Internal audit function, high regulated firms and audit fees in Malaysia: moderating role of regulatory oversight

IK Norziaton [1], *, S. Susela Devi [2], Chan Wai Meng [3], Nur Adura Noruddin [4]

[1]Faculty of Accountancy, Universiti Teknologi MARA, Malaysia
[2]Faculty of Business and Accountancy, Unitar International, Malaysia
[3]Faculty of Business and Accountancy, University Malaya, Malaysia
[4]Faculty of Accountancy, Universiti Teknologi MARA, Malaysia

Abstract: The revamped Bursa Malaysia Listing requirements in 2008 called for an increased interaction between the internal governance mechanisms of audit committee and internal audit function. In fulfilling the internal audit oversight function, internal audit perform analyses and appraisals of activities to make recommendations for improving internal controls and promoting efficiency. Thus, this paper investigates whether corporate governance reforms can also be effective at enhancing governance of high regulated firms, due to the existence of an industry-specific regulator. Data were collected from 1254 annual reports from years 2005 to 2010. Interviews were also conducted with selected external auditors, heads of internal auditors and regulators to ascertain an in depth understanding of the audit fees issue and its impact on internal governance mechanisms. The results reveal that regulatory oversight strengthens the association between internal audit function attributes (objectivity) and higher audit fees. This is consistent with the notion that regulatory oversight complements the external audit as monitoring mechanisms.

Key words: Audit fees; Corporate governance; Institutional theory; Internal audit function; Regulatory oversight

1. Introduction

In Malaysia, banking institutions and insurance firms are subjected to licensing and regulation by the Bank Negara Malaysia (BNM) apart from being regulated by the Securities Commission (SC) and Bursa Malaysia (BM). Comparatively, other listed firms, for example firms in the manufacturing industries, plantations and trading services, are regulated by the Securities Commission and BM only. Thus, banking institutions and insurance firms are said to be high regulated firms (HRFs) as they are supervised by an industry-specific regulator, i.e. the BNM, whereas the other firms may be referred to as less regulated firms (LRFs). Direct monitoring and stringent regulatory oversight by an industry-specific regulator reduces the heightened risk and information asymmetries in HRFs (Boo and Sharma, 2008). This is also supported by the institutional theory with the underlying assumption on the role of regulators in promoting good corporate governance practices. In addition, regulatory oversight reduces the need for an extensive external audit in HRFs (Dunn and Mayhew, 2004; Bryan and Klein, 2005). This is because firms subject to regulatory oversight have stronger corporate governance (CG) practices and will vigilantly monitor their internal controls and financial reporting process. Besides that, the industry-specific regulator provides close monitoring eventually will reduce the role of external auditing as a control mechanism. Consequently, by relying on the effective external and internal monitoring processes, auditors could reduce the extent of costly testing procedures in high regulated firms. These observations are consistent with the substitute's perspective, whereby regulatory oversight partially substitutes the external audit as a monitoring mechanism.

On the contrary, greater regulatory oversight enhances the critical role of corporate governance (Abbott et al., 2003). The rationale is that an independent and effective board and audit committee (AC) of a high regulated firm have greater incentives to protect their reputational capital than those in a less regulated firm. They demand for additional assurance from the external auditor in order to reduce their personal risks. This in turn will lead to additional audit engagement by the external auditors and at the same time increases audit fees. This is consistent with the notion that regulatory oversight complements the internal governance mechanisms. However, it is still unclear whether regulatory oversight is able to substitute or complement part of external audit work. Due to these conflicting results, it is vital to extend the existing literature by examining the moderating effect of regulatory oversight on the relationship between internal audit function (IAF) attributes and audit fees in the lens of the demand based perspective.

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* Corresponding Author.

With reference to the revamped Bursa Malaysia Listing Requirements (BMLR) 2008, a close relationship between the internal auditors (IA) and the AC has the potential to enhance the corporate governance capabilities of both parties. The independence of the internal auditor firm strengthened when it reports directly to the AC, as required by the listing requirements. Further, the function of the IA is likely to be enhanced when he is designated as an important agent of the AC. Correspondingly, the effectiveness of the AC is improved when it is able to obtain significant information on issues of internal controls and quality of accounting policies. Thus, since good governance is human centric and involves corporate governance key players, it stands to reason that audit quality can only be as good as the person providing the service. In other words, as stricter requirements are imposed by the industry-specific regulator, the boards of directors and AC of HRFs may demand for additional assurance from the firms' external auditors. Thus, given the enhanced CG reforms since 2007, this research explores the explanation from the demand side by investigating the IAF attributes impact post-BMLR 2008 implementation on audit fees for HRFs.

In light of the above events, we distinguish our study from prior research by evidencing the relationship between the important corporate governance mechanisms, namely IAF, external auditors and regulatory oversight in two ways. First, we evidence that the association between IAF attributes and audit fees is significant post-BMLR 2008 implementation for HRFs. We expect this relationship to be positive because good governance is more likely to demand for higher audit quality, resulting in higher audit fees. Second, this research will provide opinion to the regulators such as BM, BNM and Securities Commission on ensuring policies that support and enhance the link between the internal governance mechanisms and external auditing. Our sample consists of 1254 firm-year observations from 2005 to 2010, comprising of banking institutions and insurance firms. Interviews were also conducted with selected external auditors, heads of internal auditors and regulators to gauge a more in-depth understanding of the relationship between the enhanced BMLR 2008 on IAF attributes and its implications on audit fees.

