

Detection of Cash Flow from Operation Management Using Classification and Timing

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Abstract

Operating cash flow as a measurement of a company's performance raises a new problem, which is management can conduct a discretion in the financial statements and the time of transactions recording to increase the reported operating cash flow, which is called CFO management. This study aims to examine whether management is proven to have cash flow from operation management (CFO management) using classification and timing in companies listed on the Indonesia Stock Exchange in 2017. The research method used is explanatory research, and the method of determining the sample used is the judgment sampling method. Testing the research hypothesis using the multiple regression analysis using EViews version 6.0. The result shows that companies that became sample in this study did not conduct CFO Management through classification shifting. Most of the samples of this study were in the category of companies that went bankrupt but there were no indications of CFO Management. The sampled companies in this study were suspected of not conducting CFO Management through timings.

Keywords: cash flow from operation management, classification, timing

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1. INTRODUCTION

Cash flow can be used as an alternative measurement of a company's performance because the success of a company will be seen from how the company manages cash receipts and disbursements. Although in general, there are some disadvantages in using cash flow to measure a company's performance, market participants agreed that operating cash flow is used to measure the credibility of earnings with the assumption of "Cash is King". Some studies say that there is an increase in demand from market participants for the use of operating cash flow as the measurement of a company, especially after a series of corporate scandals in 2000-2001 (Lee, 2012). This is also in line with the point that comparing profits and operating cash flows can potentially reveal the profit management actions and some recent studies says that the use of operating cash flows can reduce profit management actions (Lee, 2012).

The use of operating cash flow as a measurement of a company's performance raises a new problem, which is management can conduct a discretion in the financial statements and the time of transactions recording to increase the reported operating cash flow, which is called CFO management.

According to Lee (2012) there are 4 characteristics of companies which motivate managers to conduct CFO Management, namely companies that are experiencing financial difficulties, have long-term credit ratings close to the cutoff, have analysts who predict cash flows, and have an effect on stock returns towards a higher operating cash flow.

Several previous studies which are mentioned in Lee's research (2012) said that the cash flow statement provides relevant information for companies that are experiencing financial difficulties so that their cash flow statements will be noticed even more because the statements describe more of the company's performance. Thus, Lee (2012) suspects that the motivation to conduct CFO management will be stronger in companies that are experiencing financial difficulties.

Profit and CFO are often used as a measurement of a company's performance, and both have different implications in predicting the company's future performance based on company characteristics. Call (2008) said that the ability of CFO to predict future CFOs\ will be higher in companies that have analysts who predict cash flow than companies that do not have analysts, while Dechow and Ge (2006) say average profit will be more beneficial to provide predictions of future profit compared to CFO but that will be the opposite (CFO is more useful than profit) in some companies that have negative accruals. For some investors who focus more on CFOs, profit is only used as an addition to evaluate managers. To identify investors who focus more on CFO than profit, the effect of stock returns towards CFO is used, this characteristic is suspected to motivate managers to do CFO management (Lee, 2012).

The company conducts CFO management by shifting several items between categories / classifications in the cash flow statement (classification) and adjusting working capital (timing).

Previous studies have shown that managers were involved in the manipulation of activities to increase profit, but the effects towards operating cash flow were not explained (Dechow and Sloan 1991; Bushee 1998; Roychowdhury 2006). On one side, reducing discretionary expenses such as research and development costs has a positive effect towards operating cash flow after controlling the level of sales. On the other hand, activities such as price discounts, and excessive production have a negative effect towards operating cash flow after controlling the level of sales. Considering these two effects, Roychowdhury (2006) found that the average company that would increase profits through real activities had an unexpected lower operating cash flow.

Lee's research (2012) was the first study to identify when and how managers increase the reported operating cash flow and found evidence that operating cash flow did not reflect the company's actual performance as it was believed but managers conduct discretion in reporting the operating cash flow. Lee's research (2012) said that managers conduct CFO management if unexpected CFO increases and if the company restarts cash flow statements; classifying inflows as operating cash flow rather than financing cash flows; the cash conversion cycle is longer in the first quarter than in the fourth quarter of the previous year to show that the shorter cash cycle in the fourth quarter is the result of deliberate efforts to increase cash flow at the end; companies whose reporting year is not December because it is different from the end of the customer's or supplier's fiscal year so that it makes it easier for them to receive 'time' transactions in a way that is profitable for the company.

