

## Assessment of Financial Information Quality: Evidence from Tunisian Context

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**ABSTRACT:** The present paper aims at assessing the financial information quality within Tunisian firms. We analyzed a sample annual data of 78 financial and non-financial Tunisian listed companies. We use the level of discretionary accruals and if the firm restate its financial statement or not as proxies of financial information quality. Our main results show that the financial information quality is globally low. We note a high level of discretionary accruals within financial firms compared to non-financial firms. We also find that financial firms are less likely to restate their financial statements compared to those of non-financial firms.

**KEYWORDS:** financial information quality, discretionary accruals, restatement

### I. INTRODUCTION

After a wave of financial scandals, that hit companies in across the world (Enron, 2002 in USA; Batam, 2003 in Tunisia). A multitude of regulatory reforms and good governance practices have been produced, in order to restore lost confidence on the quality of published financial information. The financial information quality (FIQ) was a concept that had been widely treated from a normative point of view, and widely operationalized in academic work (Garcia-Teruel et al., 2009; Saltério, 2014). Sbeai et al., (2014) note that research on the financial information quality was the consequence of opportunistic management results and the loss of confidence on this information.

Accordingly, Dechow and Schrand (2004) define the quality of financial information as: "The extent to which accounting information reflects the possibility of its immediate use by the company, useful in predicting future performance and assists the company in its estimates." We can point out that the definition of the financial information quality has evolved mainly with the needs of users and economic circumstances (Gomez, 1994). At the level of academic literature, several nominations have been used in order to conceptualize and operationalize the quality of financial information. Indeed, some papers indicate a good quality while others indicate a poor quality of financial information. Among these terminologies we can cite as an example the quality of financial statements (Vlaminck et al., 2015); the quality of management (Malik, 2014; Lin et al., 2015); earning management (Bhattachary et al., 2003; Francis et al., 2004 in Saltério, 2014); (Garcia et al., 2012);

restatements of financial statements (Abbott et al., 2004; Lary et al., 2012); quality of financial information and quality of accounting information (Garcia-Teruel et al., 2009 in Saltério, 2014). Many papers argue that firms after the instauration of governance mechanism are less likely to restate their financial statement (Goh 2002; Zhang et al., 2007) or to undergo management fraud (Davidson et al., 2005; Baxter et Cotter, 2009). Indeed, the role of corporate governance structures lies in their ability to resolve conflicts of interests between managers and shareholders. Krishnan (2005) note that independence and expertise of audit committee are linked to allow the probability of disclosing an anomaly. Bozec (2007) argue that the establishment of an audit committee leads to a reduction in earning management.

Most of the prior studies are limited to specific sectors (bank sector, industry) and the accruals as measure (Fodio et al., 2013; Vlaminck and Sarens, 2015). Moreover, we notice that literature is characterized by the lack of works treating the restatement as proxy of this quality.

There are two reasons that motivate this paper. First, the lack of research on (FIQ) within Tunisian firms specially after a multitude of reforms on governance mechanisms (Law 2001 of and law 2005 of financial security) which require the establishment of an audit committee. We tried to assess this quality after 11 years of instauration of this structure. Therefore, it is important to know if firms have been able to avoid restatement of their financial statement or financial fraud after these governance enforcements. Second, this research aimed to compare this quality by sector of activity, namely the financial and non-financial sector.

Many papers studied this concept by using a multitude of measure earning management (Dechow et al., 2010; Garcia et al., 2012); published disputes (Lin et al., 2006); restatement (Abbott et al., 2000; Krishnan, 2005); quality of accounting profits disclosed, market performance (Zarai et Bettabai, 2007, Francis et al., 2004).

Our paper extends the accounting literature. First, by studying a comparison between financial and non-financial firms. Second, using two proxies of FIQ namely earning management and restatement of financial statement. The latter is not very explored within Tunisian context.

This paper is structured as follows. Section two presents the literature reviews. Section three reports data and measure of variables. Section four provide results and main discussion.

