

# CORPORATE GOVERNANCE, EARNINGS QUALITY AND MARKET RESPONSE: COMPARISON OF ISLAMIC AND NON-ISLAMIC STOCK IN THE INDONESIAN CAPITAL MARKET

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## ABSTRACT

*We analyze the role of earnings quality in mediating the relationship between corporate governance and market response. We also observe the relative impact of earnings quality of Islamic and non-Islamic stocks on market response, using 138 firm-years of data from listed companies registered in the Indonesian Institute of Corporate Governance Award from 2008 to 2016. To test the mediating role of earnings quality, we use path analysis, and we use moderated regression analysis to examine the impact of earnings quality on the market for both Islamic and non-Islamic stock. The results show that corporate governance does not directly have a significant impact on market response. However, corporate governance indirectly has a significant influence on market response mediated by earnings quality. The evidence also demonstrates that the better the quality of corporate governance, the better the quality of earnings. The lower the quality of earnings as indicated by the high accrual values, the higher the value of Tobins'  $Q$  as a proxy of market response. These findings suggest the existence of an accrual anomaly in the Indonesian capital market. Finally, this study finds evidence of a higher positive market response to the earnings quality of Islamic stocks than of non-Islamic stocks.*

**Keywords:** Corporate Governance, Earnings Quality, Market Response, Islamic Capital Market, Accounting.

## INTRODUCTION

In addition to Islamic banks and financial institutions, Islamic investment is also growing in the Indonesian capital market. From the supply side, the number of listed companies offering Islamic stocks reached 368 from the total 613 issuers in November 2018 (The Indonesian Financial Service Authority, 2018). During the last seven years (2012-2018), the market capitalization of Islamic stocks increased 43% with average market share 57% of total listed stocks, and a transaction value of US\$238 million in October 2018 (IFSA, Indonesian Financial Service Authority, 2018). However, from the demand side, the development of the Indonesian Islamic capital market has not been significant. The percentage of Islamic investors, only 0.7% in 2012, increased to just 4.7% in September 2018. There were around thirty-six thousand

investors (IFSA, 2018), compared with approximately 1.21 million single investor identifications (SID-the Indonesia Central Securities Depository, 2018).

This sluggish development of Islamic capital markets motivates us to examine the quality of accounting information of Islamic stock. The Indonesian Stock Exchange lists Islamic stock (Daftar Efek Syariah-DES) since December 2007. DES is a benchmark for performance of Islamic stock investments. DES expects to attract potential investors who have not been involved in the capital market due to uncertainty whether their investment is against Islamic laws such as prohibition of usury, chance, and gambling. DES looks at two financial ratios. First, interest-based total debt compared to total assets may not exceed 45%. Second, total interest income and other non-halal income compared to total income may not exceed 10% (IFSA Regulation No. 35, 2017).

Islamic stock indexes in other countries such the Dow Jones Islamic Index (USA), the Karachi Stock Exchange Meezan Index (Pakistan), and the Kuala Lumpur Syariah Index (Malaysia), apply additional ratio limits, such as the receivables-to-assets ratio, which may not exceed 33% (Khatkhatay and Nisar, 2007). These ratios directly limit investment risk. Therefore, in general, investment in Islamic stock is more secure than in general stocks. Moreover, they also improve the quality of earnings. Fraud through financial statements tends to be less frequent for companies with lower debt and receivables (Ricci, 2011). Likewise, companies with lower debt financing (Saleem & Alzoubi, 2018) and lower receivables (Roychowdhury, 2006) diminish the potential of earnings mismanagement.

On the other hand, high receivables require managers to allow for uncollectible accounts and bad debts. Such allowances represent accounting conservatism. Conservatism facilitates earnings management (Jackson & Liu, 2010) which may in fact reduce the earnings *quality* at the same time as the risk. In summary, (a) the market response to Islamic stocks is supposed to be better than the response to general stocks, even though (b) this is not always the case.

We look at the influence of corporate governance (CG) on earnings quality. Earnings quality mediates the relationship between CG and market response. CG is a consequence of separation between ownership and control, and may create agency conflicts between shareholders as principals, and managers as agents. These conflicts encourage information asymmetry which fosters moral hazards and adverse selection.

Bushman & Smith (2001), on the contrary, argue that CG provides mechanisms to mitigate agency problems. Similarly Dey (2008) concludes that various governance mechanisms in a firm reflect the level of agency conflicts in the firm. A good CG (GCG) protects shareholders and ensures that all stakeholders are treated equally (Soewarno, 2018). Ahmed (2016) holds that a CG should encourage managers to respect stockholders' interests, and should encourage companies to use resources more efficiently. Therefore it makes sense if investors respond positively to GCG.

The market response to GCG attracts many researchers. Larcker et al. (2011) conclude that the market reacts positively to regulations issued by Congress or SEC related to CG. Asbaugh-Skaife et al. (2006) show that CG quality increases credit ratings. Likewise, Masulis, Wang & Xie (2007) find that CG decisions on acquisitions are welcomed by the market, as indicated by changes in abnormal returns surrounding the acquisition announcement.

Nevertheless, CG is not always liked by investors. Kouwenberg & Phunnarungsri (2013) test the influence of CG on market reaction to Thai firms. Lee et al. (2005) examine the influence of governance structures on market reaction to Chinese companies. Both studies show that a better CG quality does not get a positive response from investors. Aman & Nguyen (2008) in

Japan have similar results from public companies, and Arioglu (2015) finds that some CG structures negatively affect market reaction in Turkey.

