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THE IMPACT OF FAIR VALUE ON AUDIT QUALITY: EVIDENCE FROM TUNISIA

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ABSTARCT

This study collects the views of Tunisian external auditors about the impact of audit challenges related to fair value on audit quality and the role of the International Standards on Auditing (ISA) 540 in mitigating these challenges. Based on responses from 52 Auditors to our questionnaire, we found out that the fair value is perceived as engendering technical difficulties for auditors. However, these challenges at fair value have no negative impact on audit quality. On the other hand, 78.8% of our respondents believe that the International Standards on Auditing 540 plays a significant role in mitigating the audit challenges related to fair value. Thus our study shows that in the eyes of Tunisian external auditors, benefits of fair value outweigh its disadvantages and the International Standards on Auditing 540 provide auditors by all the necessary tools to deal with audit challenges related to fair value estimates.

JEL: M41, M42, C12, C25

KEYWORDS: Audit Quality, Fair Value, International Standards on Auditing, Logistic Regression

INTRODUCTION

Accounting standards are the basis on which is built any financial information. Thus, before issuing an opinion on the quality of financial statements, one must question the quality of standards that led to their establishment. In this regard, some research had indicated the presence of a significant relationship between the accounting framework adopted and earnings management (Barth et al. (2008)). The financial scandals that were arisen in the United States and Europe, such as Enron and WorldCom, have given rise to doubts, among investors, about the sincerity and credibility of disclosed financial information. To restore investor's confidence in the quality of published financial statements, the European Union (EU) applied to all the countries if the EU, had made mandatory the application of IFRS (International Financial Reporting Standards) for listed companies establishing consolidated accounts since January 1st 2005. In order to provide an international regulatory framework in favor of having financial information which is at the same time understandable, relevant and comparable for investors. Other countries, such as Australia, Turkey and South Africa, among others, had set the same rule.

IFRS are inspired by the Anglo-Saxon model that favors the dominance of an economic approach which estimate how much the company is currently worth, in detriment of a historical approach which reflects what has happened, produced and certain. So with IFRS, we have moved forward from a Stakeholder model to a Shareholder model prepared, in priority, to guarantee the specific informational needs of shareholders and investors. The impact of the transition to IFRS on the quality of financial reporting has been the subject of several empirical studies (Zimmermann & Goncharov (2003); (Leuz & Verrecchia (2000) and (Bartov et al. (2005)). According to these studies, this impact differs from one country to another, and sometimes, from one study to another within the same context. This topic was the subject of the keenest doctrinal controversies; there are two streams of research.

Proponents of IFRS are in favor of such adoption and believe that through these standards, which provide managers with limited flexibility in accounting choices, investors will have more transparent financial statements. On the other hand, opponents assume that IFRS adoption is a necessary condition for improving information quality but is still insufficient because it must take into account environmental factors (Ball et al. (2000)). Adversaries of such adoption justify their views based on the fact that IFRS are complex, abstract, expensive, and they are based on the principle of fair value, which is often accused of being a crisis accelerator (Laux & Leuz (2009)).

These suspicions on IFRS, particularly on fair value, were accompanied with a total loss of confidence in audit quality. According to Sikka (2009), audit firms have shown an increasing willingness to violate the laws, regulations, and help their clients to publish flattering financial statements. The growing demand on fair value accounting has resulted in a series of challenges for external auditors and auditing standard setters (Kumarasiri & Fisher (2011)). In recent years, we noted the disappearance of local accounting systems of different countries in detriment of the appearance of a single international accounting system. Tunisia was not apart of this movement. Indeed, the Tunisian authorities had aimed to adopt IFRS around 2014. And given the political and economic instability in the country since 2011, no decision has been taken. According to Ball (2006), the implementation of IFRS has not received enough attention and the implementation of fair value, among other IFRSs, may be more problematic given its complex and controversial nature, as well as other political and economic factors deeply rooted and vary by country. To successfully adopt IFRS in Tunisia, a change process must be designed in order to measure the complexity and depth of IFRS. Therefore, examining the implementation of fair value at each country is beneficial to get a further insight into the implementation of IFRS.

