

# Audited Quarterly Accounts and Earnings Response Coefficients

**Mazrah Malek**

Universiti Utara Malaysia, Kedah, Malaysia  
mazrah@uum.edu.my

**Saidatunur Fauzi Saidin**

**Mohammad Noor Hisham Osman**

Universiti Putra Malaysia, Selangor, Malaysia

The production of quarterly accounts has become a mandatory requirement for listed companies in many countries. However, these accounts are not required to be audited in many jurisdictions, which expose these accounts to the risk of errors and manipulations. The purpose of this study is to examine the investors' response towards auditor's involvement in quarterly accounts. Analysis is based on matched pair sample of 60 listed companies in Bursa Malaysia in the year 2012. The result of the OLS regression shows that the earnings response coefficients of quarterly accounts that have been audited are statistically higher than those not audited. The result provides support for the contention that investors place greater reliability on quarterly accounts that have auditor's involvement. The finding provides support for the need of auditor's involvement in the quarterly accounts. However, additional costs associated with auditing the quarterly accounts should also be considered.

*JEL Classifications:* G1, M4

*Keywords:* Earnings response coefficient, earnings reliability, financial reporting quality, quarterly accounts

External auditing has long been recognized as an important mechanism in the production of financial reports. It is required based on the beliefs that it can enhance the users' confidence towards the reliability of the financial accounts. While the accounts are prepared by the management, adding the audit function enhances the credibility of the accounts whereby users have reasonable

assurance that the financial statements are free from any material misstatements and omissions (DeAngelo, 1981). Therefore, it has been made a mandatory requirement in most countries to have the annual accounts of corporations to be audited.

Besides the annual accounts, listed companies in many countries have also been required to

produce quarterly financial accounts. However, these accounts are not required to be audited in many jurisdictions. In Malaysia, even though the production of quarterly accounts has been made mandatory since 1999, auditor's involvement is however not mandatory. While the production of quarterly financial accounts is essential for the main purpose of disseminating a more timely information, unaudited quarterly accounts have raised concerns among users due to the quality of these accounts, whereby unaudited quarterly accounts expose these accounts to the risk of errors and manipulations (Ku Ismail & Chandler, 2005a). Users are expected to place higher reliability on quarterly accounts that have auditor involvement than those without any involvement.

## LITERATURE REVIEW

### Quarterly Financial Reporting

Financial reporting is a main mechanism in the dissemination of financial information (Whittington, 1993). Even though information can also be obtained from other sources, financial reports provide the most comprehensive and reliable information. It is used in many economic decisions making such as in monitoring the management and in investment decision (Fama, 1980; Fama & Jensen, 1983; Lev & Ohlson, 1982). Traditionally, financial reporting for external reporting is prepared on an annual basis. However, annual reporting suffers from timely problem, whereby some of the information provided by the reports may become irrelevant at the time of production. To overcome this timely problem, quarterly reporting has been required. It can be observed that many countries have mandatorily required their listed companies to produce quarterly accounts. In Malaysia, quarterly reporting has been required since 1999 by the Bursa Malaysia.

This requirement was imposed as a response to the Asian financial crisis in 1997/98 to replace the half yearly reporting which was required since 1987 (Ku Ismail & Abdullah, 2009; Ku Ismail & Chandler, 2005a). Currently, the requirement is regulated under Chapter 9.22 of the Listing Requirements of Bursa Malaysia, where listed companies are mandated to produce their quarterly accounts not later than two months after the end of each quarter. Part A of Appendix B of the Bursa Malaysia Listings Requirements further elaborates the information that needs to be disclosed in the accounts.

