



The Effect of Accrual Quality and Operating Cash Flows on Future Cash Flows in the Basic Industry and Chemical Sectors

Amanda Shofia^{1*} and Wiwik Utami¹

¹*Universitas Mercu Buana, Indonesia.*

Authors' contributions

This work was carried out in collaboration among all authors. Authors AS propose the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author WU reviewed the analyses of the study and draft manuscript. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJARR/2021/V15i330380

Editor(s):

(1) Dr. Fagbadebo Omololu Michael, Durban University of Technology, South Africa.

Reviewers:

(1) Muhammad Usman, Abban Gafai Education Resource Centre, Nigeria.

(2) Haitham Nobanee, Abu Dhabi University, UAE.

Complete Peer review History: <http://www.sdiarticle4.com/review-history/68288>

Original Research Article

Received 15 March 2021

Accepted 21 May 2021

Published 29 May 2021

ABSTRACT

This study aims to analyze the effect of accrual quality and operating cash flow on future cash flows. Accrual quality in this study is measured by the accruals-working capital approach, referring to Dechow and Dichev [1] and Francis et al. [2], cash flow is measured by the ratio of operating cash flows to assets. The population of this research is the Basic Industry and Chemical sector companies listed on the Indonesia Stock Exchange for the period 2014-2018. The samples were determined using purposive sampling which resulted in 144 firms year came from 32 companies. The results of this study showed that there is a significant positive effect the accrual quality and operating cash flow on future cash flows. Management should manage the company's operating cash flow efficiently, and simultaneously improve the quality of the company's accruals which will be a positive signal for investors creditors

Keywords: Accrual quality; operating cash flow; future cash flow.

*Corresponding author: Email: shofiamanda@gmail.com;

1. INTRODUCTION

Entering the era of globalization accompanied by the implementation of the *ASEAN-China Free Trade Agreement (ACFTA)* since January 2010 requires every company to read carefully the internal situation in the fields of marketing, production, human resources and finance. Along with these developments, management is required to be able to produce or present information that can communicate the company's financial condition to external parties such as investors, creditors and other parties who have an interest in the company that uses financial statement information to assist the decision-making process. This is so that the company can survive in a situation and conditions of increasingly fierce competition.

Financial reports are an important source of relevant information for investors, creditors and other users. The annual report is basically a source of information for investors as a basis for consideration in making investment decisions in the capital market and also as a means of management accountability for the resources entrusted to it. The value of accounting profit and cash flow are inseparable parts of the financial statements, which are important parameters for investors and creditors to assess the financial performance of a company.

Profit and cash flow information are two things that are interrelated and are very helpful for assessing the company's performance, especially in predicting the company's future

finances. Prasadhanto [3] states that profits and cash flow owned by BUMN are able to predict future earnings and cash flows. According to Qodri [4], cash flow is considered better than profit in predicting future cash flows only when the company is profitable.

Based on data taken from a sample of financial statements of some companies in the sector of Basic Industry and Chemicals listed in Indonesia Stock Exchange in the period 2014 - 2018, some companies generate cash that is not stable (up and down). The condition of the company's unstable cash flow was caused by various factors, both internal and external. Internal factors include changes in the amount of cash income from the company's activities. External factors faced by companies include the state and global economic conditions. This has an impact on the company's survival, so companies need to pay attention to how the company's cash flow conditions in the future.

According to the Ikatan Akuntansi Indonesia [5] in the conceptual framework of financial statements, profit is defined as an increase in economic benefits during a certain accounting period in the form of income and addition of assets or a decrease in liabilities that results in an increase in equity, which does not come from investment contributions. The importance of earnings information in addition to assessing management performance, earnings also help estimate the ability of a presentative profit, as well as to assess risks in investment or credit.

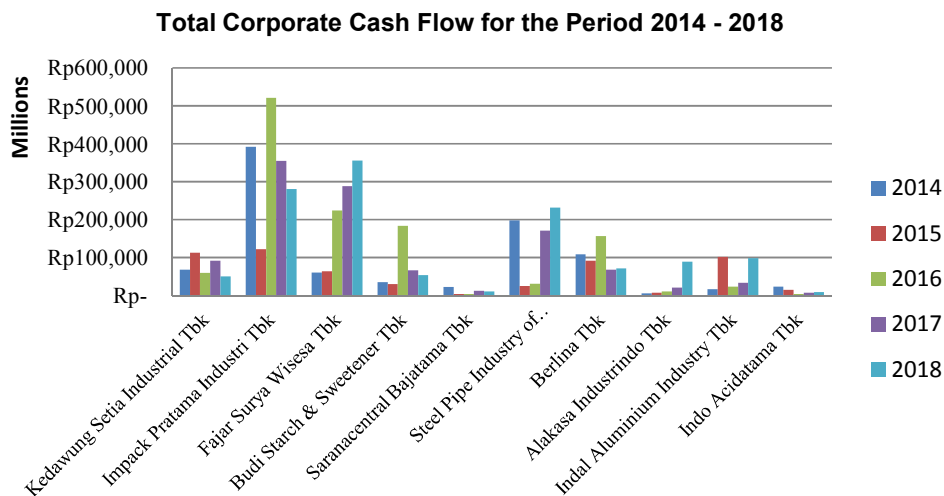


Fig. 1 . Cash flow growth graph

Each company has different earnings quality, Dechow et al. [5] define high earnings quality as one that more honestly represents the features of the company's fundamental earnings process that are relevant to certain decisions made by decision makers. Apart from the quantity point of view, the quality of earnings is also important when we read a financial report.

