

USING A CASH FLOW MODEL TO PREDICT FUTURE CASH FLOW FROM HISTORICAL CASH FLOW: A MALAYSIAN PERSPECTIVE

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ABSTRACT

This research aims to look into the role of historical cash flows in forecasting potential cash flows of Malaysian publicly traded companies. Construction, energy, and property were the industries chosen for this study. The data for this study came from the financial statements of 159 companies in these industries that were published on the Bursa Malaysia website from 2015 to 2019. The statements of profit or loss and cash flow statements were used to collect historical cash flow data. The cash flow model was used, and the three-year lags improved its predictive power in accounting results. This study found that the past one-year cash flows are a significant predictor and have an optimistic effect on forecasting potential cash flows. Taking all into account, this study would assist company executives in managing cash flows for ongoing operations, monitoring investment strategies, and tracking financing activities to ensure the organization's sustainability and growth. On the other hand, other business stakeholders may use historical cash flows to forecast potential cash flow investment decisions. This study is expected to have implications and benefits for all stakeholders concerned, including academics, professionals, and regulatory agencies.

Keywords: Historical Cash Flow, Future Cash Flow, Prediction, Malaysia.

INTRODUCTION

The cash flow analysis is a vital activity since different economic choices are involved. According to Gordon, Henry, Jorgensen, and Linthicum (2017), the International Financial Reporting Standard (IFRS) transparency offers a system in which financial statements provide adaptability for companies in their classification choices within the cash flow statements. The International Accounting Standard Board (IASB) and the Financial Accounting Standard Board (FASB) are interested in flexibility in the designation of cash flows and their ramifications. Financial information can help users of financial statements forecast potential cash flows better.

According to the IASB's Conceptual Framework, the primary objective of financial reporting is to provide financial information that is useful to current and prospective investors, lenders, and other decision-makers. Financial reports provide information on the capital of the company and assist investors in determining the reporting entity's potential net cash inflow prospects. For example, investors need details on potential cash flows since the present value of their future cash flows determines the investment's worth. As a result, investors need expertise for forecasting cash flows for investment purposes.

Investors can forecast stock prices when forecasting future cash flows because a company's ability to include cash inflows is reflected in its share valuation. Cash flow forecasting is also often used by creditors, suppliers, and workers to assess a company's

solvency and liquidity (Rashid, 2018). Furthermore, the cash flow forecast tells the progress of the appraisal determination as well as the manager's and investor's decisions (Nguyen & Nguyen, 2020). The prediction of potential cash flows is a critical symbol of management's use of this form of information to plan future projects. Complete understanding of cash flows is essential, and correctly managing them will aid companies in avoiding crises (Mulenga & Bhatia, 2017). Using cash flow data for the statement of profit or loss and statement of financial position, according to the FASB, would enable users to measure and forecast cash flows.

Three industries were selected for this study: construction, energy, and property. Construction is a high-risk industry, but it is also one of the most important in any economy. While liquidity is the most valuable resource for construction firms, cash flow prediction seeks to assess the distribution of project expenditure and revenue. Poor cash flow adversely affects company profitability and, simultaneously, the ability to meet project deadlines. The construction industry operates in a highly competitive environment. Without proper governance, contractors cannot survive. Therefore, contractors are encouraged in tender bids to introduce low-profit margins to compete within the industry. This bidding impacts the liquidity of the company. Previous research found that a lack of liquidity is a major issue for the failure of construction projects and the bankruptcy of construction companies. Various studies on cash flow management have shown that construction managers are more concerned with contract sums relating to site costs and fixed costs than benefits. As such, this concern might describe why only a third of medium to large businesses make profits even though they experience low turnovers and capital (Adjei, Fugar, Adinyira, Edwards, & Pärn, 2018).

In Malaysia, several researchers argued that cost variance, rather than time variance, is the source of many problems (e.g., Memon, Rahman & Azis, 2012). However, the results have shown a significant positive relationship between cash flows and firm performance (Adjei et al., 2018). Contractors with proxies for financial difficulties, inadequate contractor experience, lack of contractor experience, shortage of site workers, and incorrect contractor preparation and scheduling are the reasons projects could not be completed within the stipulated budget and timeline. The problem of cost overruns poses a significant threat to the development of the construction industry in Malaysia (Aris, Anuar, Trofimov, & Sokat, 2019).