2. LITERATURE REVIEW

2.1. Agency Theory

Three hypotheses in Positive Accounting Theory show that there are 3 agency relationships: management and owners, management and creditors, and between management and government. The definition of agency theory is a contract between one or more owners (principals) who employ other people (agents) to provide services on behalf of the owner and delegate some decision making by agents (Jensen and Meckling, 1976). Michelson et al. (1995) provides agency definition as a relationship based on an agreement between the two parties, where management (agent) agrees to act on behalf of other parties, namely the owner (principal).

The existence of this agency relationship can lead to information asymmetry regarding the actual financial position and operational position of the entity, but it can also lead to a conflict of interest due to differences in interests between the principal and agent (Meisser et al., 2006). Information asymmetry defined by Scott (2012) will occur if several parties involved in a business transaction have more information than other parties, or it can also mean that information is not evenly distributed between the principal and agent. In addition, Scott (2012) distinguishes information asymmetry into 2 types, adverse selection and moral hazard. Adverse selection is a condition where one or more parties have the advantage of the

information they have compared to other parties (Scott, 2012), while moral hazard is a condition that arises if the agent does not carry out mutually agreed terms in the work contract (Jensen and Meckling, 1976). Conflicts of interest arise because of management actions that are not in accordance with the interests of the principal when they should be agents, management is responsible for providing optimal benefits to the principal by obtaining compensation in accordance with the agreed contract. This conflict of interest can also be caused by human nature (Eisenhard, 1989), namely that humans have the nature of self-interest (self-interest), humans also have limited power of thought about the rationality of perception in the future (bounded rationality) , and humans have the nature to avoid risk (risk averse).

2.2. CFO Management

Illustration of how companies conduct the CFO management through classification and timing is to use the equation of $PROFIT = CASH FLOW + ACCRUAL$. Each component in the equation includes the operating and non-operating categories (funding and investment). Classification can be interpreted by shifting items between the 3 categories of cash flow statements for example: items that should be in the funding cash flow statements are shifted into an operating cash flow statement, this is done so that the profits look constant (Lee, 2012). The act of shifting classification is not all included in the violation of GAAP because managers have the discretion to classify the items on the cash flow statement.

Timing refers to adjusting working capital to change the amount of operating cash flow, but the profit generated remains constant. In general, managers have discretion when reporting CFO such as when payments or cash outflows will be recognized or when they receive cash inflows. Managers usually make CFO management at the end of the fiscal year by slowing payments to suppliers or speeding up billing payments to consumers by providing information that if consumers could settle the payments faster then, they will get a discount (Lee, 2012).

2.3. Cash Flow Statements

Cash flow statements to report cash flows for a certain period and are classified according to operating, investing and financing activities. Cash flow statements have several benefits, including: (1) it can provide information that allows users to evaluate changes in the entity's net assets, financial structure (including liquidity and solvability) and its ability to effect the amount and timing of cash flows in order to adjust to the changing circumstances and opportunities, (2) assess the ability to develop models to assess and compare the present value of future cash flows of various entities, (3) increase the comparability of operational performance report of various entities because it can negate the impact of using different accounting treatments on the same transactions and events , and (4) become an indicator of the amount, timing and certainty of future cash flows (PSAK No. 2 of 2014).

Cash flow statements are classified according to operating, investing and financing activities. Operating activities are the main revenue-generating activities of entities and other activities that are not in the investing and financing activities, investing activities are the acquisition and dismiss of long-term assets and other investments that are not included in cash equivalents, while funding activities are activities that result in changes at the amount and composition of contributions equity and entity loans (PSAK No. 2 of 2014).

