MANAGEMENT DISCUSSION AND ANALYSIS, CORPORATE GOVERNANCE PERCEPTION INDEX AND MARKET REACTION

Lindrianasari*, Sondang Berliana Gultom*, Liza Alvia*

*Accounting Department, Faculty of Economics and Business, Universitas Lampung, Indonesia

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Abstract

This research generally aims to provide empirical evidence on investor reaction to the disclosure of Management's Discussion and Analysis of the companies listed on the Indonesia Stock Exchange in the period of 2011-2013. The motivation of this study is that there is no study in Indonesia concerning the presentation of the Management's Discussion and Analysis that affect investors' decision to invest in an enterprise, which is illustrated by the market reaction to stock returns and trading volume activity. There are 827 samples in this study in the period of 2011-2013. This study found that Indonesian capital market is responding to the disclosure of Management's Discussion and Analysis provided by the company. The more complete disclosure of the information in the Management's Discussion and Analysis, the better the market response. Corporate Governance Perception Index also responded positively and significantly to the stock trading volume. These findings indicate that the disclosure of information contained in Management's Discussion and Analysis and Corporate Governance Perception Index utilised for market participants in Indonesia in decision-making.

Keywords: Management's Discussion and Analysis, Market Reaction, Stock Return, Trading Volume Activity, Corporate Governance Perception Index

1. INTRODUCTION

The content of MD&A information in the annual report can be a basic consideration of investor to conduct an evaluation on the stock rate from companies that provide MD&A completely and openly. This information will make investor expectation bias relatively low because information delivered by management is more open, accurate, and complete, so it reduces involved stock risk. Logically, investors will respond positive MD&A information delivered in the corporate annual report. The increase of stock rate and stock trading volume as the result of the existence of selling and buying actions done by investors eventually will also affect abnormal return average and with the occurring of trading volume activity average.

An annual report generally reports progress and achievement of success obtained by an organisation in a year as well as an outlook illustration of corporate business in the future. Disclosure, as well as accurate data and information, are the main key in presenting the annual report. In order to encourage Good Corporate Governance implementation in increasing disclosure quality in financial information, some governmental institutions and independent institutions in Indonesia conduct an awarding event for companies that present annual report openly in *Annual Report Award. Annual Report Award* (ARA) organized by a number of governmental institutions and independent institutions which are Komite Nasional Kebijakan Governance (KNKG)/National Committee of Governance Policy, Bursa Efek Indonesia (BEI)/Indonesia Stock Exchange, Bank Indonesia (BI)/Bank of Indonesia, Otoritas Jasa Keuangan (OJK)/Authority of Financial Service, Direktorat Jenderal Pajak Kementerian Keuangan Republik Indonesia/Directorate General of Taxation, Ministry of Finance Republic of Indonesia, Kementerian BUMN Republik Indonesia/Ministry of SOE Republic of Indonesia, and Ikatan Akuntan Indonesia (IAI)/Indonesian Accountant Association.

The award of *Annual Report Award* (ARA) is given to a company that is able to present a report that gives a good and clear illustration of operational activity, both performance and indication of the corporate direction in the future, and the one that fulfils specified criteria. Organiser team divides assessment criteria of 2013 *annual report award* into eight classifications one of them is

Management Discussion and Analysis with the second highest weight of 22%, after Good Corporate Governance (GCG) as much as 35%. It indicates the importance of Management Discussion and Analysis presentation in delivering information for stakeholders especially investors[21].

Some criteria of MD&A determined by ARA organising institution are important information needed by investors and potential investors which is: description on corporate financial performance, description on the corporate business outlook, description on dividend policy and payment of cash dividend per share. Empirical test on the effect of MD&A information disclosure in corporate annual report toward investor decision in conducting investment needs to be done. The study result of Brown (2011) shows that company with greater economic change modifies MD&A better compared to the one with a smaller economic change. The response magnitude of stock rate for 10-K is positively related to modification score of MD&A, however, the analysis shows that investors do not use information of MD&A. The study of Clarkson *et al.* (1999) shows that, overall, the quality of MD&A disclosure is varied with the disclosure found to affect the choice of disclosure in some other disclosures. This study is consistent with the idea that MD&A is part of the whole corporate disclosure. The study is also done by Bryan (2007) illustrating that in connecting financial report and MD&A disclosure, it can help in evaluating the future (short term) of corporate outlook. The finding of Mayew *et al.* (2015) demonstrates that information in MD&A disclosure is more useful in predicting relative bankruptcy toward financial ratio three years before bankruptcy and more timely MD&A disclosure compared to financial ratio. The study of Schroeder and Gibson (1990) reported that Readability of MD&A is writing quality encouraging fast and easy communication for annual report users.

The limitation of study in the area of MD&A in Indonesia becomes the main motivation for this study to be done. The objective of this study is to investigate whether investors react positively toward disclosure of Management's Discussion and Analysis. The result of this research found that Indonesian stock market responds to MD&A disclosure given by the company. The more complete information in MD&A, the better market response (both stock return and stock trading volume). Corporate Governance Perception Index also has a positive and significant reaction to stock trading volume. This finding shows the importance of Management's Discussion and Analysis disclosure and Corporate Governance Perception Index for market actors in Indonesia in decision making.