Accrual *quality* is the quality of accounting information presented by a company that compares the company's accruals to cash flows in the past, present and future [6]. Accrual quality is said to be good if the accruals are close to the company's future cash flows [1]. Accrual quality has a higher level of relevance as a measurement proxy because earnings which are compiled on an accrual basis are more indicative of the economic implications and existing transaction events.

Cash flow is the inflow and outflow of cash and cash equivalents of a company. According to the Ikatan Akuntansi Indonesia [7] Cash is cash on hand and current accounts. Meanwhile, cash equivalents are investments that are highly liquid, short-term, and which can quickly be turned into cash in a certain amount without facing the risk of significant changes in value. A cash flow statement is a report that shows changes in cash resulting from cash outflows and inflows from a company during a certain period. The cash is generated from three activities, namely operating activities, investing activities and financing activities.

In Al-Attar and Maali's [8] research, the components of earnings are assessed based on their quality, the results of the study found that earnings quality has an influence in predicting future cash flows. When earnings quality is high, both cash flow and earnings have the same ability to predict future cash flows. However, if the quality of earnings is low, then operating cash flow has a greater ability than profit in predicting future cash flows. This is in line with the research of Jelodari and Kordshouli [9]. In this study, it is explained that high quality earnings can be used to predict with good future data.

Based on the description above, the authors are interested in conducting research with the title: "The Effect of Accrual Quality and Operating Cash Flow on Future Cash Flows in the Basic Industry and Chemical Sectors".

2. THEORETICAL FRAMEWORK

2.1 Agency Theory

Agency theory describes two economic actors who have different interests, namely the principal and the agent. An agency relationship is a contract in which one or more people (principal) order another person (agent) to perform a service on behalf of the principal and authorize the agent to make the best decisions for the principal [10]. If the principal and the agent have the same goal, the agent will support and carry out everything that is ordered by the principal.

Eisenhardt [11] states that agency theory uses three assumptions of human nature, namely: humans are generally self-interested, humans have limited thinking power about future perceptions (bounded rationality) and humans always avoid risk (risk averse). Based on this assumption, the agent as a human will act opportunistically, namely prioritizing his personal interests.

2.2 Signaling Theory

Signaling theory is a theory that discusses information provided by a company about its future performance which will be trusted by outsiders. This theory was first put forward by Spence [12] through his research entitled *Job Market Signaling*. In his research, Spence [12] revealed that a *signal* gives a signal, the sending party (the owner of the information) tries to provide pieces of relevant information that can be used by the first party. The receiving party will then adjust its behavior according to the understanding of the signal.

This theory emphasizes the importance of information issued by the company about investment decisions to be made by the investor. According to Jogiyanto [13], the information published by the company is an announcement that provides a signal for investors in making investment decisions. This announcement contains both positive and negative information that can create a market reaction. The relationship between signal theory and the ability of accruals and operating cash flows in predicting future cash flows is being able to provide information in the form of an operating cash flow statement that can be used to predict future cash flows that can provide positive and negative signals. Likewise, accruals in the company's income statement can be used as a

prediction of future cash flows that can provide positive or negative signals so that the company can predict the company's future conditions.

2.3 Cash Flow Statement

PSAK number 2 of 2020, requires companies to disclose cash and cash equivalents and must present a reconciliation of this amount in the cash flow statement with the same items as the items on the balance sheet. Cash equivalents are investments that are highly liquid, short-term and can quickly be turned into cash in a certain amount without facing the risk of significant changes in value. Cash flow is the inflow and outflow of cash or cash equivalents. PSAK number 2 of 2020 also explains that cash consists of cash balances (cash on hand) and current accounts. This means that in the cash statement, cash has a broader meaning that is not only limited to cash on hand in the company and cash in banks, but also includes estimates known as cash equivalents.

The cash flow statement must report cash flows during a certain period and classified according to operating, investing and financing activities (PSAK No.2 of 2020). The cash flow statement provides information about the amount of cash inflows and cash outflows or sources of cash usage in a company. the entity presents cash flows from operating, investing and financing activities in the manner most appropriate to the entity's business.

Classification by activity provides information that enables users of the report to assess the effect of these activities on the entity's financial position and on the amount of cash and cash equivalents. The activities in the cash flow statement according to Kieso, et al [14] are as follows:

- a. Operating activities (operating activities) include cash flow from transactions used to find net income.
- b. Investing activities (investing activities) include providing and collecting loans as well as obtaining and disposing of investment (both debt and equity) as well as property, plant and equipment.
- c. Financing activities (financing activities) involve accounts of liabilities and owner's equity. These activities include: obtaining resources from owners and their composition to them by controlling and from their investments, and borrowing money from creditors and repaying them.

2.4 Operating Cash Flow Statement

Operating activities are the main revenue-producing activities of the company and other activities that are not investing and financing activities according to PSAK No. 2 of 2018. Operating cash flow can be used as the main indicator in determining whether the entity's operations can generate sufficient cash flow to be used for loans, maintain the entity's operating ability, pay dividends, and make new investments without relying on outside sources of income and are useful in predicting flows future cash.

