

## A study on relationship between internal auditing and quality of financial statement

Maryam Abulghasemi Komeleh<sup>a</sup> and Mansour Garkaz<sup>b\*</sup>

<sup>a</sup>Department of Accounting, Science and Research Branch, Islamic Azad University, Golestan, Iran

<sup>b</sup>Department of Accounting, Aliabad Katoul Branch, Islamic Azad University, Aliabad Katoul, Iran

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### ABSTRACT

The primary objective of most financial statements is to provide a concentrated as well as categorized reports on financial performance and flexibility to help decision makers reach suitable financial decisions. This paper presents an empirical investigation to study the relationship between internal auditing and quality of financial statements on selected firms listed on Tehran Stock Exchange. The proposed study selects 140 firms over the period 2008-2012. Using some regression technique, the study has determined that there was a positive and meaningful relationship between firms with internal auditing in their activities and quality of financial statements.

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## 1. Introduction

Internal auditing is considered as an independent, objective assurance and consulting activity designed to add value and to improve firms' operations. It assists firms to accomplish their objectives by bringing a systematic, disciplined method to assess and to improve the effectiveness of risk management, control, and governance processes (Fama & French, 1993; Raghunandan et al., 2001). Internal auditing is a catalyst for improving firms' governance, risk management and management controls by giving insight and recommendations based on analyses and evaluations of data and business processes (Healy & Palepu, 2001). With commitment to integrity and accountability, internal auditing gives value to governing bodies and senior management as an objective source of independent advice. The scope of internal auditing within firms is extensive and may include topics such as an organization's governance, risk management and management controls (Krishnan, 2005). Internal auditing may also include conducting proactive fraud audits to determine potentially fraudulent acts; participating in fraud investigations under the direction of fraud investigation professionals, and conducting post investigation fraud audits to detect control breakdowns and to establish financial loss.

\*Corresponding author.

E-mail addresses: [m\\_garkaz@yahoo.com](mailto:m_garkaz@yahoo.com) (M. Garkaz)

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Doyle et al. (2007) investigated the relationship between accruals quality and internal controls using 705 firms that disclosed at least one material weakness from August 2002 to November 2005 and reported that weaknesses were generally associated with poorly estimated accruals, which were not realized as cash flows. They reported that this relation between weak internal controls and lower accruals quality was driven by weakness disclosures, which was associated with overall company-level controls, which could be more difficult to “audit around.” They also reported no such relationship for more auditable, account-specific weaknesses. Nevertheless, they reported similar results using four additional measures of accruals quality: discretionary accruals, average accruals quality, historical accounting restatements, and earnings persistence.

## 2. The proposed study

This paper presents an empirical investigation to study the relationship between internal auditing and quality of financial statements on selected firms listed on Tehran Stock Exchange. The proposed study selects 140 firms over the period 2008-2012. To select the firms, only firms whose financial statements were available were selected and there should not be any three-month-long interruption on their shares activities. In addition, no financial or holding firm was permitted to this study. The accruals ( $Accr_{i,t}$ ) is calculated as follows,

$$Accr_{i,t} = \alpha_0 + \alpha_1(1/TA_{i,t-1}) + \alpha_2\Delta REV_{i,t} + \alpha_3PPE_{i,t} + \alpha_4ROA_{i,t} + \varepsilon_{i,t} \quad (1)$$

where  $Accr_{i,t}$  is estimated as follows,

$$\frac{\Delta CurrentAssets - \Delta Cash - \Delta CurrentLiabilities - Depreciation}{TotalAssets} \quad (2)$$

Let  $\Delta REV_{i,t}$  be the ratio of net revenue divided by total assets,  $PPE_{i,t}$  be the ratio of net equipment divided by total assets and  $ROA_t$  be the return on assets. Discretionary accruals (DisTA) is calculated by measuring the absolute values of residuals in Eq. (1) and then we multiplying by negative one. The more negative value represents better quality of financial statements. We may also use the method suggested by Dechow and Dichev (2002) to calculate the quality of earnings as follows,

$$WCA_{i,t} = \alpha_0 + \alpha_1OCF_{i,t-1} + \alpha_2OCF_{i,t} + \alpha_3OCF_{i,t+1} + \alpha_4\Delta Rev_{i,t} + \alpha_5PPE_{i,t} + \alpha_6DOCF_{i,t} + \alpha_7OCF_{i,t} \times DOCF_{i,t} + \varepsilon_{i,t} \quad (3)$$

where  $WCA_{it}$  is the working capital accruals, which is calculated as follows,

$$\frac{\Delta CurrentAssets - \Delta Cash - (\Delta CurrentLiabilities - \Delta CurrentDebt - \Delta TaxPayables)}{TotalAssets}$$

In addition, in Eq. (3), OCF represents operating cash flow, Rev states the total revenue, DOCF is a dummy variable, which is one if money is going out and zero, otherwise. The residuals of Eq. (3) is multiplied by negative one and it yields DisWCA as discretionary working capital accruals. The last model was originally developed by Wallman (1996) and is as follows,

$$\Delta AR_{i,t} = \alpha_0 + \alpha_1\Delta Rev_{i,t} + \varepsilon_{i,t} \quad (4)$$

where  $\Delta AR_{i,t}$  represents the change in receivable accounts and  $\Delta Rev_{i,t}$  represents the change in net profit divided by total assets and the procedure of calculating discretionary accruals is the same as the previous models. To examine the main hypothesis of this paper we use the following model,

