

## AUDIT QUALITY AND REAL EARNINGS MANAGEMENT: EVIDENCE FROM TUNISIAN BANKS

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### ABSTRACT

*The beginning of the 21<sup>st</sup> century was marked by a multitude of financial scandals, notably the Enron affair in 2001 and the fall of the auditing firm Arthur Andersen (2002). Such scandals have called into question of the financial reporting quality. The main cause of these scandals was the failure of the external audit quality which is considered crucial to ensure the reliability and relevance of accounting information. Moreover, following the promulgation of the SOX law (2002), managers tend rather towards the real activities manipulation to avoid the detection of the accounting earnings management. In fact, managers can resort to certain adjustments whose opportunistic or optimal nature is difficult to discern by auditors, in particular the reduction in selling prices, the granting of more lenient credit terms, overproduction and the reduction or postponement of research and development (R&D) and advertising expenditure. This study therefore aims to show the role that external audit quality can play in limiting real activities manipulation and therefore in the quality of accounting information. For this, we conducted an empirical study with a sample of the main Tunisian commercial banks observed over a period from 2006 to 2019, using the panel data method. The results indicate that the presence of a reputable auditor limits real earnings management. However, the results show that the tenure of auditors increases these discretionary practices.*

**Keywords:** Real Earnings Management, Audit Reputation, Audit Tenure, Product on Equity Securities, Tunisian Commercial Banks.

**JEL Classification Codes:** M41, M42, G21.

### INTRODUCTION

The several financial scandals, in particular the 2001 Enron affair and the fall of the audit firm Arthur Andersen (2002) showcased the beginning of the twenty-first century. Such scandals called into question the quality of financial reporting. The main cause of these scandals was the failure of external audit

which is considered to be the most important mechanism for ensuring accounting information reliability and relevance. According to De Angelo (1981), there are two fundamental conditions for a high-quality external audit, namely independence and competence. The author defined external audit quality as the joint probability that the auditor will both discover fraud or irregularities in the client's financial statements (depends on the auditor's overall competence: their technological capabilities, their expertise level...),

In Tunisia, according to the code of Tunisian commercial companies, external audit is an obligation for companies. This code sets the operational conditions for external audit as well as its missions

Then, auditors intervene in companies and in particular banks in order to limit the opportunistic strategies of managers, and to avoid conflicts of interest between the different stakeholders while ensuring the relevance, reliability and credibility of financial statements. The establishment of an audit system in banks is therefore essential to mend for information asymmetry problems, which are more pronounced in banks than in other firms, reduce agency costs and limit the opportunistic strategies of bank managers and subsequently their discretionary practices.

In fact, because of the succession of accounting scandals and following the enactment of the SOX law, managers tend rather towards real earnings management practices to avoid detection of accounting earnings management (Graham et al., 2005, Cohen et al., 2007; Cohen & Zarowin, 2010). Indeed, real earnings management denotes "... management actions which deviate from normal business practices, undertaken with the main objective of reaching certain income thresholds" (Roychowdhury, 2006). Thus, managers can make use of certain adjustments whose opportunistic or optimal nature is difficult to distinguish by auditors, in particular the reduction of selling prices, and the adoption of more lenient credit conditions.

It is for all these reasons that this study focuses on the ability of a quality external auditor to limit real earnings management in banks. Our aim is therefore to specifically understand the effect of external audit quality on real earnings management in Tunisian banks.

## LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Bédard et al. (2008) define auditing as "a service purchased by companies in order to improve the credibility of their financial statements". Referring to agency theory, Fan and Wong (2005) assert that external audit has long been considered a full-fledged governance mechanism with information and control missions in order to regulate relationships between the different stakeholders of a company. In the same vein, Charreaux (1997) considers external audit as one of the governance mechanisms whose mission is to resolve agency problems between the different stakeholders of a company.

O'Sullivan and Diacon (1999) and Yeoh and Jubb (2001) define external audit as an important governance mechanism that participates and helps in ensuring the reliability and relevance of accounting data. It is a mechanism which serves to monitor the relationships between company partners. Similarly, Jensen and Meckling (1976) consider that external audit serves to bring the interests of managers closer to those of shareholders. Indeed, external audit can be used as a means of justification or obligation (bonding). Thus, to supervise and control managers (monitoring), shareholders and creditors oversee financial statements through an independent external auditor. According to Ormrod and Cleaver (1993), this helps to decrease managers' opportunistic behaviour.