Based on PSAK No. 2, 2014, the amount of cash flow that appear from operating activities is the key indicator to determine whether an entity's operations have generated sufficient cash flow to repay loans, maintain the entity's operating ability, pay dividends, and make new investments without the help of funding sources from the outside. Operating cash flow is mainly acquired from the main revenue-generating activities of the entity, here are some examples of cash flows from operating activities:

1. Cash receipts from the sale of goods and the services;
2. Cash receipts from royalties, fees, commissions, and other income;
3. Cash payments to suppliers of goods and services;
4. Cash payments to and for the benefit of employees;
5. Cash receipts and payments by insurance entities including premiums, claims, annuities and other policy benefits;
6. Cash payments or income tax refunds unless specifically identified as funding and investment activities; and
7. Cash receipts and payments from contracts held for trading or trading purposes.

2.4. Previous Research

Lee (2012) tests the hypothesis that companies manage CFO earnings because there is an motivation, there are 4 characteristics of companies that make managers more motivated to do CFO management such as companies that are have financial difficulties, have long-term credit ratings that approach the cutoff, have analysts who predict cash flows, and have a higher stock return effect on operating cash flow. The company carries out CFO management by shifting several items between categories / classifications in the cash flow statement (classification) and adjusting working capital (timing). Here are some of Lee's research results (2012): (1) Using the expected cash flow model (Dechow at al., 1998), it was found that unexpected CFO increases if there is an incentive to raise the reported CFO; (2) the presentation of cash flows due to misclassification is more likely to occur when the motivation to increase the reported CFO is stronger; (3) companies that have a stronger drive to increase reported CFOs will be more likely to classify cash at inflows as operating cash flows than financing cash flows when managers have a discretion against the classification of cash flows; (4) the difference in the industry-adjusted cash conversion cycle in the first quarter in the current year compared to the fourth quarter of the previous year will increase when there is a push to increase the reported CFO. This shows that the shorter cash cycle in the fourth quarter was the result of a deliberate effort to increase cash flow

at the end of the year because improvements reversed in the first quarter of the following year; (5) the results were generally stronger for companies that had a non-December end of the year have a stronger push to increase the reported CFO because it is possible that the end of the fiscal year of their customers or suppliers does not match the end of their own year, this makes it easier for them to accept "time" of transactions in a way that is profitable for the company; and (6) unexpected CFO is less persistent for companies with encouragement to increase reported CFO.

2.5. Hypothesis Development

To illustrate how a company manages the reported CFO using classification and timing, it starts with the equation that $PROFIT = CASH\ FLOW + ACCRUAL$. Classification refers to shifting classifications between categories in the cash flow statement, but this is still done without violating applicable rules and regulations.

Timing refers to how managers do discretion to change the time of recognition of the operating cash flow component, usually the stakeholders are more focused on the report in the final quarter than the previous quarter so that this is made a gap by managers to conduct CFO Management through timing. measuring "timing" is used a conversion cycle that measures how long a company gets cash from receivables collection or sales, with a conversion cycle that gets shorter in the final quarter can show a good company performance in the eyes of investors.

To be able to answer the problem from the formulation of the problem in this study, 2 hypothesis tests were conducted: The first hypothesis is testing to prove whether there is CFO management (i.e. increasing the reported CFO) by testing companies that make a restatement of the cash flow statement, especially operating cash flow as an effort to carry out CFO management through classification shifting and the second hypothesis is carried out to find out how companies conduct CFO management through timing shifting.

3. METHODOLOGY

This research is an explanatory research. According to Umar (1999) in Wijaya (2013), explanatory research (explanatory research) is a research that aims to analyze the relationships between one variable with another variable or how a variable affects other variables.

In this study, first is to test the hypothesis that companies conduct CFO management (i.e. increasing reported CFO) is in response to incentives to be obtained, testing using unexpected CFOs based on the Dechow et al. Model (1998) and then examining how companies conduct CFO management through classification (first hypothesis) and timing (second hypothesis).

