

The effect of free cash flow and leverage on earnings management: Moderating role of good corporate governance

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Abstract

The purpose of this study is to provide empirical evidence on the impact of free cash flow and leverage on revenue management moderated by the variable of good corporate governance. The research sample consisted of 200 data samples drawn from 20 sub-sectors of the company's consumer products on 2011-2020. The sampling technique used was intentional sampling. Data were analyzed by Moderate Regression Analysis (MRA). The testing results show that free cash flow has a significant negative impact on earnings management, leverage has no impact on earnings management, good corporate governance can mitigate free cash flow, and lastly good corporate governance has a negative impact on earnings management. It shows that the effects of leverage cannot be mitigated. Discussion of the findings that are not in accordance with the initial hypothesis is explained in the final section and the implications of this article.

Introduction

Revenue information is often the focus for technical managers to perform revenue management activities and engage shareholders. Profit management arises from agency costs arising from conflicts between the interests of (major) shareholders and managers (proxy) (Aman et al., 2006; Shafer, 2015; Sari et al., 2021). Many cases of profit management in Indonesia and abroad, especially in the manufacturing sector, are at the expense of shareholders as the reported narratives are untrue. Its Three Pillars of Indonesian Prosperity (AISA) with gaps between national data and audited annual financial reports for 2017. The difference in the first point is the suspected overstatement of accounts receivable, inventories and fixed assets of the food company IDR 400 billion, turnover IDR 662 billion and EBITDA IDR 329 billion. Secondly, cash flows of IDR 78 trillion are assumed under various schemes from AISA Group to supposed affiliated websites. France Indofarma Tbk. (INAF) is also a profit management claim by Indofarma (KONTAN.co.id version on Sunday, May 17, 2020).

Revenue management is the accounting method that managers choose to achieve specific goals. The emergence of profit management practices is due to several factors such as free cash flow (Mwangi & Nasieku, 2022; Nekhili et al., 2016), earnings management (Dechow & Ge, 2006), and leverage (Wimelda & Chandra, 2018; Beatty & Weber, 2003; Bassiouny et al., 2016). Free cash flow is corporate money that may and may not be distributed to creditors or shareholders used to invest in working capital or fixed assets. Companies with high free cash flow have more problems with intermediation and therefore have more opportunities to manage their revenue (Chung et al., 2005; Fields et al., 2001). Yannizar et al. (2020) shows that free cash flow has a negligible negative impact on revenue management. However, this finding differs from Kodriyah and Fitri (2017). Setiawati et al. (2019), and Lupita and Meiranto (2019) found that free cash flow had a significant impact on sales management. Another factor is leverage and debt quality with the measure using of high leverage, extreme leverage e.g., BA company that is heavily indebted and is struggling to pay off that debt (Beatty & Weber, 2003; Bassiouny et al., 2016).

Leverage has a significant impact on revenue management, but others research has the different relationship regarding leverage variable toward earnings management system of corporate (Banimahd & Aliabadi, 2013). According Chalak and Mohammadnezhad (2012), leverage has no significant impact on revenue management. A fallback approach allows other variables to act as moderators. Based on conflicting results from previous studies, Good Corporate Governance (GCG) is believed to constrain free cash flow and leverage aforementioned revenue management. GCG as a system for managing and controlling Corporate regulation and distribution tasks, rights, and duties of corporate stakeholders (stakeholders) in order to achieve organizational goals. Eventually, the aim of this study is to provide empirical evidence on the impact of free cash flow and leverage on revenue management moderated by the variable of good corporate governance.

Literature Review and Hypotheses Development

Agency Theory

There are three basic assumptions about human nature that can explain Agency Theory (Shafer, 2015), namely: a) Humans are in general self-interest, b) People have a limited ability to think about the future (bounded rationality), and c) People always avoid risk (risk aversion). Because of human nature, managers tend to be opportunists, meaning they prioritize their interests for themselves and their organization. A manager also tends to avoid risks that can harm him/her. This results in a manager looking for loopholes to benefit himself/herself first. Diversified companies are less transparent than focused companies (Firnanti & Pirzada, 2019).

Free Cash Flow

Free cash flow is the cash flow that all investors can actually spend after a company has made all investments in fixed assets, new products and the working capital needed to sustain its day-to-day operations. Salehi et al. (2017) found that the higher the free cash flow, the healthier the company is because it has enough cash to grow, service debt and pay dividends. So from this statement we can infer that it is a health issue. When there is a lot of cash available and vice versa, when a company has little cash available, it is said that the company is sick because it accumulates debt and dividends and struggles to pay it off. Kalbuana et al. (2021) research shows that free cash flow has a negligible negative impact on revenue management. This differs from Padmini and Ratnadi (2020), and Hastuti et al. (2018), free cash flow has no positive impact on revenue management. H1: Free cash flow impacts revenue/earnings management.

