Int. Journal of Economics and Management 10 (S2): 235 – 252 (2016)

PERTANIKA JOURNALS

IJEM

International Journal of Economics and Management

Journal homepage: http://www.econ.upm.edu.my/ijem

The Effect of Risk Management and Operational Information Disclosure Practices on Public Listed Firms' Financial Performance

ERLANE K GHANI*[a], NURAZRIN TARMEZI[a] ,
JAMALIAH SAID[a] AND YULIANSYAH YULIANSYAH[b]

[a]*Universiti Teknologi MARA, Accounting Research Institute (ARI)*
Malaysia
[b]*Accounting Department, University of Lampung, Indonesia*

ABSTRACT

This study examines information disclosure practices among public listed firms, specifically, the effect of risk management and operational information disclosure on financial performance of public listed firms in Malaysia. This study uses 318 annual reports over a three-year period of 106 listed firms in Bursa Malaysia as the study sample. Using content analysis as the research instrument, this study finds that the level of risk management and operational information disclosed affects firms' financial performance in terms of return on equity and Tobin's q. However, the results show that there is no effect from the level of operational information disclosure on increasing earnings and efficiency in terms of managing assets as measured by the return on asset and EBITDA. The findings in this study indicate that the amount of risk management and operational information disclosed in the firms' annual reports could influence the firms' performance. This study provides evidence on the importance of risk management and operational information disclosure on a firm's performance.

JEL Classification: D81, G32, G17, G20

Keywords: Risk Management, Operational Information Disclosure, Financial Performance, Listed Firms, Malaysia

*Corresponding author: Email : erlanekg@salam.uitm.edu.my

INTRODUCTION

The issue of information disclosure has received global attention from various parties due to its importance to investors in making investment decisions (Razali and Adnan, 2012). Information disclosure refers to the "accurate and timely release of information about the business strategy, financial performance and corporate governance to the general public by a firm" (Bin Lee, 2012), which in sum represents risk management and operational information. The need for information disclosure is closely related to the managers' misbehavior. With greater available of this kind of information, investors would be able to anticipate the managers' actions and outcomes if they decide to invest in a firm. It could prevent managers from acting against a firm's objectives, and to align their interest parallel to the shareholders' interest (Kanagaretnam, Mestelman, Nainar, & Shehata, 2013).

The information asymmetry that exists between the managers and shareholders has positioned the managers above the shareholders in terms of information advantage about the firm (Chen, Chung, Lee , & Liao, 2007). Managers are said to have better and timelier information (Yeh, Chen, & Wu, 2014). Managers have exclusive access to operational information about firms' actions and future prospects, which causes them to have compelling reasons to ensure confidentiality of the information (Weil, Fung, Graham, & Fagotto, 2006). Therefore, firms with a weak practice of information disclosure policy could cause managers to take advantage in pursuing their self-interests at the expense of their shareholders (Chen *et al*., 2007). This leads to agency problems as the agents' (managers) action is inconsistent with the principals' (shareholders) interest. In firms that are embedded with a strong corporate information disclosure policy, shareholders are able to increase their control over the managers, which then reduces agency costs, resulting in the increase of the firms' financial performance (Ozbay, 2009).

Misbehaviour of managers could lead to fraud, bribery, and corruption in firms. KPMG (2013) conducted a survey in Malaysia, covering the period of January 2010 to December 2012. The findings reported that 89% and 80% of the survey respondents felt that fraud, and bribery and corruption had increased, respectively. Consequently, this would result in firms losing their brand image, reputation, and inability to retain and attract human capital, which in turn would reduce their performance. Reducing information asymmetry through information disclosure could limit managers' actions and prevent managerial misbehaviours from occurring (Sari & Anugerah, 2011).

Studies have shown that shareholders and investors are more interested to look at the required rate of return (Jensen & Meckling, 1976), and organizational profitability, growth, and free cash flow are the fundamental determinants in creating shareholders' value (Shukla, 2009). Based on the determinants and drivers of shareholders' value creation, it can be concluded that shareholders' returns are a subset of the financial performance indicator.

In Malaysia, however, there are limited studies that have examined the level of information disclosure related to risk management and operational information of firms' financial performance. There is a study by Razali and Mohd Adnan (2012) that examined the issue on information disclosure on financial performance but their study only focused on property firms. Other studies have examined the link before information disclosure and governance

structures (Akhtaruddin, Hossain, Hossain, & Yao, 2009) and emphasized on corporate social responsibility disclosure and financial performance (Saleha, Zulkiflib, & Muhamad). This study attempts to extend previous Malaysian studies by examining the link between risk management and operational information disclosure to financial performance using public listed firms in general. Specifically, this study aims to investigate the level of risk management and operational information disclosure of Malaysian public listed firms. In addition, this study aims to determine the effect of risk management and operational information disclosure on the financial performance of public listed firms in Malaysia. The remainder of this paper is structured as follows. The next section provides a review of relevant literature. This is followed by explanation on the research design. The results are presented further. A summary and conclusion are provided in the last section.