In the next section, we provide literature review and hypotheses development in Section 2. This is followed by a discussion on the research design in Section 3. The results of our study are reported in the Section 4 and Section 5 concludes.

2. Literature review and hypotheses development

2.1. Internal audit function and audit fees

Past studies that examined the relation between audit fees and the existence of internal audit found that audit fees are higher when firms use internal audit as a means of increasing overall monitoring (Goodwin and Kent, 2006). Additionally, greater vigilance and stronger internal control in response to close regulatory monitoring increase the need for closer audit scrutiny by external auditor. Corporate governance mechanisms such as boards and AC demand for extensive audit when there is regulatory oversight. Hence, regulators play an important role as corporate governance key players.

The external auditing is likely to be influenced by the effectiveness of other internal corporate governance mechanisms. Better internal corporate governance implies that the control environment in the firm is more effective and financial statements are credible, hence influencing the external audit effort and audit fees. Abbott et al. (2003) posit that from the point of view of the AC, they demand a higher level of audit assurance, resulting in an increased level of audit coverage, and higher audit fees. Therefore, the changes in the IAF to improve corporate governance and demand for further quality audit work, is expected to increase audit fees.

The Blue Ribbon Committee (1999) highlighted the importance of interaction between audit committee and internal audit to prevent material misstatement in financial reporting. Similarly, the Guidelines on Internal Audit Function for Directors of Public Listed Companies in Malaysia (IIA, 2000) have drawn attention to the need for close relationship between the AC and IA to contribute to the firm's success. Under Para 15.18 (d) of the BMLR, 2008, the internal audit department has a responsibility to report directly to the audit committee (objectivity). The AC must have direct communication channels with external and internal auditors. The interaction between IAF and AC in a variety of activities (Raghunadan et al., 1998) is important for the effectiveness of both parties.

Moreover, Appendix 9C (30) of the BMLR 2008 enhances disclosure in the annual report to include information pertaining to the activities carried out and the cost incurred for an IAF regardless of whether it performed in-house or is outsourced. Therefore, such expectations on the IAF to improve corporate governance and demand for further quality audit work would undoubtedly increase audit fees. Statement of Auditing Standards (SAS) No. 65 provides the framework for external auditors to evaluate the IA effectiveness so as to determine the extent of possible reliance on the internal auditor's work. Even though the external auditing standards permit the external auditors to rely on the work of internal auditors in performing a financial statement audit, to the extent that the internal auditors are competent, objective and perform work that is relevant to the external audit (AICPA, 1997; PCAOB, 2007), the AC may still demand for additional in audit testing to ensure higher audit quality, hence resulting in higher audit fees. However, in this study we focus only on the aspects of objectivity [if the head of IA reports functionally to audit committee {=1} or somebody else {0} (Prawitt et al., 2008)] and work performance [activities performed by the internal auditor during the year which the external

auditor can rely upon (Prawitt et al., 2008), measured by voluntary disclosure as per Para 43 of the Statement of Internal Control (Haron et al., 2009) resulting from the BMLR 2008 changes. Where else the IA competency is not included in this study due to unavailability of data.

Until to date, it is still unclear whether the IAF plays a substitution or complementary role to external auditing and thus, its implications on audit fees are inconclusive. Additionally, it is not obvious whether regulatory oversight is able to substitute or complement part of external audit work. Due to these conflicting results, it is vital to extend the existing literature by examining the moderating effect of regulatory oversight on the relationship between IAF attributes and audit fees in the lens of the demand based perspective for HRFs and LRFs. The study predicts that the presence of an efficient regulatory oversight and IAF attributes contribute to a better internal and external monitoring. This results in higher audit testing by external auditors, and hence higher audit fees. Therefore, the foregoing leads to the following hypotheses:

Hypothesis 1: The association between IAF attributes, namely objectivity and audit fees is stronger post-BMLR 2008 implementation for HRFs than LRFs.

Hypothesis 2: The association between IAF attributes, namely work performance and audit fees is stronger post-BMLR 2008 implementation for HRFs than LRFs.

3. Research design

3.1. Data collection

The sample data set consists of 1254 firm-year observations for HRFs and LRFs from 2005 to 2010. The time period allows for a three-year period before and a three-year period after the implementation of 2008 BMLR. The firms in the sample are listed on the main board and the data used for this study is primarily collected from DataStream and hand collected from the firms' annual report. Interviews were also conducted with selected regulators, external auditors and heads of internal auditors. They were chosen based on their in-depth understanding of the audit fees issue and its impact on other internal governance mechanisms such as audit committee and internal audit function. Drawing from prior literature (i.e. Craswell and Francis, 1999; Tsui et al., 2001; Carcello et al., 2002), we posit the following audit fee model:

$AF = \beta_0 + \beta_1 TA + \beta_2 NAF + \beta_3 FORGN + \beta_4 SEG + \beta_5 ZFC + \beta_6 AQ + \beta_7 LOSS + \beta_8 PRD + \beta_9 REG + \beta_{10} OBJ + \beta_{11} WP + \beta_{12} OBJ\_REG + \beta_{13} WP\_REG + \varepsilon$,

Where:

AF= Audit fee paid by the audited firm (Natural logarithm of audit fees).

