

The Impact of Cash Flow Patterns on Company Performance: A Malaysian Perspective

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Abstract: The purpose of this study is to examine the effect of cash flow on the performance of Malaysian companies. This study examines eight types of cash flow patterns which are used as an alternative tool to predict incidents leading towards distressed companies. Cash flow patterns are derived from both positive and negative signs of cash flow components, which consist of operating, investing and financing activities. Company performance in this study is differentiated between PN17 listed companies and non-PN17 listed companies. The total sample for this study comprises of 32 companies. Data are then collected from these companies' annual reports, as well as additional financial data from Refinitiv Eikon's Datastream. The results show that there is no significant difference of cash flow pattern with company performance. Meanwhile, the different patterns of cash flow from operating, investing and financing activities are insignificant predictors towards financial distress. The implication of the above empirical results suggests that cash flow as a financial indicator is not able to provide enough information and evidence towards company performance. This may be implied similarly for company performance post-Covid 19, as cash flow may not be a relevant metric during the pandemic, as businesses faced unprecedented challenges might not be captured by traditional financial indicators. The pandemic may have revealed some weaknesses in traditional financial indicators, highlighting the need for more nuanced and comprehensive measures of company performance. In addition, this study highlights the importance of including as much financial and non-financial information as possible in evaluating company performance.

Keywords: Distressed Company, Financing, Indicator, Investing, Operating, Sign.

1. INTRODUCTION

Cash is the most liquid asset that any firm may have, as it provides companies with both flexibility and liquidity at the same time. Cash can be quickly and easily converted into other forms of assets to give companies an ability to pay off debts, make investments, and supply fund operations without having to sell other assets or wait for the conversion of those assets into cash (Lee & Kim, 2019). This flexibility and liquidity give companies the ability to respond towards unexpected events and opportunities, making cash a crucial component of financial stability and performance (Rashid, 2018).

In the past, a majority of daily transactions were conducted using cash basis technique. As technology continues to expand and companies start to invest more in automating their finance processes, there are still certain companies that continue to utilise cash basis method within their operations. This is because these companies believe that the cash basis method is still an appropriate choice (Ibarra, 2009). The cash basis method only recognises revenue and expenses when cash is received or paid out. As such, accounts that adopt this method do not take into account any outstanding accounts

receivable or accounts payable. This method is considered simple and straightforward, which is why some companies still prefer to use it to this day. However, it is important to note that accrual basis method of accounting provides a more comprehensive view of a company's financial position. Accrual basis is also considered to be more in line with the Generally Accepted Accounting Principles (GAAP).

A growing company is expected to see an increase in the number of transactions within the company, in addition to an increase in the complexity of those transactions. This growth can lead to a more complex financial landscape, requiring a more sophisticated approach towards accounting and financial management. In order to keep up with these changes, companies may need to adopt more advanced accounting systems, hire additional personnel, and seek professional advice to ensure that they continue to comply with accounting standards and regulations. Proper financial management is essential for the continued growth and success of a growing company. As a result, the growing company will need to have a proper, detailed, and organised cash flows report in addition to other pertinent financial and non-financial information (Palepu et al., 2021).

Statement of cash flows is an essential financial statement to be reported by companies, and its inclusion in annual report is required by a majority of financial reporting standards. Statement of cash flows provides information on a compa-

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ny's cash inflows and outflows during a specific period of time which helps to give investors, creditors, and other stakeholders an understanding of the company's liquidity, solvency, and ability to generate cash (Ali et al., 2022; Palea & Scagnelli, 2017). This information is important for users of this financial statement to make informed investment and credit decisions, as well as assessing the company's financial health and future performance (Nguyen & Nguyen, 2020). Besides that, statement of cash flows gives users other angles to evaluate the performances of companies without the fuzziness of non-cash items (Yakalhef & Matook, 2019).

The inclusion of statement of cash flows in financial statements is a requirement for publicly traded companies and other organisations that are subject to financial reporting regulations. It can be used together with other financial statements, such as income statement and balance sheet, in order to provide a clear picture of company performance (Collins, 2022). While income statement details out a company's profitability and balance sheet show its financial position, statement of cash flows provides information on the company's ability to generate and use cash. This information helps to give a more comprehensive understanding of the company's financial performance and eliminates some of the ambiguity that can be present in other financial statements, particularly with respect to non-cash transactions (Sahay, 2022).

By providing a clearer picture of a company's cash inflows and outflows, the statement of cash flows can be used to evaluate its financial health, liquidity, and ability to meet its obligations, making it an essential tool for investors, creditors, and other stakeholders. Statement of cash flows provides valuable information that can be used by various parties to assess a company's financial health and potential to recover from distress (Tron, 2021). For example, lenders may use information in this statement to assess a company's ability to repay loans, while investors may use the information to evaluate the company's potential for growth and future profitability.

In the case of a company in distress, the statement of cash flows can be used to assess its ability to survive and recover from the negative impact from distress, making it an important tool for all parties involved. The impact of financial distress on a company and society as a whole can be evaluated by looking at the company's overall financial performance (Wu et al., 2020). By examining the company's financial health and its ability to generate and use cash, as well as its liquidity and solvency, stakeholders can assess the potential impact of financial distress on the business community and society as a whole (Rashid, 2018). This information is important for making informed decisions and for taking appropriate steps to address financial distress and minimise its impact on the company and society. This study focuses on the impact that financial distress has on the business community, as well as society as a whole.