Leverage

Leverage is the use of assets that have debt as their source of funding. The leverage ratio describes the ratio of a company's debt to equity and assets. Making decisions, management considers its decisions in relation to: return and risk level. By using leverage, the firm offers benefits in return (Chow & Wong-Boren, 1987). Assuming the debt pact, numbers are expected to make a company default on its debt, and managers choose accounting practices that transfer future period earnings to current period earnings. The higher the leverage, the more the manager manages profits to get a good. Yasa et al. (2020) showed that leverage has a significant negative impact on revenue management. But according to Lestari and Khafid (2021), leverage has a positive effect on revenue management.

H2: Leverage impacts revenue/earnings management

Good Corporate Governance as Moderating Effect

According to Fakhroni et al. (2018), Lupita and Meiranto (2019), free cash flow usually creates a conflict of interest between managers and shareholders when managers want to reinvest in future profit projects. Corporate governance implementation is a mechanism used to minimize regulatory conflicts related to corporate governance. Although companies have good corporate governance,

they are not always able to minimize profit management efforts. Swastika (2013) found that GCG as a modulating variable does not modulate free cash flow in revenue management.

H3: GCG mitigates the impact of free cash flow on revenue/earnings management.

Sari et al. (2021), excessive borrowing is bad for business. Businesses will be in debt and will have a hard time getting out of it. This encourages management to engage in revenue management activities to maintain performance in the eyes of shareholders and the public (Surjandari et al., 2021). This was due to the lack of oversight by GCG. A conflict of interest arises between the agent and the customer because the agent cannot meet the customer's request. GCG is a control method used to avoid these conflicts.

H4: GCG mitigates the impact of leverage on revenue/earnings management.

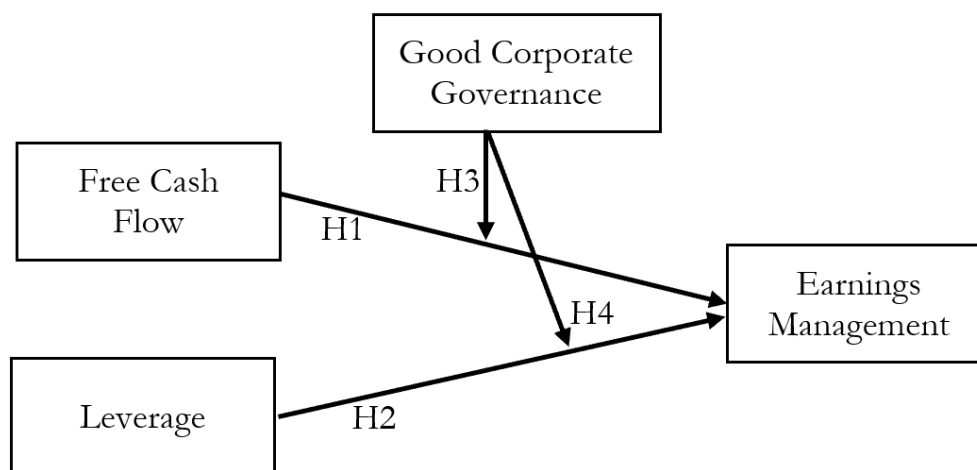


Figure 1. Conceptual Framework

Research Methods

Population and Sample

The company's population consists of manufacturing companies that were listed on the Indonesia Stock Exchange (IDX) from 2011 to 2020. The sampling technique used a deliberate sampling method to achieve the objective of this study. The sampling criteria are following:

Table 1. Sampling Criteria of the Research

| No. | Sample Criteria | Accumulation |
|-----|---|--------------|
| 1 | Manufacturing companies listed on the stock exchange, the consumer goods industry sub-sector. | 60 |
| 2 | Company status not go-public during the study period (2011-2020). | (21) |
| 3 | Data relating to variables are not fully represented. | (19) |
| | Number of samples in 1 period | 20 |
| | Number of samples in 10 periods = 20 x 10 | 200 |

Analysis Method

Moderated Regression Analysis (MRA/Interaction Test) is a special application of multiple linear regression that includes an element of search interaction in the regression equation. A normality test is performed to see if the variables used in the regression model are normally distributed. The normality test in this study uses Kolmogorov-Smirnov. If the test result is a significant value > 0.05 .asymp.Sig (two-sided) > 0.05 , the data are considered normally distributed, H_0 is accepted, and the data are indicated as normally distributed (Wimelda & Chandra, 2018). Asymp.Sig (two-tailed) indicates test is used to check whether the data used have unequal variances between the remaining cases and other cases. When observations are fixed, one speaks of heteroscedasticity,

and when two observations give different results, the other speaks of heteroscedasticity. A regression model is good if it has equal variances or no differences. How to detect the presence or absence of a pattern between SRESID and ZPRED.