TA= Total assets (Natural logarithm of total assets).

NAF= Total non-audit fee paid by the audited firm (Natural logarithm of non-audit fees).

FORGN
= Number of firm's foreign subsidiaries.

SEG= Number of business segments.

ZFC= Zmijewski score for financial crisis[†].

AQ= An indicator variable equals to 1 if the firm hires Big4 auditor, and 0 if otherwise.

LOSS= An indicator variable equals to 1 if the firm has made loss in any of the years and 0 if otherwise.

PRD= An indicator variable equals to 1 for post-test period and 0 if otherwise.

REG= An indicator variable equals to 1 for HRFs and 0 if otherwise.

OBJ= An indicator variable equals to 1 if the internal audit function reports to audit committee and 0 if otherwise.

WP= Voluntary disclosure under IAF as per Para 43 of SIC.

OBJ_REG= Interaction between OBJ and REG.

WP_REG= Interaction between WP and REG.

ε= Error term.

3.2. Dependent variable

The dependent variable is measured by the value of the audit fee paid (Ringgit Malaysia) by the firm to its auditors. Consistent with previous studies (Francis, 1984; Francis and Simon, 1987), the tests of normality and logarithmic transformation are applied to the audit fee. The main experimental variables for this study are internal audit function's objectivity (OBJ) and work performance (WP). In the audit fee model adopted in this study, several standard variables to control for cross-sectional differences associated with client size, complexity and client risk (Simunic, 1980; Craswell 1992; Gul and Tsui, 1998) are used. The set of control variables selected in this study is consistent with the variables generally identified in the audit fees literature (Hay et al., 2006; Hay, 2012). The effect of firm size is controlled by using total assets (TA). Audit complexity is controlled by using foreign subsidiaries (FORGN) and business segment (SEG) (Simunic, 1980; Hackenbrack and Knechel, 1997). Loss-making (LOSS) is considered another measure of risk because it reflects the extent to which the auditor may be exposed to loss in a situation where the client is not financially strong (Simunic, 1980). Non-audit fees (NAF) are also included as a control variable because it is significantly associated with audit fees (Whisenant et al., 2003; Hay et al., 2006). A dummy variable for Big4 audit firms controls for differences in audit quality (AQ) (Craswell and Francis, 1999; Tsui et al., 2001). To control for the relative financial distress faced by the firms, the

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[†] Zmijewski financial distress score: The model incorporates three weighted financial ratios taken from Zmijewski (1984).
Net income/Total assets (X_1)
Total debt/Total assets (X_2)
Current assets/Current liability (X_3)
The above ratios are used to compute the Zmijewski score using the following model
$Z = 4.3 - 4.5 X_1 + 5.7 X_2 - 0.004 X_3$

Zmijewski score (ZFC) is computed for each firm and is included as a control variable in all regression (Zmijewski, 1984). Period (PRD) is an indicator variable, 1 for post-BMLR 2008 implementation period, and zero if otherwise. A dummy variable for regulated (REG) is incorporated to control for highly regulated firms by setting 1 for HRFs and zero if otherwise.

3.3. Descriptive statistics

Table 1 provides the descriptive statistics for the variables. On average, the voluntary disclosure on work performance (WP) and disclosed during the year by the internal audit department is 10.9 out of 19 voluntary disclosures as per Para 43 of Statement of Internal Control (SIC). Objectivity (OBJ) explains that 83 per cent of the internal audit departments of the sample firms report directly to the AC.

The mean audit fee (AF) is RM346,016 and it ranges from RM9,000 to RM6,172,000 The average client size (TA) is RM5,331,818 where else the mean for the variable indicating non-audit fees (NAF) is RM171,849. On average, the sample firms have 2.16 foreign subsidiaries (FORGN) and 3.23 business segments. Further, the sample firms experience financial crisis (ZFC) at an average of -3.08. Seventy one per cent of the sample firms hire Big4 as external auditors and 18 per cent of the firms encounter losses in any of the years from 2005 to 2010.

Table 1: Descriptive statistics (2005 – 2010, n = 1254)

Variable	Min	Max	Mean	Std. Dev.
LAF	9.10	15.64	12.07	1.05
AF	9000.0	6172000.0	346016.4	630495.3
LTA	9.61	19.09	13.57	1.76
TA	14916.0	195674251.0	5331818.7	18815259.9
LNAF[º]	9.21	15.90	4.78	9.31
NAF	0.00	8100000.0	171849.9	593234.3
FORGN	0.00	109.0	2.16	8.75
SEG	1.00	8.00	3.23	1.64
ZFC	-4.99	-1.01	-3.08	0.87
LOSS	0.00	1.00	0.18	0.38
AQ	0.00	1.00	0.71	0.45
OBJ	0.00	1.00	0.83	0.37
WP	2.00	17.00	10.90	2.72

[º]Observations having a zero for LNAF are re-corded to a small positive value (0.00001) to enable a logarithmic transformation.