It was argued in past literature that cash flow should be used as a more accurate method of measuring a company's performance while it is experiencing difficult times because information on earnings becomes less dependable during this period (Ali and Ali, 2021). With difficult economic times, a

company's earnings may be affected by a variety of factors, such as lower sales, increased costs, and write-downs of assets. In these cases, the information contained in earnings reports may become less reliable and may not accurately reflect a company's true financial performance. Cash flow on the other hand, measures actual inflows and outflows of cash and provides clearer picture of a company's ability to generate and manage its cash resources (Joel et al., 2023). By focusing on cash flow, it is possible to get a more accurate understanding of a company's financial health, even during challenging economic times.

Additionally, statements of cash flow provide a better picture of a company's ability to pay its bills, invest in growth opportunities, and pay dividends. For these reasons, cash flow is often considered a more important metric for evaluating a company's financial performance as compared to earnings reported in income statement.

According to Richardson, Taylor, and Lanis (2015), financially troubled businesses may try to avoid paying their taxes, which can result in a reduction in the amount of revenue that an economy receives through taxes. It was also argued that financially troubled businesses may seek to reduce their tax liability as a way to conserve cash and improve their financial position. This may be presented in various forms, such as underreporting income, claiming excessive tax deductions, or not paying taxes owed on time. Next, a research conducted by Arsyad et al. (2015) found that financial distress would also lead to an increase in financial fraud. Financial fraud can have serious consequences for both the affected company and the wider economy. Companies that engage in financial fraud can harm their reputation and reduce investor confidence, making it more difficult for them to access funding and support from stakeholders. At the same time, financial fraud can undermine the overall integrity of financial markets and may lead towards decreased trust in the financial system. On another perspective, it is possible for a company and its manager to be driven with opportunities, pressure, and rationalization to engage in fraudulent activity and poor management (Hashim et al., 2020) in order to create an appearance that the company is doing well when, in reality, this is not the case. These practices may include overstating revenue, understating expenses, and using creative accounting techniques to manipulate financial statements.

Information on cash flow is investigated from a variety of viewpoints in this study. Operating activities, investment activities, and financing activities are three sections that make up the entire statement of cash flows. Together, these three sections provide a comprehensive picture of a company's cash position over a specified period of time, helping stakeholders to understand the company's liquidity, financial strength, and ability to meet its obligations. These cash flow activities would produce positive cash flow when a company has an abundance of cash and generates more cash than what it is spending. This is a sign of financial strength and stability, as it suggests that the company is generating enough cash to meet its obligations and investing in its future growth. On the other hand, a negative cash flow indicates that the company may have a shortage of cash and is

spending more cash than what it is generating. This can be a warning sign of financial trouble, as it suggests that the company may not have enough cash to meet its obligations or invest in its future growth.

It is important to note that a negative cash flow in a specific period of time would not necessarily cause an alarm, as some companies may experience temporary cash flow shortages due to seasonal fluctuations, investments in growth, or other factors. However, if negative cash flow persists over an extended period of time, it may indicate a more serious financial problem which warrants further investigation by the company's management team. For instance, if a company experiences a negative cash flow from its operations, yet a positive cash flow is being reported from its investing and financing activities, the combination of all three activities would be written as negative (-) or positive (+). Combination of these signs of cash flows were adopted from previous studies, which found these patterns to be useful indicators for financial distress (Shamsudin & Kamaluddin, 2015; Kordestani et al., 2011; Jantadej, 2006; Bruwer & Hamman, 2005; Gup et al., 1993;). Financial distress refers to a state in which a company is unable to meet its financial obligations and is facing financial difficulty. By analysing patterns of cash flows from operating, investment, and financing activities, stakeholders are able to gain insights into a company's ability to generate cash, invest in its future growth, and meet its financial obligations. For example, if a company is consistently generating negative cash flows from operating activities, this may indicate that the company is spending more cash than it is generating through its core business operations. This may be a sign of financial distress, as the company may not have enough cash to meet its obligations or invest in its future growth.

The primary objective of this study is to examine the impact of cash flow analysis on the company performance. Using cash flow patterns, this study is sought to understand the similarities and differences of each pattern, and how these patterns are related to the performance of the company. Cash flow analysis would provide valuable information to stakeholders, including investors, lenders, and managers, about a company's ability to generate cash, invest in its future growth, and meet its financial obligations. By examining cash flow patterns, users of this financial statement can gain insight into the strengths and weaknesses of a company's financial position and identify potential signs of financial distress. Results from this study can be used for practitioners to make informed decisions about investing in a company, lending money to a company, or managing a company's finances. By understanding the impact of cash flow analysis on the performance of a company, stakeholders would be able to make more informed decisions that can help to ensure long-term success of the company.

The remaining parts of this paper are organised as follows. The following section provides a review of relevant literature and research hypotheses that form the basis of this paper. Section 3 presents the research method and design, while Section 4 presents the results and discussions. The last section, Section 5 concludes this paper.