The financial success of a firm's performance in the construction industry is determined by a number of factors, including the company's cash inflows and outflows. Cash inflows are the amount of cash collected and cumulative investment by a company for a given time span. Insufficient cash flow means no payments to vendors, staff, or crews and no material purchases. Thus, the company could be constrained in its ability to complete on-site assignments. It also would have to make job cuts or work at a slower pace to balance the amount of cash available. As a consequence, the need for cash flow stability and liquidity is important when assessing a company's financial status. In other words, cash flow values are critical for analyzing the duration of funds in operations management to determine the investment's duration and for examining cash in funding activities. Accordingly, financial performance can be more precisely calculated, and decision-making can be more efficient (Aris et al., 2019).

On the other hand, for the energy industry, it would be helpful to provide a robust structure that prioritizes decision-making at every level of the global energy system. However, this has not yet been implemented. Even though fossil fuels have historically had significantly lower marginal supply costs, substitute reserves have been required over the last decade, and have become more complex and expensive than ever before. In order to meet the increased capital requirements for the replacement of reserves, oil and gas companies keep striving for sufficient free cash flows from their current income, thus trying to prevent

a decline in current assets over the lifecycle to avoid any possible downturn in future cash flows (Agostinho & Weijermars, 2017). Without investment in experimentation to discover alternative reserves to replace oil and gas production, the oil industry would disappear. However, when oil and gas prices collapse due to poor demand, overproduction, or both, companies are forced to postpone exploration to avoid negative cash flows or prevent already negative cash accounts from being even more negative. As a result, energy firms continue to aim for adequate cash flow from their current profits to meet the increasing capital needs for the replacement of reserves, prevent a decrease in already negative cash flows, and prevent potential reduction in future cash flows. The energy market will vanish if no investments are made in a platform for new reserves to replace oil and gas exploration (Agostinho & Weijermars, 2017). Therefore, a structured investment strategy must verify that capital for discovering and producing new areas can be derived from operational activities or raised from the investors (Agostinho & Weijermars, 2017).

According to Bergmann, Kamarás, Gleißner, and Guenther (2020), growth threats in the real estate sector are understudied, posing a challenge to company survival. The authors highlighted the impact of material selection in terms of external and project risks for real estate development. In sum, resource prices and changing regulations have shown the highest risks. The authors further highlighted that the cash flow model shows that conventional materials perform slightly better, although the uncertainties in the calculations are similar. Their findings contributed to risk management and decision-making for real estate projects by giving visibility to the discussion and analysis of the financial efficiency of sustainable construction materials and design that may be essential to disruptive innovations. Their study presents a model that integrates the environmental and long-term cash flow assessment of real estate projects, thereby increasing management flexibility.

In general, the ability of an organization to generate future cash flows is critical when making decisions for various stakeholders. Indeed, predictions of potential cash flows play a vital role in financial prediction and financial analysis (Kliestik, Valaskova, Lazaroiu, Kovacova, & Vrbka, 2020). Malaysia has reported a significant decrease in project execution and deliverable performance due to poor time management and cost efficiency issues (Omopariola, Windapo, Edwards, and Thwala, 2019). Since there is limited research on predicting future cash flows in the construction, energy, and property industries in Malaysia, this study would provide the most recent data, especially on these industries. It would focus on the following research question: Do historical cash flows have significant predictive power in forecasting potential cash flows in Malaysian publicly traded firms. This study would include the most up-to-date information on the construction, energy, and real estate sectors, which are considered responsive to and are at high risk of cash flows.

The rest of this paper is presented as follows. Section 2 contains the literature review. Section 3 defines the research methodology. Section 4 elaborates on the study's findings, and Section 5 presents the study's conclusions.

LITERATURE REVIEW

The primary purpose of financial statements is to forecast future cash flows. The relevant information is provided to users within and outside the business by forecasting cash flows. Any economic decision denotes a comprehensive choice among various options for achieving the target. As a result, each choice necessitates the presumption that the future will be better served.