The concern on the quality of quarterly reporting has been raised based on the fact that it is not required to be audited. Unaudited interim reporting exposes the accounts to the risk of errors and manipulations (Ku Ismail & Abdullah, 2009). Without auditing, the quality of the quarterly accounts is fully dependent upon the management. Evidence indicates that there are many instances where the information provided in the quarterly accounts may not be accurate. For example, Kinney and Trezevant (1997), Ku Ismail and Chandler (2005a), and Ku Ismail and Abdullah (2009) have all found the tendency of management to defer the exceptional items to the fourth quarter report. Moreover, Lightstone, Young, and McFadden (2012) reported that volatility of net income in each of the first three quarters is lower than in the fourth quarter which the study claimed for earnings management in the earlier quarter. As noted by Ku Ismail and Chandler (2004), an auditor's involvement in the quarterly accounts may vary such as full audit similar to annual audit, partial audit involving verification of only material items, limited audit reviews, and management discussion with auditor. It can be observed that some countries have required for auditor's involvement in the production of quarterly accounts and the most common requirement is limited audit review. Similar to full audit, limited audit review consists

of analytical and an inquiry procedure, the difference is the lack of tests of details of accounts balances and transactions (Ettredge, Scholz, Smith, & Sun 2000). In the U.S, the Securities and Exchange Commission (SEC) requires limited audit review for the fourth quarter accounts, while for listed companies in Thailand, the requirement is for limited audit review for all quarters. However, the Bursa Malaysia and Singapore Exchange do not require for any auditor's association.

A study by Pany and Smith (1982) in the U.S. examined the perceptions of financial analysts on the different auditor association in quarterly accounts. Four instruments are used: (1) no auditor involvement, (2) limited review at year end, (3) limited review before the production, and (4) full audit. It has been found that the means of reliability increase with increasing auditor involvement. However, only the mean of limited review before the production and full audit are found significantly higher than the mean of unaudited accounts. In the case of inaccurate quarterly accounts in the past, the means of all three auditor association are significantly higher than the mean of unaudited accounts. However, the mean difference is not significant in the case of accurate past quarterly accounts and auditor association. Taken together, the findings imply that the recognition on auditor association in quarterly accounts is limited to the condition of accuracy of prior quarterly accounts. However, a later study in Malaysia by Ku Ismail and Chandler (2005b) had found that a statement whether the report is audited or not is ranked only as the second last important item from 38 key items disclosed in the quarterly reports by professional investors. Meanwhile, Bedard and Courteau (2015) found no association between the quality of quarterly earnings, as measured by the level of absolute unexpected accruals, and the fact that they were reviewed by an auditor.

## External Auditing

External auditing of financial accounts is preferred in the corporate structure based on the beliefs that it can enhance the credibility of the accounts. This is due to the fact that accounting involves estimation and alternative method application which itself can result in lower quality financial accounts and can be manipulated. While the preparation of the financial accounts are the management's responsibility, auditors are required to examine the correspondence of information provided in the financial accounts with their standards and give the report on the correspondence. The reports attest to the truth and fairness of the information and in doing so provides a degree of assurance to users that the accounts are free from material misstatements (Ismail & Mohd Iskandar, 2003). Auditors may request for adjustments if they are not satisfied with the accounts and if the adjustments have not been properly made, auditors can highlight the incompliance in their reports. Meanwhile, the value of auditing is also based on auditor's independence, besides competence (DeAngelo, 1981). Many audit failures such as in the case of Enron Corporation, WorldCom Corporation, and Global Crossing have been related to the auditors' failure in exercising their independence. The independent status of an auditor gives value and significance to audit reports (Lavin, 1976). Houghton and Jubb (2003) highlighted that the auditors are not only required to be independent but also been seen as independent. Considering the fact of the need to have an independent auditor, an outside auditor is appointed in the production of financial accounts for the external users.

## THEORETICAL FRAMEWORK

Many studies have found a positive relationship between earnings performance and share returns

(Ismail & Rahman, 2012; Lee & Park, 2000). The finding is consistent with the efficient market theory proposed by Fama (1970) who argued that investors instantaneously adjust their expectations on share value upon receiving new information which in turn are reflected instantaneously in share prices. A positive information will result in an upward change in share prices, while a negative information will result in a downward price change. Meanwhile, Holthausen and Verrecchia (1988) modeled the investors' reactions on the reported earnings, termed as earnings response coefficient (ERC), as the function of the prior uncertainty about the underlying value of the entity's and the perceived noise in the entity reported numbers. The study postulated that by holding the prior uncertainty constant, the ERC will increase with the perceived quality of the earnings by the investors. The effect of auditor's involvement in quarterly accounts on ERC depends on the perceived reliability of the accounts by the capital market participants. As external to the company, auditors' involvement in the production of quarterly accounts may enhance investors' confidence towards the quality of the reported earnings as compared to those without any auditor association. As shown in Figure 1, the involvement of auditor in quarterly accounts moderates the relationship between earnings performance and abnormal return of shares. Therefore, it is hypothesized that the earnings response coefficient of companies

with auditors' involvement is higher than those without auditors' association.