This paper aims to examine the impact of audit challenges in fair value on audit quality as required by the International Standards on Auditing (ISA) 540. Our decision to retain the Tunisian context is explained by the debate about adoption of IFRS in the current environment and the lack of studies that have addressed this topic. The objectives of our research are first, to examine the impact of fair value on audit quality while addressing the challenges audit fair value. And second, to analyze the impact of failures of the ISA 540 on its role in mitigating the challenges at fair value. In this paper, we first present the literature review, then the Data and methodology, the results and finally the conclusion.

LITERATURE REVIEW

In this part we present two research streams: the research stream that studies the fair value audit challenges and the research stream that studies the failures at the ISA 540.

Fair Value Audit Challenges

To understand how accounting estimates are verified, Griffith et al. (2012) interviewed 24 auditors belonging to six major audit firms, during the months of October and November. These interviewees noticed that the accounting estimates are difficult to verify because they must assess the reasonableness of the estimates rather than simply verify their accuracy. Montague (2010) sought to address potential problems with the audit of financial instruments measured at fair value. She concluded that the auditors should ensure that managers had classified assets / liabilities measured at fair value under the appropriate hierarchy.Martin et al. (2006), based on psychological studies to highlight the various problems that may occur during the verification of estimates at fair value, pointed out that the knowledge of specialized assessment needed to audit effectively estimates at fair value will be difficult for auditors to acquire and maintain, due to its complexity. They described the problems related to fair value from three different perspectives. First problem is the challenges to identify and assess the fair value estimates. Second is the potential bias of direction. Finally, the third problem is associated with the lack of internal control specific to fair value estimates. Kumarasiri & Fisher (2011) sought to identify and examine the issues and

challenges faced by auditors in auditing estimates at fair value in a context of developing countries based on a survey of 156 auditors in Sri Lanka. Among the problems they found is the prevalence of inactive markets in developing countries. According to the above-mentioned studies, we can formulate the following assumptions:

H1a: the complexity of fair value measures has a negative impact on audit quality.
H1b: the potential biases by managers have a negative impact on audit quality.
H1c: the lack of technical knowledge on the fair value measures has a negative impact on audit quality.
H1d: the absence of an active market has a negative impact on audit quality.
H1e: the absence of specific internal control for fair value measurement has a negative impact on audit quality.

Failures at the ISA 540

Canadian Public Accountability Board (CPAB, 2012) in its attempt to examine the effectiveness of the post-implementation of clarified ISAs, identified a number of deficiencies in ISA 540 that may affect audit quality. The members of board believed that the effectiveness of the audit procedures required by ISA 540 that are implemented in response to risks of significant anomalies are often insufficient to support the conclusion of the auditor on the reasonableness of the accounting estimates. Jeppesen & Liempd (2013) noted that when the auditor makes an estimate and uses assumptions or methods different from those used by managers, a difference may arise because the auditor used different but equally valid assumptions. Auditors are technically unable to determine what to do with the equally valid assumptions. According to the above-mentioned studies, we can formulate the following assumptions:

H2a: failures of audit risk procedures in ISA 540 have a negative effect on its role in mitigating fair value audit challenges.

H2b: the lack of guidelines for equally valid assumptions in ISA 540 have a negative effect on its role in mitigating fair value audit challenges.

DATA AND METHODOLOGY

Background and Sample

In this research, we selected a sample of Tunisian Certified Public Accountants (TCPAs), referred here as external auditors. Our questionnaire was realized in 2014 and had two steps. A pre-exploratory survey was conducted among some TCPAs belonging to our sample to adapt different questions to the Tunisian context and improve the measure scales. The second phase consists of the distribution of the final questionnaire by email and via social networks such as Facebook and LinkedIn. We sent 110 questionnaires, we received 59 responses and after excluding incomplete responses. We retained only 52 responses. The variables developed in the survey and used in our analysis are presented in Table 1. Table 2 details the descriptive statistics of the sample.

Table 1: Variables in the Study

Variable	Definition
Sample characteristics	
V_1 (AGE)	Age of the responding
V_2 (GENDER)	Gender of the responding
V_3 (EXP)	Number of years of respondent's experience as an auditor
V_4 (BIG6)	Responding member of Big 6 (Y/N)
Dependent	
V_5 (JV-QD)	Fair value has a negative impact audit quality (Y/N)
V_6 (ISA540)	ISA 540 plays a sufficient role in mitigating the challenges of audit related to fair value measurements (Y/N)
Independent	
V_7 (COMP)	Complexity to measure at fair value
V_8 (MANQ)	Lack of technical knowledge on fair value measurement
V_9 (AB_M_A)	Absence of an active market
V_{10} (AB_CI)	Absence of specific internal control to measure at fair value
V_{11} (POTEN)	Potential bias of fair value by management
V_{12} (RISQ)	Failures of risk assessment procedures in ISA 540 relative to fair value estimates
V_{13} (EST_VAL)	Lack of guidelines for equally valid estimates in ISA 540

This table lists the variables developed in the survey and used in our analysis

Models of the Study

We developed two logistics regression models. In the first model, we try to analyze the impact of fair value audit challenges on audit quality. In the second model, we analyze the impact of failures of ISA 540 in its role in mitigating the challenges of audit related to fair value measurements.