Decision-makers, according to Umoren & Umoffong (2018), must generally face the consequences of their decisions. Anticipating future cash flows is a crucial part of the decision-making process because it can decide the options and assessment process results. Since cash

must be available when needed, cash flow is known as the "*cornerstone*" of a company's business management. As a result, a company's cash management capabilities are vital to its long-term survival and growth. Consequently, by predicting future cash flows, managers can assist in foreseeing possible financial issues. Forecasting cash flow also helps the company to have a clearer view of its cash situation, enabling it to make appropriate improvements in debt reduction, acquisitions, and cost repayment (Noury, Hammami, Ousama, & Zeitun, 2020).

According to Sarraf (2019), an analyst is interested in a company's cash flow because historical cash flows are assumed to affect potential cash flows. In other words, the study aims to forecast future cash flow expansion to provide a straightforward predictor of the company's future cash flows. To make an informed decision about investment portfolios, fund managers or experts may calculate the return on their stock holdings. This calculation is essential to determine which securities to purchase, hold, or sell, as well as when to buy or sell them (Jiang & Jia, 2020).

Furthermore, a company's desire to pay dividends is mirrored in its capacity to produce potential cash flows. Predicting a company's cash flow when it sells shares is essential when making financial decisions because it shows the company's potential to pay dividends in the future. Additionally, various stakeholders' decision-making processes rely on a company's ability to understand future cash flows. In terms of financial analysis and investment research, estimating potential cash flows is a significant task (Soboleva, Matveev, Ilminkaya, Efimenko, Rezvyakova, & Mazur, 2018).

As a result, when combined with other data, Vietnamese Accounting Standard No. 24 (VAS 24) has agreed that cash flow from operating activities would help and enable users to forecast future cash flows (Nguyen & Nguyen, 2020). On the other hand, since forecasting future cash flows is so important, some researchers have advocated for the visibility of cash flow prediction to help investors and analysts predict future cash flow dividend streams. Consequently, they have agreed to compare future cash flows with actual cash flows to provide more useful data for investment decision-making.

Predicting a client's or customer's bankruptcy problems helps borrowers avoid misery and terrible debts, as Shamsudin and Kamaluddin (2015) point out in their lending decisions. There are a few telltale signs that a company is having financial difficulties. As a result, cash flows are one of the most important financial indicators of a financial crisis. Creditors and other stakeholders will receive an early warning alert of bankruptcy if cash flow is reduced. Longevity is also measured by a company's ability to generate a healthy long-term cash flow, with inflows exceeding outflows over time. Companies may live for a limited time by deferring loan payments or allocating funds wisely. In the long run, though, companies must also collect enough cash to meet their needs, as debt repayment failure is the most common cause of bankruptcy (Lee & Kim, 2019).

Since it is essential to investigate potential cash flow prediction to detect deterioration in a company's financial situation, a reliable prediction of financial problems using a suitable and valid approach is a major concern. Mulenga and Bhatia (2017) asserted that historical cash flow is a better predictor of future cash flows, which has been scientifically proven by the FASB. Previous research finds mixed evidence on which measure, in terms of historical earnings or historical cash flows, is a superior indicator of potential cash flows from 1989 to 2015, according to Nallareddy, Sethuraman, and Venkatachalam (2020). They discovered, however, that historical cash flows are a better indicator per year.

Nonetheless, Umoren & Umoffong (2018) examined past cash flows and earnings to forecast potential operating cash flows of Nigerian money deposit banks between 2011 and 2016. They employed the OLS regression techniques, and the main findings showed that past earnings could forecast future operating cash flows better than past cash flows.

Agana, Mireku, and Appiah (2016) investigated the comparative predictive ability of variables in earnings and operating cash flows for future operating cash flows in a developed economy to support their point. As a proxy for potential operating cash flows, current operating cash flows were inverted as predictors over the previous one, two, and three years of earnings and operating cash flows. The findings revealed that forecasting potential operating cash flows requires a thorough understanding of historical earnings and operating cash flows. However, they have distinct predictive powers for future cash flows, with historical earnings having a superior comparative predictive potential. As a result, the analysis concluded that historical earnings are a better indicator of potential cash flow of transactions than historical cash flow of transactions.