## II. LITERATURE REVIEW

The determinants of the FIQ represent the characteristics that financial information must have which are relevance, reliability, comparability and intelligibility. The operationalization of this quality focused essentially on reliability and relevance which represent the two essential characteristics of financial information used by researchers in their academic work. Prior studies show two approaches of research assessing the FIQ. The first one is the observable approach. According to this approach, financial information is classified as poor quality. Francis et al. (2004); He et al., (2007, 2009) and Gaio (2010) measured this quality by disclosed fraud and accounting errors. Abbott et al. (2000); Beasley et al. (2000), used disclosed financial statement corrections as a proxy. While Abbott et al., (2000); Lin et al., (2006) measure the quality of financial information by published disputes between directors and investors. Indeed, these measures represent the most reported observable acts in relation to the quality of financial information.

The second approach consists on non-observable approach. It demonstrates how manager can manipulate results. Accounting adjustments and manipulations represent the most determining act of informational asymmetry between management and users of financial information. Thus, earnings management is the best strategy adopted by managers (Lin et al., 2012)

In this paper, we chose to operationalize the financial information quality within Tunisian companies in terms of its reliability. We use for this the observable approach through restatement of financial statements and the unobservable approach via opportunistic earnings management. The choice is explained by the fact that the assessment of this quality in terms of its reliability is easier than in terms of its relevance. The latter requires a study over years (time series) while our work is based on a questionnaire formulated and distributed over a single year 2015. On the other hand, the choice of the two proxies is motivated by the likelihood of determining these two measures in the Tunisian context. We note that papers studying abnormal accruals, in Tunisian context, are

interest only to industrial and service sector (Elleuch, 2008) and rarely on companies belonging to the financial sector, specifically banks.

### II.1. Observable approach of FIQ measure

This approach consists on information disclosed by the firm. Indeed, restatement, our proxy of FIQ represents public recognition of the existence of errors, fraud and/or omissions in previously published financial statements. These errors may be noted by the company or the auditors after disclosure. It consists of making corrections to accounting errors in the financial statements and reissued to users. This form is considered to be bad news (Palmrose et al., 2004). We notice that studies on restatement are scarce such as Lary et al., (2012) and Chung et al., (2014). The need to restate financial data can result from either accounting errors, non-compliance with generally accepted accounting principles (GAAP), fraud (manipulation of accounting methods and practices by managers), misrepresentation, changes in the entity (type of ownership or the structure of the company during the year) or a simple error (Eilifsen and Messier, 2000). The materiality of the error is reported if the error distorts user decisionmaking. Financial information is therefore unreliable. Under GAAP, there are two conditions that trigger the restatement of financial statements, namely, changes in accounting principles and accounting errors. Five situations involving changes in accounting policies: a change in the valuation of LIFO stocks to another method; a change in the method of accounting for long-term construction type contracts; a change in the full cost method of accounting in extractive industries; the publication of financial statements for the first time in order to raise additional capital, to carry out a business combination or to register securities; and/or a new accounting statement recommends a change in accounting policy to be treated retroactively. Accounting errors are treated as prior-year adjustments, so the comparative financial statements have been restated. In other words, errors include mathematical errors, misunderstandings, changes in accounting principles that are not in accordance with GAAP, changes in estimation and misclassification.

### II.2. Non observable approach of FIQ measure

Earning management has been widely used as a measure of financial information quality in the accounting literature. It consists in acting on the company's result, since the accounting result is formed by two components, namely the sum of cash flows and accruals. This measure is manifested through the choice of accounting methods or their application (depreciation charges, provisions and withdrawals, adjustments of expenses and income, etc.). Studies on earning management focus on distinguishing between the discretionary part of the accruals and the non-discretionary part (Healy, 1985; Jones, 1999; Garcia et al., 2012; Lin et al., 2015). This form represents the accounting manipulation the

most difficult to detect by investors, given the impossibility of distinguishing between a decision and the attempt at accounting manipulation (Schipper, 1989). A high level of abnormal accruals indicates a low quality of financial information (Francis et al., 2005).