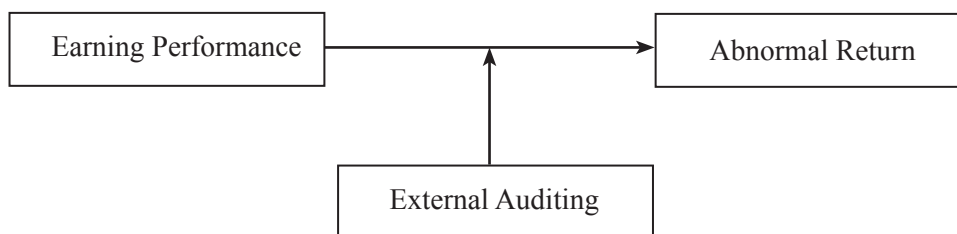
## METHODOLOGY

### Sample and Data Collection Method

Analysis is based on listed companies on the Bursa Malaysia for the year 2012. As required by the Bursa Malaysia Listing Requirements, these companies must disclose whether their quarterly accounts have been audited. From 937 listed companies as at 31 December 2012, it can be observed that only 30 companies have declared auditors' involvement in the production of their fourth quarter accounts. The low amount suggests the need for a mandatory requirement if the regulators would want to promote more auditors' involvement in the production of quarterly accounts. For control purposes, another 30 companies which have not audited their quarterly accounts are pair-matched by similar firm size are also included as sample. The information of quarterly accounts is collected from Bursa Malaysia's website and data on share prices and composite index is collected from Bursa Station.

### Research Model and Measurements

The effect of auditor's involvement in quarterly accounts on investors' reliability to the



**Figure 1:** Theoretical framework of the relationship between earnings performance, external auditing and abnormal return.

accounts is examined using the Ordinary Least Square regression and takes the following form:

$$CAR = \beta_0 + \beta_1 EP + \beta_2 EP * AUDIT + \beta_3 EP * SIZE + \beta_4 PROFIT + \beta_5 SIZE + \mu \quad (1)$$

where:

CAR = Cumulative abnormal return  
 EP = Earnings performance  
 AUDIT = Audited fourth quarter accounts  
 SIZE = Asset size  
 PROFIT = Profitability

AUDIT is a dichotomous measurement taking the value of 1 if the quarterly accounts of observed company has disclosed of auditor involvement in the quarterly accounts, and 0 if without auditor involvement. SIZE is measure by the natural logarithm of total assets reported in the fourth quarter accounts. PROFIT is a dichotomous measurement taking the value of 1, if the reported earnings in the fourth quarter accounts is profit, and 0 if loss. The Sharpe (1964) market model is used in measuring the abnormal returns. The abnormal return of stock  $i$  on date  $t$  will be calculated as the difference between the actual return and the expected return for this date and will take the following form:

$$AR_{it} = R_{it} - E(R_{it}) \quad (2)$$

where:

$AR_{it}$  = Actual return of stock  $i$  on date  $t$   
 $R_{it}$  = Return of stock  $i$  on date  $t$   
 $E(R_{it})$  = Expected return of stock  $i$  on date  $t$

The  $R_{it}$  is calculated as the difference between the closing price on date  $t$  and date  $t-1$  divided by closing price on the date  $t-1$ . The  $E(R_{it})$  is derived from the following equation:

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} \quad (3)$$

where:

$E(R_{it})$  = expected return of company  $i$  on day  $t$   
 $R_{mt}$  = market index return on day  $t$ ,  
 $\alpha_i$  = unsystematic returns for company  $i$ ,  
 $\beta_i$  = systematic risk for company  $i$ .