Stakeholder Theory

The stakeholder theory is a view of capitalism that emphasizes the interconnected relationships between a business and its customers, suppliers, staff, investors, societies, and other stakeholders (Freeman, Phillips, & Sisodia, 2020). Stakeholder theory refers to groups of people involved in a company's success and are motivated by its goals, operations, or activities.

According to Al-Attar and Maali (2017), the stakeholder theory can be linked to Freeman's workshop in 1984, which created a modern conceptual paradigm for organizations to address the needs and benefits of stakeholders. This theory aims to optimize profits and increase company resources for the good of all stakeholders. Some scholars have noted that the objectivity of the stakeholder hypothesis can vary depending on the constituents, which can lead to inconsistencies. When it comes to a business's cash flow, all parties are able to participate. In reality, the cash flow architecture alone enables stakeholders to make short- and long-term investment decisions. If a company's cash flow is weak, it may scare away potential investors and put current investors in jeopardy (Amayreh & Castaneda, 2019).

In the context of this study, this theory clarifies that management has a responsibility to predict what will happen to cash flows and ensure that the organization has sufficient capital to thrive. As a result, a lack of consistent funds could jeopardize the project's entire lifespan. Furthermore, in the construction, energy, and property industries, predicting cash flows is vital to assisting management in forecasting a surplus or deficit in the coming months. For example, if the company's earnings are expected to fall over the next three months, it would be ideal if management decides to buck the trend.

Previous studies established cash flow estimation as a criterion for calculating potential cash surpluses or shortfalls, according to Omopariola et al. (2019). Construction projects that catch the interest of key stakeholders and take full advantage of the growth opportunity are more prevalent in companies with a productive cash flow analysis. The authors suggest that the creation of an accurate financial forecast that can be attributed to actual on-site development and the associated expenditure outlays is the goal of cash flow analysis. Furthermore, property development has always been a highly cyclical market, and developers are often plagued by cash flow issues. Property construction necessitates a large initial investment as well as recurring cash outflows for operations. Except for the fact that some or all projects can be sold before they are built, developers often run into cash flow problems before the development starts to sell, particularly if the real estate market is slowing down during construction. Several developers are also facing bankruptcy due to prolonged negative cash flows.

Furthermore, a business that is experiencing rapid growth could experience cash flow issues. As a company grows, it incurs higher costs, such as higher rent for additional

rooms, increased marketing expenses, and increased capital spending for new equipment, machinery, and so on. Extra funds may be consumed in addition to maintaining a higher inventory ratio.

Since the coronavirus outbreak, the property industry, known for its '*high leverage and high turnover*,' has faced various strategic and operational challenges. A series of programs (such as fiscal relief and monetary easing policies) are expected to be implemented to speed up the economic recovery. The coronavirus broke out without notice at the end of 2019 and spread rapidly. Since then, the pandemic has engulfed companies, adding to the already-increasing problems they face. As a result of this disaster, it is critical for property developers to set up the correct cash management system to ensure successful overall planning and sufficient cash flow to avoid capital shortages and a possible debt crisis. Therefore, forecasting potential cash flows in the real estate sector is crucial.

Energy companies may put their cash flow to good use in a number of ways. Until operating costs or financing changes, cash flow is the gap between income and cash flows investment. As a result, businesses can use cash flow to make acquisitions, repay loans, produce profits, buy back equity shares, and increase the accumulated cash balance. Firms may use the additional funds for investments, acquisitions, dividends, share repurchases, or to increase cash balances when they borrow additional funds, issue new share capital, or sell current resources. Due to the long-term nature of economic decisions and the short-term resource constraints, companies often increase their capital reserves during times of increasing energy prices in order to have money available to invest in the coming years. There are two aspects of financial data that are worth noting. First, owing to the depreciation of past and present tangible funding and the desertification of oil reserves, net income is initially considerably lower than cash flow. Second, certain investment decisions (e.g., experimentation and research and development costs) are deducted as expenditures for cash flow and gross profit.