There are several definitions of earning management. It is a “deliberate intervention in the process of developing financial information for personal gain.” (Schipper, 1989). According to Wirtz (2002), earning management means "the use of discretionary spaces not affected by accounting standards in order to modify results". Miltra and Rodrigue (2002) pointed out that results management reflects opportunistic manipulation of accounts for personal interests. Healy (1985) is the first to use discretionary accruals as an indicator of results management and defines it as "all accounting adjustments to the company's cash flows allowed by the standard-setting bodies".

Papers In the Tunisian context using earning management as proxy of FIQ, separate between non-financial firms from those of financial firms (Elleuch and Boulila, 2009). This separation is explained by the specificity of the earning management treatment. Financial sector which is characterized by accounting methods and techniques such as prudential rules (Beatty et al., 1995; Ahmed et al., 1999). Other researchers are interest in analysing this quality within non-financial Tunisian firms (Bouzaizi and Triki, 2012).

Literature demonstrates the existence of several models that have been developed, in order to operationalize earning management. The most known are those of Healy (1985), DeAngelo (1986), Dechow and Sloan (1991), and the famous Jones model (1991), the Jones model modified by Dechow et al., (1995) and which is subsequently modified by Kothari et al., (2005). Indeed, the use of these estimation models allows the extraction of the discretionary fraction of accruals from total accruals.

**III. SAMPLE SELECTION AND VARIABLES MEASURES**

First, we present our sample and method of data collection. Second, we describe the measurement of our variables.

**Table 1. Descriptive statistics of restatement**

Restatement variable	Total Sample	Financial firms	Non financial firms
<b>Number</b>	42 (restated) 19 (non restated)	20 (restated) 10 (non restated)	22 (restated) 09 (non restated)
<b>Proportion</b>	0,3114 (non restated) 0 ,6885 (restated)	0,3333 (non restated) 0,6666 (restated)	0,290(non restated) 0,7096 (restated)
<b>OB</b>	<b>61</b>	<b>30</b>	<b>31</b>

The table show that 68.85% of the total sample (61 companies) restate their financial statements. 66% of

**III.1. Sample selection**

In order to assess FI Q of Tunisian firms after the establishment of audit committee. We choose to study two proxies which are restatement of financial statement and discretionary accruals.

Therefore, we distinguishing between financial and non-financial firms. Then we use (78) Tunisian financial and non-financial listed companies for the year 2015. In other word after 11 years of the establishment of an audit committee within Tunisian companies. However, there were 61 companies who’s responded to our questionnaire. Our dependent variable "restatement" is collected from the questionnaire. In addition, our second dependent variable is retired from the financial statements available on the webmaster of the Financial Market Council (CMF).

**III.2. Measures of variables**

We present the financial information quality proxies and their measurement namely earning management and restatement

**III.2.1. Restatement: frequency and typology:** Restatements of financial statements represent a sign of poor financial information. This is a dichotomous variable that takes the value 1 if the company had undergone a restatement of these financial statements; 0 otherwise (Abbott et al., 2004; Ika and Ghazali, 2012). This measure is derived from our questionnaire distributed within financial and non-financial Tunisian firms. We also ask within the questionnaire the nature of the restatement in other word the type of errors made.

**III.2.2. Earning management**

In our paper we try to identify our discretionary accruals. The value of the discretionary accruals which will be our proxy for earnings management will be the difference between the discretionary accruals generated from the first model (M1) of Jones model modified by Dechow et al., (1995) (M1), then from the same model adjusted by the ROA by Kothari et al., (2005) (M2).

**IV. RESULTS AND DISCUSSION**

**IV.1. Descriptive statistics of restatement:** Table 1 represents the number of firms which restate their financial statement.

financial companies versus 70% of non-financial firms. We conclude that financial firms have more rigid regulation and

a higher level of supervision. Therefore, they are less likely to restate their financial statements compared to those of non-financial sector. This result is explained by the importance of external audit monitoring (Big4) and internal control bodies (audit committees, administration, risk committees).

Table 2 envisages the restatement frequency of each company and the nature of these restatements, that is to say the type of errors committed. The results are presented as follow.