These inconsistencies move us to reexamine the possibility of an indirect relationship between CG and market response mediated by earnings quality. Investors can more easily see, measure and evaluate an output (i.e. earnings) than a process to achieve the output (i.e. CG practices), although some previous research proves that earnings are vulnerable to managerial discretion (Hung, 2001; Sandra, 2012; Priantinah, 2016; Kordestani & Mohammadi, 2016; Leon & Li, 2016; Makhsun et al., 2018). Therefore, this study examines the mediation role of earnings quality in the relationship between CG and market response.

Most studies use accrual to measure earnings quality. Sloan (1996) verifies that the market reacts to reported earnings as indicated by abnormal returns. Richardson et al. (2005) follow up Sloan's findings and find that earnings with a high accrual component lead to a decline in future returns due to low reliability of the accrual. Pincus et al. (2007) follow up Sloan's findings using data from several countries and come to similar conclusions. Subsequent studies also obtain negative reactions on high accrual with low quality: Pasaribu (2009); Ekawati (2012); Ozkan & Kayali (2015); Kim et al. (2015); Ghofar & Aunilah (2016); Rafay et al. (2017) Makhsun, et.al (2018).

CG within the agency framework is expected to control moral hazard and adverse selection of managers. As a result, earnings information released will be protected from the manager's interests. Earnings then can describe the actual performance and reveal the information content that investors require, to assist them in making investment decisions. Most researchers find that the relationship between CG and earnings quality is positive. The better the CG the better the quality of earnings. Hutchinson & Leung (2007); Marra (2011); Badolato et al. (2014); and Miko et al. (2015) confirm that an independent board of directors and audit committee reduce earnings management and fraud thereby improving earnings quality. The role of CG in reducing opportunistic earnings management behavior is examined by Duh et al. (2009); by Njah & Jarboui (2013); and by Shan (2015).

The relationship between CG and earnings quality is quite complex. Hutchinson & Leung (2007) look at ownership structure and earnings management. They distinguish between low level and high level ownership structure. Siregar & Utama (2008) investigate the motivation behind earnings management. They conclude that earnings management in Indonesian listed companies tends to be efficient, not opportunistic, and that governance structures have a significant influence on this type of earnings management. Companies with a high proportion of family ownership, and non-business groups, tend to have efficient earnings management.

A high quality of earnings should be responded to positively by the market. Kalelkar & Nwaeza (2011) find a positive relationship between earnings quality and market response, especially for naïve investors for the period after SOX. For more competent investors, on the contrary, this relationship is negative. Competent investors have the ability to filter out unobserved accounting processes and can rationally infer accrual quality from accounting numbers (Verrecchia, 1983).

Using the CG score issued by the Indonesian Institute of Corporate Governance (IICG), we examine the direct and indirect relationships between CG and market response with earnings quality as a mediating variable. CG scores may capture comprehensive CG practices (Jiang, Lee & Anandarajan, 2008; Nicolo et al. 2008) In addition, we compare market response to earnings quality for Islamic and non-Islamic stock. Islamic stocks are rigorously selected for both

business process and financial aspects. Therefore they are expected to have a higher earnings quality and better investor responses than non-Islamic stocks.

There are at least two innovations in this research. First, we analyze earnings quality as a mediating variable and we place CG as an exogenous variable. CG is a control mechanism that functions indirectly to affect performance. Second, our comparison of earnings quality between Islamic and non-Islamic stocks will assist potential investors in the Islamic capital market.

## LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

### Corporate Governance and Its Islamic Perspective

Corporate governance plays a major role in creating macroeconomic stability, supporting economic growth and community welfare. Corporate governance is a set of relationships between management, shareholders and company stakeholders (Al-Haddad et al., 2011). The goals of the company with a variety of people's interests in it become very important to implement corporate governance (Ahmed et al., 2016). In the conventional economy, CG is explained by agency theory, which aims to avoid conflicts between principals (shareholders) and agents (management). CG can also be explained by stewardship theory, which assumes that managers are motivated not only by individual goals but also by common goals for the benefit of the organization, including its environment. This comprehensive view of CG is in line with Islamic teachings, where the management as trustee of the owners will be responsible for implementing good corporate behavior. Management is not only bounded vertically by human beings (owners and other stakeholders), but also horizontally by God. Furthermore, a company has two responsibilities that cannot be separated, namely seeking profit and increasing social welfare (Choudhury & Hoque, 2006). By referring to these duties, both parties may better control inter-agency conflict.

The Indonesian Governance Policy Committee (KNKG) has advanced five principles of Good Corporate Governance: transparency, accountability, responsibility, independence, and fairness. These five universal values are in accordance with Islamic teachings. Of course, two pre-conditions apply. They are (1) *halal*: Islamic Law prohibits usury, gambling, uncertainty, wrongdoing, waste, and bribery; and (2) *tayyib*: covering all good values that stem from halal practice, namely security and welfare for the wider community. To ensure compliance with Islamic laws, there must be a sharia supervisory board in the company's organizational structure (GGBS-Good Governance Bisnis Syariah, 2011).

### Multidimensional CG Measurement

Inconsistent research findings about the role of CG may be due to the large number of variables that cannot be captured in the measurements used (Black et al., 2006). The CG index is one solution that represents a variety of variables in one value. Some studies create CG indices. Gomper et al. (2003) Governance Index combines five provisions (Delay, Protection, Voting, Other, and State) with 28 sub-provisions. They construct the index by awarding one point for the existence (or absence) of each provision. The index shows that to invest in firms in the lowest decile of the index (strongest rights) and to divest from firms in the highest decile of the index (weakest rights) would have earned abnormal returns of 8.5 percent per year during the sample period. Stronger shareholder rights imply higher firm value, higher profits, higher sales growth, lower capital expenditures, and fewer corporate acquisitions.