Furthermore, this paper presents a literature review and previous research as a basis for developing hypotheses. Data research, the definition of variables and econometric tools for hypothesis testing are described in section 3. In section 4, described the results of research and discussion to explain the results of tests performed on the data used in this study. Conclusions and suggestions described as an explanation of the closing of this paper.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1. Theories

Signaling theory developed by Ross (1977) suggests a company with great leverage can be used by the manager as optimistic signals over the future of the company. This theory emphasises the importance of information issued by the company toward investment decision of company's external parties. Information is an important note of a company in the past, present, and future. Signaling theory shows the existence of asymmetric information between corporate management and parties who concern with the information and express on how the company gives signals to financial report users. Information published as an announcement will give the signal for investors in investment decision making. If the announcement contains a positive value, market actors are expected to respond to the announcement when it is received by them.

Good signal over a disclosure indicates that there is useful information content in the disclosure. The corporate annual report is an item expected to have information content by accountancy community. Because financial report relevance is the purpose of reliable accountancy report, Feldman *et al.* (2008), Li (2010), Hanley and Hoberg (2010), and Kogan *et al.* (2011) explored whether MD&A has incremental information content. Kogan *et al.* (2011) found that MD&A improve its usefulness more after the era of SOX. Meanwhile, Feldman *et al.* (2008) found that, in reaction from short window period, MD&A information increases corporate return portfolio that they observed, even after controlling accrual, OFC and earning surprise. Hanley and Hoberg (2010) found that MD&A information can increase corporate prospectus information when feasibility testing is done by emission guarantee company on the first stock trading. Li (2010) found that MD&A reduces rate errors as the result of accrual. Some results of this study show that MD&A has additional information content of the corporate annual report.

The signal can be a promotion or other information stating that the company is better than other companies (Hartono, 2008). Similarly, if it is related to the relationship of performance and social or environmental disclosure, which is if a company has high financial performance, it can give the positive signal for investor or community through a financial report or annual report that is disclosed. Shareholder theory states that company is set up and run in order to maximise the welfare of owner/shareholder as the result of investment done (Smerdon in Sutedi, 2011). Based on this theory, the most basic responsibility of directors is to act for the importance of value increasing from shareholders. If the company focuses on the interest of its supplier, customer, employee, and environment, value obtained by shareholder is less, so the running of management by directors has to consider the interest of its shareholder to ensure the health of the company in the long term, including the increase of shareholder value (Sutedi, 2011).

This theory explains the relationship between corporate management and shareholder; has the aim to help corporate management in increasing value creation as the effect of activities they did, and

[21] http://www.bi.go.id/id/ruang-media/info-terbaru/Pages/ARA2013.aspx

minimises loss that might appear for their shareholder. In creating value for the company, corporate management must be able to manage all sources owned by the company, both employee (human capital), physical capital, and structural capital. When all sources owned by the company can be managed and used well, it creates value added for the company to be able to increase corporate financial performance. All actions are done for the importance of shareholder.

2.2. Value Relevance in Management Discussion and Analysis

The financial report made by the company is basically aimed for decision making for investors and creditor. The financial report stated to have high relevance if the information contained in the financial report can affect the decision of its user in business decision making related to corporate activity. Ghozali and Chariri (2007) explained that information can be said relevant if the information has an advantage, in accordance with action that can be done by financial report user. In other words, relevance is the ability of information to affect decision all financial report users so it is able to change or support the expectation of its user towards outcomes and or consequence of the action taken.

The relevance of accountancy value has been discussed for a long time in empirical studies (Ball and Brown, 1968; Beaver, 1968). Beaver explained that value relevance in accountancy information has the ability to explain corporate value. Meanwhile, the study of Ball and Brown indicates that accountancy profit and some other financial components can give reaction to the stock market, so the changing in the stock market will occur. Both studies are an initial monument of accountancy value relevance study.

According to Belkoui (2006), relevance refers to the ability of information to affect manager decision by changing or informing their expectation on outcome or consequence of action or event. Relevant information will help investors, creditors, and other users to evaluate events in the past, present, and future (predictive value) for informing or improving previous expectation and at the same time must be delivered on the right time. In order to be relevant, information has to be available for decision makers before they lose its capacity to affect decision making.

Value relevance also contains a definition of content in it (information content), which has a capacity of information that can explain more the real condition of the company (Atmini, 2002). Information in MD&A gives consideration to the investor to conduct evaluation over the stock rate of a company that presenting MD&A. It will make bias of investor expectation relatively low because information delivered by management is more open, accurate, and complete, so it reduces related stock risk.

Securities and Exchange Commission-Commission Statement defines *Management's Discussion and Analysis* (MD&A) as the following:

"SEC has admitted the needs of narrative explanation from the financial report because the numeric presentation and brief footnote accompanying may not be enough for an investor to evaluate earning quality and the possibility that past performance is the indication of future performance. MD&A is meant to give the investor the opportunity to see the company through the eye of management by providing short analysis and long-term analysis from corporate business."

Disclosure is mandatory where there is known tendency or uncertainty that tends to have a material effect on the financial condition of an applicant or operational outcome. Therefore, development of MD&A must be started by identifying what management and evaluation information, including known trend effect potential, commitment, event, and uncertainty. It is important to provide investor and others accurate understanding about the position and current corporate financial operation outcome and potential investors[22].

MD&A is very important part of the annual report, especially for those who analyse the fundamental including management and management style. Although this part contains useful information, investors have to consider that the part is not audited. For a big company, this statement might be complicated and might include in wide series of financial report footnote and management discussion. The note usually describes each item on balance, earnings report, and cash flow statement further in detail. Essentially, note on the financial report is considered as a part that cannot be separated from financial report. Meanwhile, management discussion and analysis or MD&A is a part that is integrated to corporate annual financial report.

