

# Cash Flow Analysis, Corporate Governance and Financial Distress

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Using a sample of mining companies listed on the Indonesia Stock Exchange (BEI) over the period of 2014–16, this study aims to investigate the relationship of cash flow analysis and good corporate governance with financial distress. The cash flow analysis ratio includes CFFO / TL; CFFI / TL; CFFF / TL; CFFO / TR; and CFFO / CL. Good corporate governance is the composition of the board of commissioners, the ownership of institutional shares to the total shares, the ownership of shares of internal parties to the total shares and the composition of the audit committee. The target of observation in this research is all mining sector companies based on set criteria. The logistic regression method, G-test and t-test are used to analyse the relationship between the variables. Our results show that one ratio of cash flow analysis shows the relationship between cash flow analysis and financial distress. This study did not find any relationship between good corporate governance and financial distress. The results of this study contribute to investors and users of financial statements to consider the company's financial performance, especially regarding the solvency of the company, because it is able to provide information on whether the company's long-term financial condition is healthy.

**Keywords:** *Cash flow analysis, Good corporate governance, Financial distress.*

## Introduction

The globalization of the world economy has led to an increase in the development of the business community in Indonesia. The community's competitiveness in the face of the demands of globalization opens up opportunities for businesses to improve their quality. Development and competition in the business world present challenges for companies to be able to compete professionally in order to maintain their survival. When a company is unable to compete or maintain its viability, the most likely impact is that the company will experience financial distress and eventually face bankruptcy.

The company's efforts to survive certainly cannot be separated from the role of management in determining policies to support a company's main objectives. The role of management is to align the goals of the company with the condition of the company using a company performance appraisal measurement tool. One form of application can be to use the structure of good corporate governance (GCG). The topic of corporate governance has been widely studied (Aliyu, 2019; Aluchna, 2009; Erina & Mohamed, 2017; Harymawan et al., 2019; Muda, 2017; Muda, Maulana, Siregar, & Indra, 2018; Wardhana, Tjahjadi, & Permatasari, 2017; Sari, Maksum, Lubis & Lumbanraja, 2018; Kanagaretnam, Lobo & Whalen, 2007). GCG is a concept as well as a set of rules that aims to improve company performance; this can be done through supervision and monitoring management performance activities. GCG is also said to be able to measure the effectiveness of a company's operational performance.

In Indonesia, issues related to corporate governance have surfaced since the second half of 1997. The application of GCG is considered to be running at less than the optimum level, and this is considered one of the factors that caused the Asian financial crisis and at the same time has had an impact on economic conditions in Indonesia since 1997 (Main, 2003). Oversight and control functions that do not run effectively and efficiently, the number of companies that still depend on external funding sources and the lack of transparency of existing procedures are factors that exacerbated the economic crisis that occurred in Indonesia (Kaihatu, 2006). This demonstrates that GCG in companies can improve the state of the country's economy.

GCG should be implemented by all parties in the company, especially those involved in forming a policy – namely the top management of the company. The board of commissioners is one of the most important organs of the company. The board of commissioners advises the board of directors and is responsible for ensuring whether the implementation of GCG has been running effectively (National Committee on Governance Policy, 2006: 20). Based on GCG guidelines, the composition of the board of commissioners in each company depends on the complexity of each company, but is expected to continue to be able to assist the decision-making process in an effective manner and to ensure that the implementation of the supervisory function runs according to the laws and regulations.

Another application of GCG is to pay attention to the proportion of company share ownership, especially ownership of shares by institutional and managerial parties. Companies must be able to position the position of shareholders and other stakeholders because their existence can provide added value to the company. The problem with this is that the majority of companies listed on the Indonesia Stock Exchange are family-owned companies and there are many fraudulent practices involved in the process of managing a company (Kaihatu, 2006). Therefore, there is some bias regarding profits, especially from capital included by public investors, as well as many irregularities in the management of the company.

In addition, the audit committee board also has an important role in the structure of GCG in determining the success of the company. The task of the audit committee is to convey its members' knowledge about accounting issues, explain accounting problems that occur and ensure that all operational functions within the company are running properly. The existence of the audit committee is expected to be able to improve the quality of the company, improve internal control of the company, minimize fraud that could cause harm to the company and be able to provide opinions as well as solutions related to financial and operational problems related to the company's leadership.