LITERATURE REVIEW

Information Disclosure

Information disclosure refers to firms disclosing their financial performance, risk management activities, business risks, and operational information in a timely manner to their present and potential shareholders (Ozbay, 2009). Greater information disclosure represents an increase in the number of timely and reliable information flow comprising economic, social, and political information. Other studies have extended the definition of information disclosure to incorporate the availability of the information being disclosed with respect to the internal workings and the firms' performance (Vishwanath and Kaufmann, 1999; Grimmelikhuijsen, 2012). Therefore, information disclosure relates to the availability of information of a firm that allows external parties to control and monitor the firm's performance and decisions (Grimmelikhuijsen, 2012).

The way information is being disclosed plays an important role in avoiding misinterpretation by the users of the information. Ozbay (2009) and Weil *et al*. (2006) identified four attributes in describing information disclosure in order to ensure that the information provided would not be misrepresented and irrelevant to the firms. The information disclosure attributes include accessing compatibility with decision making processes, relevant, comparable, comprehensive, and reliable in terms of compatibility with decision making processes (Ozbay, 2009; Vishwanath & Kaufmann, 1999). It is important for the information to be made available in a useful format and accessible in a timely manner (Vishwanath & Kaufmann, 1999; Weil *et al*., 2006), as the aim of information disclosure is to convey information. Investors demand timely information in order to understand firms' governance as well as performance (Yeh *et al*., 2014). A useful format is associated with the way the information is presented (Kleindorfer & Orts, 1998; Ozbay, 2009; Weil *et al*., 2006).

As for shareholders, who are the owners of a firm, better information disclosure could help them monitor the behavior of their managers (agents). According to Ozbay (2009), risk management information disclosure helps in improving the democratic culture in firms (Yatim, 2009, Mustapha and Ghani, 2012), which enable institutional shareholders to actively participate in monitoring and controlling the management. This is important to ensure that the managers are acting in the best interest of the firms and not for their own self-interest at the expense

of the shareholders. The availability of the information in financial markets is important to facilitate the shareholders in obtaining information quickly and to respond effectively (Weil *et al*., 2006). Thus, for firms that are perceived to have higher business risks and tend to provide less information to the stakeholders, the shareholders require a higher rate of return in order to compensate the risks that they are willing to take. One of the ways for the shareholders to determine whether the managers are acting in their best interest is to observe the financial performance of a firm.

Information Disclosure and Financial Performance

Financial performance is an outcome, in monetary terms, of the decisions and actions that have been made by the members (management, employees) of a firm (Carton, 2004). Carton (2004) further explained that operating profit, return on assets, return on investment, sales level, and cash flows could be used to measure a firm's financial performance. As financial performance portrays the overall health of a firm within a given period of time, it would allow decision makers to evaluate and receive feedback on the success of the firm's business strategies in meeting their objectives (Drury, 2007). Firms with higher financial performance levels are willing to disclose information and become more transparent, as they are proud to show the outsiders that they are doing well, which then attracts more investors and analysts. Lang and Lundholm (1993) found firms with good performance disclosed more information compared to firms that are not doing well. Therefore, firms should consider providing better information disclosure especially on risk management and operation to the markets as an initiative to become transparent to their stakeholders and consequently, enhance their financial performance.

Increased information disclosure reduces information asymmetry, which in turn lowers the firms' cost of capital because investors pay less for information disseminated under disclosure rules (Poshakwale & Courtis, 2005). The process of disclosing information incurs operational and financial costs because organizational changes are needed in forming specific teams to deal with the production of information to the shareholders and other stakeholders. Arguably, increased information disclosure may influence the financial performance of the firm (Poshakwale and Courtis, 2005). Bushman and Smith (2003), however, provide inconsistent results as they found that corporate disclosure practices could be associated with the variability of firm performance if performance proxies for information asymmetry between investors and managers. They further indicated that information disclosure and transparency practices can be the best tool to make sure managers act on the best interest of the firm, which could include maximising the firm's profit. Due to the inconsistent results, this study examines the link between the level of risk management and operational information disclosure and financial performance among Malaysian public listed firms.

Research Hypotheses Development

Risk management and operational information disclosure is one of the factors that indirectly affects firms' performances. Information disclosure provides greater benefits by acting as a tool in monitoring the behaviours of the managers, signalling to potential investors to pull the equilibrium that has been set in the first place and many others. There is still no conclusive

evidence that the level of information disclosure has a positive effect on firms' financial performances. Therefore, the level of information disclosure represents the independent variable. The financial performance is the dependent variable. Financial performance is divided into four categories, which comprise return on assets (ROA), return on equity (ROE), Tobin's q (Tq), and earnings before interest, tax, depreciation, and amortisation margin (EBITDA).

Managers are said to disclose greater and more detailed information when a firm's performance is high to support their positions and remuneration when they are tied to performance-based contracts. On the other hand, when a firm's performance is low, it would disclose less information in order to conceal its business weakness (Singhvi & Desai, 1971). Loh (2002) and Sari and Anugerah (2011) supported Singhivi and Desai's notation as they found that higher information disclosure related to risk management and operations will result in better market performances. This is due to the greater benefits gained by firms that have greater information disclosure such as increased credibility of the management, attracting more long term investors, improve access to capital, and lower the cost of capital. Vishwanath and Kaufmann (1999) found that better information disclosure leads the firm to have better financial stability and reduce market volatility. In addition, Khanna *et al*. (2004) found a direct relationship between corporate transparency and firm performance.