2. LITERATURE REVIEW AND HYPHOTHESES DEVELOPMENT

2.1. Importance in Statements of Cash Flow

Statement of cash flows is a vital addition towards the financial statements of a company because the company's accounting profit is not the only indicator of performance (Gentry et al., 1990). Statement of cash flows provides a more comprehensive picture of a company's financial health by focusing on the movement of cash in and out of the company. This information can help stakeholders, such as investors, lenders, and managers, to make more informed decisions about the company's financial performance and future prospects (Nguyen & Nguyen, 2020). In addition, statement of cash flows can provide valuable information about a company's ability to generate cash from its core business operations, invest in its future growth, and meet its financial obligations. This information can be especially useful for companies experiencing financial difficulty, as it can help to identify potential sources of cash that can be used to address financial challenges (Gentry et al., 1990).

Analysis of cash flow, which focuses on where cash comes from and where it moves, is helpful for determining a company's liquidity and solvency (Ali et al., 2022). Liquidity refers to a company's ability to meet its short-term obligations, such as paying its bills and debts, while solvency refers to its ability to meet its long-term obligations, such as repaying loans and financing its operations. By analysing a company's cash inflows and outflows, stakeholders are able to gain insight on its ability to generate cash from its core business operations, invest in its future growth, and meet its financial obligations (Ali and Ali, 2021). This information can help stakeholders to determine whether a company is likely to have enough cash to meet its short-term and long-term obligations, and whether it is likely to experience financial difficulties in the future. In addition, the analysis of cash flow can provide valuable information about a company's ability to generate positive cash flow, which is a key indicator of its financial health (Kliestik et al., 2020). Companies that consistently generate positive cash flow are more likely to be able to meet their financial obligations and invest in their future growth.

Cash flow is the essential of a business, and it is critical for companies to have a good understanding of their cash flow patterns, including the sources and uses of cash, as well as the timing of these cash flows. This information can be used to make informed decisions about spending, investing, and managing the business. The impact of cash flow patterns on company performance is significant. Positive cash flow patterns, where a company generates more cash than it uses, can lead to financial stability, increased investment opportunities, improved creditworthiness, and better overall performance. On the other hand, negative cash flow patterns, where a company uses more cash than it generates, can lead to financial difficulties, reduced investment opportunities, decreased creditworthiness, and decreased performance.

Black (1998) examined the value relevance of earnings, operating, financing, and investment cash flows over four

distinct phases of a company's life cycle, namely start up, growth, maturity and decline stage. In the start-up stage, a company is typically focused on generating operating cash flows to finance its growth and development. In the growth stage, a company may require both operating and financing cash flows to support its growth. In the maturity stage, a company may generate significant operating cash flows and also have stable financing activities. In the decline stage, a company may see a decline in operating cash flows, hence it may start to shift its focus towards reducing its debt and financing activities. Using the notion of firm value developed by Myers (1984), Black's study highlighted the importance of considering a company's life cycle stage when evaluating the value relevance of its different types of cash flows.

Joseph and Lipka (2006) examined whether the information content of earnings would decline in cases of financial distress. They investigated on alleged deterioration in the information content of earnings and the value relevance of cash flow from operations. Their results suggested that while the information content of earnings may decline during periods of financial distress, it would still possess some value relevance. In contrast, value relevance of cash flow from operations appeared to be relatively stable and would remain to be value relevant even during periods of financial distress. This result suggested that while earnings information may not be as informative in case of financial distress, cash flow from operations information would still be a valuable information that can provide valuable insight into a company's financial performance and future prospects. The results from Joseph and Lipka (2006) contributed to the understanding of value relevance in financial information for periods of financial distress, highlighting the importance of considering both earnings and cash flow from operations information in making investment decisions.

Livnat and Zarowin (1990) examined the relationship between components of operating, financing, and investing cash flows with annual security returns. They confirmed a differential association between the components of cash flows and annual security returns. Specifically, Livnat and Zarowin (1990) found that operating cash flows are positively associated with annual security returns, while financing and investing cash flows are negatively associated with annual security returns. This suggested that operating cash flows would provide valuable information about a company's financial performance and future prospects, while financing and investing cash flows are less valuable in this regard. These findings were consistent with an idea that operating cash flows are the primary source of value for a company, while financing and investing cash flows represent a drain on value. The results of Livnat and Zarowin (1990) reinforced the importance of considering both operating and financing/investing cash flows when evaluating financial performance and future prospects of a company.

It is important for companies to monitor and manage their cash flow patterns to ensure financial stability and maintain a strong performance. Monitoring and managing cash flow patterns is an important aspect of good financial management, as it is essential for ensuring a company's financial stability and maintaining its performance. By regularly

monitoring cash flow patterns, companies are able to identify trends and make adjustments to ensure that they have adequate cash on hand to meet their financial obligations, invest in growth opportunities, and respond to unexpected events. This can help to improve the company's financial stability and increase its chances of success in the long term. In summary, monitoring and managing cash flow patterns is an important aspect of financial management and is critical for maintaining a company's financial stability and performance. By monitoring and managing cash flow patterns, companies can avoid financial difficulties and ensure that they have the resources they need to achieve their financial goals and sustain long-term success.

2.2. Hypotheses Development

This study investigates different cash flow patterns that can occur to a company using cash flow patterns as an independent variable, which are then broken down further into eight different possibilities of cash flow patterns. Company performance, which is measured against both distressed and non-distressed situations, becomes the dependent variable in this study. On the other hand, each of the eight different patterns of cash flow constitutes independent variables. The eight cash flow patterns (CFP) were adapted from prior research and have been given the following numerical designations: CFP1, CFP2, CFP3, CFP4, CFP5, CFP6, CFP7, and CFP8 (Shamsudin & Kamaluddin, 2015; Kordestani et al., 2011; Jantadej, 2006; Bruwer & Hamman, 2005; Gup et al., 1993). Further, total revenue or total asset of companies is selected as the control variable that is employed in comparison to the dependent and independent variables.