Measurement of financial performance is a tool used to measure financial distress as well as success. This can be done through financial statements. Users of financial statements can use this measure to predict the viability of the company, calculate and improve company finances and company operations, and produce economic decisions. Financial analysis to provide information for users of financial statements for the company's past, present and future financial reporting can be done using cash flow analysis or cash flow analysis. PSAK No. 2 (2002: 5) discusses cash flows for cash in and out processes. Information about how and from whom the company receives cash or how to obtain it, and which companies spend it in a certain period is presented in the cash flow statement. The movement of cash is important, and this report is often used for liquidity efficiency and solvency of the company. This study uses the measurement of cash flow analysis to see the valuation of financial distress in accordance with research conducted by Noor Salfizan Fawzi et al. (2015) in which the results of the study mention several studies of cash flow comparisons that produce significant predictors of financial distress.

By using cash flow analysis, the condition of cash surpluses or deficits experienced by a company in the future can be predicted. If the company is predicted to experience a cash surplus, it is better for management to design a plan for how the budget funds can be used effectively and efficiently. On the other hand, if the company is predicted to experience a deficit, management should have planned a policy to prevent or cover the deficit. A company that has a deficit but is still making a profit may be an indication that there is a financial health problem and the company is doubtful about its ability to fulfil its obligations, especially to creditors and investors (Hermason, 1995: 386).

This study uses data from mining companies listed on the Indonesian Stock Exchange in 2014–16. A total of 102 observations were used. The analysis was done by doing logistic regression analysis by first testing the classical assumptions. The analysis process was carried out using SPSS 23.00 software.

The results showed that only one cash flow analysis ratio was positively related significantly to financial distress, namely solvability (cash flow from operating divided by total liabilities).

We found no significant relationship between good corporate governance and financial distress. The results of this study are useful for academics to improve the literature on cash flow analysis and good corporate governance in relation to financial distress found in companies in Indonesia. The results of this study can be used as a basis for consideration of decisions for both investors and creditors. Investors and other users of financial statements need to look at the company's financial performance, especially regarding the solvency of the company, taking into account the health of the company's financial condition for the long term. Investors need to make sure how much profit they can achieve later Likewise, creditors need to ensure that the company is able to pay off its debts.

The next section of this article is a literature review and hypotheses development; this is followed by a sample description and research variable and an examination of the results and discussion. The final section of the article presents conclusions, limitations and suggestions for further research.

## **Literature Review**

### ***Theoretical Framework***

Agency theory relates to the relationship between the manager as an agent, with investors as the principal (Jensen and Meckling, 1976). Based on classical agency theory, both principals and agents tend to maximize their individual benefits (Fitri et al., 2019). Agency conflict makes investors incur additional costs in the hope that managers can maximize the value of the company (Putra, Pagalung, Habbe, 2018). In the agency relationship, there is a difference in status between the agent and the principal so that it often causes the emergence of an agency problem, which may be caused by asymmetric information. This conflict of interest occurs because the manager or as an agent is taking an action that may not be in accordance with the interests of the investors as the principal, so the principal is not able to ensure their welfare, which triggers agency costs. The importance of evaluating internal control and the components of corporate governance (corporate governance structure) minimizes or even prevents the behavior of the agent from the principal interests.

Signalling theory introduces the term 'information asymmetry' (asymmetry information). Akerlof's (1970) theory was developed by Spence (1973) into the theory of signal balance (basic equilibrium signalling model). According to Morris (1987), information asymmetry can be minimized when parties who have information are better able to convey this information through certain signals. Signalling theory motivates companies to continue to improve performance and reveal the good news to the market. It seeks to minimize the occurrence of asymmetric information. The annual report is one source of information disclosed by a company, which is also a good signal for users of financial statements, who

really need accurate, detailed and significant information that can be accounted for. If the information disclosed really becomes a good signal, investors will trust the company and involve themselves in participating in stock trading activities. Thus, the trading volume of shares will increase.