The model assumes a stable linear relation between the market return and the share return. The estimated coefficients,  $\alpha$  and  $\beta$ , are calculated by regressing the stock returns with market returns using daily closing prices and daily Bursa Malaysia Composite Index over the 200 trading days (-230; -31) using the ordinary least square regression. The FTSE Bursa Malaysia Composite Index is used as a proxy for the market return. It will be calculated as the difference between the market index on date  $t$  and date  $t-1$  divided by the market index on the date  $t-1$ . Meanwhile, the cumulative abnormal returns (CAR) is measured using the following equation:

$$CAR_i(t_0t_1) = \sum_{t_0}^{t_1} AR_{it} \quad (4)$$

where:

$CAR_i(t_0t_2)$  = cumulative abnormal returns of company  $i$  from  $t_0$  to  $t_2$  day  
 $AR_{it}$  = abnormal return of company  $i$  on day  $t$ ,  
 $t_0$  = announcement date of quarterly earnings  
 $t_1$  = day 1 after the announcement date

The widely used measurement of earnings performance is by dividing the difference between the actual earnings per share and expected earnings per share with the market value of share prior to the earnings' announcement date (Balsam, Krishnan, & Yang, 2003; Krishnan, Sami, & Zhang, 2005). However, while earnings forecast (the measurement usually used for expected earnings) is not publicly available in Malaysia, consistent with prior Malaysian studies, the naive expectation model is used (Fah & Nasir, 2010; Hussin, Ahmed, & Ying,

2010). The model assumes that the next period's expected earnings is the current period's earnings. Therefore, the following measurement is used in measuring earnings performance:

$$EPit = [EPSit - EPSi(t-1)] / [Pi-2] \quad (5)$$

where:

EPit = earnings performance of companies i for year t,

EPSt = earnings per share of companies i for year t,

EPSi(t-1) = earnings per share of companies i for year t-1,

Pi-2 = share prices of companies i, on 2 day prior to the earnings announcement.

## FINDINGS AND DISCUSSION

### Descriptive Statistics and Analysis

Table 1 presents the descriptive and t statistics of continuous data between companies with auditors' involvement (audited companies) and companies without auditors' association (unaudited companies) in their fourth quarterly accounts. It can be observed that audited companies have higher cumulative abnormal return, better earnings performance, and are bigger in size of assets than unaudited companies. However, the t tests of the mean difference between the two types of companies for all the three variables are found insignificant.

**Table 1. Descriptive Statistics**

Variable	Audited Companies		Unaudited Companies		t test (p value)
	Mean	Std. Dev.	Mean	Std. Dev.	
CAR	.003	.016	-.001	.014	.931 (.359)
EP	.034	3.217	-.142	3.223	.195 (.847)
SIZE	9.825	.894	9.788	.838	.162 (.873)

CAR = Cumulative abnormal return

EP = Earnings performance

SIZE = Asset size

**Table 2. Pearson Chi Square**

AUDIT	PROFIT		Pearson chi square (p value)
	Loss	Profit	
Unaudited	6 (20%)	24 (80%)	4.043 (.044)
Audited	1 (3.33 %)	29 (96.67%)	

Table 2 presents the results of the Pearson chi square of sample distribution based on auditors' involvement in quarterly accounts and profitability. It can be observed that most of the audited and unaudited companies have profit. However, the frequency of audited companies which have profit is higher than unaudited companies. Almost 97% of companies with audited quarterly accounts have profit while only 80% from unaudited companies. The Pearson chi square results also show that the frequency distribution is significantly different at a five percent level.

### Correlation Statistics and Analysis

Table 3 presents the results of the Pearson correlation matrix among the variables. It can be observed that the correlation among independent variables is considerably low where the highest correlation of 0.3 is between SIZE and PROFIT, lower than the threshold of 0.8 that is used as possible multicollinearity. Only EP is significant and positively correlated with CAR.