Based on reviewing the literature, there are studies that have examined the link between information disclosure and return on asset. Cochran and Wood (1984) and Vishwanath and Kaufmann (1999) found a significant positive relationship between information disclosure and return on assets. On the other hand, Aupperle *et al*. (1985) found no significant relationship between information disclosure and return on asset. Similar results were shown by Alikhani and Maranjory (2013) who used environmental information disclosure to examine its effect on return on assets. Most of these studies have focused on information disclosure related to voluntary disclosure such as social and environmental responsibility. There is a lack of study that has examined the link between information disclosure related to risk management and operational disclosure. This has led to the development of the following research hypothesis:

H1: Firms with higher risk management and operational information disclosure scores are expected to have higher return on assets (ROA).

A group of studies had examined information disclosure and its relationship to return on equity (Cochran & Wood, 1984). The results of these studies are mixed attributed to the differences in research methodologies used. One of the earliest studies that was conducted on the effect of information disclosure on return on equity was by Moskowitz (1972). He found that the firms that have a higher level of voluntary information disclosure, also have a higher return on equity. Poshakwale and Courtis (2005) also found similar results. However, other studies could not support Moskowitz's findings as they found none or little relationship between information disclosure and return on equity (Bowman and Haire, 1975; Parket and Eibert, 1975; Razek, 2014). The mixed findings motivated this study to further examine this issue. Therefore, the following hypothesis is developed:

H2: Firms with higher risk management and operational information disclosure scores are expected to have higher return on equity (ROE).

Another group of studies examined the link between information disclosure and firm performance in terms of Tobin's q. Majority of the studies found a positive relationship between information disclosure and firms' Tobin's q. This indicates that firms with better information disclosures have better financial performances, as it will reduce the cost of capital, increase shareholders' wealth through profit maximization and improve efficiency and performance of the firms. Black, Jang, and Kim (2006) found that information disclosure positively affects Tobin's q, as the result showed that profitable firms are willing to disclose more information than less profitable firms. Sari and Anugerah (2011) found a positive relationship between information disclosure and firms' performance with Tobin's q in measuring the firm's competitiveness in the market. However, there is yet a study that has examined the effect of risk management and operational information disclosure on Tobin's q. Therefore, the following hypothesis is presented in this study:

> **H3**: Firms with higher risk management and operational information disclosure scores are expected to have higher Tobin's q (Tq).

A review of the literature reveals the relationship between information disclosure and Earnings before interest, taxes, depreciation, and amortisation (EBITDA). The results of these studies are inconclusive. For example, Sonnier *et al*. (2007) examined the link between intellectual capital disclosure and EBITDA. They found that there is a significant relationship between the level of intellectual capital disclosure and EBITDA. The relationship, however, is a negative relationship. On the other hand, Oeyono *et al*. (2011) found a positive relationship between corporate social disclosure and EBITDA although the relationship is not significant. Similar results were shown by Pekshawale and Courtis (2005) although their results showed a significant relationship. In contrast, Alikhani and Maranjory (2013) found no signficiant relationship between social and environmental information disclosure and EBITDA. This study will examine the relationship between risk management and operational information disclosure on EBITDA. Therefore, the following hypothesis is developed:

> **H4**: Firms with higher risk management and operational information disclosure scores are expected to have a higher EBITDA margin.

RESEARCH DESIGN

Sample Selection

Public listed firms in the Bursa Malaysia are chosen as the sample in this study. This sample is chosen because the firms listed in Bursa Malaysia are relatively large firms that have a high number of shareholders and actively trade in the market. Given their high volume of trade, it is thus appropriate to assume that these are firms that readily attract the interests of many investors. In addition, firms listed in Bursa Malaysia are actively involved in the buying and selling of shares and have greater numbers of market participants. Thus, transparency can be a good signal to investors in assisting them to make investment decisions. According to Razali and Mohd Adnan (2012), public listed firms are required to publish their own annual reports,

which can be a major tool for the transparency benchmark. A total of 106 of the 815 firms has been selected randomly, regardless of the industry, as a sample for this study.

Data Collection

This study used an approach similar to the approach used by Razali and Mohd Adnan (2012). This study used secondary data and performed content analysis on the current annual reports available from year 2011 until 2013 since these 3-year period represents the latest annual reports available in Bursa Malaysia at the time this study was conducted. Examining a total of 106 firms listed in Bursa Malaysia over a 3-year period, yielded a sample of 318 annual reports in total. Three-year period of annual reports were chosen because according to Bursa Malaysia (2011), all listed issuers must comply with the enhanced disclosures in the LR for the financial periods/years ending on or after 31 December 2011. The latest annual report was only available for the year ending of 2013.

Data Measurement

Risk Management and Operational Information Disclosure

The level of risk management and operational information disclosure was measured using transparency matrixes (TM), which were developed based on the JLL transparency index, comprising performance measurement, market fundamentals, listed vehicles, regulatory and legal environment, and the transaction process (JLL, 2010). JLL transparency index was previously developed in 1999, which was based on the questionnaire disseminated among senior JLL investment management personnel who were working in each country in order to construct composite transparency indexes. As this study captures the need for the Malaysian market and uses the same method of data collection, which is from the annual reports, a 20-point criteria adapted from Razali and Mohd Adnan (2012) was utilized.