This part contains last year description and a number of key factors that affect corporate business present year, as well as a fair and objective description of company in the past, present, and future. MD&A usually describes position of corporate liquidity, capital resources, company outcome, causes of material changing in financial report item (such as the decrease of asset value and restructuration), unusual event or infrequent nature (such as merger and acquisitions or stock buyback), positive and negative trend, effect of inflation, domestic and international market risk, significant uncertainty.

In the draft of *Management's Discussion and Analysis – Guidance on preparation and disclosure* published by (*Canadian Performance Reporting Board,* 2014), the purpose of MD&A is allowing the reader to see corporate performance, financial condition and future outlook through management point of view; giving material information to the reader that is probably not fully reflected in financial report; supplementing and completing information in financial report by assisting the reader to understand information in financial report; guideline of trend key and risk that have affected or can affect flow and financial report in the future; and providing discussion about profit and cash flow and variability of component potential in profit and cash flow.

Canadian Performance Reporting Board (2014) in the draft of *Management's Discussion and Analysis – Guidance on preparation and disclosure*, state that MD&A has five key elements which are business essence; objective and strategy; ability to give result – resources, relationship and risk; result and view; and main indicator of performance measuring. MD&A becomes a challenge for audit

[22] https://www.sec.gov/news/press/2003-179.htm

committee and their auditor because it is wider in the area of the traditional financial report. It focuses on business, including non-financial performance metric, and it contains future business outlook information. Moreover, the guideline for MD&A preparation is very few. Generally, MD&A is consistent with decision advantage approach. MD&A aims to help information users to help their own evaluation rather than to directly provide it. MD&A can develop working accuracy of security market in order to extend relevant information availability for investors more.

2.3. Previous Study and Hypothesis Development

2.3.1. The Effect of Management Discussion and Analysis on Market Reaction

Signaling theory (Ross, 1977) suggests that company with great leverage can be used by the manager as an optimistic signal of the company in the future. This signaling theory appears because of the existence of information asymmetry. Because there is a condition of information asymmetry from time to time, the company has to keep loan spare capacity by keeping the loan level low. The existence of this spare allows the manager to take advantage of investment opportunity without selling stock at the low rate.

Study of Baginski *et.al* (2000) gives empirical evidence that voluntary disclosure toward casual attributes in credible management profit prediction is responded by stock market with the existence of stock rate movement. Their study result is consistent with the idea that attribution increases credibility or prediction accuracy given by management over certain information disclosure that will increase rate reaction per dollar. Study of Eikner *et.al* (2000) explains that *Securities and Exchange Commission* (SEC) in the draft of MD&A states that information given by management is useful for annual report users. This study tests the assumption and investigates whether the advantage of MD&A information disclosure will be increasing after SEC issues interpretive release (*Financial Reporting Release*, FRR-36). The significant relationship found between return and index of disclosure shows that MD&A information disclosure is useful. Significant cash flow changing in a model shows that MD&A disclosure has additional information content on cash flow changing.

Davis and Tama-Sweet (2012)) investigated whether manager uses optimistic or pessimistic language in earning statement that can give information on corporate performance in the future to market and whether market responds the use of optimistic and pessimistic language in earning statement after controlling income and other factors that may affect market response toward earning statement. The resulting study of Davis and Tama-Sweet (2012) shows that manager uses optimistic and pessimistic language to give credible information about corporate performance that is expected in the future to market, and that market responds the language of the manager.

In another study, Bushee *et.al* (2011) tested the effect of conference presentation of stock return and reaction volume and long-term changing in analysis and investors. Their study shows that conference presentation is significant economic information event that plays important role in interaction of company and market actors. Overall, this finding shows that conference presentation is an important component of corporate voluntary disclosure activity and that the place of disclosure significantly affects market reaction toward disclosure. Grüning (2011) investigated the relationship among annual report disclosure, market liquidity, and capital cost for companies listed in German Deutsche Borse. The study result shows that annual report disclosure can increase market liquidity by changing investor expectation and encouraging portfolio adjustment. This study gives evidence of disclosure capital effect based on the analysis of investor needs about market return and value.

Study of Brown (2011) explains that *Securities and Exchange Commission* (SEC) assuming that company disclosing MD&A is potentially not informative if there is no changing from the previous year when economic condition is having a significant change. The result shows that the company with greater economic change modifies MD&A better than the one with a lower economic change. The magnitude of stock rate response for 10-K is positively related to MD&A modification score, however, the analysis shows that investors do not use MD&A information. Studi of Clarkson *et.al* (1999) aims to investigate that MD&A is part of the entire package of company's disclosure. The study result shows that overall quality of MD&A disclosure is varied with the disclosure found to affect the selection of disclosure in some other disclosures. This study is consistent with the idea that MD&A is part of the entire company's disclosure, and it supports the idea that MD&A is a new information resource, and it shows that MD&A is used for the importance of financial analysis by at least a group of a significant group. Barton and Mercer (2005) investigated on how financial analysis responds poor corporate financial performance disclosure. Specifically, the researcher found that disclosure blaming poor performance on external factors tends to increase the prediction of analysis profit and stock valuations when the analysis believes that the disclosure is reasonable, but not conversely.