**Table 2. Restatement frequency**

Variables	Financial firms			Non financial firms		
	FDA		Differences DA of the two models	NFDA		Differences DA of the two models
	Jonesamended par Dechow et al., (M1) FDA1	Jones amended by Kothari et al., (M2) ADF2	FDA2-Fda1	Jones amended by Dechow et al.,(M1) NFDA1	Jonesamended by Kothari et al.,(M2) NFDA2	NFDA2-NFDA1
MOY	0, 3391	1,3044	0 ,965	1,330	1,348	-2,40
MIN	-3,319	0,5727	-0, 189	0,3313	0,179	-0,151
MAX	0,8613	5,947	0,9182	5,297	5,299	0,539
MED			0,0108			-0,0320
OB	<b>30</b>			<b>31</b>		

We notice that the majority of respondents did not answer the questions related to the nature of the corrections made within their companies as well as the frequency of these restatements either for the financial or non-financial firms. Financial firms restate their financial statement for maximum two times and (08) non-financial firms with a maximum of (04) times.

Regarding the variable nature of the adjustments made. Only (07) companies responded and all of the responses report that restatements concern correcting accounting policy methods or errors in estimates.

**IV.2. Descriptive statistics of earning management** We used “discretionary accruals” as a proxy for measuring earnings management. We calculate it through two ways, according to the first Jones model modified by Dechow et al., (1995) (M1) and the second model proposed by Kothari et al., (2005) (M2). Indeed, we will present our results separately (financial and non-financial firms).

Then, we will deduce discretionary accruals for the financial sector (FDA) and discretionary accruals for the non-financial sector (NFDA). The error terms of the regressions of our models represent an estimate of discretionary accruals

**Table 3. Descriptive statistics of discretionary accruals**

Variables	Total Sample	Financial firms	Non-financial firms
<b>Frequency</b>	1 time 2 times 3 times	1 time 2 times	1 time 2 times 3 times
<b>Proportion</b>	0,363 (1 time) 0 ,545 (2 times) 0,090 (4 times)	0,666 (1 time) 0,333(2 times)	0,25 (1 time) 0,625 (2 times) 0, 125 (4 times)
<b>OB</b>	<b>11</b>	<b>03</b>	<b>08</b>

Table 3 shows that on average the difference in discretionary accruals of the two models within companies within financial sector are positive (0.965) with a median of (0.0108) and a minimum of (-0.18) and a maximum of (0.918) while those of companies in the non-financial sector are negatively lower with (-2.40) with amedian of (-0.0320) and a minimum of (-0.151) and a maximum of (0.539). This result highlights a high level of discretionary increases in the financial sector compared to the non-financial firms. This result is consistent with paper of Elleuch and Boulila (2009) which note the

existence of a high-level of earning management within Tunisian banks during the period of (2005-2007).

**IV.3. Multivariate analysis**

We present the results obtained from the estimation of the regression model of this variable in table 4. Our approach consists in determining the “Accruals” coming from the regression of the Jones model modified by Dechow et al., (1995). Then we calculated the accruals from the second model modified by Kothari et al., (2005).



**Table 4. Estimation of regression models**

	Jones model modified by Kothari et al., (1995)				Jones model modified by Dechow et al., (1995)			
	Financial firms		Non financialfirms		Financial firms		Non financialfirms	
	Coef	sig P>  z )	Coef	sig ( P>  z )	Coef	sig P>  z )	Coef	sig ( P>  z )
1/assets-1	-4707955	0,445	4230418	0,642	-3704798	0,538	-3243917	0,042**
TURNOVER-VCRE/ Assets-1	-40,840	0,000***	-0,0001484	1,000	-41,762	0,000***	-0,0565732	0,902
IMMOB/ Assets-1	44,795	0,217	1,007791	0,000***	36,796	0,291	0,9770755	0,000***
ROA/ Assets-1	3,19	0,373	-3,53	0,407				
Const	0,8276	0,645	0,6872578	0,014***	1,165	0,506	0,8203884	0,001***
F( 4, 25)	4,66		8,29		5936.36		10,94	
Prob > F	0,0000		0,0002		0.0000		0,0001	
R-squared (R <sup>2</sup> )	0,9986		0,5606		0,9985		0,5486	
OB	30		31		5936.36		10,94	