Notes: AF is audit fees while LAF is natural logarithm of audit fees; TA is total assets (in RM) while LTA is natural logarithm of total assets; NAF is non-audit fees (in RM) while LNAF is natural logarithm of non-audit fees; FORGN is the number of foreign subsidiaries; SEG is the number of business segments; ZFC is the Zmijewski score for financial crisis; LOSS is an indicator variable equals to 1 if the company has made loss in any of the years, 0 if otherwise; AQ an indicator variable equals to 1 if the company hire Big4 auditor and 0 if otherwise; OBJ is an indicator variable, 1 if the internal audit function reports to audit committee, and 0 if otherwise; WP is the voluntary disclosure on IAF under Para 43 of SIC.

3.4. Correlation

Table 2 shows the correlation matrix between audit fees, control variables and experimental variables. OBJ and WP are positively and significantly associated with audit fees. Consistent with our expectations, the correlation matrix also shows that the correlation coefficient between regulatory oversight (REG) and audit fees is positive and significant. The signs for the control variables are all in the right direction and significant in the testing periods. Since none of the explanatory variables are highly correlated ($r > 0.9$), their correlations do not indicate that multicollinearity is a serious problem (Pallant, 2001).

Notes: AF is audit fees while LAF is natural logarithm of audit fees; TA is total assets (in RM) while LTA is natural logarithm of total assets; NAF is non-audit fees (in RM) while LNAF is natural logarithm of non-audit fees; FORGN is the number of foreign subsidiaries; SEG is the number of business segments; ZFC is the Zmijewski score for financial crisis; LOSS is an indicator variable equals to 1 if the company has made loss in any of the years, 0 if otherwise; AQ an indicator variable equals to 1 if the company hire Big4 auditor and 0 if otherwise; OBJ is an indicator variable, 1 if the internal audit function reports to audit committee, and 0 if otherwise; WP is the voluntary disclosure on IAF under Para 43 of SIC.

4. Results and discussions

4.1. T-tests and chi-square tests analysis

Table 3 shows the results for the differences between HRFs and LRFs. The results generally highlight significant differences between the two groups except for FOREIGN, ZFC, LOSS, and AQ. When we compare the two groups, we find that the AF is statistically different for both subsample firms at $p<0.05$ significance level (t=-7.86). Further, HRFs experience higher audit fees than LRFs

(µ=RM903,540, µ=RM289,307). This could be explained by the observation that HRFs generally are larger in size (TA), hire the Big4 auditors to audit their financial statements (AQ) and have bigger business segments (SEG). Additionally, finance related firms have unique characteristics and regulatory requirements which differ from less regulated industries. The internal audit WP during the year is significantly different at $p<0.05$

significance level for both sample firms. It shows that the IA departments of HRFs voluntarily disclose more information as per Para 43 of SIC, on the activities perform as compared to LRFs. Similarly, OBJ shows significant differences between HRFs and LRFs at $p<0.05$ significance level in terms of head of internal audit direct reporting to audit committee (Table 3 and 4).

Table 2: Pearson Correlation Matrix (2005 – 2010, n = 1254)

	LAF	AF	LTA	TA	LNAF	NAF	FORGN
LAF	1	0.75**	0.71**	0.46**	0.36**	0.42**	0.40**
AF		1	0.60**	0.69**	0.25**	0.61**	0.52**
LTA			1	0.60**	0.39**	0.40**	0.35**
TA				1	0.14**	0.35**	0.25**
LNAF					1	0.26**	0.19**
NAF						1	0.51**
FORGN							1
	SEG	ZFC	LOSS	AQ	REG	OBJ	WP
LAF	0.43**	0.18**	-0.19**	0.24**	0.28**	0.11**	0.28**
AF	0.32**	-0.01	-0.04**	0.15**	0.22**	0.12**	0.12**
LTA	0.32**	0.15**	-0.15**	0.37**	0.40**	0.12**	0.16**
TA	0.25**	-0.04	-0.09**	0.13**	0.41**	0.01**	0.14**
LNAF	0.14**	0.05	-0.07	0.28**	0.11**	0.09**	0.16**
NAF	0.14**	-0.02	-0.02	0.14**	0.12**	0.04**	0.16**
FORGN	0.24**	-0.04	-0.01	0.13**	-0.15	-0.01	-0.03
SEG	1	0.06	-0.04	0.00	0.22**	0.08	0.01
ZFC		1	0.21**	0.04	0.01	0.03	0.06
LOSS			1	-0.75*	-0.30	0.03	0.03
AQ				1	0.17**	-0.09	0.08
REG					1	0.17**	0.15**
OBJ						1	0.46**
WP							1

Significant at *10, **5 and ***1 per cent levels. **_*p < 0.05;_**
© Chi-square tests. ºObservations having a zero for LNAF are re-corded to a small positive value (0.00001) to enable a logarithmic transformation.