Information presentation is said informative when the information is able to change the belief of decision makers. This belief will change stock rate through the change of demand and supply of corporate stock. The more informative, which is complete, clear, and open the disclosure of MD&A in the annual report is, market response will increase, so it will affect the increase of stock return. If the stock return is increased, investors will be more interested in buying corporate stock. Therefore, this study proposes the first hypothesis as the following:

Ha_1: Disclosure of Management Discussion and Analysis positively affects stock return.

In the study of Schroeder and Gibson (1990), it is explained that *Securities and Exchange Commission* (SEC) demands the company to prepare MD&A disclosure as part of annual report package. MD&A discusses issues and trends related to corporate liquidity, capital resources, and corporate operational outcome. This research also explains that Readability from MD&A is writing quality that encourages quick and easy communication for annual report users.

Other studies conduct an analysis of seven disclosures contained in MD&A to evaluate the content of company's information. The study result shows that MD&A disclosure, especially the discussion of company's plan for the future and capital expenses that are planned related to the size of future performance and investment decision, is highly desirable by financial report users (Bryan, 2007). Study of Bryan showed that financial report and MD&A disclosure can help predicting future value (short term and long term) of the company. Study of Hotchkiss and Strickland (2003) analysed whether the composition of institutional share ownership is a parameter on market reaction surrounding negative earning statement. When a company reports low earnings (negative) below analysis expectation, market response will be more negative on the company with a higher level of institutional share ownership. Ownership structure is also related to trading volume and volatility of stock rate on days around earnings statement.

Study of Davis and Sweet (2011) conducted textual analysis software to measure language used in earnings statement and MD&A disclosure. Overall, their study result is consistent with the previous study showing that company succeeded in affecting market toward information disclosed by using manager alternative communication as part of a strategy to increase market reaction. Mayew *et al.* (2015) discussed the advantage of textual disclosure in MD&A in predicting corporate ability to continue its business continuity. The study result of *Mayew et al.* shows that information in MD&A disclosure is more useful in predicting relative bankruptcy toward financial ratio three years before the bankruptcy and MD&A disclosure is more proper compared to financial ratio. Investor perception in conducting an evaluation on stock outlook is based on information which one of them is about emitting fundamental performance. If outlook and management performance information is presented in MD&A, the disclosure of MD&A in the annual report is more complete and clear. The logic consequence from this disclosure is that market response will be increased and it will increase stock trading volume.

Ha_2: Disclosure of Management Discussion and Analysis positively affects trading volume activity.

2.3.2. The Effect of CGPI on Market Reaction

Signaling theory shows the existence of information asymmetry between corporate management and parties who concern on the information and states on how the company gives signals to financial report users. Information published as a statement will give the signal for investors in taking an investment decision. If the statement contains a positive value, market actors are expected to respond on the time of the statement and accepted by market actors.

The result of the previous study on the effect of CGPI on the stock return is still varied. Zaidirina and Lindrianasari (2015) found the existence of stock rate decreasing around the statement of corporate information that is perceived to have good governance index. This finding is actually quite surprising and it creates a question of whether the market has other parameters in evaluating the company in the last years. Some other studies were done by Rahardjo (2004), Mulyani (2008) and Wirajaya (2011) – found a positive market response in each company that tries to fulfil the principle of good governance. As the study of Mulyani (2008) proved that there is a significant abnormal return that indicates CGPI statement is responded by the market, the study of Wirajaya (2011) also showed that CGPI statement in a company that follows the survey of corporate governance implementation entirely has information content and it is responded to market. This response is shown by the existence of abnormal return and significant stock trading volume changing the date of the statement. In this study, CGPI value is determined by denoting number (1) on the company that is included in CGPI statement and denoting number (0) on the company that is not included in CGPI statement. The explanation above is the framework of this study to formulate the second hypothesis as the following:

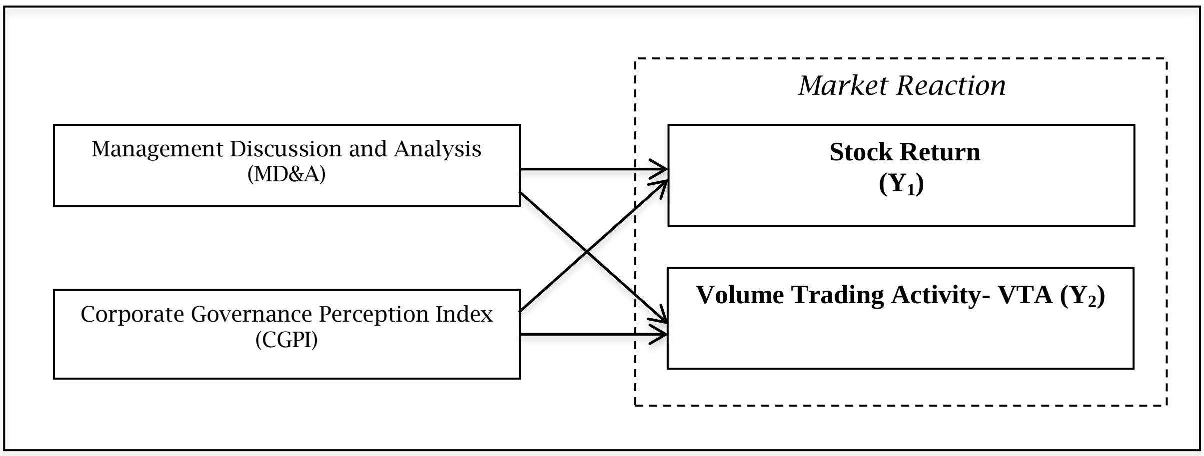
Ha_3: Corporate Governance Perception Index positively affects stock return.