The rationale for the analysis is that if a certain pattern exists, for example, points forming a certain regular pattern, it indicates that heteroscedasticity has occurred. Also, if the patterns and dots are distributed above and below the y-axis number 0, there is no uneven distribution. The purpose of this test is to see if the regression model found a correlation between the independent variables z-Criteria. If VIF is less than 10, there is no collinearity. The autocorrelation test checks whether there is a correlation between period t and period t-1 (the previous period) in a linear regression model). If there is correlation, it is called an autocorrelation problem. Autocorrelation can be measured using test runs where the results of a test run against SPSS show Asymp results. Not present if signal (two-way) > probability 0.05. And vice versa when < 0.05, Multiple Linear Regression is used to measure the relationship between related and dependent variables, and between independent and moderately dependent variables (Fakhroni et al., 2018). The F-statistic test was performed using the general formula that b1, b2, b3, and b4 are both equal to the F-statistic test criterion of 0 by comparing the calculated F-values to the F-values shown in the table. Then the author would continue to test the hypotheses. If computed $F >$ value of array F, then H_0 is rejected and H_a is accepted.

The t-statistic test essentially tells how well the independent variables individually explain the dependent variable. This test is performed at the 0.05 significance level. Hypothesis acceptance or rejection is based on the following criteria: (1) If the value is greater than 0.05, the hypothesis is rejected (regression coefficient is not significant). That is, the partially independent variable has no significant effect on the dependent variable. (2) The hypothesis is accepted if the significance value is 0.05 (significant regression coefficient). This means that the partially independent variable has a large influence on the dependent variable (Nekhili et al., 2016). The coefficient of determination (R^2) is used to describe the model ability to explain changes that occur in the dependent variable. The range is 0 to 1. It does not matter if R^2 is large or close to 1.

Results and Discussion

Descriptive Statistic Result

Table 2. Descriptive Statistics

| | N | Minimum | Maximum | Mean | Std. Deviation |
|---------------------|-----|---------|---------|-------|----------------|
| Free cash flow | 200 | -.28 | .50 | .0610 | .11513 |
| Leverage | 200 | .02 | .74 | .3866 | .17108 |
| Earnings management | 200 | -.14 | .14 | .0005 | .05214 |
| Valid N (listwise) | 200 | | | | |

Table 1 shows that 1) Free cash flow minimum at PT. Kimia Farma Tbk (KAEF) in 2020 is -0.28, maximum at PT. Unilever Indonesia Tbk in 2020 is 0.50, average is 0.610, standard deviation is 0.11513. 2) Leverage variable of PT. KalbeFarma Tbk in 2017 shows minimum value of 0.02 and maximum value of 0.74 for PT. Unilever IndonesiaTbk in 2020 with mean of 0.3866 and standard deviation of 0.17108. 3) Variable of earnings management shows a minimum value of -0.14 for PT. Martina Berto Tbk in 2019 and a maximum value of 0.14 for PT. Mayora Indonesia Tbk in 2019, with a mean of 0.0005 and standard deviation is 0.05214.

Table 2 mention that the value of Asymp. Sig. (2-tailed) 0.199 or Asymp. Sig (2-tailed) > 0.05. Data can be found and accept normal distribution. Table 2 shows Asymp. Sig. (two-tailed) 0.199 or Asymp. Sig (2-tailed) > 0.05. The data are found and accepted with a normal distribution.

For multicollinearity test, the result shows variable free cash flow with a leverage tolerance of 0.995 or a tolerance of 0.1 and a VIF value of 1.005 < cutoff for VIF that is less than 10. From this the author can conclude that the regression model does not exhibit a multicollinear problems between the variables in relationship model.