### Regression Statistics and Analysis

Table 4 presents the results of the Ordinary Least Square (OLS) regression. The model is significant at a one percent level with an adjusted R squared of 0.182. As expected, the coefficient of EP is positive and significant at 10% which proves that earnings performance is positively related to abnormal returns of share. This is found to be consistent with the argument by Fama (1970) that positive information will result in positive reactions from investors and also findings by earlier studies (see for example Ismail & Rahman, 2012; Lee & Park, 2000). As hypothesized, the coefficient of EP\*AUDIT is positive and significant at a five percent level. This implies that investors place higher reliability on quarterly earnings which have been audited than those without. The involvement of external auditors in the quarterly accounts enhances investors' confidence towards the reliability of earnings reported in the quarterly accounts. Results are consistent with Pany and Smith (1982) who reported a higher mean reliability by

**Table 3. Pearson Correlation Matrix**

Variable	CAR	EP	AUDIT	PROFIT
EP	.374 (.003)			
AUDIT	.120 (.360)	.028 (.833)		
PROFIT	.208 (.111)	.046 (.726)	.260 (.046)	
SIZE	.082 (.536)	.056 (.670)	.022 (.869)	.321 (.012)

In parenthesis, p value

CAR = Cumulative abnormal return

EP = Earnings performance

AUDIT = Audited fourth quarter accounts

SIZE = Asset size

PROFIT = Profitability

**Table 4. OLS Regression Result**

Variable	Expected sign	Coefficient	t	p-value
EP	+	.017	1.48	.072
EP*AUDIT	+	.002	1.90	.032
EP*SIZE	-	-.002	-1.40	.084
PROFIT	+	.011	1.94	.029
SIZE	-	-.000	-.18	.431
Constant		-.005	-.25	.400
Adjusted R square		.182		.007

CAR = Cumulative abnormal return

EP = Earnings performance

AUDIT = Audited fourth quarter accounts

SIZE = Asset size

PROFIT = Profitability

financial analysts on audited quarterly accounts. It can also be observed that the coefficient of EP\*SIZE is negative and significant at a 10% level and PROFIT is positive and significant at a five percent level. The negative coefficient of EP\*SIZE implies that investors place lower reliability on bigger companies while the positive coefficient of PROFIT implies that profit companies have positive return of shares.

## CONCLUSION AND RECOMMENDATION

Many have raised their concerns on the reliability of quarterly accounts mainly due to the lack of auditors' involvement in the production of these accounts. This study provides empirical evidence concerning the effect of auditors' involvement in the production of the accounts on investors' reliability on quarterly earnings. Data is based on Malaysian listed companies where quarterly reports are not mandatorily required to be audited. Analyses show that the earnings response coefficient of companies with auditors' involvement is higher than those companies without auditors' association. The result implies that investors place higher

reliability on quarterly earnings that have been audited. The findings suggest for the need of auditor's involvement in the production of quarterly accounts in order to enhance investors' confidence on the accounts. However, it should also be noted that requiring external auditor's involvement will involve costs, report delay, and audit cost. Requiring auditors' involvement in the quarterly accounts may delay the release of the accounts and at the same time will involve additional audit costs to the companies. Further study should be conducted to examine whether the benefits of requiring audit will outweigh these costs. In addition, future study should also examine a possible quality difference between the quarterly accounts with and without auditors' association.

## ACKNOWLEDGEMENT

The research reported is funded by the Fundamental Research Grant Scheme (FRGS) of the Malaysia Ministry of Education (MOE), and the authors would like to thank the MOE for supporting our research project (FRGS/2/2013/SS05/UPM/02/1).