Ha_4: Corporate Governance Perception Index positively affects stock trading volume.

2.4. Research Framework

Based on the explanations stated in the previous discussion, as the base to formulate a hypothesis, study framework can be illustrated as the following.

Figure 1. Study scheme



3. RESEARCH METHOD

3.1. Sample and data

The population is the whole of observation that is the focus of study. The population used is all companies listed in Indonesia Stock Exchange (IDX) and is based on data availability to count variables explained previously. The study period is 2011-2013. Type of data used in this study is included as secondary data. Secondary data is a type of study data that is obtained by researcher indirectly through intermediary media. Secondary data is usually in the form of evidence, note, or historical report that have been arranged to be published or not to be published. Secondary data used in this study is qualitative data obtained from Annual Report of companies listed in Indonesia Stock Exchange (IDX), data of Corporate Governance Perception Index (CGPI) as the result of The Indonesian Institute for Corporate Governance (IICG) period 2012-2014, the list of Historical Prices Yahoo Finance period 2012-2014, and SWA magazine period 2012-2014.

3.2. Operational Definition of Variable

Independent variable in this study is disclosure of Management Discussion and Analysis (MD&A) and Corporate Governance Perception Index (CGPI). Disclosure of MD&A is aspects of the financial report, and other statistic data can increase understanding of its reader about financial condition. Those aspects are:

1) Operational discussion and current financial condition;
2) Information disclosure about risk and uncertainty condition of the company:
3) Information about equity and the size of financial instrument that have not been appeared in financial report;
4) Disclosing matters that can help interpreting financial report describing corporate liquidity and profitability in the future;
5) Including a total provision that helps the company in fulfilling report policy.

MD&A used in this study refers to the standard issued by organiser institution of Annual Report Award (ARA). There are 17 elements that must be in MD&A and they are shown in Table 1.

Table 1. 17 elements of management discussion and analysis

№	*Elements of Management Discussion and Analysis*
1	An objective of operation per business segment
2	A description on corporate financial performance
3	A discussion and analysis about the ability to pay loan and the level of collectability of corporate accounts receivable
4	A discussion about capital structure and management policy over capital structure
5	A discussion about material bond for capital goods investment
6	A discussion about capital goods investment that is realised in the last book year
7	Comparison information between target and achieved result (realisation) in the book year, and target or projection that is desired to be achieved in an upcoming year
8	Material information and fact occurring after the date of accountancy report
9	A description about corporate business outlook
10	A description of marketing aspect
11	A description of dividend policy and total cash dividend per share and total dividend per year that are announced or paid for 2 (two) years of the last book
12	Share ownership program by employee/or management that is conducted by the company (ESOP/MSOP)
13	Realisation of the use of fund from general tender (in term of company that is still required to deliver fund use realisation report)
14	Material information about investment, expansion, divestment, business incorporation/merger, acquisition or restructuration of debt/capital
15	Information of material transaction containing interest conflict and/or transaction with affiliation party
16	A description about the changing of legislation that affects significantly on company
17	A description about the changing of accountancy policy that is implemented by the company in the last book year

Source: http://www.ojk.go.id/kriteria-annual-report-award-2013

This study will investigate information in the annual report of a company by using Management Discussion and Analysis (MD&A) disclosure index based on the above criteria, which is 17 items with subchapter as many as 15 items of disclosure. If there is information of MD&A according to Annual Report Award criteria, it is denoted by a number (1) and (0) if there is no information. Therefore, total divider from the whole index that is calculated as many as 50 items.

Corporate Governance Perception Index (CGPI) is a research program and ratings of GCG implementation in companies in Indonesia. CGPI is followed by Public Company (Issuer), BUMN/SOE, banking, and other Private Company. CGPI program has consistently been held in each year since 2001. CGPI is helping by IICG as independent non-governmental organisation cooperating with SWA magazine as a media partner of publication. This program is designed to encourage company in increasing quality of CG concept implementation through continuous improvement by conducting an evaluation and comparative study. Measurement of Good Corporate Governance (GCG) implementation is published by IICG. Corporate Governance Perceived Index (CGPI) is a research done every year and it cooperates with Komite Nasional Kebijakan Governance (KNKG)/National Committee of Governance Policy.

Similar to MD&A, CGPI value is in the form of index score and weighting of value based on a reference that has been made. The scoring was done by using a questionnaire that includes commitment toward Corporate Governance, Shareholder Rights, and Function of Key Ownership, Equal Treatment for all Shareholders, Stakeholder roles in Corporate Governance, Disclosure and Transparency, and Responsibility of Commissioner Board and Board of Directors. The index used to give score is started from 0 to 100, if the company has scored close to or reached score 100, the company is better in implementing corporate governance. IICG through CGPI program helps the company to review the implementation of CG that has been done and to compare its implementation toward other companies in the same sector. Steps and study score weighting and ratings of CGPI can be seen in Table 2.

Table 2. Steps and study score weighting and ratings of CGPI

№	Steps	Weighting (%)
1	Self-Assessment	15
2	Document Completeness	20
3	An essay reflecting program and result of GCG implementation as a system in involved company	14
4	Observation	51

Source: CGPI report, 2011

CGPI rating is designed to be three categories based on the level of trust that can be explained based on the score of GCG implementation presented in Table 3.