Table 3: T-test and chi-square results (n = 1254)

Highly Regulated Firms (n=120)		
Variable	Mean	SD
LAF	12.88	1.27
AF	903540.30	1298763.0
LTA	15.94	1.92
TA	35233228.0	50925734.3
LNAFº	8.44	7.94
NAF	411696.90	910871.0
FORGN	1.70	3.22
SEG	4.50	1.57
ZFC	-2.95	0.95
LOSS	0.10	0.37
AQ	0.90	0.32
OBJ	0.95	0.29
WP	12.45	1.94

Notes: AF is audit fees while LAF is natural logarithm of audit fees; TA is total assets (in RM) while LTA is natural logarithm of total assets; NAF is non-audit fees (in RM) while LNAF is natural logarithm of non-audit fees; FORGN is the number of foreign subsidiaries; SEG is the number of business segments; ZFC is the Zmijewski score for financial crisis; LOSS is an indicator variable equals to 1 if the company has made loss in any of the years, 0 if otherwise; AQ an indicator variable equals to 1 if the

company hire Big4 auditor and 0 if otherwise; OBJ is an indicator variable, 1 if the internal audit function reports to audit committee, and 0 if otherwise; WP is the voluntary disclosure on IAF under Para 43 of SIC.

Table 4: T-test and chi-square results (n = 1254)

Less Regulated Firms (n=1134)			
Variable	Mean	SD	t-value /chi-square
LAF	11.98	0.95	-7.86*
AF	289307.8	482894.95	-4.57*
LTA	13.38	1.53	-12.23*
TA	2590325.6	7852211.8	-5.93*
LNAFº	4.37	9.38	-4.86*
NAF	146334.3	543279.94	-2.86*
FORGN	2.20	9.14	0.48
SEG	3.90	1.59	-8.72*
ZFC	-3.56	0.88	-0.93
LOSS	0.18	0.39	0.13
AQ	0.69	0.43	0.00
OBJ	0.81	0.390	0.00*
WP	10.73	2.74	-8.04*

_*p < 0.05;_ © chi-square tests
ºObservations having a zero for LNAF are re-corded to a small positive value (0.00001) to enable a logarithmic transformation.

4.2. Multivariate analysis

The multiple regression results for testing the hypotheses are presented in Table 5. Models A, B and C are significant at one per cent significance level (p=0.000) with an adjusted R^2 of at least 75 per cent. Overall, these data suggest the models are structurally stable.

The results in Model A show the association between external audit fees on nine (9) control variables derived from the extant literature (Gul, 2006; Boo and Sharma, 2006 and 2008; Yatim et al., 2006; Abdul Wahab et al., 2009). Following prior research (Simunic, 1980; Francis and Simon, 1987; Craswell et al., 1995), it is expected that the audit fees are positively associated with total assets (TA), non-audit fees (NAF), number of business segments (SEG), number of foreign subsidiaries (FORGN), financial crisis index (ZFC), and audit quality (AQ). All other variables remain significant with the exception of LOSS. The TA being the most dominant determinant audit fees, is positive and significant at one (1) per cent level of significance (0.46, t=18.14),

indicating that the bigger the size of audit client firms' the higher the audit fees charged by the external auditors. The coefficient of NAF (0.06, t=3.89) is also significant and positive at p<0.001. Besides that, audit complexity measured by FORGN and SEG coefficient is found to be significant at one (1) per cent significant level. Similarly, ZFC coefficient is positively and significantly associated with higher audit fees at p<0.001, suggesting that the auditors may be exposed to higher risk if the audit client is badly affected by the financial crisis. AQ is positively associated with audit fees which strongly support the observation that the Big 4 is associated with higher audit fees. PRD which reports on post-BMLR 2008 implementation also show positive and significant results and higher audit fees. We also observe a positive and significant (p<0.01) coefficient on REG. This is consistent with the argument that regulatory oversight complements the external audit monitoring, even though HRFs have stronger internal controls and internal monitoring (Table 5 and 6).

Table 5: Audit fee regression models (n =1254)

		Model A		Model B	
Variable	Sign	Coefficient	t-value	Coefficient	t-value
Constant			34.78		32.31
LTA	+	0.46	18.14***	0.44	18.33**
TA	+	0.01	0.70***	0.05	2.32**
LNAF	+	0.06	3.89***	0.05	3.61***
NAF	+	0.11	5.81***	0.07	3.80***
FORGN	+	-0.27	-9.39***	-0.24	-8.37***
SEG	+	0.07	4.38***	0.08	4.75***
ZFC	+	0.10	3.96***	0.10	4.37***
LOSS	+	0.01	0.55	0.01	0.72
AQ	+	0.06	3.62***	0.06	3.91***
PRD	+	0.08	5.39***	0.04	2.40***
REG	+	0.05	2.80***	0.07	4.12**
OBJ	+			0.04	2.55***
WP	+			0.08	4.72***
F-statistic		238.66		196.58	
p-value		0.00		0.00	
Adj. R^2		0.76		0.75	