2.5 Accrual

Accrual-based accounting means that the recording of a company's financial transactions is at the time they occur and not just when the transaction involves expenses or inclusion of cash and cash equivalents. For example, income can be recognized when the possibility of future profits is acceptable or can be measured reliably (Revenue Recognition), likewise expenses can be recognized at the time of occurrence and not only when cash payments occur (Expense Matching).

Subramanyam and Wild [15] define accruals as the number of accounting adjustments that make net income different from net cash flows. This adjustment results in an effect on earnings and does not have an impact on cash flow, because the use of a paired journal with the accrual concept also affects the balance sheet by increasing and decreasing assets or liabilities in the same amount.

Dechow et al. [5] define high earnings quality as those that more honestly represent features of the company's fundamental earnings process that are relevant to certain decisions made by decision makers. There are many attributes that can be used to measure earnings quality, including accruals quality, persistence, predictability, smoothness, value relevance, timeliness and conservatism [2,5], (Zhou, 2007). This study will focus on assessing earnings quality by using accruals quality as a proxy.

Accrual quality is the quality of accounting information presented by a company that compares accruals to company cash flows in the past, present and future periods [6]. Accrual quality is said to be good if the accruals are close to the company's future cash flows [1]. Accrual

quality has a higher level of relevance as a measurement proxy because earnings that are compiled on an accrual basis are more indicative of the economic implications and existing transaction events.

Accrual quality in this study is measured by the accruals-cash flow approach referring to Dechow and Dichev [1] and Francis et al. [2].

$$WCA = a + b_1CF_{Ot-1} + b_2CF_{Ot} + b_3CF_{Ot+1} + et$$

This model was developed by Dechow and Dichev [1] because it sees that there is a relationship between realized cash flows and working capital so that the accrual to cash flow matching function is important. The accrual model with Working Capital Accrual (WCA) is created as a function of past (CF_{Ot-1}), present (CF_{Ot}), and future (CF_{Ot+1}) cash flows because accruals can anticipate cash to be received / paid and reversed when cash previously recorded as accruals received / paid. The standard deviation of error (et) is a proxy for earnings quality, with the higher the error value, the lower the accrual quality.

McNichols (2002) then modified the model from Dechow and Dichev [1] by combining it with the Jones (1991) model, and dividing accruals into discretionary accruals and non-discretionary accruals. The result, McNichols (2002) found that there was an increase in the power of explanation.

$$WCA = a + b_1CF_{Ot-1} + b_2CF_{Ot} + b_3CF_{Ot+1} + b_4\Delta RE_{it} + b_5PPE_{it} + et$$

2.6 Previous Research

Senan [16] in his research found that profit has a better ability than operating cash flow in predicting future cash flows. In line with Senan [16], Lee and Kim [17] in their research entitled Foreign Monitoring and Predictability of Future Cash Flow, the results show that earnings have a better ability to predict cash flow. Meanwhile, Amin et al. [18] found that operating cash flows have a better ability to predict future cash flows for small companies in Pakistan.

In Al-Attar and Maali's [8] research, the components of earnings are assessed based on their quality, the results of the study found that earnings quality has an influence in predicting future cash flows. When earnings quality is high, both cash flow and earnings have

the same ability to predict future cash flows. However, if the quality of earnings is low, then operating cash flow has a greater ability than profit in predicting future cash flows. This is in line with the research of Jelodari and Kordshouli [9]. In this study, it is explained that high quality earnings can be used to predict with good future data.

In Khansalar's [19] research, low quality accruals do not have the ability to predict future cash flows. This study shows that financial accrual is more influential in predicting future cash flows than other accrual components. Arnedo, Lizarraga and Sánchez [20] suggest that accruals have a better ability than current cash flows in predicting future cash flows.

Mulenga and Bhatia (2017) in their research revealed that operating cash flows have a better ability to predict future cash flows, on the other hand, earnings have the ability to predict future cash flows if disaggregated into the main accrual components. In the research of Jemaa, et al [21], "The Examination of the Ability of Earnings and Cash Flow in Predicting Future Cash Flows: Application to the Tunisian Context", when using a simple model, operating cash flow has a better ability to predict future cash flows. however, when using multi-year models, earnings have a better ability to predict future cash flows.

Jemaa, et al [21] again conducted research using the disaggregate of earnings, the results were that disaggregated profit into cash flow and total accruals increased the ability to predict future cash flows compared to aggregate earnings. However, disaggregating total accruals into its main components (changes in trade receivables, changes in inventories, changes in trade payables, amortization and other accruals) significantly adds to the ability of earnings to predict future cash flows.

Safiq, et al [22] in their study of Prediction of Future Cash Flow through Earnings Persistence and Accrual Components, found that earnings persistence has a positive effect on future cash flows, but the balance sheet accrual component consisting of changes in accounts receivable, changes in inventory and changes in debt only affects partially. Meanwhile, simultaneously it has no effect on future cash flows.