Model 1

$$JV - QD = \beta_0 + \beta_1 COMP + \beta_2 MANQ + \beta_3 AB\_M\_A + \beta_4 AB\_CI + \beta_5 POTEN + \beta_6 EXP + \beta_7 BIG6 + \varepsilon_{i,t} \quad (1)$$

Where

JV-QD, COMP, MANQ, AB_M_A, AB_CI, POTENT, EXP and BIG6 are the variable defined in Table 1

EXP and BIG6 are control variables.

Model 2

$$ISA540 = \beta_0 + \beta_1 RISQ + \beta_2 EST\_VAL + \beta_3 EXP + \beta_4 BIG6 + \varepsilon_{i,t} \quad (2)$$

Where

ISA540, RISQ, EST_VAL, EXP and BIG6 are the variable defined in Table 1

EXP and BIG6 are control variables.

Table 2: Descriptive Statistics of the Sample Characteristics

	Variable	Modality	Frequency	Percentage
Sample Characteristics	AGE	[20 – 30]	16	30.8%
		[30 – 40]	30	57.7%
		[40 – 50]	4	7.7%
		>= 50	2	3.8%
	GENDER	Male	41	78.8%
		Female	11	21.2%
	EXP	=< 10	36	69.2%
		[11 - 20]	14	26.9
		>= 21	2	3.8
	BIG6	Yes (1)	19	36.5%
		No (0)	33	63.5
Dependent Variables	JV-QD	Yes (1)	19	36.5%
		No (0)	33	63.5%
	ISA540	Yes (1)	41	78.8%
		No (0)	11	21.2%
Independent Variables	COMP	1	0	0.0%
		2	12	23.1%
		3	10	19.2%
		4	23	44.2%
		5	7	13.5%
	MANQ	1	9	17.3%
		2	4	7.7%
		3	15	28.8%
		4	18	34.6%
		5	6	11.5%
	AB_M_A	1	2	3.8%
		2	6	11.5%
		3	10	19.2%
		4	20	38.5%
		5	14	26.9%
	AB_CI	1	7	13.5%
		2	8	15.4%
		3	6	11.5%
		4	16	30.8%
		5	15	28.8%
	POTEN	1	2	3.8%
		2	4	7.7%
		3	13	25.0%
		4	15	28.8%
		5	18	34.6%
	RISQ	1	5	9.6%
		2	6	11.5%
		3	19	36.5%
		4	13	25.0%
		5	9	17.3%
	EST_VAL	1	1	1.9%
		2	9	17.3%
		3	23	44.2%
		4	14	26.9%
		5	5	9.6%

This table shows the descriptive statistics of the sample for each variable. These statistics are, the modality, the frequency and the percentage for each variable

RESULTS

After verifying the absence of outliers that can skew our statistics and the absence of multicollinearity between the independent variables that are introduced in our regression models, we tested the significance of the coefficients assigned to our variables based on the Wald test. Then, we examined the adequacy and classification of our empirical models.

Model 1: Impact of Fair Value Audit Challenges on Audit Quality

Table 3 presents the logistic regression estimates of Model 1. Wald statistics measures the statistical significance of each regression coefficient. The null hypothesis of this test H_0, states that the independent variables have no impact on the dependent variable. We accept H_0 if the significance of the Wald statistic is greater than the significance level of 0.05. So, we can conclude from Table 3 that the independent variables (COMP, MANQ, AB_M_A, AB_CI and POTEN) have no impact on audit quality. Thus, hypothesis H1a, H1b, H1c, H1d and H1e are rejected. Therefore, the complexity of fair value measures (H1a); the potential bias of managers (H1b); the lack of technical knowledge on the fair value measurements (H1c); the absence of an active market (H1d) and the absence of specific internal control to fair value measurement (H1e) have no negative impact on the quality of audit. From Table 3, we can conclude that the model 1 for measuring the impact of fair value audit challenges on audit quality can be written as follow:

$$JV - QD = .248COMP - .073MANQ + .287AB_{M_A}.183AB_{CI}.012POTEN + 1.391EXP + .203BIG6 - 5.001 \quad (3)$$

Table 3: Logistic Regression Parameter Estimates for Model 1

	B	Std. Error	Wald	Df	Sig.	Exp(B)
Intercept	-5.001	2.039	6.017	1	0.014**	0.007
COMP	0.248	0.404	0.378	1	0.539*	1.282
MANQ	-0.073	0.277	0.069	1	0.793*	0.930
AB_M_A	0.287	0.347	0.684	1	0.408*	1.332
AB_CI	0.183	0.290	0.396	1	0.529*	1.200
POTEN	0.012	0.333	0.001	1	0.971*	1.012
EXP	1.391	0.639	4.747	1	0.029**	4.020
BIG6	0.203	0.702	0.083	1	0.773*	1.225

*Nagelkerke's pseudo-R^2: 0.610 Significant at: *1%, **5% and ***10% This table shows the logistic regression estimates of Model 1. Wald statistics measures the statistical significance of each regression coefficient. From this table, we can conclude that the independent variables (COMP, MANQ, AB_M_A, AB_CI and POTEN) have no impact on audit quality*

Table 4 (Model 1) measures how well the model can predict the dependent variable based on the independent variables. The percentage of correct classification for affirming that fair value has a negative impact on audit quality is 68.4% and for infirming it is 93.4%. The Overall Percentage classification rate is 84.6%, which is considered as a good classification rate as well as a good predictive power.

Table 4: Classification Rate

Model 1				Model 2			
Observed	Predicted			Observed	Predicted		
	Yes	No	% Correct		Yes	No	% Correct
Yes	13	6	68.4%	Yes	36	5	87.8%
No	2	31	93.4%	No	5	6	54.5%
Overall Percentage			84.6%	Overall Percentage			80.8%

This table measures how well the model can predict the dependent variable based on the independent variables. It is used for Model 1 and 2.

The Nagelkerke's pseudo-R^2, which measures the explanatory power of the model, has a value of 0.610. This means that 61% of the variation of the dependent variable is explained by the model. Hosmer-Lemeshow's test measures the goodness of fit of a model. Table 5 shows that model 1 fits well with the data. In fact, we accept the hypothesis (H_0) that the model is well adjusted since the value χ^2 is equal to 8.488 and is significant.

Table 5: Hosmer and Lemeshow Test

Model 1				Model 2			
Step	**Chi-square**	**Df**	**Sig.**	**Step**	**Chi-square**	**Df**	**Sig.**
1	8.488	8	0.387**	1	7.812	8	0.452*

*Significant at: *1%, **5% and ***10% This table shows that both models (1 and 2) fits well with the data*

Model 2: Impact of Failures in ISA 540 on Its Role In Mitigating Fair Value Audit Challenges

Table 6 presents the logistic regression estimates for Model 2. As mentioned earlier, Wald statistics measures the statistical significance of each regression coefficient. The null hypothesis of this test H_0 states that the independent variables have no negative impact on the dependent variable. We accept H_0 if the significance of the Wald statistic is greater than the significance level of 0.05. So, we can conclude from Table 6 that the independent variables (RISQ and EST_VAL) have no negative impact on the role of ISA 540 in mitigation fair value audit challenges. This explains that 88.5% of the respondents think that ISA 540 makes a positive contribution to the quality of audit, 11.5% think otherwise. Thus, hypothesis H2a and H2b are rejected. Therefore, failures of audit risk procedures in ISA 540 and the lack of guidelines for equally valid assumptions in ISA 540 have no negative impact on its role in mitigating fair value audit challenges and in its role in mitigating fair value audit challenges.