Notes: AF is audit fees while LAF is natural logarithm of audit fees; TA is total assets (in RM) while LTA is natural logarithm of total assets; NAF is non-audit fees (in RM) while LNAF is natural logarithm of non-audit fees; FORGN is the number of foreign subsidiaries; SEG is the number of business segments; ZFC is the Zmijewski score for financial crisis; LOSS is an indicator variable equals to 1 if the company has made loss in any of the years, 0 if otherwise; AQ an indicator variable equals to 1 if the company hire Big4 auditor and 0 if otherwise; OBJ is an indicator variable, 1 if the internal audit function reports to audit committee, and 0 if otherwise; WP is the voluntary disclosure on IAF under Para 43 of SIC.

Similarly, the coefficient on internal audit function attributes, namely OBJ and WP are also significant at (p<0.01) as per Model B. Indicating that the head of internal auditors of HRFs report directly to audit committee and disclose more information on

internal audit activities as per voluntary disclosure under Para 43 of SIC. The results suggest that the introduction of the BMLR 2008 have instigated greater audit effort and have increased the audit fees for HRFs.

Model C brings in the interaction variable (REG) to test the hypotheses. It comprises of two (2) individual Models I and II on IAF attributes and their interactions with regulatory oversight. The interaction term OBJ_REG (IAF objectivity by regulatory oversight) is positive and significant at p<0.05 (0.12, t=1.89).

The results suggest that the association between objectivity and audit fees is stronger post-BMLR 2008 implementation for HRFs, thus fully support H1. The positive coefficient for the interaction variable indicating that the head of internal audit direct reporting to audit committee is stronger post implementation of BMLR 2008. However, the

interaction variable WP_REG is insignificant, thus, do not support for H2. This is due to the fact that high regulated firms have implemented most of the listing requirements even before it was mandated by Bursa Malaysia in 2008. Respondent IA1 said:

Table 6: Audit fee regression models (n =1254)

	Model C			
	Model I		Model II	
Variable	Coefficient	t-value	Coefficient	t-value
Constant		32.16		32.19
LTA	0.45	18.42**	0.44	18.32**
TA	0.04	2.16**	0.05	2.32**
LNAF	0.05	3.55***	0.05	3.60***
NAF	0.07	3.83***	0.07	3.79***
FORGN	-0.24	-8.39***	-0.24	-8.35***
SEG	0.08	4.70***	0.08	4.74***
ZFC	0.10	4.18***	0.10	4.37***
AQ	0.01	0.65***	0.01	0.72***
LOSS	0.06	3.88	0.06	3.90
PRD	0.07	4.19***	0.07	4.11***
REG	0.16	2.51***	0.03	0.40
OBJ	0.04	2.81***	0.04	2.55**
WP	0.08	4.74***	0.08	4.62***
OBJ_REG	0.12	1.89**		
WP_REG			0.07	0.77
F-stat	187.42		186.57	
p-value	0.00		0.00	
Adj. R^2	0.78		0.78	

ºObservations having a zero for LNAF are re-corded to a small positive value (0.00001) to enable a logarithmic transformation.

"Highly regulated firms have implemented most of the listing requirements even before it was mandated by Bursa Malaysi they have no choice but to comply especially if it is being enforced under Banking and Financial Institutions Act"

Therefore, audit committee members are more likely to demand extensive audit to protect their reputation (Abbott and Parker, 2000; Carcello and Neal, 2000) and to avoid financial misstatement and non-compliance. It requires substantive audit testing and consequently higher audit fees. Most of the respondents (IA1, IA2, EA1, EA2, EA3, R1 and R2)[‡] claimed that high regulated firms have better monitoring mechanisms as compared to less regulated firms. As noted by one of the respondent (EA3) that:

"Financial institutions are highly regulated and in terms of internal control, they are far better than the rest. When we audit banks, there will be a situation where we cannot find any misstatement or non-compliance because they have been audited several times in a year. Most of the times, we have nothing to report on but audit still need to be done and audit fees need to be charged. Banks will always comply with the requirements even before they became mandatory by Bursa Malaysia"

It is important to note that the results on the interaction variables on internal audit functions attribute and audit fees observed above are consistent with the demand side explanation. We find that industry-specific regulatory oversight influences audit fees and the association between internal governance mechanisms and audit fees. We attribute that higher audit fees paid by HRFs to complement the regulatory oversight function for external audit monitoring.

4.3. Sensitivity analysis

We have conducted Mann Whitney U test to assess the robustness of our findings. We further extend the basic findings. Since the sample size for highly regulated firms is small of only 20 firms (equivalent to 120 firm-year observations), a non-parametric statistical tool is also used. Previous studies that use similar matched pairs method are Beasley (1996), Carcello and Nagy (2004b), Gul (2006), Owens-Jackson et al. (2009), and Mustafa and Youssef (2010). Gul (2006) compares 38 firms with political connections to 206 firms without political connections and Sherliza (2012) uses 32 fraud firms to be matched with 84 non-fraud firms. This is because the number of firms of interest is usually not large. However, insignificant difference to the results was observed.