Kordestani et al. (2011) investigated the question of whether or not there is a substantial difference between distressed and non-distressed companies with regard to the incidence of various cash flow patterns. According to the findings, CFP1, CFP3, and CFP7 all exhibited statistically significant differences in the three years that came immediately before the difficult years. The three forms of cash flow were observed to be experienced by distressed companies within one, two, and three years before they become distressed. This finding was compared and became in line with findings of Shamsudin and Kamaluddin (2015). Jantadej (2006) examined the significant difference between non-distressed and distressed companies in the incidence of various types of cash flow pattern using different tests. He found that CFP1, CFP6, and CFP7 have significant differences within three years before the year of distress. Further, he found that CFP1, CFP2, and CFP7 were found to be more likely experienced by distressed firms within two years before distress. However, CFP5 and CFP6 were found to be less likely experienced by distressed companies. In addition, in the year prior to distress, the patterns of CFP1, CFP2, CFP5, CFP6, and CFP7 are shown to have significant disparities between non-distressed and distressed companies. As a result, the following hypothesis pertaining to the significant difference in the incidence of different patterns of cash flow among distressed and non-distressed companies is formulated as follows:

H1: There is a significant difference between cash flow patterns and company performance.

According to the findings of a study conducted by Shamsudin and Kamaluddin (2015), companies that have CFP4, CFP5, CFP6, and CFP7 are at a greater risk of exhibiting and going through troubled conditions. Meanwhile, Jantadej (2006), who used binary logistic regression to study the association between cash flow patterns and financial distress, found that only two distinct types of cash flow patterns—specifically CFP2 and CFP7—can accurately identify which companies will experience financial distress. The study by Jantadej (2006) demonstrated the importance of using rigorous analytical methods to examine the relationship between cash flow patterns and financial distress. By doing so, researchers are able to gain deeper understanding of the factors that contribute towards financial distress and develop more effective strategies for predicting and mitigating financial risk.

Gup et al. (1993) found that companies with CFP8 have the lowest debt to asset ratio. This could be a positive indicator of financial stability, as the information would suggest that the company is using debt prudently and has a strong balance sheet. In addition to this, an observation was made that companies going through CFP2 and CFP3 would be heavily leveraged and have a slow rate of growth. This observation suggested that these companies may be taking on a significant amount of debt, which may increase their financial risk and limit their ability to grow and invest in new opportunities.

It is important to note that while these findings provide useful insights into the relationship between cash flow patterns and financial performance, they should not be taken as absolute truths. Each company is unique and factors that contribute to its financial performance can vary widely. Therefore, it is important to consider specific circumstances of each company when evaluating its financial health. Overall, the findings of Gup et al. (1993) highlighted the importance of monitoring and understanding cash flow patterns when evaluating a company's financial health. By doing so, companies are able to gain valuable insights into factors that contribute to their financial stability and success, which would empower their management to make informed decisions about how to manage their finances and grow their business.

As suggested by Mulenga and Bhatia (2017), a complete understanding of cash flows is critical for successful financial management. This understanding should include an awareness of the sources and uses of cash, as well as the timing and amounts of cash inflows and outflows. By monitoring and managing these cash flows, companies can ensure that they have adequate liquidity to meet their financial obligations and support their growth and expansion. Bruwer and Hamman (2005) found that CFP1, CFP2, and CFP4 were more likely to occur in companies that are in a state of crisis. This suggested that these cash flow patterns may be indicative of financial distress and may be used as early warning signals of potential financial problems. As a result, the second hypothesis that needed to be tested is formulated as follows:

H2: Different patterns of cash flow from operating, investing and financing activities are statistically significant predictors of financial distress.

3. RESEARCH METHOD AND DESIGN

3.1. Sample

The selection of distressed companies was based on a PN17 list issued by Bursa Malaysia (2017). This is consistent with some previous studies (Fawzi et al., 2015; Thai Siew & Mehdi, 2013). This study also eliminates companies from financial and investment sectors (bank, financial institution, real estate investment trust) for data analysis purposes. The rationale of eliminating financial sector is due to the different statutory requirements imposed to this sector, as well the sector's high dependence on a nation's economic condition (Shamsudin & Kamaluddin, 2015; Thai Siew & Mehdi, 2013; Jantadej, 2006). The financial sector is governed by the Banking and Financial Institutions Act (1989), which is different from those governed by the Companies Act (1965).

Measures of non-distressed firms were chosen based on the criteria of having sensible movement of funds, mainly regular and smooth, during one whole accounting period (Shamsudin & Kamaluddin, 2015). In addition, non-distressed companies will only be chosen if within these three preceding's years of 2014, 2015 and 2016, they did not report any losses (Shamsudin & Kamaluddin, 2015; Kordestani et al., 2011). Each of the non-distressed company was then matched with a distressed company on a basis of similar total revenue or total asset. Individual one-to-one matching was performed, in which firms from the same industry were matched with their corresponding years of data. Financial data were then extracted from the statement of cash flows from 2014 to 2016, which is consistent with a study by Shamsudin and Kamaluddin (2015). The data were derived from annual reports manually to decide on its pattern. For example, Company Z experienced an inflow in operating, investing and financing activities in Year 1. Therefore, Company Z is considered to have experienced CFP8 (+,+,+). The sample would then be categorised according to cash flow pattern categories.