The energy industry's investment is a large-scale undertaking, so it is important to estimate capital expenditure for the current and future periods. Discount rates affect cash flows every year, so determining the discount rate is critical. The larger the receivables, the tighter the year-end sales and the higher the cash flows. On the other hand, the lower the receivables, the higher the financial gains and the greater the cash flows. The valuation is also focused on present values and uses accounting data to analyze the cash inflow and outflow to arrive at an economic value that is completely objective. The outcome of the valuation implicitly implies that the investment project's cash flow will remain constant, ignoring the importance of growth potential. From the viewpoint of investors, organizations are cash flow machines with detailed financial performance and profitability elements that are influenced by management decisions that must, without a doubt, produce positive shareholder returns (Yan, Lianyong & Shanna, 2020).

METHODOLOGY

Data Collection

The target population of this study is the public listed companies in Malaysia from the construction, energy, and property industries. The target respondents should have comprehensive historical cash flow data. The data were collected from their annual reports for 2015 to 2019 published on the Bursa Malaysia website.

Gordon et al. (2017) suggested the use of the stratified random sampling technique. This sampling technique was chosen for this study because it is most efficient in differentiating information based on various population strata. The stratified random sampling technique is also known to differ in parameters. The stratified random sampling in this study includes

segregation, followed by a random selection of annual reports from each organization. The data drawn from each organization can either be proportionate or disproportionate stratified random sampling. Generally, disproportionate sampling is more comfortable and straightforward in collecting data (Amayreh & Castaneda, 2019). In addition, the stratified random sampling design is also more efficient because, in terms of the sample size, each data from the financial statement is better represented and more valuable, and the information can be obtained from each organization.

The companies listed on the Bursa Malaysia website between 2015 and 2019 made up the study's sample. Before being selected, the companies must have prepared accurate financial reports, including revenue statements, balance sheets, and a statement of cash flows. Furthermore, the companies had to have been operational for at least 12 months prior to submission of the annual report. Nonetheless, the reason for excluding entities with fiscal years ending in non- December calendar is that equal numbers of companies under study can be kept. The sample comprised 159 companies, as shown in Table 1. Since the companies are large companies with high pricing, they are at a great danger of accepting risk of loss as a result of their actions and activities. For example, the company might put current and future projects in jeopardy due to a lack of stable funding over their lifespan. If cash flows can be forecasted in these sectors, the likelihood of loss or potential severity of those losses that might occur may be reduced or avoided.

Table 1 SUMMARY OF INDUSTRIES		
Industry	Number of Companies	Percentage (%)
Construction	46	29
Energy	21	13
Property	92	58
Total	159	100

Hypothesis Development

According to the International Accounting Standard (IAS) 7, the 'Cash Flow Statement' describes those past cash flows are often used as an indicator of numbers, pacing, and estimation of potential cash flows (Nguyen & Nguyen, 2020). In a recent analysis, Efayena (2015) found that cash flow from operations has greater predictive power of future cash flows than earnings. Farshadfar, Ng, & Brimble (2008) discovered that cash flow from operations has a greater predictive power in predicting future cash flows of 323 companies listed on the Australian stock exchange between 1992 and 2004. Their findings were found to be comparable to Habib (2010). As a result, the hypothesis for this study is as follows:

H1: Historical cash flows have a significant predictive power in forecasting potential cash flows in Malaysian publicly traded firms.