## REFERENCES

- Balsam, S., Krishnan, J., & Yang, J. S. (2003). Auditor industry specialization and earnings quality. *Auditing: A Journal of Practice & Theory*, 22(2), 71-97.
- Bedard, J., & Courteau, L. (2015). Benefits and costs of auditor's assurance: Evidence from the review of quarterly financial statements. *Contemporary Accounting Research*, 32(1), 308-335.
- DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183-199.
- Ettredge, M., Scholz, S., Smith, K. R., & Sun, L. (2000). How do restatements begin? Evidence of earnings management preceding restated financial reports. *Journal of Business Finance & Accounting*, 37(3&4), 332-355.
- Fah, C. F., & Nasir, A. (2010). Are Islamic incomes relevant to commercial banks in Malaysia? *Journal of Modern Accounting and Auditing*, 6(2), 26-37.
- Fama, E. F. (1970). Efficient capital markets: A review of theory and empirical work. *Journal of Finance*, 25(2), 383-417.
- Fama, E.F. (1980). Agency problems and the theory of the firm. *Journal of Political Economy*, 88(2), 288-307.
- Fama, E. F., & Jensen, M.C. (1983). Separation of ownership and control. *Journal of Law & Economics*, 26(2), 301-326.
- Holthausen, R., & Verrecchia, R. (1988). The effect of sequential information releases on the variance of price changes in an intertemporal multi-asset market. *Journal of Accounting Research*, 26(1), 82-106.
- Houghton, K.A., & Jubb, C.A. (2003). The market for financial report audits: Regulation of and competition for auditor independence. *Law & Policy*, 25(3), 299-321.
- Hussin, B. M., Ahmed, A. D., & Ying, T. C. (2010). Semi-strong form efficiency: Market reaction to dividend and earnings announcements in Malaysian stock exchange. *IUP Journal of Applied Finance*, 16(5), 36-60.
- Ismail, K., & Rahman, R. A. (2012). The wealth of information from quarterly financial reports in Malaysia. *African Journal of Business Management*, 6(3), 1054-1067.
- Ismail, H., & Mohd Iskandar, T. (2003). Audit quality: A review of selected Malaysian companies. *Proceedings of the SEMACC: Issues and Challenges Confronting the Accounting Profession Today*. Universiti Teknologi Mara Perlis, December 8-10.
- Kinney, M., & Trezevant, R. (1997). The use of special items to manage earnings and perceptions. *Journal of Financial Statement Analysis*, 3(1), 45-53.
- Krishnan, J., Sami, H., & Zhang, Y. (2005). Does the provision of non-audit services affect investor perceptions of auditor independence? *Auditing: A Journal of Practice & Theory*, 24(2), 111-135.
- Ku Ismail, K. N. I., & Abdullah, S. N. (2009). The reliability of corporate quarterly financial reports in Malaysia: Post-MASB 26 evidence. *Asian Journal of Finance & Accounting*, 1(2), 53-74.
- Ku Ismail, K. N. I., & Chandler, R. (2004). Preparers' perceptions towards quarterly financial reporting in Malaysia. *Malaysian Management Journal*, 8(2), 17-32.
- Ku Ismail, K. N. I., & Chandler, R. (2005a). The reliability of quarterly financial reports of companies in Malaysia. *IIUM Journal of Economics and Management*, 13(2), 167-188.
- Ku Ismail, K. N. I., & Chandler, R. (2005b). Perceptions of professional investors in Malaysia on the usefulness of quarterly financial reports. *Jurnal Pengurusan*, 24, 105-124.
- Lavin, D. (1976). Perceptions of the independence of the auditor. *The Accounting Review*, 51(1), 41-50.
- Lee, J., & Park, C.W. (2000). Intraday stock price reactions to interim-quarter versus fourth-quarter earnings announcements. *Journal of Business Finance & Accounting*, 27(7&8), 1027-1046.
- Lev, B., & Ohlson, J.A. (1982). Market-based empirical research in accounting: A review, interpretation, and extension. *Journal of Accounting Research*, 20, 249-322.
- Lightstone, K., Young, N. M., & McFadden, T. (2012). Information quality of interim financial statements. *Accounting Perspectives*, 11(4), 297-313.
- Pany, K., & Smith, C.H. (1982). Auditor association with quarterly financial information: An empirical

test. *Journal of Accounting Research*, 20(2), 472-481.

Sharpe, W.F. (1964). Capital asset prices: A theory of market equilibrium under conditions of risk. *Journal of Finance*, 19(3), 425-442.

Whittington, G. (1993). Corporate governance and the regulation of financial reporting. *Accounting and Business Research*, 23(91A), 311-319.