The results of the Jones model modified by Kothari (2005) regression indicate a high explanatory power for the financial firms with an R<sup>2</sup> which reaches (0.9986) almost the same which means a high explanatory power of were, the acceptance of the correct specification of the data. The result shows that the variable "difference between turnover and receivables" is significantly negative at around 1% (0.000). While the asset, and the performance of the company are not significant but show positive signs. As for the non-financial firms, the coefficient of determination of the model is low with (0.5486) compared to that of the financial pears. On the other hand, the constant of the model presents a very significant p-value at around 1% (0.017), which indicated the credibility of the model (2). the fixed assets variable and the model constant have a significant positive effect of the order of 1% (0.000) and (0.001) respectively. The findings relate to the two regression models measuring the level of earnings management within Tunisian companies notice that financial firms which are considered to be a highly within financial sector compared to the non-financial pears

The results relating to the estimation of the Jones model modified by Dechow et al., (1995) indicate that the explanatory power of the model (M1) is higher (adjusted R<sup>2</sup> = 99.85%) within financial firms than those of non-financial pears (adjusted R<sup>2</sup> = 54.8%). The displayed Fischer test also shows that the model (M1) for financial companies is significantly superior to that for the non-financial companies. The inverse of the asset of the previous year has a negative sign with total accruals. This result indicates the existence of a high level of discretionary accruals within financial firms which is consistent with the study of Elleuch and Boulila, (2009) which report that the majority of Tunisian banks, after the economic recession in (2002), resort to the practice of managing results through the manipulation of provisions. The detection of a higher level of earning management within financial companies can be explained by the specificity of

these companies. (Lambert, 1984). This type of earnings management is based on provisions, bad debts and the formulation of certain ratios such as Price Earnings Ratio (P / E), return on equity (ROE), return on assets (ROA) (Shabou and Taktak, 2002) report that earnings management in Tunisian companies increases with increasing levels of indebtedness. This observation is consistent with that reported by Ben Othman and Zéghal (2006). They find that managers manipulate result in the presence of a high debt ratio, for French and Tunisian companies. Indeed, Elleuch (2006) suggest that the manipulation of results within Tunisian companies was explained by the specificity of the Tunisian economic fabric which is mainly made up of small and medium-sized companies, often family owned or working in collaboration with European companies. This field encourages leaders to manipulate results in order to achieve their goals.

**V. CONCLUSIONS**

Financial information quality is considered the key for decision makers. Garcia – Teruel et al., (2009) point out that the FIQ has an important role in reducing information asymmetry between managers and investors and Biddle *et al.*, (2009) report that it helps to attract new investors and minimize underinvestment. Moreover, researches find evidence that producing financial information for users is not easy face to several problems hindering this quality. We use for these 61 Tunisian companies; we find that financial Tunisian companies seem to have a higher level of opportunistic earning management (banking and insurance) against a lower level of restatements compared to those of non-financial pears. However, we notice that non-financial firms suffer the most from restatements of their financial can be explained by the influence of other factors related to the company, namely the quality of the external audit. Indeed, companies with high restatement frequencies have high levels

of external audit control. They were subject to high quality controls and further recommendations from external auditors (Big4). These was expected to be of high quality and equipped with the skills to detect estimation errors, omissions and fraud. Eventually, the two proxies of the financial information quality present two different observations which can be explained by several factors such as the typology of accounting manipulations within the credit institutions, and the role of the external auditors in detecting accounting errors. These was explained by the fact that companies in the regulated sector are characterized by high levels of earnings management (Elleuch and Boulila, 2009) either through the change of accounting methods (accounting management of income) or through decisions. Indeed, the detection of errors within non-financial companies can be explained by the non-regulation of the sector, hence the absence of control mechanisms and detection of weaknesses in their internal control systems.

We can thus conclude that the quality of financial information within Tunisian companies is lower either within financial companies or non-financial pears. Moreover, testing if governance structure can reduce restatement of financial statement will be very important especially typology of these restatements.

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