However, some authors like Chemingui and Pigé (2004) and Hay et al. (2008), have criticized the effectiveness of this mechanism, grounding their argument on the many financial crises that have taken place over the past two decades and the fall of the largest audit firms (such as the Arthur Andersen network, etc.).

Indeed, since the study of De Angelo (1981), external audit quality has been found to depend on the quality of the external auditor. However, a review of the literature on this topic allowed us to identify two lines of research. The first considers that audit quality depends on the quality of the auditor (their independence and competence). The second, a more recent trend, tends to question this relationship between the auditor and auditing, by proposing a more direct approach to the assessment of audit quality.

In fact, the first so-called indirect approach is defended by several authors, including (De Angelo, 1981; Citron & Taffler, 1992, dit Hauret, 2003; Tong, 2006; Clickeman, 1998; dit Hauret, 2003, Knapp, 1991; Flint, 1988; Moizer, 1997; Krishnan, 2002; Citron & Taffler, 1992) According to De Angelo (1981), audit quality is defined as the joint probability that the auditor will both discover fraud or irregularities in the client's financial statements (depends on the auditor's overall competence: their technological capabilities, expertise level, etc.), and disclose to the market any fraud or irregularities that it has discovered (depends on the level of professional ethics and its independence vis-à-vis its client). Flint (1988) states that an audit is good when the auditor is honest, on the one hand, and technically and professionally competent on the other. Two essential criteria are thus identified for the evaluation of external auditor quality, namely: independence and competence. However, the latest financial and accounting scandals (Enron, Worldcom, & Parmalat, etc.) which took place both in the United States and in Europe and the bankruptcy of one of the auditing giants, Arthur Andersen, have shown the inadequacy of these two conditions alone to understand audit quality. These scandals disrupted our understanding of the conception of audit quality, which hitherto relied on indicators exogenous to the audit process.

Therefore, drawing attention to adverse selection risks and dependence of managers, which can undermine auditor independence and competence, a new line of research on audit quality has just emerged. Several researchers (Hopkins, 1996; Behn., 1997; Mock & Wright, 1999, Carcello, 1992; Pigé, 2003; Brown 2005; Chemingui & Manita, 2005) consider that external auditor quality does not necessarily imply audit quality. On the other hand, the first approach has been criticized empirically because of the variability of the trends identified and their inability to predict audit quality (Fuerman, 2004).

As for the second direct approach, it attempts to assess audit quality by examining the different stages of the audit process (Knapp, 1991; & Pigé, 2003). This second trend highlights the complexity of audit work (Carcello, 1992; Pigé, 2003; Brown 2005; Chemingui & Manita, 2005). Then, this new approach takes into account other elements that may affect external audit quality, besides the quality of the auditor. Accordingly, because competence and independence of the external auditor face information asymmetry problems, then adverse selection and external auditor work may depend on managers. Therefore, external audit quality depends on each audited company. As a result, it is difficult to assess the competence and independence of the external auditor. Then, conflicts of interest encourage the external auditor (agent) to cheat the company (principal) on certain information in order to maximize its usefulness and improve its competitive level and / or its fees. In fact, the external auditor reveals problems of adverse selection when signing the contract (Watts & Zimmerman, 1985). This problem generates additional agency costs, thereby requiring better differentiated audit quality (Francis & Wilson, 1988; Copley et al., 1995; Abbott & Parker, 2000; Piot, 2001, Collis et al., 2004; Hay & Davis, 2004).

However, because of the difficulty of assessing the audit process opacity and the strong information asymmetry between the auditor and the market, this study has limited itself to explore audit quality pursuing the indirect approach. Indeed, competence and independence always remain fundamental prerequisites for the quality of the audit result.

Several indicators have been used in the literature to assess these two criteria. Of these, there are audit firm size, reputation, fees, its sectoral specialization, competition in the audit market, etc. This study retains two measures of external audit quality, namely reputation of external auditor, and term of office.

### **Reputation of Audit Firm**

The review of the literature shows that the reputation of the audit firm is related to membership in an international group (Defond, 1992). Henceforth, large companies, in particular banks, have recourse to audit firms with a good reputation, i.e. having the technical and material resources which allow them to minimize agency conflicts (Watts & Zimmerman, 1981, Francis & Wilson; 1988; Johnson & Lys, 1990; Firth & Smith, 1992).