Bebchuk et al. (2009) also develop a governance index, known as Entrenchment Index (E index). The index is based on IRRC's six provisions:

1. Staggered boards, limits.
2. Bylaw amendments by shareholders.
3. Poison pills.
4. Golden parachutes, and supermajority requirements.
5. Mergers.
6. Charter amendments.

There is a negative relationship between their E index and a firm's value. Baghat & Bolton (2007) use the indexes developed by Gompe et al. (2003) and Bebchuk et al. (2009) to examine the relationship between CG and performance. They show that high scores on the Gompers et al. (2003) test and the Bebchuk et al. (2009) test correlate positively with operating performance, both immediately and subsequently. However, they do not confirm that CG is correlated with future stock market performance.

Nicolo et al. (2008) use the CGX index which has three indicators: accounting standards, earnings smoothing, and stock price synchronicity, using accounting and market data from the World Scope and the Data Stream databases. Jian et al. (2008) also use CG scores, concluding that CG measured using the self-developed score is positively related to earnings quality. The higher the CG score, the lower the level of discretionary accrual and the higher the quality of earnings.

In this study we use the Corporate Governance Perception Index (CGPI) released by the Indonesian Institute of CG (IICG). Participation in the CGPI is voluntary. In assessing the quality of CG, the CGPI applies four steps: self-assessment, document evaluation, paper review, and a company visit. Basically there are 12 aspects of CGPI assessment. They are commitment, transparency, accountability, responsibility, independence, fairness, competence, leadership, ability to cooperate, mission vision statement, moral ethics, and strategy. The CG index is based on several factors and stages of assessment. The higher the index value, the more trustworthy the company is. The CGPI index is used by Juniarti & Natalia (2012); Wahyudin & Solikhah (2017).

## **Earnings Quality**

There is no single definition of earnings quality. It relates to the ability of earnings information to capture economic reality. According to Healy & Wahlen (1999), the benefits of financial statements decrease when reported earnings do not reflect the economic reality of the company during the reporting period. Schipper & Vincent (2003) agree that because earnings quality reflects the company's current actual performance, it predicts future value (Dechow & Schrand, 2004). Various measures of earnings quality have been developed by many researchers. This study will measure earnings quality by accrual quality as suggested by Richardson et al. (2005). We calculate the difference between earnings before and after extraordinary items and cash flow from operation scaled by average assets. A lower value of accrual represents better earnings quality and a higher value of accrual represents poor quality. This measure focuses on the magnitude of accrual, scaled by assets; that is, it focuses on the role of an accruals based accounting system rather than a cash-flow-based system (Dechow et al., 2010).

## Development of Hypotheses

Investors' reaction to CG quality has been widely investigated. Some findings agree that GCG is treated positively by the market. Asbaugh-Skaife et al. (2006) demonstrate a positive relationship between strong governance and credit rating, using the long term issuer credit rating compiled by Standard & Poor's and reported on Compustat as data item 280. Strong governance structure typically includes a lower number of blockholders (stockholders with 5% or more), strong shareholder rights, a high degree of transparency, and a Board with high independence and expertise. A positive market response to GCG is also found by Masulis et al. (2007) in the context of acquisition. They show that acquirer companies with more antitakeover provisions are less subject to the disciplinary power of the market for corporate control and thus experience significantly lower announcement-period abnormal stock returns. Hooper et al. (2009) document a similar influence of CG on risk and return. There is a significant positive association between stock market performance measures and the quality of the governance. The quality of governance is negatively associated with stock market total risk and idiosyncratic risk.

Using CG scores, Teker & Yuksel (2014) confirm the positive market reaction to CG. Using event study, they examine whether the market players in Borsa İstanbul value a corporate governance score. The evidence shows that the market price of firms announcing the scoring shows a sharp increase on the first announcement day, and that this diminishes over the next ten days. Rostami et al. (2016) also show the positive impact of a better CG on stock return, using 469 firm-year observations in the Tehran Stock Exchange. They find a significant positive relationship between institutional ownership, board independence, CEO duality, CEO tenure, and stock return; there is also a significant negative relationship between ownership concentration and board size with stock return. Aloui (2018) agrees that CG structure measured by outside directors has a positive and significant effect on stabilizing the stock return volatility.

On the other hand, GCG is not always rewarded by the market. Lee et al. (2005) cannot prove that the market reaction to reported earnings by public companies in China is higher for companies with good CG practices than for companies with bad CG practices. Neither can Aman & Nguyen (2008) nor Martinez-Blasco, Garcia-Blandon & Castillo-Merino (2017). Interestingly, Gupta, Misra & Shi (2017) conclude that GCG is less important for companies trading in more competitive industries. Investors assume that to be highly competitive automatically increases the value of the company. Although the actual evidence is inconsistent, in theory the positive impact of GCG on performance is strong, and so is the positive response by the market. Therefore, we hypothesise with positive words as follows:

*H1: There is a positive influence of CG on market response.*

A well-implemented CG will increase earnings quality. Duh, Lee & Lin (2009) say that an effective governance mechanism could prevent earnings management that affects earnings quality associated with reversal of asset loss impairments. The impact of ownership structure on the reported earnings through increased disclosure is suggested by Wan-Hussin (2009). Among Malaysian firms, Wan-Hussin (2009) shows that family firms are more inclined to disclose all the required items for the primary basis of segment reporting, and that firms with a higher proportion of affiliated directors are more likely to make greater segment disclosure. Major studies of the impact of ownership structure on earnings quality by Firth & Kim (2002); Koh (2003); Velury & Jenkins (2006); Firth et al. (2007); and Chung et al. (2002) agree that there is a significant positive effect of CG best practices (institutional ownership, long term ownership) on

earnings quality.