Unexpected CFO

To count *expected CFO* use model Dechow et al. (1998):

$$CFO_t/TA_{t-1} = \lambda_0 + \lambda_1(1/TA_{t-1}) + \lambda_2(SALE_t/TA_{t-1}) + \lambda_2(\Delta SALE_t/TA_{t-1}) + \varepsilon_t \dots\dots\dots(1)$$

Where:

- CFO_t= Cash Flow from Operation
- TA_{t-1}= Ending total asset t-1
- SALE_t= Sales period t
- ΔSALE_t= Changing sales period t

The result from equation regression (1) will used to count *Unexpected CFO*.

$$Unexpected\ CFO = actual\ CFO - expected\ CFO \dots\dots\dots(2)$$

Hypothesis 1

To testing hypothesis 1 will using the equation regression:

$$UCFO_t = \beta_0 + \beta_1 FIRM_CHARACTERISTIC_t + \beta_2 EARN_t + \beta_3 SIZE_t + \beta_4 MB_t \dots\dots\dots(3)$$

or

$$UCFO_t = \beta_0 + \beta_1 DISTRESS_t + \beta_2 EARN_t + \beta_3 SIZE_t + \beta_4 MB_t \dots\dots\dots(4)$$

Where:

- DISTRESS= using altman Z-score

$$Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.999X5 \dots\dots\dots(5)$$

X1 = *working capital/total assets*, X2 = *retained earnings/total assets*, X3 = *earnings before interest and taxes/total assets*, X4 = *market value equity/book value of total liabilities*, X5 = *sales/total assets*, and Z = *overall index*.

- EARN = *income before extraordinary items/ total assets*
- SIZE = *natural logaritma from total assets*
- MB = *market value of equity/ book value of equity*

Hypothesis 2

$$\Delta CC_{t+1} = \lambda_0 + \lambda_1 FIRM_CHARACTERISTIC_t + \lambda_2 SIZE_t + \mu_{t+1} \dots\dots\dots(6)$$

$$\Delta CC_{t+1} = CC_{q1,t+1} + CC_{q4,t}$$

Where:

CC_{qi,t} = *cash conversion cycle in quartal i year t*,

To count CC_{qi,t}:

$$\left(\frac{(AR_q + AR_{q-1})/2}{Sales_q/90} \right) + \left(\frac{(Inv_q + Inv_{q-1})/2}{COGS_q/90} \right) - \left(\frac{(AP_q + AP_{q-1})/2}{Purchases_q/90} \right)$$

4. RESULT AND DISCUSSION

4.1. Multicollinearity Test

Table 1. Result Multicollinearity Test for H1

	UECFO	DISTRESS	EARN	SIZE	MB
UECFO	1.000000				
DISTRESS	-0.078833	1.000000			
EARN	0.792334	-0.126248	1.000000		
SIZE	0.075163	-0.194030	-0.081642	1.000000	
MB	-0.054839	0.452243	0.030490	-0.382604	1.000000

Table 2. Result Multicollinearity Test for H2

	CC	SIZE	DISTRESS
CC	1.000000		
SIZE	0.062413	1.000000	
DISTRESS	-0.174660	-0.194030	1.000000

The correlation between the independent variables stated in table 1 and 2 does not exceed 0.8. Thus, it can be concluded that the regression model in this study is free from multicollinearity problems.

4.2. Heteroskedasticity Test

Table 3. Result Heteroskedasticity Test for H1

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.202210	Prob. F(2,13)	0.8194
Obs*R-squared	0.603413	Prob. Chi-Square(2)	0.7396

Table 4. Result Heteroskedasticity Test for H2

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.153151	Prob. F(2,15)	0.8593
Obs*R-squared	0.400231	Prob. Chi-Square(2)	0.8186

Heteroscedasticity testing was performed using the Breusch-Godfrey Serial Correlation LM Test with the following criteria:

H0: There is no heteroscedasticity

H1: There is heteroscedasticity

If the calculated F value > 5% then reject H0.

From the test results it can be seen that $F = 0.8194$ & 0.8593 which means $F < 5\%$ so that it can be concluded that the regression model is free from heteroscedasticity problems.