Migayana and Ratnawati's [23], their research showed that the variables of net income, changes in inventories, and changes in debt

have a significant effect on cash flow for the next 1 year. Meanwhile, changes in receivables do not have a significant effect on cash flow for the next 1 year. Salehuddin [24] found that the net income variable has a significant effect in predicting future operating cash flows

The purpose of financial statements is to provide information that is useful for predicting future earnings and cash flows. From the user's point of view, what is preferred whether they prefer profit or cash flow information for making decisions. Empirically, it revealed that investors and creditors prefer future cash flow information to earnings. The reason is that the certainty for dividend payments and interest payments and loan principal repayments is more determined by the cash flow generated from the company's operations. Nallareddy, S., M. Sethuraman, and M. Venkatachalam [25] found in their research that operating cash flow is superior in predicting future cash flows compared to earnings (bottom line earnings). If bottom line earnings are then break down into cash and accruals, operating earnings are superior to operating cash flow in predicting future cash flows [26]. Study in Brazil

Malacrida, Mara & LIMA, Mara & Lima, Gerlando & Fávero, Iran & Lopes, Luiz. [27] examined profit, operating cash flow and accruals to predict future cash flows, the results provide empirical evidence that operating cash flow is superior to aggregate income. If profit is broken down into cash and accruals, the use of accruals can increase the ability of operating cash flows to predict future cash flows.

Referring to previous research that accrual will improve predictive capacity. This study will provide empirical evidence whether accrual quality can affect future cash flows

2.7 Hypothesis

Financial reports are important parameters for investors, creditors and other users to assess the financial condition of a company. For this reason, financial statements must have reliable and relevant information. Of the several financial statements presented, the income statement and cash flow statement are the parts that get more attention from users of financial statements.

The income statement presents the income earned by the company minus the company's expenses so as to generate profit in an accounting period. The profit value obtained is

often a parameter for users of financial statements to assess the company's financial performance. High earnings quality is one that more honestly represents the features of a firm's fundamental earnings process that are relevant to certain decisions made by decision makers. There are many attributes that can be used to measure *earnings quality*, one of which is accrual quality .

Cash flows generally come from transactions and other events that affect the determination of net profit or loss. Future cash flows are the operating cash flows for the following year. Operating cash flow from a company is the total cash that has been used or obtained by the company from its operating activities during a certain period. The size of the operating cash flow is much influenced by the size of the transactions in the accrual accounting component carried out by the company, such as accounts receivable and accounts payable.

Accrual accounting component transactions for the current period will cause cash inflows or outflows in the future, so that the accrual accounting component is often used in predicting operating cash flows. In Khansalar's [19] research, low quality accruals do not have the ability to predict future cash flows. This study shows that financial accrual is more influential in predicting future cash flows than other accrual components. Arnedo, Lizarraga and Sánchez [20] suggest that accruals have a better ability than current cash flows in predicting future cash flows.

H1: Accrual quality has an effect on future cash flows

The cash flow statement, which is divided into 3 main activities, is an integral part of the financial statements, namely operating, investing and financing activities. Cash flow reflects the liquidity, solvency and financial flexibility of a company. Operating activities are the main revenue-producing activities of the company and other activities that are not investing and financing activities according to PSAK No. 2 of 2018. Future cash flows are operating cash flows in the following year.

Operating cash flow can be used as a main indicator in determining whether the entity's operations can generate sufficient cash flow to be used for loans, maintain the entity's operating ability, pay dividends, and make new

investments without relying on outside sources of income and are useful in predicting future cash flows. Operating cash flow is expected to help users of financial statements to predict future cash flows. Mulenga and Bhatia (2017) in their research revealed that operating cash flows have a better ability to predict future cash flows.

H2: Operating cash flows have an effect on future cash flows

2.8 Method

2.8.1 Sample, population and research data

The target population in this study are companies in the Basic Industry and Chemical Sector from the 2014-2018 period. The method of sampling in this study was carried out using purposive sampling method, which is a method that uses certain considerations to determine the research sample. For sample selection with this method, the criteria used are:

1. Companies included in the basic Industry and Chemical Sector companies listed on the Indonesia Stock Exchange (IDX) during the research period, namely from the 2014-2018 period.
2. These companies are always listed (never delisted) in the Indonesian Capital Market Directory during the study period.
3. Companies that use the rupiah currency in financial reporting.

3. RESULTS AND DISCUSSION

3.1 Descriptive Statistical Analysis

Based on the calculation results in Table 1 shows the descriptive statistics of the variables used in the study, the number (N) of the research is 144 that fall into the category of basic and chemical industrial companies listed on the Indonesia Stock Exchange for 5 consecutive years, consisting of accrual quality and operating cash flow to future cash flows. Based on the measurement of descriptive statistics, it shows that the results of the accrual quality calculation have an average value of -0.012757 (-1.27%), which reflects the quality of the accruals obtained by -1.27% of total assets and a standard deviation value of 0.1339392 (13,39% of total assets). This value shows that the average quality of accruals for the 2014-2018 period is relatively high. The accrual value is obtained from the error value in the WCA

(Working Capital Accrual) formula. The error value is obtained from the residual of the WCA regression equation, then the value is absolute. Accrual quality is said to be good if the accruals are close to the company's future cash flows.

Operating cash flow, namely the main revenue-producing activity of the company which is used as the main indicator in determining whether the company's operations can generate sufficient cash flow to pay off loans, maintain the company's operating ability, pay dividends, and make new investments without relying on outside funding sources. The average operating cash flow value was 0.061778 (6.1% of total assets) with a standard deviation of 0.0903424 (9.03% of total assets). This value indicates that the average operating cash flow value is not good. Future operating cash flow is useful to investors and creditors to see how companies can pay dividends the funds to repay the loan to the lender. If a company's operating cash flow outlook improves consistently, the company can attract investors and creditors.