Cash Flow Model

Since previous research has shown that yearly cash flow lags are a good indicator of future cash flows, this study looked at how well year-long cash flow lags forecast future cash flows in Malaysian publicly traded firms. The cash flow model used to make this prediction is shown below:

$$CFO_t = \alpha_0 + \alpha_1 CFO_{t-1} + \alpha_2 CFO_{t-2} + \alpha_3 CFO_{t-3} + \mu$$

Where,

CFO_t	=	Cash flow from operations for year t,
CFO_{t-1}	=	Cash flow from operations for year t-1
CFO_{t-2}	=	Cash flow from operations for year t-2
CFO_{t-3}	=	Cash flow from operations for year t-3
$\alpha_0, \alpha_1, \alpha_2, \alpha_3$	=	Unknown parameters
μ	=	Error term

The total cash flow of payments as reported in the annual t-i cash flow statements, as specified by CFO_{t-i} , is used to calculate the yearly cash flow lags. The concept of cash flow indicators was also used by Agana et al. (2016) in their research. Yearly cash flow lags are estimated to have a stronger relationship with potential cash flows, whereas subsequent cash flow lags are anticipated to have cumulative predictive capacity. Furthermore, if they have predictive capabilities, they could be seen in the model.

Findings

Based on Table 2, there are 159 cash flow records in total for each company. This model consisted of four variables: Cash Flow (CFO) 2016, Cash Flow (CFO) 2017, Cash Flow (CFO) 2018, and Cash Flow (CFO) 2019. There was no missing value in all variables. The median is the best measure of central tendency. The medians in Table 2 show that, on average, the companies have good historical cash flows for predicting future cash flows since the median for the variables ranges from RM2 million to RM16 million.

Table 2					
DESCRIPTIVE STATISTICS OF THE CASH FLOW MODEL					
Statistics					
		CFO (2016)	CFO (2017)	CFO (2018)	CFO (2019)
N	Valid	159	159	159	159
	Missing	0	0	0	0
Mean		36804163.11	39218383.81	73794361.35	80089117.81
Median		8040000.00	14046107.00	2769483.00	15141000.00
Std. Deviation		139233077.203	192148216.552	253459462.569	220403976.008
Variance		193858497875 03264.000	3692093712399 8888.000	64241699165925 672.000	48577912640025 536.000

Table 3					
MODEL SUMMARY OF THE CASH FLOWS MODEL					
Model Summary^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.432 ^a	.187	.161	.69113	1.923
a. Predictors: (Constant), CFO (2018), CFO (2017), CFO (2016)					
b. Dependent Variable: ResidualCFO					

Based on Table 3 above, the R-squared value is 0.187. Therefore, the independent variables (Cash Flow 2018, Cash Flow 2017, and Cash Flow 2016) explain 18.70% of the variability of the dependent variable (Cash Flow 2019), while the remaining 81.30% is explained by other factors.

Table 4 FINAL MODEL OF CASH FLOWS						
Model		nstandardizedCoefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.594	.075		101.253	.000
	CFO (2016)	-2.684E-10	.000	-.059	-.475	.636
	CFO (2017)	1.059E-10	.000	.028	.234	.815
	CFO (2018)	1.150E-9	.000	.447	4.114	.000

The variables in Table 4 include Cash Flow (CFO) 2016, Cash Flow (CFO) 2017, and Cash Flow (CFO) 2018. Since only one variable (CFO 2018) has a significant value ($0.000 < \alpha\text{-value} (0.05)$), it could be concluded that Cash Flow (CFO) 2018 significantly contributes to the prediction of future cashflows of Malaysian companies in the construction, energy, and property industries. This outcome also indicated that the previous one-year cash flow has a substantial effect on potential cash flows ($p < 0.005$).

The cash flow statement may give an indication of how well the company is doing financially. Given that these industries are considered in a high-risk category, the past one-year cash flow data would give a better prediction of the future cash flows. Being able to see the companies' financial performance in the future would be beneficial to them and potential investors. It would be more accurate if the company could estimate its future performance based on the previous year's expenses and income.

A cash flow prediction forecasts the amount of money that will flow in and out of the company, taking into account all the revenue and expenditures. This study's finding may support the view of optimistic and substantial cash flows for potential investment. The hypothesis is supported to the extent that a previous one-year cash flow is a better predictor for future cash flows. Many companies' cash flow forecasts are usually for a 12-month term. Therefore, this study's results may support the assertion that most companies' cash flow forecasts only cover a 12-months span.