3.2. Data Collection

This study was based on a contextual data derived from published annual financial reports of Malaysian listed companies. This data can be used for the second time although the data had already existed and collected for other purposes (Veal, 2005). Secondary data is believed to be more quickly achieved, cheap, and very useful when statistics are needed (Cooper & Schindler, 1998). According to Mohd Nasir and Abdullah (2004), reported cash flows from the published annual reports can be used for analysis because secondary data are mainly formed due to inaccurate adjustments in determining financial information. These secondary data are available through the Bursa Malaysia's database.

The data gathered were analysed using the Statistical Package for Social Science (SPSS) Version 22.0. Statistical tools that were utilised in this study include descriptive statistics, chi-square and logistics regression. Both independent and dependent variables are categorical data. Therefore, Pallant (2011) contends that the chi-square test must be used in data analysis. The Chi-square test is used to determine if there is a

significant difference in the occurrence of certain patterns of cash flow compositions between distressed and non-distressed companies. As a result, the chi-square test was used to examine the first hypothesis.

Logistics regression is used to test the second hypothesis of this study, which is consistent with Jantadej (2006), Pallant (2011) as well as Shamsudin and Kamaluddin (2015). Binary logistics regression needs to be used since the categorical outcomes are dichotomous which involved two categories (0= distressed company and 1=non-distressed company).

The constructed model is shown below:

$$P(\text{DISTRESS}) = 1 / \{1 + \exp - \beta_0 + \beta_1\text{CFP1} + \beta_2\text{CFP2} + \beta_3\text{CFP3} + \beta_4\text{CFP4} + \beta_5\text{CFP5} + \beta_6\text{CFP6} + \beta_7\text{CFP7} + \beta_8\text{CFP8} + \beta_9\text{LOG_TOTAL_ASSET} + \beta_{10}\text{LOG_TOTAL_REVENUE}\}$$

Where:

P(DISTRESS) = The probability that a company would experience financial distress is denoted as “1”, “0” otherwise

exp = Exponential function

CFP1 = Dummy variable is coded as “1” if a company has the first pattern of cash flow (-,+,+), “0” otherwise

CFP2 = Dummy variable is coded as “1” if a company has the second pattern of cash flow (-,+,-), “0” otherwise

CFP3 = Dummy variable is coded as “1” if a company has the third pattern of cash flow (-,-,+), “0” otherwise

CFP4 = Dummy variable is coded as “1” if a company has the fourth pattern of cash flow (+,+,-), “0” otherwise

CFP5 = Dummy variable is coded as “1” if a firm has the fifth pattern of cash flow (+,-,+), “0” otherwise

CFP6 = Dummy variable is coded as “1” if a company has the sixth pattern of cash flow (+,-,-), “0” otherwise

CFP7 = Dummy variable is coded as “1” if a company has the seventh pattern of cash flow (-,-,-), “0” otherwise

CFP8 = Dummy variable is coded as “1” if a company has the eighth pattern of cash flow (+,+,+), “0” otherwise

LOG_TOTAL_ASSET = Natural log of total assets

LOG_REVENUE = Natural log of total revenue

4. RESULTS AND DISCUSSION

4.1. Chi-Square Test of Statistics

According to Pallant (2011), chi-square test is suitable to be used when both independent and dependant variables are categorical data. Chi-square test is a powerful tool for analysing the relationship between categorical variables, for which it can provide valuable insights into the relationships between variables in a wide range of fields. However, it is important to note that the validity of test results depends on an assumption that the sample being tested is random, and it is representative of the population being studied. The data must not violate this assumption, then only the chi square test is suitable to be used. It was also suggested that in order for the test to produce significant results, the significant value for testing should be set at 0.05 or less. The rule of thumb

is that the value for testing should not be less than 5 in each category. According to the results in Table 1, the assumption of chi-square test was not violated. Moreover, degree of freedom (df) has been set as the number of categories minus 1.

According to Table 1, out of eight cash flow patterns, there are only seven types of cash flow pattern that can be observed from Malaysian listed companies for both distressed and non-distressed conditions in 2014, namely CFP1, CFP2, CFP3, CFP4, CFP5, CFP 6 and also CFP7. This indicated a six degree of freedom (df = 7-1 = 6). Further, the results showed a chi-square value of 3.833 (df = 6, p-value =0.699). The significant value of 0.699 is higher than the alpha value of 0.05. This indicates that the result is not significant, thus, the hypothesis is rejected (Pallant, 2011). In the overall case, the value of chi-square is 3.833 and it is considered as low. It also indicates that the differences between distressed and non-distressed companies in the incidence of cash flow patterns are less.