## **Development of Hypotheses**

### ***Cash Flow Analysis and Financial Distress***

Statements of cash flows are financial statements that contain inflows and outflows from cash and cash equivalents. The cash flow statement should be disclosed along with other financial statements. The relationship between cash flow statements and other financial statements is able to provide views to users of financial statements. Financial difficulties can be predicted through the company's cash flow analysis activities for the current and future years (Foster, 1986). The cash flow statement is useful for investors and creditors in assessing the company's ability to manage cash inflows and cash outflows to produce maximum profits and assess the company's survival. It is also useful for management in evaluating company performance and efforts to prevent financial distress, and to assess risk levels, plan and make better decisions for the company. In this case, the cash flow statement is also expected to be able to predict the possibility of the company experiencing financial distress and even bankruptcy. To examine the relationship between cash flow analysis and financial distress, this study tests the following hypothesis:

**H1:** Cash flow analysis has a relationship with financial distress

### ***Good Corporate Governance and Financial Distress***

GCG is a set of rules that are expected to be able to improve performance and provide added value to the company (Seog, 2007). Over time, the problems of corporate governance have increased and received more attention – especially for those involved in the world financial markets (Ho and Wong, 2001). As was the case in the United Kingdom in the late 1980s, this is caused by problems such as bankruptcy on a fairly large scale, the number of sources of funds that are misused, the failed role and responsibilities of auditors and activities that harm the economy as a whole (Keasey and Wright, 1997).

Corporate governance is a set of rules that explain the connectedness of various parties involved in the survival of the company, including internal parties such as company managers and external parties such as creditors, investors and other stakeholders (FCGI, 2001). The board of commissioners is one part of the company that has the responsibility to conduct monitoring activities to the board of directors who play a direct role in maximizing the implementation of

GCG (KNKG, 2006). The greater the number of boards of commissioners, the more likely it is that the company's decision-making process and the implementation of GCG components in the company will run effectively and minimize financial distress. Previous research has shown that boards that more effectively monitor management improve the quality and frequency of information issued by management (Ajinkya et al., 2005; Karamanou and Vafeas, 2005; Klein, 2002). When a company has institutional ownership, this means it has management and supervision not only from internal parties but also from external parties.

The higher the institutional ownership, the stronger the company's internal control, reducing information asymmetry and agency costs (Crutchly et al., 1999). ownership concentration increases company performance by reducing agency costs for scattered ownership (Elloumi and Guelie, 2001; Holderness and Sheehan, 1988; Neun and Santerre, 1986). However, dominant shareholders tend to misuse minority investors, especially in poor institutional arrangements (Pajuste, 2002). Institutional ownership should be able to increase company control and reduce a company's financial distress. The existence of share ownership by managers is able to influence policies related to supervision conducted by management itself, so the greater the managerial ownership, the smaller the potential for financial distress will be. The existence of the audit committee as a function of supervision regarding financial statements in order to assist the duties of the board of commissioners, audit activities and risk minimization also enhance the implementation of GCG. A more effective audit committee will reduce the possibility of financial distress. To examine the relationship of GCG and financial distress, this study examines the following hypothesis:

**H2:** GCG has a negative relationship with financial distress

## **Research Design**

### ***Sample and Source of Data***

The population used in this study was mining companies listed on the Indonesia Stock Exchange from 2014 to 2016. Samples were obtained from populations that were criticized according to research needs. The final sample used in this study were 34 companies for three years (2013–17) so that the total observations of the study were 102. The data used in this study were balanced panel data because the number of companies used as samples was the same every year. The data used are secondary data, namely the companies' annual reports, which were obtained from the Indonesia Stock Exchange website, <http://www.idx.co.id>.

### ***Operational Definition and Variable Measurement***

The dependent variable used is financial distress disclosure. Financial distress is a financial condition that has declined and occurred before the company was said to be bankrupt or liquidated (Plat and Plat, 2006). The company will experience financial distress if the company's operating cash flow is unable to meet its short-term obligations. There are four general terms of financial distress according to Altman (1968): economic failure, business failure, insolvency and legal bankruptcy. Financial distress disclosure uses dummy variables, where the provision of a score of 0 for the category of financial distress company and a score of 1 for the category of non-financial distress company. The category is determined based on interest coverage ratio.