Abbadı et al. (2016) establish the positive impact of CG on earnings quality in listed firms on the Amman Stock Exchange, Jordan an emerging market. Earnings management is affected negatively by overall categories of governance index measured by board of director, board meeting, audit and nomination and compensation committee. In summary, the better the corporate governance, the smaller the potential of moral hazard, thus the higher the quality of earnings. Therefore our hypothesis H2 is as follows:

*H2: There is a positive influence of CG on earnings quality.*

Market reaction to earnings quality is often investigated, with the consistent conclusion that earnings quality has a positive impact on market reaction. See Sloan (1996); Richardson et al. (2005); Pincus et al. (2007); and Gavius (2007). Better earnings quality indicates that investments are profitable without manipulation. Using data from Jordanian industrial and service companies listed on the Amman Stock Exchange, Abdel-Karim & Al-Debi'e (2015) show that the relationship of returns to earnings improves with the quality of earnings.

Perotti & Wagenhofer (2014) examines whether earnings quality improves investors' decisions. For their sample of US non-financial firms over the period 1988 to 2007, persistence, predictability, abnormal accruals, accruals quality, earnings response coefficient, and value relevance are all negatively associated with absolute excess returns. Smoothness is negatively associated with absolute excess returns, suggesting that smoothness is generally a favourable attribute of earnings. In addition, Ferri et al. (2017) explain that managers can increase the information content of financial statements to attract investors, meaning that the content is important to investors. The more earnings information reflects economic reality, the more positive the market reaction. Therefore we hypothesise as follows:

*H3: There is a positive influence of earnings quality on market response.*

Previous research using the mediation model reveals inconsistent findings. Fuerst (2000) and Achyani et al. (2015) find that earnings quality measured by earnings management mediates the influence of CG practices on market reaction. Furthermore, for non-financial listed firms in Pakistan in 2014, Latif et al. (2017) demonstrate that CG improves the earnings quality and value of the firm. Better earnings quality partially mediates the governance-to-value relationship. CG improves the firm's value not only directly but also indirectly through earnings quality. However, Siallagan & Machfoedz's work (2006) could not confirm earnings quality as the mediating variable in the relationship between CG and the firm's value. We reexamine earnings quality as the mediating variable considering that most investors are more interested in profit. Our fourth hypothesis follows:

*H4: Earnings quality mediates the relationship between CG and market response.*

The last hypothesis in this study examines the market response to the earnings quality of Islamic compared to non-Islamic stocks. There are two ways in which an issuer is categorized as Islamic: first, when the issuer declares itself to be an Islamic issuer, and second, when the issuer is included in the Islamic criteria contained in the Indonesian Financial Service Regulations and also in the Fatwa of the National Sharia Council of the Indonesian Ulema Council (DSN-MUI) no. 40 / DSN-MUI / 2003. The criteria include:

- a) Does not conduct business activities classified as
- Gambling,
  - Trade which is not accompanied by the delivery of goods and services,
  - Ribawi (usury),
  - Financial services (such as conventional banks and conventional insurance),
  - Production, distribution and trade in goods or services whose substances are haram,
  - Damaging morale, and
  - Bribery.
- b) From the financial aspect, the issuer has a ratio of total interest-based debt compared to total assets of not more than 45%, and a total of non-halal income less than a maximum of 10%.

This selection process applies in the Islamic capital markets of Malaysia and Pakistan, and also in the various international index providers such as the Financial Times Stock Exchange (FTSE) Shariah Global Equity Index Series, the Morgan-Stanly Compliance Islamic Index (MSCI), and the Dow Jones Islamic Market Index, with different ratio limits. Within those limits, the risk of Islamic stock is lower than non-Islamic stock. Rana & Akhter (2015) investigate the volatility of the Islamic-compliant stock index (KMI-30) and the conventional stock index (KSE-100) in Pakistan. They show a positive and statistically significant effect of interest rate volatility on KSE-100, whereas KMI-30 remains unaffected. They do find that KMI-30 marginally underperforms KSE-100.

The ratio limits also improve the financial reliability, therefore Islamic issuers better survive crisis conditions. Jawadi et al. (2014) show that Islamic investments outperform conventional finance during turbulent times. The effect of the global financial crisis on Islamic returns is less than on conventional returns. Using stochastic dominance analysis, Al-Khazali et al. (2014) confirm that Islamic stocks outperform conventional stocks during a global financial crisis. In short, Islamic investing performs better than conventional investing during an economic meltdown. We confidently hypothesise that:

*H5: "The market response to the earnings quality of Islamic stock is better than to the earnings quality of non-Islamic stock".*

## METHODS

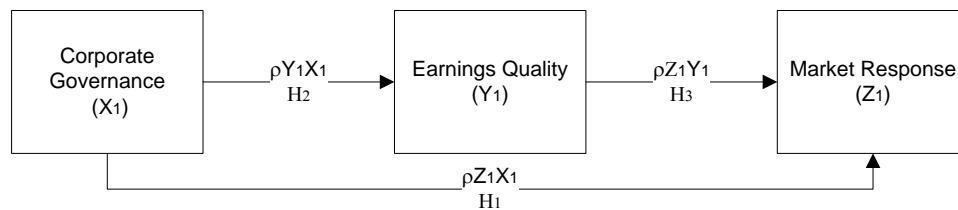
This study uses 128 firm-years of listed companies which have a CG score released by the Indonesian Institute of Corporate Governance (IICG). The period of study is the nine years between 2008 and 2016. The main advantage of using panel data is the increased degree of freedom and data variability, which reduces the collinearity between the variables (Gujarati, 2009). The data required includes the CG Index, Tobin's Q, and accrual. To examine the proposed hypotheses, we use the following conceptual models:

Based on the conceptual model, two mathematical models are developed

$$MR_{it} = \alpha_0 + \alpha_1 CG_{it} + \alpha_2 EQ_{it} + \varepsilon_{it} \dots \dots \dots (\text{Equation 1})$$

$$EQ_{it} = \beta_0 + \beta_1 CG_{it} + \beta_2 EQ_{it} + \varepsilon_{it} \dots \dots \dots (\text{Equation 2})$$





**FIGURE 1  
CONCEPTUAL MODEL**

The variables can be explained as follows:

Market Response (MR) is measured by Tobin's Q as previously used by Tjia & Setiawati (2012) and Rahmawati & Asyikin (2016). Three advantages of using Tobin's Q are (1) taking into account the potential development of stock prices, (2) considering the potential of management capabilities in managing company assets, and (3) including the potential for investment growth (Sudiyatno & Puspitasari (2010).

