highest standard deviation with a value of 95.50301, while the second highest is DPR with a value of standard deviation is 32.43111. Furthermore, the skewness has a positive value except for ROI shows a negative value of -5.93736. There are rightly skewed.

### Correlation Analysis

Table 2

<table>
<thead>
<tr>
<th></th>
<th>DPR</th>
<th>CR</th>
<th>TATO</th>
<th>DR</th>
<th>ROI</th>
</tr>
</thead>
<tbody>
<tr>
<td>DPR</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CR</td>
<td>0.12131</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TATO</td>
<td>0.24157</td>
<td>-0.27024</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DR</td>
<td>-0.21678</td>
<td>0.021753</td>
<td>-0.27346</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>ROI</td>
<td>0.113329</td>
<td>-0.37594</td>
<td>0.007923</td>
<td>-0.05562</td>
<td>1</td>
</tr>
</tbody>
</table>

As shown in Table 2, the correlation analysis showed that liquidity, leverage and profitability ratios indicate a weak positive correlation with DPR meanwhile the correlation analysis shows that leverage and DPR are negatively correlated.

Table 3

<table>
<thead>
<tr>
<th></th>
<th>t Stat</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>10.84314</td>
<td>0.015964</td>
</tr>
<tr>
<td>TATO</td>
<td>2.458921</td>
<td>0.012363</td>
</tr>
<tr>
<td>DR</td>
<td>2.5561</td>
<td>0.198115</td>
</tr>
<tr>
<td>ROI</td>
<td>-1.29707</td>
<td>0.059042</td>
</tr>
</tbody>
</table>

Based on Table 3, the result also indicates that there is a significant relationship between CR and DPR as the p-value is less than 0.05. There is also a significant relationship between TATO and DPR as the p-value is less than 0.05. Thus, the null hypothesis is rejected. On the other hand, the result shows there is no significant relationship between DR and DPR, same goes with ROI and DPR as the p-value is higher than 0.05. Thus, we fail to reject the null hypothesis.

### Multiple Regression Analysis

A regression analysis was performed, and the results are summarized in Table 4 and in equation (2) below:
Panel data were used in this study, to determine the output of this regression analysis. It comprises nine companies in the healthcare equipment and services sector within ten years period. The dependent variable is dividend policy, which is measured by the proxy dividend payout ratio (DPR) while independent variables are the liquidity ratio, activity ratio, leverage ratio and profitability ratio. The regression analysis as shown in table 4 were using the Panel Least Square method for the significance of variables to be tested with the overall model.

The equation obtained from the above analysis for each variable is as followed:

\[
\text{DPR} = 38.14672 + 1.4727\, \text{CR} + 0.371602\, \text{TATO} - 0.1709\, \text{DR} + 0.096724\, \text{ROI} \\
\text{(Eq2)}
\]

Table 4 shows that only two variables are significant which are CR and TATO when the p-value is less than the 5% significance level. The coefficient for CR is 1.4727 and TATO is 0.371602. A positive value indicates a positive relationship with DPR. This value means a change in CR by one per cent, DPR will also increase by 1.4727 assuming other variables are constant. While TATO, increase in value by one per cent, DPR will also increase by 0.371602 assuming other variables remain constant. Furthermore, for DR, it shows a negative and insignificant. The value means, when DR increase in value by 1%, the DPR will decrease by -0.1709. Meanwhile, ROI shows a positive value but is insignificant when the p-value is more than a 5% significance level. The F-test of the regression analysis is 3.859053 with a p-value is 0.006264 which is lower than the 0.05 significance level. Therefore, this study rejected the null hypothesis. It means that at least two independent variables used in this study are fit and useful to explain DPR. The independent variables that are fit and useful in this study are liquidity and activity ratio which are measured by CR and TATO. In addition, the coefficient of determination (R2) is 0.153692. It shows that 15.3692% of the total variation in the dividend policy can be explained by the total variation in independent variables which are CR, TATO, DR and ROI. Therefore another 84.6308 can be explained by other factors.
Conclusion
This study contributes to investigating how the financial ratio affected the dividend policy which are current ratio (CR), total asset turnover (TATO), debt ratio (DR) and return on investment (ROI) respectively. As a conclusion, the results revealed that the Current ratio (CR) and total asset turnover (TATO) showed a significant relationship to the dividend payout ratio (DPR) while debt ratio (DR) and return on investment (ROI) showed an insignificant relationship to dividend payout ratio (DPR). This finding is supported by the previous researcher which is Hadianto & Sahabuddin (2016); Gunawan and Tobing (2018); Simanjuntak (2016); Firdaus and Handayani (2019); Rizal and Triyanto (2021); Rafique (2012); Manaf et al (2021); Banarjee (2017) as well as (Fauzi and Rukmini, 2018). Future studies should focus on other variables that gives more impact towards dividend payout ratio.

Contribution
The pandemic COVID-19 outbreak has affected the international economy, especially the healthcare industry. Few studies have been conducted to analyse the financial performance of the healthcare industry in Malaysia, thus this paper contributes to the current literature on the understanding of the interrelationship between financial ratios and dividend policy. Furthermore, this finding contributes to the investor on the overview outlines of their investment.

Reference