Table 1. Chi-Square Test for the year 2014.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.833 ^a	6	0.699
Likelihood Ratio	4.983	6	0.546
Linear-by-Linear Association	0.663	1	0.416
N of Valid Cases	32		

In the year 2015 (Table 2), out of eight cash flow patterns, there were only seven types of cash flow pattern observed from Malaysian listed distressed and non-distressed companies. They were CFP1, CFP2, CFP3, CFP4, CFP5, CFP6 and CFP7 indicated by six degrees of freedom (df = 7-1 = 6). The results show a chi-square value of 12.055 (df = 6, p-value =0.061). The significant value 0.061 is higher than the alpha value of 0.05. The p-value indicates that the result is not significant, thus the hypothesis is rejected (Pallant, 2011). In the overall case, the value of chi-square was higher by 8.222 from the year 2014.

Table 2. Chi-Square Tests for the year 2015.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.055 ^a	6	0.061
Likelihood Ratio	15.097	6	0.020
Linear-by-Linear Association	6.732	1	0.009
N of Valid Cases	32		

In 2016, with reference to Table 3, out of eight cash flow patterns, there are only six types of cash flow pattern observed from Malaysian listed distressed and non-distressed companies, namely CFP1, CFP2, CFP3, CFP4, CFP5 and CFP 6 as indicated by six degree of freedom ($df = 6-1 = 5$). According to Pallant (2011), in order to be significant, the significant value should be 0.05 or smaller. The results show a chi-square of 7.404 ($df = 5$, p -value = 0.192). The significant value is higher than the alpha value of 0.05, indicating that the result is not significant. Thus, the hypothesis is rejected (Pallant, 2011). In the overall case, the value of chi-square is 7.404 and it is considered as lower by 4.651. It indicates that the differences between distressed and non-distressed companies in the incidence of cash flow pattern are getting less.

Table 3. Chi-Square Tests for the year 2016.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.404 ^a	5	0.192
Likelihood	7.928	5	0.160

Table 4. Binary Logistics Regression Analysis - Prediction Model for year 2014.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	CFP 1	20.014	24271.671	0.000	1	0.999	4.92 x 10 ²
	CFP 2	-0.181	1.977	0.008	1	0.927	0.835
	CFP 3	0.421	1.828	0.053	1	0.818	1.523
	CFP 4	22.498	40192.991	0.000	1	0.999	5.90 x 10 ²
	CFP 5	1.342	1.967	0.466	1	0.495	3.828
	CFP 6	-0.362	1.714	0.045	1	0.833	0.696
	Log_total_asset	-0.431	1.259	0.117	1	0.732	0.650
	Log_total_revenue	1.325	1.174	1.275	1	0.259	3.763
	Constant	45.703	46953.087	0.000	1	0.999	0.000
	Overall Test of Model						
Change in -2 Log Likelihood				37.31			
Cox and Snell R ²				0.195			
Nagelkerke R ²				0.26			

Table 5. Binary Logistics Regression Analysis - Prediction Model for year 2015.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	CFP 1	43.275	32646.594	0.000	1	0.999	6.62 x 10 ²
	CFP 2	24.281	28044.421	0.000	1	0.999	3.50 x 10 ²
	CFP 3	23.115	28044.421	0.000	1	0.999	1.09 x 10 ²
	CFP 4	1.659	49009.900	0.000	1	1.000	5.255

Ratio			
Linear-by-Linear Association	0.385	1	0.535
N of Valid Cases	32		

In summary, H1 is rejected.

4.2. Binary Logistics Regression

Tables 4, 5 and 6 represent the detail results of Binary Logistics Regression. The results is detailed as follows.

In a year 2014 (see Table 4), out of eight cash flow patterns, there are only six types of cash flow pattern that occurred between the distressed and non-distressed companies, which are CFP1, CFP2, CFP3, CFP4, CFP5, and CFP6. Omnibus Test of Model Coefficients is 6.924 with 8 degrees of freedom. Next, the chi-square value of Hosmer and Lemeshow shows 5.960 with a significant value level 0.652. The value is larger 0.05, therefore indicating that the chi-square value supports the model. Referring to Table 4, Cox and Snell's R² value and Nagelkerke's R² value suggested that they are 19.5 percent to 26 percent of the variability as explained by the set of variables in the model.

	CFP 5	19.719	28044.421	0.000	1	0.999	3.66 x 10 ²
	CFP 6	21.803	28044.421	0.000	1	0.999	2.94 x 10 ²
	Log_total-asset	-3.096	1.872	2.734	1	0.098	0.045
	Log_total_revenue	2.383	1.640	2.110	1	0.146	10.833
	Constant	-111.772	146823.224	0.000	1	0.999	0.000
Overall Test of Model							
Change in -2 log likelihood				25.176			
Cox & Snell R ²				0.449			
Nagelkerke R ²				0.599			

Table 6. Binary Logistics Regression Analysis – Prediction Model for year 2016.

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	CFP 1	-1.492	2.944	0.257	1	0.612	0.225
	CFP 2	-.401	1.203	0.111	1	0.739	0.670
	CFP 3	1.979	1.366	2.098	1	0.147	7.233
	CFP 4	1.931	1.410	1.875	1	0.171	6.899
	CFP 5	-1.169	1.550	0.569	1	0.451	0.311
	Log_total_asset	-1.058	1.195	0.785	1	0.376	0.347
	Log_total_revenue	1.342	0.895	2.250	1	0.134	3.828
	Constant	-1.672	5.248	0.102	1	0.750	0.188
Overall test of model							
Change in -2 Log Likelihood				33.098			
Cox and Snell R ²				0.294			
Nagelkerke R ²				0.392			

Table 5 shows that in the year 2015, out of eight cash flow patterns, there are only six types of cash flow pattern that occurred between the distressed and also non-distressed companies, which are CFP1, CFP2, CFP3, CFP4, CFP5, and CFP6. Omnibus Test of Model Coefficients is 19.06 with 8 degrees of freedom. Next, chi-square value of Hosmer and Lemeshow shows 10.260 with a significant value level of 0.247. This value is larger than 0.05, therefore indicating its support for the model. Cox and Snell's R² value and Nagelkerke R² value suggested that 44.9 percent to 59.9 percent of the variability is explained by the set of variables in the model.