Fu, Singhal & Prakash (2016) confirm that Tobin's Q is a valid proxy for investment opportunities. A higher value of Tobin's Q indicates a more positive market response to the company's performance.

The formula of Tobin's Q is as follows:

$$= \frac{(Closing\ Price\ x\ Outstanding\ shares) + Total\ of\ Liabilities}{Total\ of\ Assets}$$

Corporate Governance (CG) is measured by the CG Index to describe the quality of CG in the company, as by Nicolo, Laeven & Ueda (2008); Jiang, Lee & Anandarajan (2008); and Hayat & Hassan (2016).

Chong, Ting & Cheng (2017) also use the CG index. It provides a comprehensive and multidimensional picture of CG as suggested by Gillan (2006) and Tirole (2001). The CG index used in the study is issued by the IICG and is known as the Corporate Governance Perception Index (CGPI). The CGPI has a scale of 1 to 100. A higher CGPI reflects a better quality of CG.

Earnings quality (EQ) is measured by accrual quality, a method adopted from Richardson et al. (2005); Desai, Krishnamurthy & Venkataraman (2006), and Lyimo (2014). A smaller value of accrual quality indicates a better earnings quality. The formula used to calculate accrual quality is this:

$$Accrual\ Quality = \left( \frac{Earnings\ Before\ Extraordinary - CFO}{Average\ Assets} \right)$$

Hypotheses H1 to H4 are tested using the conceptual model in Figure 1. Hypothesis H5 is examined using moderated regression analysis (MRA) as described below:

$$MR_{it} = \gamma_0 + \gamma_1 EQ_{it} + \gamma_2 DSS_{it} + \gamma_3 EQ_{it} * DSS_{it} + \epsilon_{it} \dots \dots \dots (Equation 3)$$

DSS is dummy Islamic stock, with the value of 1 for Islamic stock and zero (0) for non-Islamic stock. Table 1 describes coefficients to cover each hypothesis and estimate the findings.

Hypothesis	Statement	Coefficient	Prediction	Equation
H1	There is a positive influence of CG on market response	$\alpha_1$ $\rho Z1X1$	Positive	1
H2	There is a positive influence of CG on earnings quality	$\beta_1$ $\rho Y1X1$	Positive	2
H3	There is a positive influence of earnings quality on market response.	$\alpha_2$ $\rho Z1Y1$	Positive	1
H4	Earnings quality mediates the relationship between CG and market response	$\beta_1 * \alpha_2 > \alpha_1$ ( $\rho Y1X1 * \rho Z1Y1$ ) > $\rho Z1X1$	Positive	1 & 2
H5	The market response to earnings quality of Islamic stock is better than non-Islamic stock	$\gamma_3$	Positive	3

### FINDINGS

The 71 firms in this study participated in the Corporate Governance Perception Index (CGPI) award program from 2008 to 2016. This program is held annually by IICG. Companies volunteer to participate. In 2008 Islamic stocks were first introduced by the Indonesian Capital Market Supervisory Body.

Thirty-nine of these 71 firms are listed companies which have market data to calculate Tobin's Q. During the nine years of the study period, only 150 firm years were obtained, as not every firm participated in the CG award program every year. To meet the requirements of parametric statistical analysis, twelve book-years detected as outliers were excluded from the analysis. Statistically, the outlier data have a Z score greater than plus or minus 2.5 (Leys et al., 2003). Of the twelve outliers, ten firm-years were from mining companies and two firm-years were from construction companies in the period 2009 to 2011. The remaining data, 138 firm-years, using Jarque Bera, distributed normally with a P-Value in the series residuals column of 0.1399 (>0.05). Table 2 presents sample selection criteria.

Criteria	Number
Firms participated in CGPI award 2008- 2016	71 firms
Non listed companies	(32) firms
Listed companies participated in CGPI award 2008- 2016	39 firms
Firm-years	150
Outlier	(12)
<b>Firms years for further analysis</b>	<b>138</b>

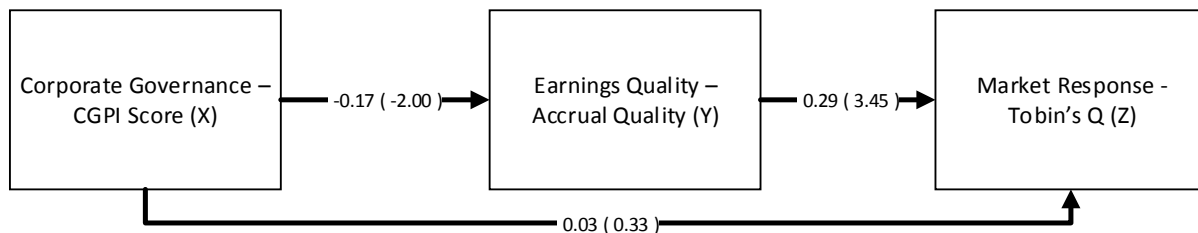
Based on Table 3 below, the average value of CG is 83,300, classified as "trusted" (score B). Most companies in the trusted category are State-Owned Enterprises (SOEs) in the mining sector. The minimum value of earnings quality is -0.145 and the maximum value is 0.238 with an average value of 0.009. Negative earnings quality indicates that companies tend to implement conservative accounting policies, whereby earnings value is smaller than the cash flow. The standard deviation for earnings quality is 0.075, which is greater than the average value of 0.009 and indicates that the data is quite heterogeneous. Table 3 shows that the average value of Tobin's Q is 1.385. A high Tobin's Q (greater than 1) implies that a company's stock is more

expensive than the replacement cost of its assets, that is, stock is overvalued by the market. In other words, the higher value of Tobin’s Q indicates that the market reacts positively to the company’s performance.