Table 3. Category of CGPI ratings

Score	Level of Trust
55-69	Fairly trusted
70-84	Trusted
85-100	Very trusted

Source: CGPI report, 2011

The dependent variable in this study is a market response. In this study, market response uses stock return proxy and trading volume activity. Stock return can be formulated as the following (Hartono, 2010):

$$\textit{Total Return} = \textit{Capital gain (loss)} + \textit{yield}$$
$$= \frac{(P_t - P_{t-1}) + D_t}{P_{t-1}}$$

Description:
P_t = Stock rate in period t;
P_{t-1} = Stock rate in period t_{-1};
D_t = Paid cash dividend.

Trading volume activity is how many share sheets that are traded in one day of trading. If it is viewed from its function, it can be stated that TVA is a variation of an event study. This TVA approach can be used to test hypothesis of weak form efficiency because in a market that is not efficient or it is efficient in weak form, the price change has not immediately reflected existing information, so the writer can only observe capital market reaction through trading volume activity in capital market that is being investigated (Sunur, 2006).

3.3. Analysis Method

Multiple regression analysis is used in this research because there is one dependent variable with more than one independent variables. Multiple regression analysis aims to investigate the strength of the relationship between two variables or more. This study uses model development from Beaver (1968) that aims to test the extent that in this matter, stock investors usually perceive earnings for taking the informational value and direct the attention on investor reaction to earnings statement, as reflected in volume activity and regular stock price in weeks around the date of the announcement.

Regression model in this study regressing all sampling companies to investigate whether there is effect of MD&A disclosure on stock return (Y_1) and trading volume (Y_2) uses t test and determination coefficient test (R2). With conceptual framework above, regression model obtained as the following:

$$Y_1 = \alpha_1 + \beta_1 X_1 + \beta_2 X_2 + e \quad (1)$$

$$Y_2 = \alpha_2 + \beta_1 X_1 + \beta_2 X_2 + e \quad (2)$$

Description:
Y_1 = stock return;
Y_2 = Trading Volume Activity (TVA);
X_1 = MD&A;
X_2 = CGPI;
α = Constant;
β = Regression Coefficient;
e = Error.

4. STUDY RESULT AND DISCUSSION

This study is a study using data from companies listed in Indonesia Stock Exchange period 2011-2013. The investigation is done in 290 companies, and three years of observations as many as 43 data of companies are eliminated. Thus, the final sample of this study is as many as 827 ((290x3)-43) companies during 3 years of the observation period. The final data used in this study are quantitative data obtained from annual report of companies listed in Indonesia Stock Exchange (IDX), Corporate Governance Perception Index (CGPI) data as the survey result of The Indonesian Institute for Corporate Governance (IICG) period 2012-2014, list of Historical Prices Yahoo Finance period 2012-2014, and SWA magazine period 2012-2014.

4.1. Descriptive Statistic

The descriptive statistic is used to investigate characteristic of a sample in this study and is expected to be able to give an initial illustration about the study.

Table 4. The descriptive statistic testing result of operational variable

	N	Minimum	Maximum	Mean	Std. Deviation
Stock Return	827	-96.10	955.00	21.6339	68.96387
TVA	827	.00	2.47E10	3.7132E8	1.79385E9
MDA	827	.20	1.00	.8105	.17024
CGPI	827	.00	1.00	.0508	.21969
Valid N (listwise)	**827**				

Source: Processed Data, 2015

From the result of descriptive analysis on Table 4, variable stock return from 827 sample companies listed in Indonesia Stock Exchange (IDX) have minimum score of -96.10 which in this case means that the lowest return stock level of companies listed in IDX is -96.10 and the maximum score of 955.00 has meant that stock return level of company listed in IDX is 955. Average score (*mean*) of stock return is 21.6339 meaning that the average stock return level of companies listed in IDX is 21.16 and deviation standard value of stock rate return of 68.96387. Variable TVA from 827 sample of companies listed in IDX has a minimum value of 0.00 which means that there is no stock trading of the company in the observation period and a maximum score of 2.47E10 meaning that the total number of corporate share sheets is traded the most that are listed in IDX as many as 2.47E10 sheets. The average value (*mean*) of TVA that is 3.7132E8 has meant that the average corporate stock sheets that are traded in the list of IDX are 3.7132E8 sheets and deviation standard value of total stock sheets are 1.79385E9.

Variable MD&A from 827 sample of companies listed in IDX have the minimum score of 0.20 which is the total index of MD&A that is fulfilled in the annual report is only 20% and the maximum score of 1.00 which is the total index of MD&A in the annual report is 100% fulfilled. The average value (mean) of MD&A of 0.8105 which is the average MD&A index that is fulfilled in the annual report of companies listed in IDX is 81% and the deviation standard value of MD&A index is 0.17024. Variable CGPI from 827 sample of companies listed in IDX has minimum score of 0.00, which is not including companies listed in IDX in CGPI announcement and a maximum score of 1.00 meaning that companies listed in IDX are included in CGPI announcement. Average score (*mean*) of CGPI is 0,0508 meaning that only 5% of companies listed in IDX are included in CGPI announcement and deviation standard value from companies listed in IDX that are included in CGPI announcement is as many as 0.21969.

4.2. Data Analysis

Classic assumption test in multiple regressions is needed to investigate data distribution used in the study. Normality test is used in order to know whether or not data used in this study have a normal distribution. Based on normality statistic test result by using One-Sample Kolmogorov-Smirnov Z (K-S) with the dependent variable stock return and TVA, significance value of Kolmogorov-Smirnov Z for stock return is 0.000, or smaller than 0.05. From the result, it can be concluded that study model is not distributed normally. Meanwhile, TVA has significance value of 0.200, or greater than 0.05.