CONCLUSION

This research is expected to have consequences and benefits for all parties involved, including academics, creditors, and investors. The forecast model, for example, could be used by creditors to assess their customers' ability to repay debts and borrow money. Investors who are interested in predicting future returns may also be interested in forecasting future cash flows. This study also contributes to the body of information and previous research on historical cash flows in predicting potential cash flows. The results of this study can also be extended to the decision-making processes of other stakeholders, such as business executives. Users of financial statements would also be able to measure and use the cash flow modeling data to determine possible cash flows of businesses in terms of predicting projected cash flows, funding, and other results. Government agencies, such as Malaysia's Securities Commission, may use this study's findings to devise legislation and determine what facts can be made available to the general public. Policymakers often play an important role in enacting laws or regulations that favor shareholders and other institutional investors. Thus, policymakers may monitor the policy of disclosing information to the Malaysian publicly listed firms via the information management framework. In other words, they should promote the identification of other achievement metrics, such as cash flow operations, as a complementary metric for funding management.

Some limitations may partially influence the research results. Other than time

limitations and no availability of data sources, the following concerns also limit the current study. First, the results of this study are only limited to Malaysian-listed companies in the construction, energy, and property industries. Consequently, the results may not be extendable to all members of other industries. In addition, the recovery companies were omitted from the study. Thus, the research findings could not be used by companies undergoing rehabilitation. Second, this study presumed that the cross-sectional regression analysis operates through businesses in different industries. In other words, each model component was predicted to have the same effect on potential cash flows regardless of sector. However, it is likely that the relationship between the explanatory variables and future cash flows differs across sectors, resulting in forecast errors.

This study may be expanded by emulating the methods for investigating data affecting publicly traded firms in other areas. Furthermore, the data sample can be broken down and analyzed by sector. As a whole, this can lead to the development of more sector hypotheses. This study could generate predictive models that are important for studying the Malaysian stock market. If a business model is used, the predictive model would probably be more reliable since each firm's data would be evaluated separately. Future research should test longer data timelines and include more suitable prediction models for Malaysian companies. Additionally, this study focused exclusively on the secondary data system. The outcome from data directly collected from the users of financial statements or associated parties may offer additional validity. Customers of financial statements could use cash flow predictors to predict future cash flows, and further studies may include evidence-based practice. The approximation of the regression model would not be consistent with the cash flow findings because this study used regression analysis to approximate the model for estimating potential cash flows. In other words, a better model can be extracted from a different program. More research should be performed if the cash flow data is sufficient.

REFERENCES

- Adjei, E.A., Fugar, F.D., Adinyira, E., Edwards, D.J., & Pärn, E.A. (2018). Exploring the significant cash flow factors influencing building projects profitability in Ghana. *International Journal of Construction Engineering and Management*, 7(1), 35-46.
- Agana, J.A., Mireku, K., & Appiah, K.O. (2016). Comparative predictive abilities of earnings and operating cashflows on future cash flows: Empirical evidence from Ghana. *Accounting and Finance Research*, 4(3), 40.
- Agostinho, M.D.S.C., & Weijermars, R. (2017). Petroleum business strategies for maintaining positive cashflow and corporate liquidity under volatile oil and gas prices as the sustainable energy transition unfolds. *Journal of Financing and Accounting*, 5(1), 34-55.
- Al-Attar, A.M., & Maali, B.M. (2017). The effect of earnings quality on the predictability of accruals and cash flow models in forecasting future cash flows. *The Journal of Developing Areas*, 51(2), 45-58.
- Amayreh, K.T., & Castaneda, R. (2019). An analysis of cash flow: Predictive model of future dynamics. *IJRRAS*, 39(1), 1-17.
- Aris, N.M., Anuar, R., Trofimov, I., & Sokat, N. (2019). The effect of cash flows on firm's profitability of construction sector in Malaysia. *UNIMAS Review of Accounting and Finance*, 3(1), 31-39.
- Bergmann, P., Kamarás, E., Gleißner, W., & Guenther, E. (2020). Enhanced cash flow valuation in real estate management by integrating innovative materials and risk assessment. *Sustainability*, 12(6), 2201.
- Efayena, O. (2015). The role of accrual accounting basis in the prediction of future cash flows: The Nigerian evidence. *Research Journal of Finance and Accounting*, 6(4).
- Farshadfar, S., Ng, C., & Brimble, M. (2008). The relative ability of earnings and cash flow data in forecasting future cash flows. *Pacific Accounting Review*, 20(3), 251-268.
- Financial Accounting Standards Board (FASB) (1978). Objectives of financial reporting by business enterprises. *Statement of Financial Accounting Concepts No. 1*, Stamford, CT:FASB.
- Freeman, R.E., Phillips, R. & Sisodia, R. (2020). Tensions in stakeholder theory. *Business and Society*, 59(2), 213-231.
- Gordon, E.A., Henry, E., Jorgensen, B.N., & Linthicum, C.L. (2017). Flexibility in cash-flow classification under IFRS: determinants and consequences. *Review of Accounting Studies*, 22(2), 839-872.