Future cash flows have an average value of 0.062920 (6.29%) showed 6.29% of future cash flows of total assets and a standard deviation of 0.0690118 (6.90% of total assets). This means that the average value is smaller than the standard deviation, thus indicating that the results are not good. Because the standard deviation is a reflection of a very high deviation.

3.2 Classic Assumption Test

3.2.1 Normality test

The normality test is used to determine whether the data obtained from the research results are normally distributed or not. A data is said to be normally distributed if the significant level is > 0.05 probability value, whereas if the significant level is < 0.05 , the probability value is said to be not normally distributed.

To test this, the Normal PP Plot graphical method can be used from standardized residual cumulative probability, by identifying if the distribution is around the normal line, then the normal assumption can be fulfilled. In addition, the Kolmogorov-Sminov test can also be used to see normality by identifying if the p-value is greater than alpha, then the assumption of normality is acceptable.

- a. If the value is *Asymp. Sig.* (2-tailed) less than 0.05, then H_0 is rejected and H_A is accepted. This means that the residual data is not random (systematic).
- b. If the value is *Asymp. Sig.* (2-tailed) is more than 0.05, then H_0 is accepted and H_A rejected. This means that the residual data occurs randomly (random).

The results of the data normality test are as follows: Chat.1.

The result of the Kolmogorov-Smirnov test sample in the table above shows that the probability level is significant 0.200 because the P value (*Asymp. Sig*) is greater than the significant level 0.05, it can be concluded that the residual data in this regression model is normally distributed. In other words , the regression model used meets the normality assumption.

3.2.2 Multicollonierity test

Multicollonierity test aims to test whether the regression model found a correlation between independent variables (Independent). You do this by analyzing the morrelation matrix of the independent variables and by looking at the tolerance value and the Variance Inflation Factor (VIF) value. A regression model is said to

be free from multicollonierity, if the tolerance value is above 0.10 and the VIF is below 10.

The multicollonierity test results can be seen in the following:

The multicollonierity test results presented in Table 2 above indicate that all variables have a tolerance value above 0.10 (accrual quality 0.998 and operating cash flow 0.998) with a VIF value of each below 10 (net profit 1.002 and operating cash flow 1.002). So it can be concluded that there is no multicollonierity between variables in this regression model.

3.2.3 Homoscedasticity test

This test is to test whether there is a similarity in variance from the residuals from one observation to another. To test this, a Scatterplot is used, where the X axis is the predictive values. ZPRED = Regression Standardized Predicted Value with the Y axis is the value, namely ZRESID = Regression Standardized Predicted Value. If the graph obtained shows a certain pattern produced by the existing dots, it is said to have Heteroscedasticity, but if it does not form a certain pattern it is said that there is no heteroscedasticity.

Table 1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Accrual Quality	144	-0,4072	0,3327	-0,012757	0,1339392
OCFt	144	-0,1118	0,7992	0,061778	0,0903424
OCFt+1	144	0,0000	0,2454	0,062940	0,0690118
Valid N (listwise)	144				

One-Sample Kolmogorov-Smirnov Test

		Unstandardiz ed Residual	
N		144	
Normal Parameters ^{a,b}	Mean	.0000000	
	Std. Deviation	.06507772	
Most Extreme Differences	Absolute	.055	
	Positive	.055	
	Negative	-.038	
Test Statistic		.055	
Asymp. Sig. (2-tailed) ^c		.200 ^d	
Monte Carlo Sig. (2-tailed) ^e	Sig.	.355	
	99% Confidence Interval	Lower Bound	.343
		Upper Bound	.368

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.
- e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 221623949.

Chart 1. Kolmogorov-smirnov test

Table 2. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	0,053	0,007		7,976	0,000		
	Accrual Quality	0,114	0,041	0,222	2,790	0,006	0,998	1,002
	OCF _t	0,183	0,061	0,239	3,011	0,003	0,998	1,002