Variable	Minimum	Maximum	Mean	Standard Deviation
CG	66.510	93.300	83.300	6.179
Earnings Quality	-0.145	0.238	0.009	0.075
Market reaction	0.548	3.764	1.385	0.599

Table 4 below presents the correlation among variables. CG has a significantly negative correlation (-0.169) with Earning Quality (EQUAL). As the interpretation of earning quality score is reversed (the higher the score the worse the earnings quality), this negative correlation can be interpreted as “the better the CG the better the quality of earnings.” The correlation between Earning Quality (EQ) and Market Response (MR) is also significant with positive direction. However the correlation between CG and MR is not significant.

		CG	EQUAL	MR
CG	Pearson Correlation	1	-0.169*	-0.021
	Sig. (2-tailed)		0.048	0.807
EQ	Pearson Correlation	-0.169*	1	0.283**
	Sig. (2-tailed)	0.048		0.001
MR	Pearson Correlation	-0.021	0.283**	1
	Sig. (2-tailed)	0.807	0.001	
*. Correlation is significant at the 0.05 level (2-tailed).				
**. Correlation is significant at the 0.01 level (2-tailed).				



Chi square: 0.000; p value:1.000; RMSEA: 0.000

**FIGURE 2  
PATH ANALYSIS WITH STANDARDIZED SOLUTION (T-VALUES)**

The mediation relationship among variables is tested using path analysis with the LISREL 8.70 application. In addition to normality, path analysis must fulfil the linearity assumption. Linearity testing using the Ramsey method produces an F-statistic of 0.6925 with a P-value > 0.05, meaning that the independent variables are linear with the dependent variable. Figure 2 below shows the results of path analysis.

The goodness-of-fit test shows that the model is a close fit, with  $RMSEA \leq 0.08$ ,  $p$  value  $\geq 0.05$  and chi square value of 0.00. The path coefficient between CG and Market Response in Figure 2 shows insignificant result with a parameter value 0.03 and  $t$ -value 0.33 (less than 1.98). The conclusion is that CG does not directly affect the market response. The coefficient relationship between CG and earnings quality shows a negative parameter of -0.17 with a significant  $t$ -value 2.00, meaning that CG has a significant effect on earnings quality. The higher the CG score, the lower the quality of a company's accrual. The lower value of accrual quality shows a better earnings quality. Therefore CG increases the quality of earnings.

The coefficient between earnings quality and market response in Table 5 also shows a significant result ( $t$ -value  $3.45 > 1.98$ ) with a parameter coefficient of 0.29. It can be concluded that the higher the value of accrual quality, the higher the value of Tobin's Q. High accrual quality shows low earnings quality, while high Tobin's Q value shows a good market response. The conclusion is that high accrual quality is welcomed by the market. Tables 5 and 6 below present the overall findings.

Relationship between Variables	Standardized solution	T values	Significant / Insignificant	Results of Hypothesis
CG-MR	0.03	0.33	Insignificant	H1: Supported
CG-EQ	-0.17	-2.00	Significant	H2: Supported
EQ-MR	0.29	3.45	Significant	H3: Supported (the direction of the relationship is contrary to the hypothesis)

Relationship between Variables	Direct relationship (CG-MR)	Indirect relationship (CG-EQ) * (EQ*MR)	Results of Hypothesis
CG-MR	0.03	$-0.17 * 0.29 = 0.049$	H4: Supported ( $0.049 > 0.03$ )

**Notes:**

EQ: Earnings Quality, measured by the quality of accruals

DDES: dummy variable, 1 for Islamic stock, 0 for non-Islamic

EQ\_DDES: interaction between dummy and earnings quality

Based on Tables 5 and 6 above, we conclude, by comparing the direct effect of 0.03 and the indirect effect of 0.049 ( $0.17 * 0.29$ ), that earnings quality mediates the relationship between CG and market response. The indirect effect of CG on market response through mediation of earnings quality is greater, with a coefficient of 0.049, than the direct influence with a coefficient of 0.03.

To test hypothesis 5 about whether the market reaction to earnings quality of Islamic stock is better than to non-Islamic stock, we use moderation regression analysis. In addition to data normality, a heteroscedasticity test using a White Test shows that the probability value Chi-Squared is equal to  $0.0687 > 0.05$ , meaning that the regression model causes no problem of non heteroscedasticity. The MRA test generates a value of F test 37.830 with a significance of 0.000. As shown in Table 7, three independent variables significantly influence the market response, with a significance value of 0.000 and adjusted R square value of 0.446.