A 20-point criteria covering transparency within an annual report covers items such as firm management, financial reports, statement of cash flow, risk analysis, market segmentation, shareholders' information, future investment plans, and dividend policies. It is common that firms often detail out their information and provide comprehensive coverage of the firms' information in their annual reports (Razali & Mohd Adnan, 2012). For each criterion being disclosed by the firms, a tick "√" will be given. Each tick "√" represents one score. The more ticks "√" received by the firms, the greater the score obtained indicating a better information disclosure by the firms.

Financial Performance

Firms' financial performances are categorized into four aspects, which include return on assets (ROA), return on equity (ROE), Tobin's Q (Tq), and earning before interest, tax, depreciation and amortization (EBITDA) margin. ROA is an indicator of how efficient a firm is in making profit by utilizing the use of its total assets. Adopting a similar measure used in previous studies such as Ozbay (2009), Arcot and Brunoy (2011), and Barber and Lyon (1996), ROA is one

of the best tools to give a reflection on how well the firms are performing, as it deals with the efficiency in maximizing the use of assets. In this study, ROA is calculated as follows:

$$\text{ROA} = \frac{\text{earnings before interest, taxes, depreciation and amortisation (EBITDA)}}{\text{average total assets}}$$

Return on equity (ROE) is also the perfect measure to portray firms' profitability (Razek, 2014). It indicates that firms with better return on equity (ROE) have better performances, as the firms are able to effectively utilize the equity invested in generating profits in order to protect the interest of shareholders. Return on equity (ROE), according to O'hagan and Rice (2013), is one of the financial indicators for firms and is calculated as follows:

$$\text{ROE} = \frac{\text{earnings before interest, taxes, depreciation and amortisation (EBITDA)}}{\text{Average total equity}}$$

Tobin's q (Tq) is among the most common performance measures used by firms (Dale-Olsen, Schøne, & Verner, 2013). Dale-Olsen *et al*. (2013) further stated that Tobin's q (Tq) is probably the most widely used performance measure by researchers in empirical corporate finance studies. Tobin's q (Tq) is defined as the market value of assets (calculated as book value of assets minus book value of equity plus market value of equity) to book value of assets. Tobin's Q is calculated as follows:

$$\text{Tobin's Q} = \frac{[(\text{Book Value of Assets} + (\text{Market Value of Common Stock} - \text{Book Value of Common Stock} - \text{Deferred Taxes})]}{\text{Book Value of Assets}}$$

Earnings before interest, taxes, depreciation, and amortization (EBITDA) margin measure firms' profitability, which directly reflects the financial performances of the firms. According to Delen, Kuzey, and Uyar (2013), EBITDA shows the ability of firms in controlling the operating expenses, along with costs. As disclosing information requires some organizational changes, firms with better information disclosures will have better control of their operating costs. The EBITDA margin is calculated as follows:

$$\text{EBITDA margin} = \frac{\text{Earnings before interest, taxes, depreciation and amortization}}{\text{Total revenue}}$$

RESULTS

Risk management and Operational Information Disclosure Frequencies

The information disclosure score was calculated from the review of annual reports of the sample firms. In total, 318 annual reports were examined in order to extract 20 attributes from each annual report. In aggregate, 6,360 attributes were created, which is 106 firms * 3 years * 20 attributes. All the attributes examined provide an overview of the attributes that could be

an indicator of information disclosure for the firms listed in Bursa Malaysia. However, there are attributes or elements of information disclosure other than those that have been examined that need to be considered as well.

A matrix table was used to determine the level of information disclosure among the public listed companies in Malaysia. Table 1 presents the score for each firm in year 2013 (this is the most current annual report available in the Bursa Malaysia, as the data was collected in February 2015) and the information disclosure attributes for the matrix. Table 1 shows the most common information disclosure attributes that are practiced by the public listed companies in Malaysia. Each attribute was examined to provide a clearer idea of the information disclosure index. The sign of "√" indicates the companies disclosed the information whereas the sign of "x" indicates the companies did not disclose the information. Total represents the number of attributes disclosed by each company.

Table 1 presents the 20 attributes used in this study to measure the information disclosure of the companies. Out of the 20 attributes, 14 attributes acquired a 100% score by the public listed firms in Malaysia. These attributes include the year published, financial report, shareholder information, statement of profit or loss and other comprehensive income, statement of cash flow, statement of financial position, dividend policy, firms' liability, firms' investment, market segmentation, risk analysis, ownership structure, accounting policy, and remuneration and performance pay for directors. Competitors are the only attribute that received a score of zero, while mission statement received a lower score of only 41.51%. Razali and Mohd Adnan (2012) also received a zero score for the attribute of competitors and a lower percentage of mission statement at only 20%. This indicates that pubic listed firms in Malaysia are not yet ready to reveal all the required information.

Table 1: Information Disclosure Attributes

No	Information Disclosure Attributes	No. of companies disclosed (%)
1	Year published	100
2	Financial report	100
3	Shareholder information	100
4	Statement of profit or loss and other comprehensive income	100
5	Statement of cash flow	100
6	Mission statement	41.51
7	Statement of financial position	100
8	Dividend policy	100
9	Companies' liability	100
10	Companies' investment	100
11	Market segmentation	100
12	Competitors	0
13	Risk analysis	100
14	Future investment plan	87.74
15	Ownership structure	100

Table 1 (Cont.)