5. Conclusions

The revised BMLR in 2008 provides greater obligation for both HRFs and LRFs to enhance Malaysia's corporate governance regime. The panel analysis of 1254 firms-year observation for a period 2005 to 2010 finds the association between IAF atributes, regulatory oversight and audit fees in Malaysia. It is predicted that the association between IAF attributes and audit fees is stronger post-BMLR

[‡] Respondents for the interview in the current study are categorized as Internal Auditors (IA), External Auditors (EA) and Regulators (R).

2008. The results indicate that auditors perceived HRFs which are being monitored by an industry-specific regulator i.e. BNM, require more audit effort, thus increase in audit fees. Further, as noted by the interviews, seven (7) of the eight (8) respondents IA1, IA2, IA3, EA2, EA3, R1, and R2[§] opined that the role of regulators in Malaysia is very effective. Only one (1) (EA1) viewed that the role of regulators in Malaysia as effective. Further, all eight (8) respondents agreed that due to the role played by BNM, banking institutions and insurance firms are more governed as compared to those in other industries. Since these highly regulated firms are subject to additional industry-specific oversight, they have to ensure that effective policies and practices are followed. Respondent IA3 explains it:

"Highly regulated firms are more governed because of Bank Negara, when there is a directive from Bank Negara, these firms have to comply…if not, their license will be revoked"

Similarly, regulatory oversight strengthens the association between IAF attributes, namely objectivity and audit fees post-BMLR 2008 which is consistent with the notion that regulatory oversight complements the external audit as monitoring mechanisms. Our results further indicate that HRFs are subject to vigilant monitoring by BNM to ensure the audit committee and internal audit department are taking more active and independent role in the internal monitoring process. Thus, it can be said that the additional-specific regulator i.e. BNM has put high expectations on HRFs, resulting in the AC and IA department taking a more pro-active and independent role in the monitoring process. In sum, it can be concluded that audit fees have significantly increased due to compliance with the new regulatory requirements. The corporate governance reforms do matter as firms that are committed to strong corporate governance are likely to engage in greater levels of internal auditing and are prepared to pay for a higher quality external audit.

The present study has a number of limitations that should be noted, hence provide opportunities for further research. We acknowledge our results might not be generalized due to small number of firms for HRFs. The comparison of the similar number of sample of firms would improve the robustness of the findings. In addition, due to the different characteristics across industries, the audit fee model could have slightly different effect between industry-specific regulated and non-regulated firms. This is because the model used in this study has been well established mainly for less-regulated firms. Besides that, a longitudinal study, expanding more than five years as pre-test and post-test periods would be beneficial in measuring the long term impact of governance on audit fees.

Acknowledgment

References

Abbott, L. J., and Parker., S., 2000. Auditor selection and audit committee characteristics. Auditing: A Journal of Practice and Theory., *19*(2), 47-66.

Abbott, L. J., S. Parker, G. F. Peters, and K. Raghunandan, 2003. An empirical investigation of audit fees, non-audit fees and audit committee. Contemporary Accounting Research 20(2).

Abbott, L. J., S. Parker, G. F. Peters, and K. Raghunandan, 2003. The association between audit committee characteristics and audit fees. Auditing: A journal of practice & theory 22(2).

AICPA (American Institute of Public Accountants), 1997. Statements of Auditing Standards, New York. AICPA Inc. Retrieved on Nov 2, 2015 from http://www.aicpa.org/.

Bank Negara Malaysia (BNM), 2008. Banking and Financial Institutions Act 1989 (BAFIA), Appointment of external auditors by banking institutions. Retrieved on November 2, 2015 from http://www.bnm.gov.my/

Beasley, M. S.,1996. An empirical analysis of the relation between board of director composition and financial statement fraud. The Accounting review, 71(4).

Blue Ribbon Committee (BRC), 1999. Report and Recommendations of the Blue Ribbon Committee on Improving the Effectiveness of Corporate Audit Committees (NY: New York Stock Exchange and National Association of Securities Dealers).

Boo, E. F., and C. Sharma, 2006. Effect of regulatory oversight on the association between internal governance characteristics and audit fees. *Accounting and Finance 48*, 51 - 71.

Boo, E. F., and D. Sharma, 2008. The association between corporate governance and audit fees of bank holding companies. Corporate Governance 8(1), 28 - 45.

Bryan, S., and A. Klein, 2005. Non-management director options, board characteristics and future firm investments and performance, working paper: New York School of Law and Economics.

Bursa Malaysia Revamped Listing Requirement, 2008. Retrieved 1 December, 2015 from http//www.bursamalaysia.com.

Carcello, J. V., and Neal., T. L., 2000. Audit committee composition and auditor reporting. The Accounting Review. , 75(4), 453-467.

Carcello, J. V., D. R. Hermanson, T. A. L. Neal, and R. J. Riley, 2002. Board characteristics and audit fees.