From Table 7 below, it is clear that the influence of earnings quality on market response is strengthened or weakened by the type of stock (Islamic or non-Islamic). The EQ coefficient is 0.491 with positive direction. When the value of accrual quality increases (which indicates a low

quality of earnings), the value of Tobin’s Q also increases. The EQ\_DDES interaction coefficient is 1.448, meaning that the impact of earnings quality on market response on sharia stocks is 1.448 points greater than non-sharia stocks. From Table 7, the regression equation is as follows:

$$MR_{it} = -0.466 + \gamma_1 0.491EQ_{it} + \gamma_2 0.544DSS_{it} + \gamma_3 1.448EQ_{DSS_{it}} + \epsilon_{it} \dots\dots\dots \text{(Equation)}$$

Table 7 PARTIAL TEST OF MODERATED REGRESSION						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0.466	0.320		-1.454	0.148
	EQ	0.491	0.166	0.201	2.961	0.004
	DDES	0.544	0.057	0.611	9.593	0.000
	EQ_DDES	1.448	0.474	0.208	3.054	0.003

### DISCUSSION

#### The Effect of CG on Market Response

Lee et al. (2005); Aman & Nguyen (2008); Rossi & Panggabean (2012); and Martinez-Blasco, Garcia-Blandon & Castillo-Merino (2017) all state that CG does not have a significant effect on market response. We too demonstrate the absence of a significant influence of CG on market response. There are three possible explanations for this interesting result.

First, CG implementation is relatively less effective. Listed companies in Indonesia are not required to implement GCG guidelines as stated in the National Committee of Governance Policy. GCG values and principles are attached only to the regulations issued by various agencies such as the IFSA, the Limited Liability Company law, the Central Bank of Indonesia, and other regulatory bodies. Therefore there is no strong encouragement to apply CG principles comprehensively.

Second, investors in Indonesia focus on performance in the short term as Sitinjak (2013) describes. Likewise, Anusakumar et al. (2017) observe the Asian market (Malaysia, India, Indonesia, Philippines, Taiwan, Thailand, South Korea and China) and confirm that stock-specific sentiment strongly and positively affects stock returns after controlling for characteristics of the company itself. There is also a positive relationship between market wide sentiment and returns but the relationship does not hold at the country level. Trading volume pattern measures investors’ sentiments.

Third, the insignificance result may be due to a lack of representative company data. CGPI scores as a proxy of CG quality are limited. The Indonesian Institute of CG releases CGPI scores for only around 30 companies (some of them not listed) every year. Future research may develop an alternative score (perhaps a self-development score based on a composite index) considering structure, mechanism and implementation of CG principles.

#### The Effect of CG on Earnings Quality

CG increases earnings quality. Transparency as one of CG’s principles will reduce moral hazard, which reduction will then have an impact on improving earnings quality. This research supports Yanti & Sartika (2017), who say that CG which is measured by CGPI influences the

practice of earnings management. An increase in CGPI will improve earnings quality because the better the corporate governance, the smaller the potential moral hazard. Our findings also support studies by Duh, Lee & Lin (2009) that an effective governance mechanism can prevent earnings management behaviour that affects earnings quality. The application of GCG will increase transparency in the company and minimize adverse selection problems and moral hazard (Tirole, 2001, and Chen & Liu, 2013). Earnings quality measure in this study is limited to only accrual quality with a simple model, without differentiating between discretionary and non-discretionary accrual. Future studies may use a more comprehensive measure of earnings quality such as predictive value, neutrality and timeliness.

### **The Effect of Earnings Quality on Market Response**

We confirm that the lower the quality of earnings, the higher the value of Tobin's Q. The direction of the relationship is contrary to our hypothesis. This finding is interesting as investors are more interested in high accrual values, even though a higher accrual value is identical to aggressive earnings policy with high risks. This finding explains the persistence of accrual anomaly in the Indonesian Capital Market as studied by Suhardiyanto & Harymawan (2011); Ekawati (2012); and Toha & Harahap (2018). A preference by investors for higher earnings rather than cash flow may show that investors in Indonesia are quite optimistic, so that behavioural and psychological factors dominate in making investment decisions. According to Puspitaningtyas (2013), investors in Indonesia do consider fundamental accounting information. However, psychological factors dominate their rational considerations.

### **Earnings Quality Mediates the Relationship between CG and Market Response**

Evidence shows that earnings quality mediates the relationship between CG and market reaction. The indirect effect of CG on market reaction through earnings quality as mediation is greater, with a coefficient of 0.049 compared to the direct effect of CG on market reaction with a coefficient of 0.03. This finding partially supports the previous research by Yanti & Sartika (2017) that CG measured by CGPI ratings influences earnings management in companies participating in the CGPI. Any increase in ranking at CGPI will improve earnings quality. Increased earnings quality should be followed by a better market response (Achyani et al. 2015).

Fuerst (2000) says that companies implementing GCG have better monitoring effectiveness. Monitoring prevents managers from behaving opportunistically with earnings management. Opportunism is viewed negatively by investors.

### **Market Response to Earnings Quality of Islamic and Non-Islamic Stock**

The effect of earnings quality on market response is affected by the type of stock: Islamic or non-Islamic. The regression coefficient of earnings quality on market response, 0.491, means that an increase of accrual (which indicates poor earnings quality or aggressive earnings) will be followed by an increase of Tobin's Q. When there is an interaction between earnings quality and the type of stock (1: Islamic, 0: non-Islamic), the regression coefficient becomes 1.448. It can be inferred that the effect of earnings quality on market response to Islamic stock is 1.45 points greater than on response to non-Islamic stock.

The findings may be due to the financial selection criteria applied to Islamic stocks. Restriction of interest bearing debt ratio for Islamic stock (not to be more than 45% of total

assets) helps companies to control aggressive accounting policies. As stated in the debt-covenant hypothesis (Scott, 2014), when companies have more debt than equity, managers tend to shift their income from current to future periods to avoid high debt costs. Likewise, interest income limits for Islamic stocks will prevent the company from t volatility in interest rates (Rana & Akhter, 2015). Both ratios have an impact on increasing earnings persistence, as well as earnings neutrality. However, examining the difference between Islamic and non-Islamic stock based merely on two financial ratios actually contains weaknesses. It ignores possible financial criteria such as receivable ratio (as used in other countries), unrealized gains or losses, and the non-financial elements of Islamic business generally.