16	Accounting policy	100
17	Audit committee	98.11
18	Related party transactions	99.06
19	Shareholder by type and class	99.06
20	Remuneration and performance pay for directors	100

Table 2 presents the frequencies of the information disclosed by the listed firms for 2013. The results show that 39.6% of the firms have the highest and achieved almost full scores for the matrix. 47.2% or almost half of the sample firms disclosed 18 out of the 20 attributes. The remaining sample firms disclosed only 17 attributes.

In sum, the results show that the annual report is one of the tools for companies to disseminate and disclose information. Information disclosure attributes such as year published, income statements, cash flow statements, risk analysis, and dividend policy were among the popular attributes chosen by the firms for disclosure.

Table 2: Frequencies of the Information Disclosed by Firms for the year 2013

No. of attributes disclosed by firms	Frequency	Percentage (%)
16 attributes and below	0	0
17 attributes	14	13.2
18 attributes	50	47.2
19 attributes	42	39.6
20 attributes	0	0
Total	106	100

Risk Management and Operational Information Disclosure Score

Table 3 presents the descriptive statistics for risk management and operational information disclosure score based on 106 public listed firms. In this study, the risk management and operational information disclosure scores comprise 20 attributes. Overall, it can be summarized that public listed firms in Malaysia have a good level of risk management and operational information disclosure scores (M = 3.26, SD = 0.68). This can be further supported by the results of the descriptive analysis on the information disclosure score by public listed firms, which are presented in the following subsections.

This is consistent with the findings obtained by Razali and Mohd Adnan (2012), in which the researchers reported that property firms in Malaysia have a good level of information disclosure as these firms disclose at least 50% or half of the total information disclosure criteria. The minimum value of “2” indicates that the Malaysian public listed firms have disclosed at least 17 information disclosure criteria out of the 20. Meanwhile, the maximum value of “4” indicates that the maximum number of information disclosure criteria being disclosed by Malaysian public listed firms is 19 out of 20. None of the Malaysian public listed firms disclosed information about their competitors.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Overall average for information disclosure Score	106	2	4	3.26	0.68

Risk Management and Operational Information Disclosure and Financial Performance

Risk Management and Operational Information Disclosure Score and Return on Assets (ROA)

Table 4 presents the results of testing the first hypothesis. Hypothesis 1 states that firms with higher risk management and operational information disclosure scores are expected to have a higher ROA. The results show that information disclosure affects ROA. The result shows b = 0.059, t (106) = 0.606; p = 0.546 > 0.001. These results indicate that increasing information disclosure efforts would not increase the efficiency of the firms in utilizing their assets to make profits. Therefore, Hypothesis 1 is not supported.

Table 4: Regression Analysis (ROA)

	Beta	T	Sig.
Constant		-0.229	0.819
Average information Disclosure	0.059	0.606	0.546
R square	0.004		
Adjusted R square	-0.006		
F-Statistics (Sig.)	0.367(0.546)		
Df	(1, 104)		
N	106		

Based on the findings obtained by Vishwanath and Kaufmann (1999), the process of disclosing information requires some organizational costs with regards to the production of such information. Thus, a positive relationship between the level of information disclosure and financial performance and return on assets (ROA), could not be obtained due to the incurred cost that does not help in improving the firms' earnings. Other studies have also found a positive relationship between the level of information disclosure and financial performance (with ROA as a measurement) of a firm. However, this study shows no relationship as reduction in earnings will contribute to lowering the value of ROA.

Risk Management and Operational Information Disclosure and Return on Equity (ROE)

Table 5 presents the regression result in testing the second hypothesis. Hypothesis 2 states that firms with higher risk management and operational information disclosure scores are expected to have a higher ROE. The result shows that information disclosure is significant and positively affects ROE at 10%. The result shows b = 0.167, t (106) = 1.73, p = 0.087 < 0.10. This result

indicates that 16.7% of the variation can be explained by information disclosure and the rest are affected by other factors. As the firms provide greater information to the market participants, it reduces the information asymmetry between the firms and investors. Therefore, Hypothesis 2 is supported.

Based on the signalling theory, greater information disclosure potrays that the firms are performing well (Razek, 2014) and thus, investors' confidence increases towards the firms and the cost of capital decreases. It would be easier for the firms to obtain sources of funding and grab all the profitable opportunities available in the market and maximize the firms' value. With greater return created, return on equity invested would increase. Poshakwale and Courtis (2005) also found that information disclosure reduces the cost of capital as investors are willing to accept a lower required rate of return due to lower uncertainty and thus, increase the firms' value. The result is consistent with the hypothesis in which increasing information disclosure efforts will increase the return on equity of the firms.