One of the conditions to be able to conduct regression parametric test is that data normality test must be distributed normally. Therefore, normality test result of stock return shows that it is not distributed normally and classic assumption test is not fulfilled, so partial correlation non-parametric test is done to test the first hypothesis that is proposed and tested by the writer, whether there is a positive relationship between variable MD&A and variable stock return. Normality test result of TVA data shows that it is distributed normally, then classic assumption test is fulfilled for multiple linear regression of parametric test in order to test the second hypothesis that is proposed and tested by the writer, whether there is positive effect between variable MD&A on variable TVA.

Multicollinearity test is used to test whether regression model has a correlation among independent variables. Good regression model can be seen the presence or absence of multicollinearity, if there is no multicollinearity, it can be said that it has good regression model. The result of multicollinearity test shows that VIF value has no item having more than score 10, and all tolerance scores have scored more than 0.01. It shows that in the regression model, multicollinearity problem does not occur. Heteroscedasticity test is used to investigate whether there is variance dissimilarity from residual of one observation to another observation in regression model done in a study. Based on the test result of scatterplot graph, it is seen that dots are scattered randomly and they scatter both in below and above zero on axis Y, it shows that data in this study have no heteroscedasticity.

The last classic assumption test done is autocorrelation of Breusch-Godfrey. It is used in the study to see whether in linear regression model there is a disturbing error in the current period (t) with an error of previous period (t-1). The result of autocorrelation resulted significance value of RES_2 which is 0.272, more than significance level of 0.05, and it can be concluded that there is no autocorrelation.

4.3. Hypothesis Test

The first hypothesis test is done by using non-parametric test of partial correlation with a confidence level of 95% and error level of 5% (α = 0.05) in a model with its dependent variable that is stock return.

The non-parametric test used in this study is partial correlation test because there is control variable that controls independent variable in its relation with the dependent variable. Correlation coefficient shows positive and negative direction as well as the degree of relationship between independent and dependent variables. The second hypothesis test is done by using parametric test of multiple linear regression with a confidence level of 95% and error level of 5% (α = 0,05) on TVA. Multiple linear regression testing is done to investigate whether there is a significant effect of independent variable to the dependent variable after fulfilling classic assumption test. A hypothesis test is done by using the amount of profitability value (p-value) of each independent variable regression coefficient compared to significance level (α). The base of decision making is based on profitability which is, if (p-value) > 0.05, then Ha is rejected, and if (p-value) < 0.05, then Ha is accepted.

4.3.1. The first and the third hypothesis Tests

Statistic testing on stock return aims to investigate whether investors will react positively toward MD&A disclosure. The hypothesis that is formulated as the first hypothesis of this study is that disclosure of Management Discussion and Analysis affects positively toward a stock return. The result of the first hypothesis test is presented in Table 5.

Table 5. Test result of hypothesis correlation

		Return	*MDA*	*CGPI*
Return	Pearson Correlation	1	.088**	-.040
	Sig. (1-tailed)		.006	.123
	N	827	827	827
MDA	Pearson Correlation	.088**	1	.151**
	Sig. (1-tailed)	.006		.000
	N	827	827	827
CGPI	Pearson Correlation	-.040	.151**	1
	Sig. (1-tailed)	.123	.000	
	N	827	827	827

***. Correlation is significant at the 0.01 level (1-tailed)*
Source: Processed data, 2015

Based on correlation test result *(Pearson correlation)* presented in Table 5 above, it is obtained significance level of 0.006 or smaller than 0.05 with a correlation of 8.8%. It shows that stock return has a positive relationship with variable MD&A significantly. From the result of correlation test, it can be concluded that market responds corporate management disclosure related to good information of the company. This positive reaction is shown by increasing the stock return of a company that has high information disclosure. This positive and significant result is the reason to conclude that the first hypothesis of this study is supported.

Correlation test for the third hypothesis of this study predicting that stock market reacts on CGPI can not be supported in this study. Correlation between CGPI on return shows negative value, even though it is not too significant. This value indicates that capital market is not the index of corporate governance as information used in making an investment decision. This finding is in line with and supports the study of Zaidirina and Lindrianasari (2015) showing that capital market does not react on CGPI of a banking company in Indonesia. Study finding the result on the first and the third hypotheses demonstrate that Indonesia capital market reacts more on disclosure of management discussion and analysis for information and for the effort has been done and corporate plan in the future.

4.3.2. The Second and the Fourth Hypotheses Tests

Statistic test on TVA aims to investigate whether investors will positively react toward MD&A disclosure. Hypothesis formulated for the second hypothesis of this study is that disclosure of Management Discussion and Analysis in annual report positively affects trading volume activity. Meanwhile, the fourth hypothesis predicts that CGPI positively affects trading volume activity. The test result of the goodness of fit toward study model shows that F value as much as (7.936) > F table (1.676), a *p-value* of 0.000 and *Adj.R-Square* of 3.3%. This result indicates that although the relationship of the independent variable in this study is only 3.7%, the relationship has high significance. Therefore, a study model for the second and the fourth hypotheses is fit and is able to be continued for testing by using OLS statistic instrument.