The independent variables in this study are cash flow analysis and good corporate governance. The statement of cash flows is information about changes related to the inflows and outflows of cash and cash equivalents of an entity. IAI defines cash flow based on activities as follows including operating activities, investment activities and financing activities. This study uses several cash flow analysis ratios, including operating, investing and financing activities including  $\text{CFFO (cash flow from operating) / TL (total liabilities)}$ ;  $\text{CFFI (cash flow from investing) / TL (total liabilities)}$ ;  $\text{CFFF (cash flow from financing) / TL (total liabilities)}$ ;  $\text{CFFO (cash flow from operating) / CL (current liabilities)}$  and  $\text{CFFO (cash flow from operating) / TR (total revenue)}$ .

Corporate governance was first introduced by the Cadbury Committee in 1992. Corporate governance is a set of rules that explain the connectedness of various parties involved in the survival of the company, including internal parties such as company managers and external parties such as creditors, investors and other stakeholders (FCGI, 2001). The function of GCG is to provide added value to the company. Competition arises by creating new creativity between companies, which at the same time influences the economic climate of a country. This study uses GCG indicators that include the composition of the board of commissioners, the proportion of share ownership held by institutional parties, the proportion of share ownership owned by internal parties and the composition of the audit committee.

**Table 1:** Variable definition

Variable	Definition
FD	Financial distress disclosure uses dummy variables, where the provision of a score of 0 for the category of financial distress company and a score of 1 for the category of non-financial distress company
OTL	Cash flow from operating to total liabilities
ITL	Cash flow from investing to total liabilities
FTL	Cash flow from financing to total liabilities
OCL	Cash flow from operating to current liabilities
OTR	Cash flow from operating to total revenue
COMM	Total commissioners
INSOWN	Institutional ownership
MANOWN	Managerial ownership
AUDCOM	Total audit committee

### *Methodology*

The analytical method used in this study is a logistic regression analysis method, which first tests the classical assumptions with the help of SPSS 23.00 software. The logistic regression analysis model in this study is used in the following mathematical equation:

$$\ln \frac{p}{1-p} = \beta_0 + \beta_1 \text{OTL} + \beta_2 \text{ITL} + \beta_3 \text{FTL} + \beta_4 \text{OCL} + \beta_5 \text{OTR} + \beta_6 \text{COMM} + \beta_7 \text{INSTOWN} + \beta_8 \text{MANOWN} + \beta_9 \text{AUDCOM} + \varepsilon \dots \dots \dots (1)$$

### **Results and Discussion**

#### *Descriptive Statistics*

This study explains the total valid company observations (N), minimum/lowest values, maximum/highest values, mean/average values and standard deviations of each variable. Total company observations are valid, namely total company observations that are ready to be examined from each variable, the minimum value is the smallest value of each variable that is meticulous and the maximum value is the highest value of each variable studied. Then the mean value is the average of each variable and the standard deviation is the level of variation in the data of each variable studied. The results of the descriptive statistical analysis are presented in Table 2.

**Table 2:** Descriptive statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
OTL	102	-.50	1.46	.1731	.27732
ITL	102	-1.74	.10	-.1609	.23733
FTL	102	-.88	1.58	-.0234	.30324
OCL	102	-2.44	3.48	.3369	.60787
OTR	102	-17.75	2.84	-.2637	1.98378
COMM	102	2.00	10.00	4.5588	1.88045
INSOWN	102	.00	.99	.6576	.22318
MANOWN	102	.00	.66	.0495	.12975
AUDCOM	102	1.00	5.00	3.0784	.57482
FD	102	0	1	.59	.495
Valid N (listwise)	102				

### ***Logistic Regression Test Results***

Based on Table 3, assessment of the overall model (overall model fit) is done by analyzing the initial  $-2LL$  value with the final  $-2LL$  value. If the difference decreases, the proposed regression model and the hypothesis model can be said to be good and fit with the data. As is the case with the results of the analysis, the initial value of  $-2LL$  is 138.209 and the final value of  $-2LL$  that is after entering all the variables is 102.137. This means that it can be concluded that the proposed regression model and the hypothesis model can be said to be good and fit with the data. Based on Table 2, the results of Cox and Snell  $R^2$  explained that the ability of the dependent variable namely financial distress in this case can be identified through the independent variable of 29.80%.