Table 5: Regression Analysis (ROE)

	Beta	T	Sig.
Constant		-1.536	0.127
Average information Disclosure	0.167	1.73	0.087
R square	0.028		
Adjusted R square	0.019		
F-Statistics (Sig.)			
Df	(1, 104)		
N	106		

Risk Management and Operational Information Disclosure and Tobin's Q (Tq)

Table 6 sets out the regression results in testing the third hypothesis. Hypothesis 3 states that firms with higher risk management and operational information disclosure scores are expected to have a higher Tobin's q (Tq). The result shows that information disclosure is significant and positively affects Tobin's q at 5%. The result shows $b = 0.276$, $t(106) = 2.075$, $p = 0.04 < 0.05$. This result indicates that 27.6% of the variation can be explained by information disclosure and the rest are affected by other factors. The result is consistent with the hypothesis in which increasing the information disclosure efforts will increase the Tobin's q of the firms. Therefore, Hypothesis 3 is supported.

The result indicates that risk management and operational information disclosure affects the value of Tobin's q of the public listed firms. A higher Tobin's q reflects an effective competition in the market. According to Yeh *et al*. (2014), information disclosure is critical for the functioning of an efficient capital market. Sari and Anugerah (2011) also found a positive relationship between information disclosure and firms' performance with the same measurement of Tobin's q that measured the firms' competitiveness in the market.

Table 6: Regression Analysis (Tobin's q)

	Beta	T	Sig.
Constant		-1.742	0.085
Average information Disclosure	0.276	2.075	0.04
R square	0.04		
Adjusted R square	0.031		
F-Statistics (Sig.)	4.305 (0.04)		
Df	(1, 104)		
N	106		

Based on the results obtained, 27.6% of the variation in firms' competitiveness in the market is explained by the level of information disclosure. This result is significant at 5%. The level of information disclosure keeps increasing from year to year and all the samples selected have a score of more than half the attributes being disclosed. It means that firms are putting effort in providing more information as it can make them noticeable to market participants, thus increasing the competition among the firms in the market. Therefore, the level of information disclosure affects the financial performance of public listed firms in Malaysia with regards to Tobin's q (Tq).

The result of this study is consistent with Sari and Anugerah (2011) who found a positive relationship with information disclosure and firms performance in terms of Tobin's q (Tq) in measuring the firms' efficiency in operations and firms' competitiveness in the financial market. As the firms' ability to obtain external fund is higher if they have greater information disclosure, it enables them to actively participate in the financial markets, grabbing any opportunities for positive investment. Thus, it could create effective and efficient competition in the market (Yeh *et al*., 2014).

Risk Management and Operational Information Disclosure and EBITDA Margin

Table 7 presents the results of testing the fourth hypothesis. Hypothesis 4 states that firms with higher risk management and operational information disclosure scores are expected to have a higher EBITDA margin. The result shows that information disclosure does not affect the EBITDA margin. The result shows $b = -0.006$, $t(106) = -0.059$ $p = 0.953 > 0.001$. This indicates that increasing the information disclosure efforts will not increase the EBITDA margin of the firms. Therefore, Hypothesis 4 is not supported.

Table 7: Regression Analysis (EBITDA)

	Beta	t	Sig.
Constant		0.439	0.661
Average information Disclosure	-0.006	-0.059	0.953
R square	0.000		
Adjusted R square	0.010		
F-Statistics (Sig.)	0.004(0.953)		
Df	(1, 104)		
N	106		

Information disclosure is one of the best tools to signal potential investors (Razek, 2014), as it enables the firms to attract investors in making economic decisions, thus providing firms with a lower cost of capital (Poshakwale & Courtis, 2005) to fund available projects in the financial market. Consequently, firms could create greater value for their shareholders from the capital invested. Poshakwale and Courtis (2005) found the same findings in which information disclosure lowers the cost of capital of the firms. However, it does affect the financial parts in terms of incurring operational and financial costs. Therefore, indirectly, it should affect the EBITDA margin of the firms. The result shown in this study in relation to EBITDA is consistent with the result shown by Poshakwale and Courtis (2005); however, it is not consistent with Sonnier *et al*. (2007).

CONCLUSION

This study examined the effect of risk management and operational information disclosure on financial performance among public listed firms in Malaysia. Using content analysis as the research instrument, this study found that the level of risk management and operational information disclosed affects firms' financial performance in terms of return on equity and Tobin's q. However, the results show that there is no effect from the level of operational information disclosure on increasing earnings and efficiency in terms of managing assets as measured by return on asset and EBITDA. The findings in this study indicate that the amount of information disclosed in the firms' annual reports could influence the firms' performance.

This study could not provide evidence on the relationship between risk management and operational information disclosure and return on assets. This finding is consistent with Aupperle *et al*. (1985) and Alikhani and Maranjory (2013) who found no significant relationship between information disclosure and return on asset. The results of this study however is inconsistent with Cochran and Wood (1984) and Vishwanath and Kaufmann (1999) who found a significant positive relationship between information disclosure and return on assets.

In relation to return on equity, the results in this study show that there is a significant positive relationship between information disclosure and return on equity. These findings are consistent with Moskowitz (1972) and Poshakwale and Courtis (2005) who found that firms with a higher level of voluntary information disclosure would have a higher return on equity. However, the results in this study contrast with Bowman and Haire (1975), Parket and Eibert (1975), and Razek (2014) who reported none or little relationship between information disclosure and return on equity.

This study also found a significant relationship between risk management and operational information disclosure with Tobin's q. The results are consistent with Black *et al*. (2006) who found that information disclosure positively affects Tobin's q, as the result showed that profitable firms are willing to disclose more information than less profitable ones. This study also supports the findings of Sari and Anugerah (2011) who found a positive relationship between information disclosure and firms' performance with Tobin's q in measuring the firms' competitiveness in the market.