According to Pittman and Fortin (2004), being a “Big 4” auditor improves accounting disclosure quality, reduces information asymmetry and uncertainty of business partners as well as managers' opportunistic behavior.

In fact, research on the impact of using a Big 4 firm on earnings accounting management is wide (Pittman & Fortin, 2004; Almarayeh et al, 2020). However, studies examining the effect of using a Big 4 firm on real earnings management are few (Kim & Park., 2014; Khanh & Khuong, 2018; Chowdhury & Eliwa 2021). Indeed, auditors do not have a dissuasive power over the use of real earnings management (Chi et al. 2011). They cannot easily distinguish between optimal management decisions (such as overproduction, lower research and development and advertising costs, lower selling prices) from opportunistic operational adjustments. In fact, auditors have neither the skills nor the power to detect possible real earnings management (Choi et al., 2016, 2018). Sometimes when companies opt for both accounting and real earnings management, auditors need more resources to detect real earnings management which complicates the reported accounting figures. Auditors are sometimes unable to distinguish between accounting manipulation and real manipulation. Several audits are thus necessary for auditors to detect real earnings management and reduce the complexity of the reported earnings, facilitating thus their detection of accounting earnings manipulation (Choi et al., 2018).

On the other hand, it is important to note that auditors tend to reduce real earnings management to deal with litigation risk because the simultaneous use of real earnings management and accounting earnings management by managers to increase share price may not have a positive lasting effect on the price of these shares. This may lead shareholders to assign the responsibility of accruals to companies and / or auditors. Consequently, it is therefore indisputable that real earnings management can give rise to litigation (Ibrahim et al., 2011; Choi et al., 2018), which prompts auditors to pay attention to real earnings management in order to minimize litigation risk.

In fact, and depending on this risk associated with the detection of real earnings management, auditors can opt either to preserve their clients or to resign (Kim & Park, 2014). However, resignation of auditors can be costly for the company since they are well adapted with its activities and its management, which limits the excessive use of real earnings management by companies. This therefore translates into the importance of the role that a quality auditor can play in mitigating real earnings management (Choi et al., 2018).

Nevertheless, empirical studies on the impact of auditor membership to a Big 4 group on real earnings management found mixed results. Indeed, Choi et al. (2018), in a transnational study covering 22 countries, found that belonging to Big 4 makes it possible to attenuate real earnings management. However, Cohen and Zarowin (2010) found that Big 4 firms push companies to engage in real earnings management with the aim of escaping the scrutiny of auditors of accounting earnings management. Likewise, Chi et al. (2011) show that auditor membership to Big 4 can limit accounting earnings management, which encourages managers to opt for real earnings management, although it is more expensive.

In a more recent study, Sitanggang et al. (2019) even found that audit quality measured by membership to Big 4 group is statistically insignificant and has no impact on real earnings management in a sample of British manufacturing companies. Khanh and Khuong (2018) in turn prove empirically that belonging to a big 4 group has no effect on real earnings management.

This study tests the effect of the reputation of the audit firm on earnings management of banks. Hence, our first hypothesis runs as follows:

*Hypothesis 1: the reputation of the audit firm has a negative effect on real earnings management of banks*

### **Term of Office or Rotation Rules**

In Tunisia, Article 13 bis of Law n ° 2005-96 of October 18, 2005, relative to the strengthening of the security of financial relationships, presumes that the auditor is appointed for a renewable period of three years. However, the number of successive mandates, taking into account the renewal, is regulated as follows:

- For business companies subject to the obligation to appoint an auditor registered on the Counsel of Chartered Accountants of Tunisia may not exceed three mandates,
- When the statutory auditor is a natural person, three mandates
- When the auditor is a chartered accounting firm with at least three chartered accountants registered on the Counsel of Chartered Accountants of Tunisia, five mandates. This is true on the condition of changing the auditor in charge of drafting the audit report and changing the team involved in the audit operation once, at least once, after three terms of office.

Application of these terms is fixed by decree. The provisions of the second paragraph of this Article apply to the renewal of mandates from January 1, 2009.

Mandate duration or rotation rules are among the factors that can influence independence of the external auditor (Carey & Simnett, 2006; Iyer & Rama, 2004). According to these authors, after a certain period, the auditor is no longer independent. However, they found no evidence showing that a long term of office diminishes auditor independence. Under this perspective, Knapp (1991) found that at the start of their career, auditors can detect anomalies more than at the end of their career.