In the year 2016 (see Table 6), out of eight cash flow patterns, there are only five types of cash flow that occurred between the distressed and also non-distressed companies, which are CFP1, CFP2, CFP3, CFP4, and CFP5. Omnibus Test of Model Coefficients is 11.138 with 7 degrees of freedom. Next, chi-square value of Hosmer and Lemeshow shows 7.388 with a significant value level 0.498. This value is larger than 0.05, indicating that it is significant for the model. Next, the Cox and Snell R² value and Nagelkerke R²

value suggested that 29.4 percent to 39.2 percent of the variability is explained by the set of variables included in the model.

From all of the tables above, for the first type of cash flow, (-,+,+), the p-value is 0.999 for 2014 and 2015, and 0.612 for 2016. These values indicate that this first type of cash flow does not have a relationship with financial distress. Therefore, this type of cash flow cannot be used as a predictor for financial distress. This result is consistent with Shamsudin and Kamaluddin (2015), which showed that this type of cash flow pattern is not familiar among Malaysian listed companies. However, the result is contradictory with Bruwer and Hamman (2005), Gup et al. (1993), as well as Kordestani et al. (2011), which suggested that this type of cash flow pattern is significant to distressed companies. According to their study, a negative net operating cash flow indicated that the company does not have cash to meet its operation expenditures. Therefore, the company would start to sell off its assets to make the cash inflow which later on will lead to positive investment activities. The management will start to be more involved with financing through the borrowing and

issuance of stock. The increase in borrowing and issuance of stock will lead to increase in debt, which at a later time they will need to give up on debt payment.

For the second type of cash flow pattern, (-, +, -), the p-values are 0.927, 0.999 and 0.739 for 2014 to 2016 respectively, for which these are not predictors to distressed companies. These results indicate that this type of pattern has no relationship with distressed companies. The result is supported by Shamsudin and Kamaluddin (2015), who claimed that this type of cash flow pattern is also foreign to a Malaysian context. However, according to Bruwer and Hamman (2005), as well as Jantadej (2006), this type of cash flow pattern is significant to distressed companies. These researchers postulated that the negative financing net cash flow leads to positive investing net cash flow because the companies would start to sell or redeem debts, as well as repurchasing capital. This pattern cannot be continued for a long period and the companies will be able to achieve the highest level of debt. Eventually, they are going to be liquidated.

For the third type of cash flow pattern, (-,-,+), the p-values for 2014 until 2016 are 0.818, 0.999 and 0.147 respectively, indicating that this pattern is not significant to distressed situations. This is consistent with Bruwer and Hamman (2005), Gup et al. (1993), as well as Shamsudin and Kamaluddin (2015). In their findings, this type of cash flow pattern usually occurs in newly set up companies, where they will experience losses at the beginning, but later on the business will pick up their pace. They believed that the outflow from operating activities is only temporary.

For the fourth type of cash flow pattern, (+, +, -), the p-values are 0.999, 0.999 and 0.171 for 2014 until 2016 respectively, which are indicators of non-distressed companies. In an observation of 32 companies from 2014 to 2016, negative cash flows of financing activities might be similar for both non-distressed and distressed companies. This is due to the fact that for non-distressed companies, they are capable to pay off debts, such as long term debt, project debt or revolving credit facility. Meanwhile for distressed companies, their cash may be highly used in financing of their discontinued operations (McCrary, 2011). However, this is contradictory to several previous findings (e.g. Bruwer & Hamman, 2005; Gup et al., 1993; Jantadej, 2006; Kordestani et al., 2011; Shamsudin & Kamaluddin, 2015) where it was found that this type of cash flow pattern is significant to distressed companies as they are entering the liquidation phase. According to them, even though the net operating is positive, cash flow for the companies is still not enough to cover their financing activities since the net cash from investing is also negative, which shows a sign of lack in financial strength. Additionally, the companies will be engaged in activities such as selling off assets for cash inflow from investing activities which is then replaced by the outflow of cash in financing activities.

For the fifth type of cash flow pattern, (+,-,+), the p-values are 0.495, 0.99 and 0.451 for the year 2014 to 2016 respectively. All of the p-values are more than 0.05, which indicate that this cash flow pattern is only experienced by non-distressed companies. The positive investing net cash flow shows that companies are enjoying various profitability from their investing activities, which in turn indicates that the

companies are growing healthy and achieving satisfactory performance. This progress also makes way for more cash inflow towards the net operating activities (Bruwer & Hamman, 2005; Jantadej, 2006; Kordestani et al., 2011). However, this is contradictory to Shamsudin and Kamaluddin (2015), in which they found that this type of cash flow is significant to distressed companies. This is because the positive cash flow in financing shows that the companies are more likely to acquire more external financing such as loans, debt and some other borrowing. This will put the company into overtrading, high debt and increase in company gearing level. This finding is also supported by Gup et al. (1993), which agreed that companies which are distressed will be likely to require and get more cash from other sources to support the company operations activities.