a. Dependent Variable: OCF_{t+1}; Source: Data processed by SPSS 25, 2020

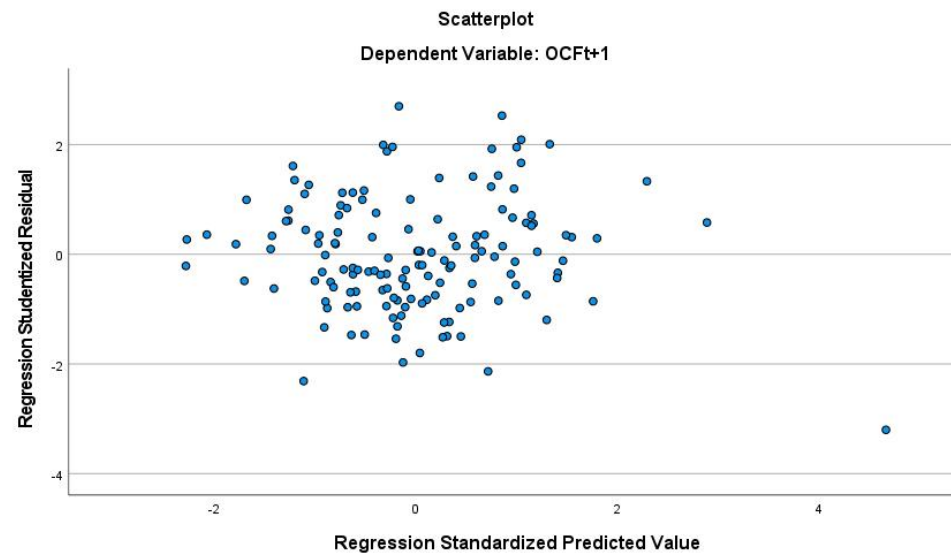


Chart 2. Scatterplot residual and predicted value

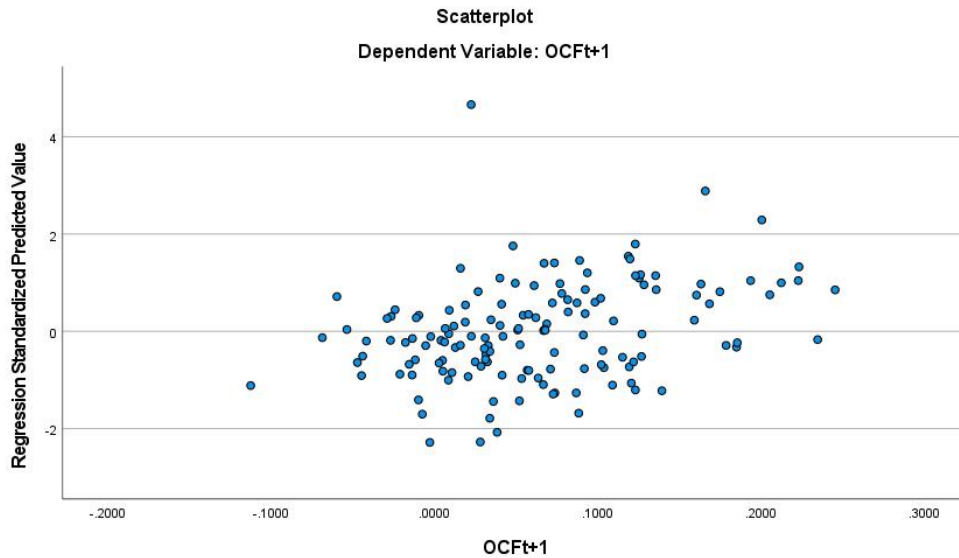


Chart 3. Scatterplot predicted value and OCFt+1

The scatterplot results show that the data is perfectly spread, which means that there is no heteroscedasticity.

3.2.4 Autocorrelation test

The results of *Durbin-Watson* can be seen in the following table:

Based on Table 4 above and based on the results of the analysis with SPSS, the *Durbin-Watson value* is $d = 2,001$. It is known that the number of independent variables is 2 and the number of data is 144, so the value of dL (for $k, N = 1, 71370$). Because the value of d is greater than the value of dL , it is decided that there is no autocorrelation.

3.3 Model Feasibility Test

3.3.1 Test The coefficient of determination (R^2)

The coefficient of determination (R^2) is primarily to gauge how far the model's ability to explain variations in the dependent variable. The coefficient of determination is between zero and one ($0 < R < 1$). The greater the coefficient of determination, the greater the variation in the independent variable that affects the dependent variable.

Based on the regression results, the value of *Adjusted R Square* is 0.098. This shows that

the percentage of the future cash flows that can be explained from two independent variables, namely the quality of accruals and operating cash flow amounted to 9.8 %, while the remaining 91.2% is explained by other factors outside the model.

3.3.1.1 F test

The F test is conducted to jointly test the relationship between the influence of the independent variables on the dependent variable. To test this hypothesis, the F statistic is used with a significance level of 0.05 ($\alpha = 5\%$) with the following decision-making criteria (Ghozali, 2013):

- 1) If the probability value is significant > 0.05 , the hypothesis is rejected
- 2) If the probability value is significant < 0.05 , the hypothesis is accepted
- 3) Comparing the calculated F value with the F table. If F count is greater than the value of F table, then H_0 is rejected and H_a is accepted.

The simultaneous test results can be seen in the following table :

3.3.1.2 Simultaneous test results (Test-F)

Based on the results of the regression analysis of Table 5 above, the value of $F_{arithmetic}$ amounted $8,781 > F_{table}$ of 3,910 ($df_1 = k-1 = 3-1 = 2, df_2 = nk-1 = 144-3 = 141$). The

significance is $0.000 < 0.005$ or 5%, so that H_0 to test the significance of this multiple linear regression is in the rejection area, meaning that all independent variables, namely accrual quality and operating cash flow, have a significant effect on the dependent variable of future cash flows.

3.4 Hypothesis Testing

3.4.1 T test

The t statistical test shows how far the independent variable affects the dependent variable. How to do the t test is as follows (Ghozali, 2013):

- a. If the significant value > 0.05 , then the hypothesis is rejected (the regression coefficient is not significant). This means that the independent variable does not have a significant effect on the dependent variable.
- b. If the significant value < 0.05 , then the hypothesis is accepted (significant regression coefficient). This means that the independent variable has a significant effect on the dependent variable.
- c. Comparing the t statistical value with the critical point according to the table. If the t statistical value is higher than the t table value, it means accepting an alternative hypothesis which states that an independent variable affects the dependent variable

3.4.1.1 Test results for the significance of individual parameters (t statistical test)

Based on the test results in Table 5 it can be concluded as follows:

3.4.1.2 The effect of accrual quality on future cash flows

Based on the results of the t test above, it is found that the accrual quality variable (X_1) t count is equal to $2,790 > t$ table of 1.977 ($df = nk = 144 - 3 = 141$), with a significant value of 0.006 where this value is smaller than the significant level of 0.05 ($0.006 < 0.05$). These results indicate that H_1 is accepted, which means that accrual quality has a positive effect on future cash flows.