- Habib, A. (2010). Prediction of operating cash flows: further evidence from Australia. *Australian Accounting Review*, 20(2), 134-143.
- Jiang, H., & Jia, J. (2020). Short selling and future cash flow predictability of capital investment: Evidence from Australia. *Journal of Contemporary Accounting & Economics*, 100224.
- Kliestik, T., Valaskova, K., Lazaroiu, G., Kovacova, M., & Vrbka, J. (2020). Remaining financially healthy and competitive: The role of financial predictors. *Journal of Competitiveness*, 12(1), 74–92.
- Lee, J., & Kim, E. (2019). Foreign monitoring and predictability of future cash flow. *Sustainability*, 11(18), 4832.
- Memon, A.H., Rahman, I.A. & Aziz, A.A.A. (2012). Time and cost performance in construction projects in South and Central Regions of Peninsular Malaysia. *International Journal of Advances in Applied Sciences*, 1(1), 45-52.
- Mulenga, M., & Bhatia, M. (2017). The review of literature on the role of earnings, cash flows, and accruals in predicting of future cash flows. *Accounting and Finance Research*, 6(2), 59-70.
- Nallareddy, S., Sethuraman, M., & Venkatachalam, M. (2020). Changes in accrual properties and operating environment: Implications for cash flow predictability. *Journal of Accounting and Economics*, 69(2-3), 101313.
- Nguyen, H., & Nguyen, T. (2020). The prediction of future operating cash flows using accrual-based and cash-based accounting information: Empirical evidence from Vietnam. *Management Science Letters*, 10(3), 683-694.
- Noury, B., Hammami, H., Ousama, A.A., & Zeitun, R. (2020). The prediction of future cash flows based on operating cash flows, earnings and accruals in the French context. *Journal of Behavioral and Experimental Finance*, 28, 100414.
- Omopariola, E.D., Windapo, A., Edwards, D.J., & Thwala, W.D. (2019). Contractors' perceptions of the effects of cash flow on construction projects. *Journal of Engineering, Design and Technology*.
- Rashid, C.A. (2018). Efficiency of financial ratios analysis for evaluating companies' liquidity. *International Journal of Social Sciences & Educational Studies*, 4(4), 110-123.
- Sarraf, F. (2019). Cash flow forecasting by using simple and sophisticated models in Iranian companies. *Iranian Journal of Finance*, 3(1), 24-52.
- Shamsudin, A., & Kamaluddin, A. (2015). Impending bankruptcy: Examining cash flow pattern of distress and healthy firms. *Procedia Economics and Finance*, 31, 766-774.
- Soboleva, Y.P., Matveev, V.V., Ilminkaya, S.A., Efimenko, I.S., Rezvyakova, I.V., & Mazur, L.V. (2018). Monitoring of businesses' operations with cash flow analysis. *International Journal of Civil Engineering and Technology (IJCET)*, 9(11), 2034–2044
- Umoren, A.O., & Umoffong, N. (2018). Cash flows and earnings in predicting future cash flows: A study of deposit money banks in Nigeria. *Advances in Research*, 15(1), 1-13.
- Yan, J., Lianyong, F., & Shana, F. (2020). Comparative study of discounted cash flow and energy return on investment: review of oil and gas resource economic evaluation. *Финансы: Теория и Практика*, 24(2).