In relation to EBITDA, this study found no significant relationship between risk

management and operational information disclosure and EBITDA. The results support the study by Alikhani and Maranjory (2013) that found no significant relationship between social and environmental information disclosure and EBITDA. The results in this study however, are not consistent with Sonnier *et al*. (2007), who found a significant relationship between the level of intellectual capital disclosure and EBITDA. The relationship, however, is a negative relationship. On the other hand, Oeyono *et al*. (2011) found a positive relationship between corporate social disclosure and EBITDA although the relationship is not significant.

This study is subjected to two limitations. This study used 20 information attributes to measure risk management and operational information disclosure scores. Most of the information criteria, such as statement of financial position, statement of cash flow, statement of profit or loss, and other comprehensive income and accounting policies are actually mandatory disclosures that need to be presented in the audited financial statements by all firms. Perhaps other information criteria should be looked into such as information on ownership and investor relations, information on board and management structure and process, and many others.

Secondly, this study only focused on the risk management and operational information disclosed in the annual reports. Perhaps, there are other tools or channels that firms use in disseminating information to the public, market participants, and other stakeholders, for example, through firms' websites. Firms' websites are one of the tools used to communicate and disseminate information to outsiders.

Thirdly, this study only focused on the risk management and operational information disclosed in the annual reports. Perhaps there are other tools or channels that firms use in disseminating information to the public, market participants and other stakeholders, for example, through firm websites. Firms' websites are one of the tools used by firms to communicate and disseminate information to outsiders.

In sum, this study is necessary, as it is evident in the literature that financial reporting and disclosure are potentially important means for the management to communicate firm performance and governance to outside investors. There are many types of information disclosure that could be disclosed in the annual reports of the public listed firms. However, it is imperative for the firms to know which information disclosure attributes are important for the users as the decision-makers. The findings in this study provide evidence on the importance of risk management and operational information disclosure on firm's performance. The findings in this study provide an insight to the shareholders and other market participants in making the best economic decision so that they could choose firms that would create greater value from their investment, as this is the main objective of any investment portfolio.

REFERENCES

Akhtaruddin, M., Hossain, M. A., Hossain, M., and Yao, L. (2009), "Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firms", *Journal of Applied Management Accounting Research*, Vol. 7 No. 1, pp. 1-20.

Alikhani, R and Maranjory, M. (2013), "An investigation on the relationship between social and environmental information disclosure level and firm performance in Iran", *International Research Journal of Applied and Basic Sciences*, Vol. 5 No. 1, pp. 125-128

Arcot, S. and Brunoy, V. (2011), "Silence is not golden: Corporate governance standards, transparency, and performance", Working Paper.

Aupperle, K., Carroll, A., and Hatfield, J. (1985), "An empirical examination of the relationship between corporate social responsibility and profitability", *Academy of Management Journal,* Vol. 28 No. 2, pp. 446-463.

Barber, B. M., and Lyon, J. D. (1996), "Detecting long-run abnormal operating performance: The empirical power and specification of test statistics", *Journal of Financial Economics,* Vol. 41 No. 3, pp. 359-399.

Bin Lee, Y. (2012), "A study of evaluation criteria for disclosure and transparency", *Journal of American Academy of Business*, Vol. 17 No. 2, pp. 139-146.

Black, B.S., Jang, H. and Kim, W. (2006), "How corporate governance affects firm value: Evidence on channels from Korea", Law and Economics Working Paper, 51.

Bowman, E., and Haire, M. (1975), "A strategic posture towards CSR", *California Management Review,* Vol. 18 No. 2, pp. 49-58

Bushman, R.M., and Smith, A.J. (2003), "Transparency, financial accounting information and corporate governance", *Economic Policy Review*, Vol. 9 No. 1, pp. 65-87.

Carton, R.B. (2004), "Measuring organizational performance: An exploratory study".

Chen, W.P, Chung, H.M, Lee, C.F & Liao, W.L. (2007), "Corporate governance and equity liquidity: An analysis of S&P transparency and disclosure ranking", *Corporate Governance: An International Review*, Vol. 15 No. 4, pp. 644-660.

Cochran, P., & Wood, R. (1984), "Corporate social responsibility and financial performance", *Academy of Management Journal*, Vol. 27, pp. 42-56

Delen, D, Kuzey, C & Uyar, A. (2013), "Measuring firm performance using financial ratios: A decision tree approach", *Expert Systems with Applications*, Vol. 40 No. 10, pp. 3970-3983.

Dale-Olsen, H, Schøne, P & Verner, M. (2013), "Diversity among Norwegian boards of directors: Does a quota for women improve firm performance?", *Feminist Economics*, Vol. 19 No. 4, pp. 110-135.

Drury, C. (2007), Management and Cost Accounting, Seventh Edition, Patrick Bond: Paperback.

Grimmelikhuijsen, S. (2012), *Transparency and Trust: An Experimental Study of Online Disclosure and Trust in Government*, ISBN: 978-90-8570-971-2.