### Robustness Test

We use two robustness tests to validate the overall conclusion. First, the same model as proposed in the methodology is tested using regression analysis (CG-Market Response Relationship; CG-Earnings Quality Relationship; Earnings Quality-Market Response Relationship). Second, this study includes two control variables which commonly affect market response, namely company size and leverage. Table 8 below presents the coefficient regression for CG-Market response association. CG has no significant impact on market response with p value of 0.807 ( $>0.05$ ).

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.555	0.694		2.240	0.027
	CG	-0.002	0.008	-0.021	-0.244	0.807

Dependent Variable: MR (Market Response)

Table 9 below shows the negative significant coefficient of CG–Earning Quality association with -0.002 and p value 0.048 ( $<0.05$ ). This finding implies that an increase of CG score will be followed by a decrease of accrual. As accrual quality measure is reversed the lower accrual represents better earnings quality.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.179	0.085		2.099	0.038
	CG	-0.002	0.001	-0.169	-1.999	0.048

Dependent Variable: EQ (Earnings Quality)

Table 11 below presents the regression coefficient of the Earning Quality relationship to Market Response, showing the same result as the path analysis. A positive coefficient of 2.27 with a significant value of 0.001 ( $>0.05$ ) implies that the higher the accrual, the higher the Tobin's Q. A higher accrual represents a lower earnings quality. This interesting finding may be associated with the optimistic behavior of investors, or possibly the existence of anomalies in the Indonesian Capital Market.

The second robustness test includes control variables in the model. The company size is normally used as control variable in regression models. Size indicates how well a company has an adequate resource to manage investments. Thus size determines the capability of the company to achieve performance. Pervan & Visic (2012) and Dogan (2013) show that size has a positive effect on profitability. Kuncova et al. (2016) also describe the positive effect of size on economic performance. They assess economic performance using three criteria (profitability ratios, labour productivity, and operating ratio). Larger firms perform better than smaller ones. Lun & Quaddus (2011) specifically confirm the positive effect of size on sales growth. The bigger the size, the higher the market expectation.

Leverage also affects company performance. A high leverage firm means a high risk firm. Because the majority of investors are risk-averse, they will tend to react negatively to higher leverage. Fomani & Moghadam (2015) show these using listed companies on the Tehran Stock Exchange. Nenu et al. (2018) also demonstrate a positive correlation between leverage and share price volatility in companies listed on the Bucharest Stock Exchange in Romania. All findings confirm the higher risk of firms with higher leverage, which correlates with high volatility. However, several findings examine growth which positively affects performance. A high leverage may represent high growth opportunities and gain a positive response from the market. Using 75 listed firms on the Teheran Stock Exchange, Khandah & Ahmania (2013) show that financial leverage has a meaningful effect on liquidity and growth opportunity. They measure growth opportunity using the ratio of market value of assets to book value of assets, the ratio of the market to book value of equity, and the earnings-over-price (EP) ratio. Likewise, Aggarwal & Padhan (2017) examine the effect of capital structure on selected listed Indian hospitality firms. They find a significant positive relationship of firm value to leverage.

Table 10 presents the model of market response which includes CG, earnings quality and the two control variables as independent variables. The results are consistent with the main finding. Earnings quality still has a positive relationship with market response. Size measured by total assets has a positive impact on market response, and leverage measured by total liabilities has a negative impact on market response. The model provides 27.5% adjusted R square.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.365	0.049		27.610	0.000
	EQ	2.274	0.660	0.283	3.444	0.001
Dependent Variable: MR						

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.141	0.626		0.225	0.822
	EQ	2.002	0.597	0.249	3.353	0.001
	CG	-0.004	0.010	-0.041	-0.387	0.699
	TL	-0.655	0.108	-2.273	-6.053	0.000
	TA	0.724	0.135	2.160	5.355	0.000



<b>Table 11</b>
<b>CG – MARKET RESPONSE RELATIONSHIP WITH CONTROL VARIABLES</b>
Dependent Variable: MR

## CONCLUSIONS

First, CG does not have a significant effect on market reaction. This finding is unexpected. It may indicate that CG implementation has not been effective, especially in the early research periods where CG issue was still very new at the time. Regulations related to CG were officially released by the Government only in 2006. Investors may not yet consider important the fundamental issues such as CG. Instead they are more interested in financial risks and returns.

Second, CG has a significant effect on earnings quality. The better the quality of CG, the better the quality of earnings. The finding indicates that CG is a powerful control mechanism in improving the quality of accounting information. CG principles such as transparency will limit managers' behaviour in choosing accounting policies that are not too aggressive in recognizing earnings, thereby lowering accruals.

Third, earnings quality has a significant effect on market reaction. The market responds positively to a high accrual value. This interesting finding may be an indication of an accrual anomaly. Investors behave optimistically in observing high accrual values.

Fourth, earnings quality is able to mediate significantly the relationship between CG quality and market reaction. The coefficient value of indirect relationship between CG quality and market reaction through earnings quality (CG-EQ-MR) is greater than the coefficient value of the direct relationship between CG quality and market reaction (CG-MR). This shows that investors consider and take into account the quality of earnings in their investment decisions.

Fifth, the impact of earnings quality on market reaction for Islamic stock is higher than for non-Islamic stock. The restricted amount of interest bearing debt and interest income for Islamic stock seemingly contributes to the improvement of earnings quality.

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