[§] Respondents for the interview are categorized as Internal Auditors (IA), External Auditors (EA) and Regulators (R).

Contemporary Accounting Research 19 (3):365 - 384.

Carcello, J.V., and Nagy, A.L., 2004. Client Size, Auditor Specialization and Fraudulent Financial Reporting. Managerial Auditing Journal, 19(5), 651.

Craswell, A. T., 1992. Audit pricing in Australia. Australian Accounting Review 1 (3):28 - 33.

Craswell, A. T., and J. R. Francis, 1999. Pricing initial audit engagements: a test of competing theories. Accounting Review 74 (2):201-216.

Craswell, A. T., J. R. Francis, and S. L. Taylor, 1995, Auditor brand name reputations and industry specializations *Journal of Accounting and Economics* 20 (3):297-322.

Dunn, K. A., and Mayhew, B. W. (2004). Audit firm industry specialization and client disclosure quality. *Review of Accounting Studies, 9*, 35.

Francis, J. R., 1984. The effect of audit firm size on audit prices: a study of the Australian market. Journal of Accounting and Economics 6 (2):133

Francis, J. R., and D. T. Simon, 1987. A test of audit firm size in the small client segment of the UD audit market. The Accounting Review 62, 145-157.

Goodwin-Stewart, J., and Kent, 2006. Relation between external audit fees, audit committee characteristics and internal audit. Accounting and Finance 46.

Gul, F. A., 2006. Auditor's responses to political connections and cronyism in Malaysia. Journal of Accounting Research 44 (5).

Gul, F. A., and J. S. L. Tsui, 1998. A test of the free cash flow and debt monitoring hypotheses: Evidence from audit pricing. Journal of Accounting and Economics 24, 219.

Hackenbrack, K., and W. R. Knechel, 1997. Resource allocation decisions in audit engagements. Contemporary Accounting Research 14 (3), 481.

Haron, H., Ibrahim, N., Jeyaraman, K., and Chye, O. H., 2009. Determinants of Internal Control Characteristics Influencing Voluntary and mandatory Disclosures: A Malaysian Perspective. Managerial Auditing Journal, 25(2).

Hay, D. C., W. R. Knechel, and N. Wong, 2006. Audit Fees: A Meta-analysis of the Effect of Supply and Demand Attributes. Contemporary Accounting Research 23 (1).

Hay, D., 2012. Further Evidence from Meta-Analysis of Audit Fee Research. Social Science Research Network (SSRN) Working Paper Series.

Institute of Internal Auditors Malaysia (IIAM), 2000. Statement on internal control - Guidance for Directors of Public Listed Companies.

Johnson, S., and Mitton, T., 2002. Cronyism and capital controls: evidence from Malaysia. Journal of Financial Economics, 67(2), 351 - 382.

Mustafa, S.T., and Youssef, N.B., 2010. Audit committee financial expertise and misappropriation of assets. Managerial Auditing Journal, 25(3), 208-225.

Owens-Jackson, L., Robinson, D., and Shelton, S.W., 2009. The Association Between Audit Committee Characteristics, the Contracting Process and Fraudulent Financial Reporting. American Journal of Business, 24(1).

Pallant, J., 2001. SPSS survival manual: A step by step guide to data analysis using SPSS. National Library of Australia.

Prawitt, D. F., Sharp, N. Y., and Wood, D. A., 2008. Does internal audit quality affect the external audit fees? Paper presented at the 2006 BYU Accounting Research Symposium.

Public Company Accounting Oversight Board (PCAOB), 2007 An Audit of Internal Control Over Financial Reporting That Is Integrated with an Audit of Financial Statements. Auditing Standard No. 5. Washington, D.C.: PCAOB.

Raghunandan, K. R., Rama, D. V., and Scarbrough, D. P. (1998). Audit committee composition and interaction with internal auditing: A Canadian evidence. *Accounting Horizons, 12*(1), 51.

Securities Commission Malaysia (SC). Retrieved on November 5, 2015 from http://www.sc.com.my/.

Sherliza, P. N, 2012. Pre Fraud" An empirical in Malaysia. International Journal of Economics and Finance Studies. 4 (1)

Simunic, D. A., 1980. The pricing of audit services: Theory and evidence. Journal of Accounting Research 18 (1), 161.

Tsui, J. S. L., B. Janggi, and F. A. Gul, 2001. CEO domination, growth opportunities and their impact on audit fees. Journal of Accounting, Auditing and Finance 16 (3).

Whisenant, S., S. Sankaraguruswamy., and K. Raghunandan, 2003. Evidence on the Joint Determination of Audit and Non-Audit Fees. Journal of Accounting Research 41:721-744.

Yatim, P. Kent, and P. Clarkson, 2006. Governance structures, ethnicity and audit fees of Malaysian listed firms. Managerial Auditing Journal 21 (7), 757 - 782.

Zmijewski, M. Supplement, 1984. Methodological Issues Related to the Estimation of Financial Distress Prediction Models. Journal of Accounting Research 22:59-82.