Jensen, M.C and Meckling, W.H. (1976), "Theory of the firm: Managerial behavior, agency costs and ownership structure", *Journal of Financial Economics,* Vol. 3 No. 4, pp. 305-360.

Jones Lang LaSalle (2010), "Mapping the world of transparency", *Global Real Estate Transparency Index 2010,* Retrieved from https://www.jll.com/greti/Documents/GRETI/Global_Real_Estate_Transparency_Index_2010.pdf

Kanagaretnam, K, Mestelman, S, Nainar, S.M.K and Shehata, M. (2013), "Transparency and empowerment in an investment environment", *Journal of Business Research,* Vol. 67 No. 9, pp. 2030-2038.

Khanna, T, Palepu, K.G. and Srinivasan, S. (2004), "Disclosure practices of foreign firms interacting with U.S. markets', *Journal of Accounting Research*, Vol. 42 No. 2, pp. 475-508.

Kleindorfer, P.R. and Orts, E.W (1998), “Informational regulation of environmental risks”, *Risk Analysis*, Vol. 18 No. 2, pp. 155–170.

KPMG, (2013), “KPMG Malaysia fraud, bribery and corruption survey 2013”, Retrieved from https://assets.kpmg.com/content/dam/kpmg/pdf/2016/03/fraud-survey-report.pdf

Lang, M. and Lundholm, R. (1993), “Cross-sectional determinants of analysts ratings of corporate disclosures”, *Journal of Accounting Research*, Vol. 31 No. 2, pp. 246-271.

Loh, L. C. (2002), “Gain from increased voluntary disclosure in corporate reporting”, *The Star Biz* Weekly 3.

Moskowitz, M. (1972), “Choosing socially responsible stocks”, *Business and Society,* Vol. 10, pp. 71-75.

Mustapha, N. A. and Ghani, E. K. (2012), “Risk management in budgetary management accounting practices in Malaysian construction companies”, *Asian Business of Journal and Management Sciences*, Vol. 2 No. 9, pp. 1-16.

O’hagan, S.B. and Rice, M. (2013), “Exploring the personal histories of the top executives of US firms using a quantitative approach: Is there a geographical relationship with corporate headquarters, and does it influence firm performance?”, *Geographical Research*, Vol. 51 No. 3, pp. 279-291.

Oeyono, J., Samy, M., and Bampton, R. (2011), “An examination of corporate social responsibility and financial performance: A study of the top 50 Indonesian listed corporations”, *Journal of Global Responsibility,* Vol. 2 No. 1, pp. 100-112.

Ozbay, M. (2009), *The Relationship between Corporate Transparency and Firm Performance in the Istanbul Stock Exchange*, (MSc Accounting and Finance), Kingston Business School.

Parket, R., and Eibert, H. (1975), “Social responsibility: The underlying factors”, *Business Horizons,* Vol. 18 No. 4, pp. 5-10.

Poshakwale, S and Courtis, J. K. (2005), “Disclosure level and cost of equity capital: Evidence from the banking industry”, *Managerial and Decision Economics*, Vol. 26 No. 7, pp. 431-444.

Sonnier, B. M., Carson, K. D. and Carson, P. P. (2007), “Accounting for intellectual capital: The relationship between profitability and disclosure”, *The Journal of Applied Management and Entrepreneurship*, Vol. 12 No. 2, pp. 3-14.

Razali, M. N. and Adnan, Y. (2012), “Transparency in Malaysian property firms”, *Property Management*, Vol. 30 No. 5, pp. 398-415.

Razek, M. A. (2014), “The association between corporate risk disclosure and firm performance in emerging country: The case of Egypt”, *Journal of Empirical Studies*, Vol. 1 No. 3, pp. 105-115.

Saleh, M., Zulkifli, N., and Muhamad, R. (2008), “An empirical examination of the relationship between corporate social responsibility disclosure and financial performance in an emerging market”, *International Journal of Productivity and Performance Management,* Vol. 59 No. 3, pp. 229-254.

Sari, R. N. and Anugerah, R. (2011), “The effect of political influence and corporate transparency on firm performance”, *Journal of Modern Accounting and Auditing,* Vol. 7 No. 8, pp. 773-783.

Shukla, H. J. (2009), “Creating and measuring shareholder value”, *Paradigm,* Vol. 8 No. 1, pp. 66-72.

Singhvi, S. S. and Desai, H. B. (1971), “An empirical analysis of the quality of corporate financial disclosure”, *The Accounting Review,* Vol. 46 No. 1, pp. 129-138.

Yatim, P. (2009), "Audit committee characteristics and risk management of Malaysian listed firms", *Malaysian Accounting Review*, Vol. 8 No. 1, pp. 19-36.

Yeh, Y. C. M, Chen, H.W. and Wu, M.C. (2014), "Can information transparency improve earnings quality attributes? Evidence from an enhanced disclosure regime in Taiwan", *Emerging Markets Finance and Trade,* Vol. 50 No. 4, pp. 237-253.

Vishwanath, T. and Kaufmann, D. (1999), "Towards Transparency in finance and governance", *The World Bank Draft,* pp. 1-30.

Weil, D, Fung, A, Graham, M and Fagotto, E. (2006), "The effectiveness of regulatory disclosure policies", *Journal of Policy Analysis and Management*, Vol. 25 No. 1, pp. 155-181.