3.4.1.3 The effect of operating cash flows on future cash flows

Based on the results of the t test above, it is found that the accrual quality variable (X_1) t

count is equal to $3,011 > t$ table of 1.977 ($df = nk = 144 - 3 = 141$), with a significant value of 0.003 where this value is smaller than the significant level of 0.05 ($0.003 < 0.05$). These results indicate that H_2 is accepted, which means that operating cash flows have a positive effect on future cash flows.

3.4.2 Multiple regression linear analysis test

Based on the table above, the multiple linear regression equation can be obtained as follows:

$$Y = 0.053 + 0.114 X_1 + 0.183 X_2$$

From the regression results, it can be concluded that:

1. The constant $a = 0.053$ means that if the quality of accruals and operating cash flows are considered constant, the value of future cash flows will increase by 0.053.
2. Accrual quality coefficient (X_1) of 0.114 indicates that every 1 increase in accrual quality will cause an increase in future cash flows of 0.114, assuming other independent variables are constant. The higher the quality the accrual of a company then will the higher the company's future cash flows.
3. Operating cash flow coefficient (X_2) of 0.183 indicates that every 1 increase in operating cash flow will lead to an increase in future cash flows of 0.183, assuming other independent variables are constant. The higher operating cash flow of the company, will be the higher the company's future cash flows.

3.5 Discussion

Based on the results of research that has been carried out between the independent variables (Accrual Quality and Operating Cash Flow) against the dependent variable (Future Cash Flow) in basic industrial and chemical sector companies in the period 2014 - 2018, the following results are obtained:

3.5.1 The effect of accrual quality on future cash flows

The results of this study indicate that Accrual Quality has a positive effect on future cash flows, this is in line with the previous research hypothesis. In Al-Attar and Maali's [8] research, the components of earnings are assessed base

Table 3. Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.333 ^a	0,111	0,098	0,0655376	2,001

a. Predictors: (Constant), OCF_t, Kualitas Akrua; b. Dependent Variable: OCF_{t+1};

Table 4. ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0,075	2	0,038	8,781	.000 ^b
	Residual	0,606	141	0,004		
	Total	0,681	143			

a. Dependent Variable: OCF_{t+1}; b. Predictors: (Constant), OCF_t, Kualitas Akrua; Source: Data processed by SPSS 25, 2020

Table 5. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0,053	0,007		7,976	0,000
	Accrual Quality	0,114	0,041	0,222	2,790	0,006
	OCF t	0,183	0,061	0,239	3,011	0,003

a. Dependent Variable: OCF_{t+1}

on their quality, the results of the study found that earnings quality has an influence in predicting future cash flows. When earnings quality is high, both cash flow and earnings have the same ability to predict future cash flows.

Jemaa, et al. [21] again conducted a study using the disaggregate of earnings, the results were that disaggregated earnings into cash flows and total accruals increased the ability to predict future cash flows compared to aggregate earnings. However, disaggregating total accruals into its main components (changes in trade receivables, changes in inventories, changes in trade payables, amortization and other accruals) significantly adds to the ability of earnings to predict future cash flows.

Accrual *quality* is the quality of accounting information presented by a company that compares the company's accruals to cash flows in the past, present and future [6]. Accrual quality is said to be good if the accruals are close to the company's future cash flows [1]. Operating cash flow is one of the components used in calculating accrual quality, so that the magnitude of the quality of current accruals will affect the value of future cash flows.

3.5.2The effect of operating cash flow on future cash flows

The results of this study indicate that operating cash flows have a positive effect on future cash flows, this is also in line with the previous research hypothesis. Amin, et al [18] found that operating cash flows have a better ability to predict future cash flows for small companies in Pakistan. In the research of Al-Attar and Maali [8] found that if the quality of earnings is low, then operating cash flow has a greater ability than earnings in predicting future cash flows.

Operating cash flow is obtained from the company's main revenue activities, is the main indicator in determining whether the entity's operations can generate sufficient cash flow to be used for loans, maintain the entity's operating ability, pay dividends, and make new investments without relying on outside sources of income and are useful in predicting future cash flows.

4. CONCLUSION; IMPLICATION AND LIMITATION

4.1 Conclusion

1. Accrual quality has a significant positive effect on future cash flows, the better the accrual

- quality value, the better the predictive ability of future cash flows.
2. Operating cash flow has a significant positive effect on future cash flows, the higher the cash flows, the positive effect it will have on future cash flows.