**Table 3:** Determination coefficient test results

Step	$-2$ Log likelihood	Cox & Snell $R^2$	Nagelkerke $R^2$
1	102.137a	.298	.401

Table 4 shows that the variable that has a significance value  $<0.05$  or 5% is only OTL or in this case the result of the cash flow analysis is  $CFFO / TL$ , while other variables have values  $> 0.05$  or 5%. Because the OTL value of the analysis results is 0.005 and means  $<0.05$ , it is concluded that the  $CFFO / TL$  variable has a simultaneous relationship with financial distress.

**Table 4:** T-Test (Partial)

	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
OTL	8.200	2.905	7.968	1	.005	3641.542	12.263	1081406.739
ITL	.154	1.797	.007	1	.932	1.167	.034	39.537
FTL	.088	1.858	.002	1	.962	1.092	.029	41.658
OCL	-1.221	.872	1.959	1	.162	.295	.053	1.630
OTR	.170	.252	.456	1	.499	1.186	.723	1.944
COMM	.141	.146	.928	1	.335	1.151	.865	1.533
INSOWN	1.986	1.341	2.193	1	.139	7.286	.526	100.903
MANOWN	-1.779	2.428	.537	1	.464	.169	.001	19.665
AUDCOM	-.185	.445	.173	1	.678	.831	.347	1.990
Constant	-1.535	1.841	.695	1	.404	.216		

### *Cash Flow Analysis and Financial Distress*

The results of the CFFO (cash flow from operating) / TL (total liabilities) regression analysis produce a value of 0.005, with a significance level ( $\alpha$ ) = 5% while the results of the regression analysis for other cash flow ratio variables, namely CFFI (cash flow from investing) / TL (total liabilities); CFFF (cash flow from financing) / TL (total liabilities); CFFO (cash flow from operating) / CL (current liabilities) and CFFO (cash flow from operating) / TR (total revenue), have values of  $> 0.05$  or 5%.

The hypothesis that cash flow analysis is positively related to financial distress is accepted for the measurement of cash flow analysis using OTL. In contrast, a study conducted by Ward (1994), which states that cash flow from investing has a significant relationship with financial distress, is not proven in this study.

The results of the FTL variable regression analysis, or in this case the results of the CFFF / TL analysis, produce a value of 0.962, which is higher than  $\alpha = 5\%$ ; it can therefore be concluded that the hypothesis says that cash flow analysis (one form of analysis that is at the level of solvency is FTL) relating to financial distress is unacceptable. This study supports previous research conducted by Fawzi et al. (2015), but does not support research conducted by Rodgers (2011), which states that FTL has a relationship with financial distress. Furthermore, OCL has no relationship with financial distress. These results differ from studies conducted by Murty and Misra (2004), which state that OCL has a relationship with financial distress. OCL is a form of liquidity ratio. The company's ability to settle its obligations can be analysed through a high liquidity ratio, which means that the company's current debt is smaller than the operating cash flow, so the company's operating cash flow is able to cover its current debt to prevent financial stress. Consequently, the company treats its

profits very carefully and takes action to overcome operational costs by using long- and short-term liabilities. Finally, the results of the logistics test show that OTR has no relationship with the company's financial distress.

Cash flow resulting from operating activities to meet obligations due in the long run is able to predict the possibility of companies experiencing financial distress. However, in this study the results of cash flow ratios from investment and funding activities are not able to predict the possibility of companies experiencing financial distress because it is not certain that the company is able to settle its obligations to creditors. Likewise, if the value of cash flow is low, it is not certain that the company is experiencing a bad financial condition. As is the case with the cash flow ratio, which translates total income into cash, there is a possibility that the increase in sales is not in the form of cash but this can be detected through corporate receivables. This is what proves that the cash flow condition of the company may not be able to predict the possibility of financial distress.

### ***Good Corporate Governance and Financial Distress***

The results of the regression analysis of the composition of the board of commissioners' variables, the proportion of share ownership owned by institutional parties, the proportion of share ownership held by internal parties, and the composition of the audit committee resulted in values  $> 0.05$  or  $> 5\%$ .