Table 3. Normality Test Result

| | | Unstandardized Residual |
|--|----------------|-------------------------|
| N | | 200 |
| Normal | Mean | .0000000 |
| Parameters ^a b | Std. deviation | .04752643 |
| Most extreme | Absolute | .047 |
| Differences | Positive | .040 |
| | Negative | -.047 |
| Test statistic | | .047 |
| Asymp. Sig. (2-tailed) | | .199 |
| a. Test distribution is normal | | |
| b. Calculated from data | | |
| c. Lilliefors significance correction | | |
| d. This is a lower bound of the true significane | | |

For autocorrelation test, the result also shows that the test value -0.00065 with a probability value of 0.470 or probability > 0.05, so H_0 Accepted, or it means no autocorrelation of the variable from year-t to the previous year.

Multiple Linear Regression Analysis Result

The results of the statistical analysis of multiple linear regression of the first model allow us to set the linear equations below.

$$Y = 0.12 - 0.186FCF - 0.047FL + e$$

Description:

- 1) The constant value (α) is 0.25 or positive. That is, as free cash flow and leverage increase, revenue management increases.
- 2) The regression coefficient of free cash flow is -0.186 or negative, which means that changes in free cash flow variables affect the occurrence of a decrease in operating income, assuming other variables are constant or constant.
- 3) Leverage coefficient regression is -0.047 or negative. This means that profit control will decrease or increase as the leverage variable changes, assuming the other variables are fixed or constant.

In the second form of the linear regression model adjusted by good corporate governance. The results of the second statistical analysis model of multiple linear regression can be transformed into the linear equation as follows:

$$Y = 0.25 - 0.384 FCF - 0.31FL + 0.39 FCF * GCG - 0.46FL * GCG + e$$

The above linear equation can be interpreted below.

- 1) Constant value (α) is 0.25 or positive. This indicates that profit management increases as moderate free cash flow and leverage increase.
- 2) The regression coefficient for free cash flow is -0.384 or negative, indicating that revenue management declines as the free cash flow variable changes, assuming other variables are fixed or constant.
- 3) Leverage regression coefficient is -0.31 or negative, indicating that profit control decreases as the leverage variable changes, assuming other variables are constant or constant.
- 4) GCG-adjusted free cash flow regression coefficient is 0.39 or positive. This means that changes in the GCG-adjusted free cash flow variable will reduce operating income, assuming other variables are fixed or constant.
- 5) The GCG-adjusted leverage regression coefficient is -0.46 or positive, indicating that changes in the GCG-adjusted leverage variable decrease the turnover control when the other variables are fixed or constant.

Table 4. t-test Statistic Result Model 1

| Model | Unstandardized Coefficients | | T | Sig. |
|----------------------|-----------------------------|------------|--------|---------|
| | B | Std. Error | | |
| 1 (Constant) | .012 | .012 | .946 | .347 |
| Free cash flow (FCF) | -.186 | .043 | -4.318 | .000*** |
| Leverage (FL) | .000 | .029 | .012 | .990 |

Table 4 shows the results:

- 1) The t-table value is 1.66177, the t number for the free cash flow variable is -4.318, and the t number = -4.318 means that the probability of H₀ being rejected is 0.05. This means that free cash flow variable has negative and significant impact on revenue/earnings management.
- 2) The value of the t table is 1.66177 and the t count of the leveraged variable is 0.12 with a significance of 0.99. This gives a value of t count = 0.12 < t-table and p-value is 0.99 > 0.05 probability, so that H₀ is accepted or H_a is rejected. This means that partial leverage has no impact on yield/revenue or earnings management.

Table 5. t-test Statistic Result Model 2

| Model | Unstandardized Coefficients | | T | Sig. |
|-------------------------|-----------------------------|------------|--------|---------|
| | B | Std. Error | | |
| 2 (Constant) | .025 | .012 | 2.073 | .041 |
| Free cash flow | -.384 | .064 | -6.040 | .000*** |
| Leverage | -.031 | .029 | -1.085 | .281 |
| Interaction 1 (FCF*GCG) | .390 | .099 | 3.955 | .000*** |
| Interaction 2 (FL*GCG) | -.046 | .033 | -1.408 | .163 |

The coefficient of determination (Adj R Square) from model I is 0.151. This means that from this coefficient the relative share of variable free cash flow and leverage is 15.1%, with the remaining 84.9% affected by other non-research variables.

The coefficient of determination (Adj R Square) from model II that both free cash flow and leverage adjusted by good corporate governance is 0.27, which is the factor that the relative contribution of the combination of free cash flow and leverage variables is 27% and it is remained 73% were influenced by variables outside the study model that were not tested.