Table 6: Logistic Regression Parameter Estimates for Model 2

	B	**Std. Error**	**Wald**	**df**	**Sig.**	**Exp(B)**
Intercept	2.479	2.037	1.481	1	0.224*	11.925
RISQ	-0.107	0.412	0.068	1	0.794*	0.898
EST_VAL	-0.724	0.533	1.847	1	0.174*	0.485
EXP	1.485	1.088	1.865	1	0.172*	4.416
BIG6	-0.316	0.793	0.159	1	0.690*	0.729

*Nagelkerke's pseudo-R2: 0.382 Significant at: *1%, **5% and ***10% This table presents the logistic regression estimates for Model 2. Wald statistics measures the statistical significance of each regression coefficient. From this table, we can conclude that the independent variables (RISQ and EST_VAL) have no negative impact on the role of ISA 540 in mitigation fair value audit challenges.*

From Table 6, we can conclude that the model 2 for measuring the impact of failures of ISA 540 in its role in mitigating the challenges of audit related to fair value measurements can be written as follow:

$$ISA540 = -.107RISQ - .724EST_{VAL} + 1.485EXP - .316BIG6 + 2.479 \quad (4)$$

Table 4 (Model 2) measures how well the model can predict the dependent variable based on the independent variables. The percentage of correct classification for affirming that fair value has a negative impact on audit quality is 54.5% and for infirming it is 87.8%. The Overall Percentage classification rate is 80.8%, which is considered as a good classification rate as well as a good predictive power. The Nagelkerke's pseudo-R^2, which measures the explanatory power of the model, has a value of 0.382. This means that 38% of the variation of the dependent variable is explained by the model. Hosmer-Lemeshow's test measures the goodness of fit of a model. Table 5 shows that model 2 fits well the data. In fact, we accept the hypothesis (H_0) that the model is well adjusted since the value χ^2 is equal to 7.812 and is significant. The objective of this work is to collect the TCPAs views on the impact of the adoption of IFRS, particularly, the impact of the fair value measurements on the quality of audit as well as the

impact of the contribution of ISA 540 on the quality of audit. The results of our statistical analysis show that, according to TCPAs, the five challenges of auditing fair value measurements, namely, the complexity of fair value measures; the potential bias of managers; the lack of technical knowledge on the fair value measurements; the absence of an active market and the absence of specific internal control to fair value measurement have no negative impact on the quality of audit. In other words, according to the TCPAs, the benefits of the fair value outweigh its disadvantages. In addition, the ISA 540 gives auditor all the necessary tools to face the challenges of auditing at fair value. However, it seems that there are convergence issues in Tunisia with this standard.

CONCLUSION

This research aims to test the impact of fair value audit challenges on audit quality and the impact of failures in ISA 540 on its role in mitigating fair value audit challenges in the Tunisian context. For our research, we selected a sample of Tunisian Certified Public Accountants (TCPAs), referred here as external auditors. Our questionnaire was realized in 2014 and had two steps. A pre-exploratory survey was conducted among some TCPAs belonging to our sample to adapt different questions to the Tunisian context and improve the measure scales. The second phase consists of the distribution of the final questionnaire by email and via social networks such as Facebook and LinkedIn. We sent 110 questionnaires, we received 59 responses and after excluding incomplete responses, we retained 52 responses. The result of our study shows that, according to the auditors interviewed, no fair value audit challenge has a negative effect on audit quality. One can speculate that fair value is perceived as engendering technical difficulties for auditors. However, it is seen as an essential feature and its advantages overcome its disadvantages.

These results are consistent with those of Kumarasiri & Fisher (2011). In fact, they found that Sri Lankan auditors perceive fair value as an essential feature, allowing managers to select the models that best suit their business despite the lack of an active market and the lack of experience as well as the additional audit fees involved in the context of developing countries. This study shows also that according to the auditors interviewed, no fair value audit challenge has a negative effect on audit quality. In fact, 53.8% of the respondents think that it is appropriate to introduce the standards of fair value in Tunisia, against 46.2% who think the opposite. Based on our statistical analysis, the failures of risk assessment procedures and the lack of guidelines for equally valid estimates in ISA 540 have no negative impact on the role played by this standard in mitigating audit challenges in fair value. 78.8% of the respondents believe that ISA 540 plays a significant role in mitigating fair value audit challenges. Only 21.2% believe that this role is not sufficient. This explains why 88.5% of our respondents think that the ISA 540 makes a positive contribution to audit quality, while 11.5% think the opposite. The present research can be extended to identify challenges and obstacles that prevent Tunisian Certified Public Accounts (TCPAs) to comply with ISA 540 specifically, and with international auditing standards generally. In addition, it will be interesting to identify the political and economic factors that may influence how fair value is measured and disclosed in the financial statements in the Tunisian context.

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