Table 6. Hypothesis testing result

Model		*Unstandardized Coefficients*		*Standardized Coefficients*	*t*	*Sig.*
		B	*Std. Error*	*Beta*		
1	(Constant)	-400035345.009	301315650.121		-1.328	.185
	MDA	884483539.389	366164295.645	.084	2.416	.016
	CGPI	1072467520.786	283738016.592	.131	3.780	.000

a. Dependent Variable: TVA
Source: Processed data, 2015

Table 6 shows the testing result of the second and the fourth hypotheses with a $t_{\text{-statistic}}$ value of 2.416 for MD&A with the significance of 0.016, meanwhile, $t_{\text{-statistic}}$ value for CGPI is 3.780 with the significance of 0.000. Both indicate that Management's Discussion and Analysis and CGPI have positive value for investors so they increase the total number of issued stock trading that is proxied with TVA. From this regression test result, it can be concluded that variables MD&A and CGPI have a positive and significant effect on TVA, meaning that the second and the fourth hypotheses in this study can be supported.

4.4. Additional Testing (Paired Sample T-Test)

Paired sample t-test testing used to test whether statistically there is different market reaction before and after window period during 5-day observation using stock rate and trading volume activity (TVA). Confidence level used in this testing is 0.95 or α = 0.05 (2-*tailed*).

4.4.1. Stock Rate of 5-day Window period

This below is the result of additional testing on stock rate presented in Table 7 and Table 8 as the following.

Table 7. Testing result of stock rate using statistic test

		Mean	*N*	*Std. Deviation*	*Std. Error Mean*
Pair 1	SP_Before	9.6089E6	827	3.62979E7	1.26220E6
	SP_After	8.9767E6	827	2.69786E7	9.38139E5

Source: Processed data, 2015

Table 8. Paired samples correlations

		N	*Correlation*	*Sig.*
Pair 1	SP_Before & SP_After	827	.651	.000

Source: Processed data, 2015

Based on the statistic test result of paired sample t-test, it can be found that average value (mean) of the stock rate of the 5-day period window before annual report announcement is 9.6089E6 greater than the stock rate of the 5-day period window after annual report announcement. Meanwhile, test significance value is 0.000 on the level (α) as much 5 %. It shows that p-value is smaller than alpha, so there is different stock rate before and after window period during 5-day observation of annual report announcement. This study finding is consistent with the study conducted by Feldman *et al.* (2008) investigating in the reaction of the stock rate in short term period and found that MD&A information can push the increasing of corporate portfolio return.

4.4.2. Trading Volume Activity of 5-day Period Window

This below is the additional testing result on the stock rate that is presented in Table 9 and Table 10 as the following.

Table 9. Result of TVA calculation using statistic test of paired sample t-test

		Mean	*N*	*Std. Deviation*	*Std. Error Mean*
Pair 1	TVA_Before	1.0638E4	827	1.30584E5	4540.86269
	TVA_After	1.0917E4	827	1.35665E5	4717.52307

Source: Processed data, 2015

Table 10. Paired samples correlations

		N	*Correlation*	*Sig.*
Pair 1	TVA_Before & TVA_After	827	.998	.000

Source: Processed data, 2015

Based on the statistic testing result of paired sample t-test, it can be found that average value (mean) of TVA of 5-day window period before annual report announcement is 1.0638E4 smaller than TVA of 5-day window period after annual report announcement which is 1.0917E4. It shows that there is TVA average increasing of 5-day window period after annual report announcement. Meanwhile, testing significance value is 0.000 at level (α) of 5 %. It shows that p-value is smaller than alpha, so there is different TVA before and after window period of 5-day observation of annual report announcement.

4.5. Analysis of Information Content in MD&A

The calculation result of the total positive information (good news) in MD&A index shows that the total average of good news information presented in annual report period 2011-2013 from 290 companies is 0.31 – 0.33 meaning that there is 31%–33% items from the total information disclosed in MD&A of each company contains good news information and the rest contains of negative information (bad news). This finding is consistent with the previous study conducted by Feldman *et al.* (2008), Li (2010), Hanley and Hoberg (2010), and Kogan *et al.* (2011).

5. CONCLUSIONS

This study concludes that Indonesia capital market strongly responds MD&A disclosure given by the company. A more complete information in MD&A disclosure, the better market will respond. It is shown, both stock return and trading volume activity that are increasing along with the extent of corporate MD&A disclosure. This finding shows the importance of MD&A disclosure for market actors. On the other side, CGPI has different reaction toward indicator of capital market measurement. CGPI positively and significantly affects trading volume activity, but negatively affects stock return. If it is viewed from the strength of trading volume activity as the indicator of the capital market, it can be concluded that CGPI is responded by the capital market in Indonesia.

The major limitation of this study is the use of the measurement of corporate governance. Results of some previous studies indicated that the CGPI index is general and generic, so it has not been able to measure the specific criteria of corporate governance. For further research needs to consider the use of other measurements more reliable.

The implication of this study refers to the index of CGPI. The previous study indicated that CGPI has not given information that was expected by market actors. CGPI must be reviewed even more than that, CGPI must be improved, to give confidence more to users especially market actors. Because if CGPI does not get trust from market actors, it indicates that the strength of corporate governance in Indonesia is still questionable. Therefore, the next study in the area of MD&A must be continued, considering that similar study has not been conducted much in Indonesia. Because there are still few of MD&A researches, study result in this area is still highly awaited. Researchers in Indonesia are allowed to continue the idea of this study by adding antecedent factors and expanding the consequence of MD&A.

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