4.3. Hypothesis 1: Managers conduct CFO Management using Classification Shifting

Table 5. Result of Hypothesis 1

Dependent Variable: UECFO
Method: Least Squares
Date: 09/26/19 Time: 13:03
Sample: 1 20
Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.422364	0.455696	-0.926854	0.3687
DISTRESS	0.018676	0.040817	0.457556	0.6538
EARN	0.651845	0.123610	5.273377	0.0001
SIZE	0.012019	0.015015	0.800485	0.4359
MB	-0.004085	0.011433	-0.357287	0.7259
R-squared	0.653085	Mean dependent var		-1.22E-10
Adjusted R-squared	0.560575	S.D. dependent var		0.126334
S.E. of regression	0.083746	Akaike info criterion		-1.909746
Sum squared resid	0.105200	Schwarz criterion		-1.660813
Log likelihood	24.09746	Hannan-Quinn criter.		-1.861152
F-statistic	7.059574	Durbin-Watson stat		1.562485
Prob(F-statistic)	0.002101			

Test focuses on whether managers manipulate classifications to inflate reported CFO. In this set of tests, I explore whether firms with stronger incentives to inflated reported CFO by examining cash flow restatements due to classification errors. Classification can be interpreted by shifting items between 3 categories of cash flow statements for example: items that should be in the funding cash flow statement are shifted to an operating cash flow statement, this is conducted so that the profits will look constant (Lee, 2012). Not all classification shifting is included in the violation of GAAP because managers have the discretion to classify items on the cash flow statement.

The result shows that companies that became sample in this study did not conduct CFO Management through classification shifting. In this research, most of the firms are more likely to restate cash flow downward due to classification and most of the samples of this study were in the category of companies that went

bankrupt but there were no indications of CFO Management. The result indication that companies in the sample do restatement Cash Flow from Operations not to manipulated but that is the real case happen in the companies.

The result in this research is contradict with result of Lee's (2012) research that indicate firms manage CFO by shifting items between the statement of cash flows categories both within and outside the boundaries of Generally Accepted Accounting Principles (GAAP). Firms that have stronger incentives to inflate reported CFO are more likely to classify a cash inflow as an operating cash flow than a financing cash flow when managers have discretion over the classification of the cash flow.

4.4. Hypothesis 2: Managers conduct CFO Management using Timing

Table 6. Result of Hypothesis 2

Dependent Variable: CC
 Method: Least Squares
 Date: 11/17/19 Time: 19:36
 Sample: 1 20
 Included observations: 20

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-152.4634	2048.586	-0.074424	0.9415
DISTRESS	-122.7175	176.7853	-0.694161	0.4970
SIZE	8.285021	68.01693	0.121808	0.9045
R-squared	0.031351	Mean dependent var		15.706
Adjusted R-squared	-0.082607	S.D. dependent var		50
S.E. of regression	404.2575	Akaike info criterion		388.52
Sum squared resid	2778210.	Schwarz criterion		83
Log likelihood	-146.7946	Hannan-Quinn criter.		14.979
F-statistic	0.275112	Durbin-Watson stat		46
Prob(F-statistic)	0.762804			15.128
				82
				15.008
				62
				1.9558
				61

Timing refers to adjusting the working capital to change the amount of reported operating cash flow, but the profit generated remains constant. In general, managers have discretion when reporting CFO such as when payments or cash outflows will be recognized or when will they receive cash inflows. Managers usually make CFO management at the end of the fiscal year by slowing down payments to suppliers or speeding up the billing payments to consumers by providing information that if consumers make payments faster, they will get a discount (Lee, 2012).

The results show that the sampled companies in this study were suspected of not conducting CFO Management through timings. Most of the samples of this study were companies that have a negative conversion cycle where if you look further into the sampled companies in this study, in the third quarter of 2017, it has more time to pay debts (Days Payable Outstanding) compared to the time to sell inventory (Days Inventory Outstanding) and time to collect debts (Days Sales Outstanding). However, these were the companies' policy in managing the companies' operations and was not one of the ways that managers do to increase the operating cash flow that was reported or often referred to as CFO management.

The result in this research is contradict with result of Lee's (2012) research that indicate firms manage CFO by timing certain transactions such as delaying payments to suppliers or accelerating collections from customers.

5. CONCLUSION

Based on the results of the study that has been conducted, it can be concluded that the sampled companies in this study are suspected of not conducting CFO Management through classification shifting nor timing shifting. Suggestions that can be given for future study to adding research samples in order to provide better results. Future research can examine CFO-based metrics in executive compensation contracts that can affect manager behavior.

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