Effect of Free Cash Flow on Earnings Management

The t-test results show a significant free cash flow value of 0.000 with a t-value of -4.318. This means that free cash flow has a significant negative impact on revenue management. This means that companies with high free cash flow values are less likely to be involved in revenue management. In agency theory, the manager is responsible for running the company. As such, free cash flow becomes one of the drivers of our revenue management activities. Too much free cash flow and poor management forces management to take actions that benefit individuals and groups. Among the 95 samples, there are companies with high levels of free cash flow relative to their level of revenue management. Companies with high free cash flow must deal with larger agency issues, so they can handle external revenue. This study is supported by several studies such as Alexander (2017), and Utomo and Pamungkas (2018), that found free cash flow will have a significant impact on sales management.

Effect of Leverage on Earnings Management

The t-test result shows a significant leverage of 0.99 with a t-score of 0.12. This means that leverage has no impact on revenue management. According to the agency theory, managers are responsible for running the company and perform revenue management activities to seek sources of funding other than shareholders. From a sample of 95 companies, PT. Unilever Indonesia Tbk, PT. Tri Bayan Tirta Tbk, PT Budi Starch & Sweetener Tbk, PT. Kimia Farma Tbk, and PT. Martina Berto

Tbk., high financial level leverage does not affect income management. This is because leverage is created when a company grows to earn high returns (Ruwanti et al., 2019).

Moderating Role of Good Corporate Governance

The t-statistic test results in a significant value for GCG-adjusted free cash flow of 0.000 and a t-value of 3.955. This shows that free cash flow has a significant positive impact on revenue management. Using the GCG as a moderator, the GCG is not a factor in the effectiveness of the firm's management oversight, so the firm should not weaken or strengthen its revenue management capabilities. However, the effectiveness of management mechanisms depends on prevailing values, norms and beliefs within an organization regarding the management of management activities. This means more or less cash flow is not profitable for management. Firms no longer actively manage profits to avoid loss of profits and reduce revenue. Top companies are among the 95 champions of the companies listed. Free cash flow is compensated by GCG and disrupts revenue management. PT Unilever Indonesia Tbk, PT. Darya Varia Laboratoria Tbk, PT. Indofood CBP Sukses Makmur Tbk, and PT. Gudang Garam Tbk are companies with high free cash flow and good corporate governance can stifle management actions. The results of this study are consistent with Susanto and Pradipta (2016), GCG does not limit free cash flow related to revenue management.

The statistical t-test results show a significant leverage of 0.163 with a t-value of -1.408. Leverage does not affect revenue management. This indicates that firms with mitigating GCG variables should not weaken or strengthen their revenue management capabilities. This is because the GCG does not determine the effectiveness of corporate governance. However, the effectiveness of management depends on the values, norms, and beliefs within the organization regarding performance management activities. This means that more or less leverage does not lead to profit management. Small, large, and medium-sized companies are reluctant to manage their profits to avoid losing profits or losing revenue. Of the 95 samples, there are highly leveraged companies that are not compensated by GCG those are PT. Unilever Indonesia Tbk, PT. Tri Bayan Tirta Tbk, PT. BudiStarch & Édulcorant Tbk, PT. Kimia Farma Tbk, and PT. Martina Berto Tbk. Enterprises Government does not limit leverage to affect the level of revenue management. This study is consistent with Ghofir and Yusuf (2020), Asyiroh and Hartono (2018), and Wijaya et al. (2020), that reveal GCG as moderating variable can not increase or decrease revenue management leverage.

Implication and Conclusion

Good corporate governance can mitigate flow a significant positive impact on revenue management. Good corporate governance can not mitigate the leverage variable to affect revenue management variable. Based research conducted and the results of the discussion, suggestions emerge that are intended to be constructive both for the authors themselves, those interested in this research, and for future wishing to study the same problems (Damayanty et al., 2022). This study are intended to encourage surveyed companies to further improve their management performance in the future and to improve their financial statements so that there are not too many companies auditing financial statements. It hopes investors and lenders will learn more about the companies they work with so their decisions will yield better returns in the future.

For other researchers if they want to direct the same case study hopes that researchers will be able to substitute non-capital market yield management variables to determine the level of yield management in an organization. The researcher is aware of the limitations, namely: the value of the coefficient of determination (adjusted R) is 0.151, which based on this coefficient, the relative contribution of the cash flow is free combination 15.1% and other unstudied variables 84.9%. This shows that unexamined variables have a much larger impact examined. Given the limitations of the study, it is expected that further researchers will be able to substitute other factors for the variables affecting revenue market of revenue management at to replace or complement the company's industry pattern (Ghofir & Yusuf, 2020).

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