The results of the COMM variable regression analysis, or in this case the size of the board of commissioners, produced a value of 0.335 which is higher than  $\alpha = 5\%$ ; it can therefore be concluded that the hypothesis that good corporate governance (one component is the size of the board of commissioners) is negatively related to financial distress is not acceptable. The greater the size of the board of commissioners in a company, the more it is likely to be able to increase oversight of company performance, especially the board of directors. The board of commissioners also plays a role in making more appropriate decisions and reducing agency problems between the agent and the principal, namely directors and shareholders. Thus the size of the board of commissioners in a company may not be able to prove the possibility of financial distress in a company.

The results of the INSOWN variable regression analysis, or in this case the proportion of share ownership owned by the institution with the total number of shares, resulted in a value of 0.139; this is higher than  $\alpha = 5\%$  so it can be concluded that the hypothesis that good corporate governance (one component of which is institutional ownership) is negatively related to financial distress is not accepted. The greater the share ownership, the greater the by the institutional expectation of supervision of company performance will be, so it can increase the value of the company. However, investors are often weak and passive in giving

advice to company management (Gillan & Starks, 2000). Thus the high and low proportion of share ownership owned by institutions may not necessarily prove the possibility of financial distress in a company.

The results of the MANOWN variable regression analysis, or in this case is the proportion of share ownership held by internal parties with the total number of shares, produced a value of 0.464; this is higher than  $\alpha = 5\%$  so it can be concluded that the hypothesis that states good corporate governance (one of the components of which is that internal ownership) is negatively related to unacceptable financial distress is accepted. The greater the proportion of share ownership held by internal parties, the more likely it will be to be able to increase the ability deployed by internal parties to determine policies that are more appropriate for the future and continue to increase value for the company because the internal parties feel that a portion of the company is his. However, 66.9% of companies that go public are family companies (Classen, Djankov and Lang, 2000). Thus, the high and low proportion of share ownership owned by institutions may not necessarily prove the possibility of financial distress in a company.

The results of the regression analysis of the AUDCOM variable, or in this case the size of the audit committee, produces a value of 0.678; this is higher than 5% so it can be concluded that the hypothesis that good corporate governance (one component of which is the size of the audit committee) is negatively related to financial distress is not accepted. The greater the size of the audit committee within a company, the greater the expectation of oversight of the company's financial reporting performance, risk management and audit implementation so that the company's financial statements can be more trustworthy and the value of the company for external parties can be increased. However, the smaller the size of the audit committee, the more limited the diversity of skills and knowledge about audit activities, whereas the larger the size of the audit committee, the more difficult it is to reach agreement. Thus the size of the audit committee in a company may not be able to prove the possibility of financial distress in a company. It can therefore be concluded that Hypothesis 2, which says that the good corporate governance has a relationship with financial distress cannot be accepted. The size of each component of GCG cannot predict the possibility of financial distress. Furthermore, it can be concluded that the hypothesis that GCG is related to financial distress cannot be accepted.

## **Conclusion**

This study aims to analyze the relationship between cash flow analysis, GCG and financial distress. Based on the results of the analysis and discussion of the hypotheses that were formulated, the results of this study indicate that cash flow analysis has a relationship with financial distress. One of the cash flow calculation methods used by researchers is the CFFO /



TL, which produces a t test value equal to the significance level ( $\alpha$ ) set at 0.05. By using the CFFO / TL ratio, it is possible to see whether the results of the analysis have a relationship with financial distress. The component of GCG is not related to financial distress. Hypothesis 2, that corporate governance has a relationship with financial distress, cannot be accepted. The extent of GCG apparently has no relationship with financial distress.

The study showed that the variance that explains how much the independent variable proves its relevance to the dependent variable is 29.80%. It is therefore likely that 70.20% is due to other independent variables, aside from the variables used by researchers in this study. We therefore suggest future research should use wider variables and methods to obtain more effective research results.

This research provides some basic considerations for management and investors. In the midst of the weakening of the rupiah and falling demand for foreign market prices, management needs to re-evaluate the financial performance of companies, and to determine strategies to anticipate whether there are indications of financial distress in order to improve the company's financial performance, especially regarding the solvency or long-term financial performance of the company to avoid financial distress. Investors and other users of financial statements need to look at the financial performance of companies, especially regarding the solvency of the company, taking into account the health of the company's financial condition in the long term. Investors need to ascertain how much profit they will get, as well as ensuring ability to repay debts.

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