4.2 Implication

Management should manage the company's operating cash flow efficiently, it will increase operating performance and simultaneously improve the quality of the company's accruals which will be a positive signal for investors creditors

4.3 Limitation

1. Operating cash flow and accrual quality have an effect on future cash flows, but in this case it is only able to explain 11.1% (R Square), therefore investors also need to pay attention to other aspects of the company that have not been tested in this study because the overall financial statements are interrelated.
2. It is expected to explore the alternative model of accrual quality measurement to improve the predictive ability for future cash flow.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Dechow, P and I. Dichev. The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*.2002;11(Supplement):35-59.
2. Francis, Jennifer, et al. Cost of equity and earnings attributes. *The Accounting Review*. 2004;79(4):967 – 1010.
3. Prasadhanto W. Studi akuntansi relevansi nilai prediktif pada badan usaha milik Negara. *Jurnal Riset & Informasi*. 2012;3(1):14-32.
4. Qodri, Rif'an. Analisis Kemampuan Laba dan Arus Kas dalam Memprediksi Arus Kas Masa Depan. *Skripsi*. Universitas Islam Negri Syarif Hidayatullah. Jakarta;2010.
5. Ikatan Akuntan Indonesia. Standar Akuntansi Keuangan. Jakarta: Salemba Empat; 2018.
6. Dechow P et al. Understanding earnings quality: A review of the proxies, their determinants and their consequence. *Journal of Accounting and Economics*. 2010;50.
7. Teruel, Pedro J, Solano Pedro M. Accruals quality and corporate cash holdings. *Accounting and Finance*. 2009;49:95-115.
8. Al-Attar, Ali Mohammad dan Bassam Mohammad Maali. *The effect of earnings quality on the predicbaility of accruals and cash flow models in forcasting future cash flow*. *The Journal of Developing Areas*; 2017.
9. Jelodari, Akbar dan Fatemeh Asadi Kordshouli. A survey of the role of earnings quality in accurately forecasting of operational and cash circulation of companies listed on tehran stock exchange. *International Journal of Academic Research in Accounting, Finance and Management Sciences*;2016.
10. Ichsan Randhy. *Teori Keagenan (Agency Theory)*; 2013. Available:https://bungrandhy.wordpress.com/2013/01/12/teori-keagenan-agency-theory/, Diakses tanggal 30 November 2019 pkl 15.00 WIB.
11. Eisenhardt KM. Agency theory: An assessment and review. *Academy of Management Review*, 1989;14(1):57-74.
12. Spence, Michael. Job market signaling. *The Quarterly Journal of Economics*. 1973;87(3):355-374.
13. Jogiyanto HM. *Teori Portofolio dan Analisis Investasi*. Edisi Ketujuh. BPFE. Yogyakarta;2010.
14. Keiso DE, Weygandt JJ, Warfield TD. *International accounting (13th ed)*". New Jersey: John Wiley dan Sona (Asia) Pte Ltd;2010.
15. Subramanyam KR, dan Wild, John J. *Financial statement analysis diterjemahkan oleh Dewi Yanti*. Edisi 10. Jakarta : Salemba Empat; 2010.
16. Senan, Nabil Ahmed Mareai. Ability of earnings and cash flows in forecasting future cash flows: A study in the context of Saudi Arabia. *Academy of Accounting and Financial Studies Journal*; 2019.

17. Lee, Jaehong dan Eunsoo Kim. Foreign Monitoring and Predictability of Future Cash Flow. *Sustainability*;2019.
18. Iftikhar-ul-Amin, Giuseppe (Joe) Labianca dan Nadia Iftikhar. Prediction of future cash flow using disaggregated accruals and cash flow of small-sized firms listed at the pakistan stock exchange (PSE). *Pakistan Business Review*;2016.
19. Khansala, Ehsan. The reliability of accruals and the prediction of future cash flow. *International Journal of Business and Management*; 2012.
20. Arnedo, Laura Fermín Lizarraga dan Santiago Sánchez. 2011. *The role of accounting accruals for the prediction of future cash flows: evidence from Spain*. *SERIEs*.
21. Jemâa, Olfa Ben, Mohamed Toukabri dan Faouzi Jilani. The examination of the ability of earnings and cash flow in predicting future cash flows: application to the tunisian context. *Accounting and Finance Research*; 2014.
22. Safiq, Muhamad, Ina Yustina dan Karinna Firdiastella. Prediksi arus kas masa depan melalui persistensi laba dan komponen akrual. *Jurnal Internal President University*;2016.
23. Migayana dan Andalan Tri Ratnawati. Analisis pengaruh laba bersih dan komponen akrual terhadap arus kas di masa mendatang (studi empiris di perusahaan manufaktur yang terdaftar di BEI). *Media Ekonomi dan Manajemen*;2014.
24. Salehuddin. Pengaruh laba bersih dan komponen akrual dalam memprediksi arus kas operasi masa depan (riset pada perusahaan jasa sub sektor property dan real estate tahun 2012-2015). *Jurnal Universitas PGRI Yogyakarta*; 2016.
25. Nallareddy S, Sethuraman M, Venkatachalam M. Changes in accrual properties and operating environment: Implications for cash flow predictability. *Journal of Accounting and Economics*. 101313. Nikolaev VV. Identifying account. 2020
26. Ball, Ray, Nikolaev. Valeri V., FASB was right: earnings beat cash flows when predicting future cash flows. *Chicago Booth Research Paper No. 2020*;20-23.
Available:SSRN: <https://ssrn.com/abstract=3689802> or <http://dx.doi.org/10.2139/ssrn.3689802>
27. Malacrida, Mara, LIMA, Mara, Lima, Gerlando, FÃ¡vero, Iran, Lopes, Luiz. An accounting accruals model to predict future operating cash flows: evidence from Brazil. *International Journal of Management*. 2021;10:562-580.

© 2021 Shofia and Utami; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:

The peer review history for this paper can be accessed here:
<http://www.sdiarticle4.com/review-history/68288>