For the sixth type of cash flow pattern, (+,-,-), the results show p-values of 0.833, 0.99, and 0.376 from year 2014 to 2016 respectively. The values show that this is not a predictor for distress, which is consistent with the studies by Bruwer and Hamman (2005), Gup et al. (1993), as well as Kordestani et al. (2011). According to them, this type of cash flow pattern would commonly be observed in a non-distressed company. Companies that are experiencing this type of cash flow pattern would generate positive operating net cash in order to finance future costs. A positive operating cash flow is an ideal cash flow position because a healthy company depends on the operating cash flow that is enough to cover any finance cost. It also provides a possibility for the company to invest and get more return. However, this finding is contradictory to the study by Shamsudin and Kamaluddin (2015). These authors revealed that during losses in certain financial years, companies would still manage to get positive cash flows because of the increase in their working capital. Changes in working capital would include an increase in the company's current assets such as receivables and inventories, as well as a decrease in payables. These reflect that the company is into the liquidation phase. As the result, cash inflow might be insufficient to cover its financial obligation, thus the company might be forced to sell off its asset.

For the seventh type of cash flow pattern, (-, -, -), the significant value is 0.999 in 2015. From the observation of 32 companies, there is only one company that experience this type of cash flow pattern, which is K. Seng Seng Bhd. However, the company has improved in 2016 (Bursa Malaysia, 2017). According to the study by Bruwer and Hamman (2005), Gup et al. (1993), Kordestani et al. (2011), also Shamsudin and Kamaluddin (2015), if a company is experiencing this type of cash flow pattern, it means that it is experiencing a huge loss and a very high debt reliance. If the company does nothing to fix the situation, the only option that the company has is to liquidate itself. Companies that are experiencing this type of cash flow pattern would need to work fast to recover in order to avoid from being removed from listing (Bursa Malaysia, 2017).

For the eighth type of cash flow pattern, (+,+,+), there is no company experiencing this type of cash flow pattern from the 32 observations of distressed and non-distressed companies from 2014 to 2016. Therefore, it cannot be concluded whether this type of pattern is significant to the distressed or

non-distressed companies. According to Jantadej (2006), this type of pattern has a huge positive net cash inflow from operating, investing and financing activities which is so perfect for a cash position. However, it is generally impossible for a company to be this perfect. As a conclusion, the cash flow pattern is not significant to the distress situation of companies. Therefore, the hypothesis 2 is not supported.

5. CONCLUSION

There are two hypotheses examined in this study. The first hypothesis was to examine whether or not there is any significant relationship between cash flow pattern and company performance and the second hypothesis was to identify the difference of cash flow patterns between distressed and non-distressed companies. The chi-square test was used to examine cash flow patterns between distressed and non-distressed companies for the years 2014 to 2016. The results showed that the patterns are insignificant between distressed and non-distressed companies for the respective years of 2014 until 2016.

Logistics regression was used to examine the second hypothesis, which was to identify cash flow patterns in the incidence of distressed companies. There were eight types of cash flow patterns code-named CFP1 until CFP8. From the findings, none of the CFP was significant to companies' distress. In other words, patterns of cash flow between distressed and non-distressed companies were more or less the same. Out of the eight patterns of cash flow, CFP 7 (-, -, -) rarely happens in Malaysia. If a company is indeed experiencing this cash flow pattern, it will be immediately removed from the listings of Bursa Malaysia. Other than that, none of the companies in Malaysia experienced CFP8 (+, +, +), as this CFP is considered as a perfect cash flow.

Due to CFPs not showing any significant value, the researcher found that 56 percent of distressed companies were grouped into the PN17 list not because to their cash flow pattern, but it is because of the disclaimer of audit opinion that was issued by external auditors. For example, a disclaimer of audit opinion was issued because of internal fraud and big drop in the company's share price. Disclaimer of audit opinion is important as it provides early warning signs to the financial statements' users. This suggests that factors other than cash flow patterns, such as issues with financial reporting or internal controls, may have contributed to the financial distress of these companies.

The implication of this study is that it enables stakeholders to realise that the financial statements alone do not produce sufficient evidence of the healthiness of a company. Nowadays, Covid 19 pandemic has notably brought about significant disruptions to the global economy, and traditional financial indicators may not be sufficient to capture the full extent of the impact on businesses. There are other reasons that are needed to be identified and evaluated before a company's performance can be judged and concluded. Users need to identify more non-financial statement evidence such as economics, politics and social conditions which could be very significant to determine the company's healthiness. On other note, cash flow, which is a key financial indicator, may not be as relevant during this period. This is because cash flow might not reflect other important factors that affect a

company's performance, such as supply chain disruptions, changes in consumer behavior, or government regulations. For example, a company involved in productions which are sensitive to natural resources might face some environmental issues or community protest that could well lead into a moratorium being issued by the authorities. In fact, this situation could lead the company straight into bankruptcy by virtue of temporary stop work orders on its business and revocation of business licences.

Overall, it is crucial for companies to maintain accurate and reliable financial information and to have effective internal controls in place. This helps to ensure that financial information is trustworthy and supports decision-making by stakeholders, as well as protecting the company from potential legal consequences.

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