$$(DisTA, DisWCA, Dis Rev, AccrCash)_{i,t} = \alpha_0 + \alpha_1IAQ_{i,t} + \alpha_2BODQ_{i,t} + \alpha_3CG_{i,t} + \alpha_4AQ_{i,t} + \alpha_5LASSET_{i,t} + \alpha_6INV_{i,t} + \alpha_7LEV_{i,t} + \alpha_8CFO_{i,t} + \alpha_9LAGE_{i,t} + \alpha_{10}SGROWTH_{i,t} + \varepsilon_{i,t} \quad (5)$$

where

$$AccrCash_{i,t} = -\ln\left(\frac{|Accr|}{|OCF|}\right). \quad (6)$$

In addition,  $IAQ_{i,t}$  is one if firm has signed a contract for internal auditing and zero, otherwise,  $BODQ_{i,t}$  is one if there is a person with the financial background in board of directors and zero, otherwise, and finally  $CG_{i,t}$  is one if the average number of corporate governance is greater than an average number and zero, otherwise. Table 1 demonstrates the summary of some basic statistics.

**Table 1**  
The summary of some basic statistics for the first model

Variable	First model					Second model	
	$ROA_t$	$PPE_{i,t}$	$\Delta REV_{i,t}$	$1/TA_{i,t-1}$	$Accr_{i,t}$	$\Delta REV_{i,t}$	$\Delta AR_{i,t}$
Number	700	700	700	700	700	700	700
Mean	0.156	0.236	0.144	0.000	0.099	0.144	0.010
Median	0.131	0.196	0.110	0.000	0.069	0.110	0.020
Mode	0.320	0.180	0.000	0.000	0.030	0.000	0.000
Standard deviation	0.116	0.158	0.130	0.000	0.106	0.130	0.392
Skewness	1.212	0.700	1.736	34.539	2.574	1.736	-1.283
Kurtosis	1.532	-0.374	4.106	1225.000	9.981	4.106	316.573
Range	0.650	0.690	0.920	0.000	1.000	0.920	16.000
Min	0.000	0.000	-0.020	0.000	-0.090	-0.020	-8.000
Max	0.660	0.700	0.890	0.000	0.910	0.890	8.000
Q25	0.072	0.105	0.053	0.000	0.029	0.021	0.053
Q50	0.131	0.196	0.110	0.000	0.069	0.098	0.110
Q75	0.211	0.351	0.198	0.000	0.133	0.185	0.198

### 3. The results

Table 2 demonstrates the results of regression analysis for Eq. (5). The table shows the implementation of four regression models where dependent variables are DisTA, DisWCA, DisRev and AccrCash.

**Table 2**  
The summary of regression analysis

	AccrCash			DisRev			DisWCA			DisTA		
	P-value	t	$\beta_i$	P-value	t	$\beta_i$	P-value	t	$\beta_i$	P-value	t	$\beta_i$
$\alpha_0$	0.330	0.975	1.731	0.011	-2.538	-0.772	0.827	-0.219	-0.030	0.480	0.707	0.199
<b>IAQ</b>	<b>0.000</b>	<b>3.081</b>	<b>1.010</b>	<b>0.000</b>	<b>3.486</b>	<b>0.910</b>	<b>0.000</b>	<b>3.129</b>	<b>1.001</b>	<b>0.000</b>	<b>3.455</b>	<b>1.009</b>
BODQ	0.887	0.142	0.018	0.761	-0.304	-0.007	0.492	-0.687	-0.007	0.784	-0.275	-0.005
CG	0.443	0.767	0.096	0.186	1.324	0.028	0.138	1.486	0.014	0.847	-0.193	-0.004
AQ	0.397	-0.848	-0.108	0.444	0.767	0.017	0.828	-0.217	-0.002	0.526	-0.635	-0.013
LASSET	0.534	-0.622	-0.030	0.836	0.207	0.002	0.898	0.128	0.000	0.613	-0.506	-0.004
INV	0.111	-1.595	-0.805	0.510	0.659	0.057	0.996	-0.005	0.000	0.931	0.087	0.007
LEV	0.801	-0.252	-0.102	0.000	4.030	0.278	0.076	1.775	0.055	0.623	-0.492	-0.031
CFO	0.601	-0.524	-0.002	0.262	1.124	0.001	0.652	0.452	0.000	0.540	0.614	0.000
LAGE	0.854	-0.184	-0.113	0.265	1.115	0.117	0.557	-0.587	-0.028	0.316	-1.004	-0.097
SGROWTH	0.243	-1.170	-0.155	0.748	0.321	0.007	0.274	-1.096	-0.011	0.003	-3.000	-0.063
Durbin-Watson	2.062			2.027			1.995			2.132		
F-value	3.633			2.708			3.812			3.206		
P-value	0.000			0.003			0.000			0.000		
Adjusted R <sup>2</sup>	0.005			0.024			0.003			0.003		
R	0.095			0.194			0.108			0.131		

As we can observe from the results of three regression models, Durbin-Watson values for all models are within an acceptable level. Therefore, we can conclude that there was no auto-correlation among residuals. In addition, F-value is statistically significant, which means the relationship was linear. The sign of IAQ variable is positive and t-student values for all models are statistically meaningful when the level of significance is one percent. Therefore, we can confirm the main hypothesis of the survey and conclude that there was a positive and meaningful relationship between the quality of financial statements and having internal auditing.

#### **4. Conclusion**

In this paper, we have presented an empirical investigation to study the relationship between the quality of financial statements and having internal auditing services in selected firms listed on Tehran Stock Exchange. The proposed study of this paper has implemented various models and the results have confirmed that there was a positive and meaningful relationship between the quality of financial statement and helping some external agencies on having internal auditing.

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