As for studies on the relationship between term of office and real earnings management, they turn out to be limited in number. In fact, it was only after the imposition of the SOX law that managers turned to real earnings management in order to prevent a fall in accounting flexibility. In particular, Roychowdhury (2006) found that in order to respect the reference criteria of financial information and to avoid disclosure of annual losses, managers tend more towards real earnings management (discount on prices, overproduction, etc.). In this regard, Cohen and Zarowin (2010) found that the duration of an auditor's mandate positively correlates with real earnings management.

This study tests the effect of the auditor's mandate duration on real earnings management of banks. Hence, our second hypothesis is formulated as follows:

*Hypothesis II: A long term as an auditor is associated with higher levels of real earnings management.*

## RESEARCH METHODOLOGY

### Sample and Study Period

The aim of this study is to determine whether audit quality has an effect on real earnings management of banks. Therefore, we examine a sample of 10 Tunisian commercial (or deposit) banks which are listed on the Tunis Stock Exchange (BVMT). The other categories of banks (development, business and off-shore) were not retained because of their specificities, their small size and the clearer impact of external factors on them. The study period is 14 years stretching from 2006 to 2019. This gives us a panel of 140 observations. Financial data and governance data, in particular external audit, are collected from the banks' annual reports, and the APTBEF annual reports.

### The Model to estimate

A review of the literature has shown us that it is necessary to distinguish between selling equity securities and trading or investing securities. In addition, selling equity securities is often carried out by banks. In fact, it was at the beginning of the nineties with Bartov (1993) that studies on the estimation of the normal thresholds of products on sale of securities and subsequently on the estimation of abnormal excess levels started (Herrmann et al., 2003; Gunny, 2005; Zang, 2007). In fact, Schipper (1989) was among the first to define real earnings management and incorporated it into the notion of earnings management in general.

In this study, like Herrmann et al. (2003) and Zang (2007), we estimate the product on equity securities following a two-step approach. Our first model assumes that the level of discretionary product on equity securities depends on the level of sales of the asset (the value of products increases if banks increasingly sell their securities). Thus, the normal component of product on equity securities ( $NDPROD_{it}$ ) can be presented by the following equation:

$$NDPROD_{it} = \alpha_0 + \alpha_1 \frac{SALES_{it}}{TA_{it-1}} + \varepsilon_i \quad (1)$$

( $\alpha_0, \alpha_1$ : are the estimators of the coefficients of equation (1) on Panel data during the estimation period 2006-2019).

$$NDPROD_{it} = \hat{\alpha}_0 + \hat{\alpha}_1 \frac{SALES_{it}}{TA_{it-1}} \quad (2)$$

Discretionary products on equity securities (DPROD<sub>it</sub>) denote the residual of the estimate of equation (1). They are calculated as follows:

$$\frac{DPROD_{it}}{TA_{it-1}} = \hat{\varepsilon}_{it} = \frac{PROD_{it}}{TA_{it-1}} - [\hat{\alpha}_0 + \hat{\alpha}_1 \frac{SALES_{it}}{TA_{it-1}}] \quad (3)$$

$\hat{\varepsilon}_{it}$ : The residual of the equation which represents the discretionary component of products on the sale of securities of bank *i* in year *t*.

SALES<sub>it</sub>: The sale value of equity securities of bank *i* in year *t*

TA<sub>it</sub>: total assets of bank *i* in year *t*

The aim of this study is to state the effect of external audit quality on real earnings management of banks. The study therefore tests the effect of the different measures of audit quality on discretionary products calculated by the first model. We therefore develop the following model:

$$\frac{DPROD_{it}}{TA_{it-1}} = \beta_0 + \beta_1 REPUT_{it} + \beta_2 TENURE_{it} + \beta_3 LASSET_{it} + \beta_4 ROA_{it} + \beta_5 CAR_{it} + \varepsilon_i \quad (4)$$

### The study variables

The different variables and their measures are presented in Table 1 below:

Table 1. Variables measurement

Nature of variables	Variables	Measurement
<b>Dependent variables</b>	DPROD	Discretionary product on equity securities.
	NDPROD	Non-discretionary product on equity securities; income from the sale (capital gain - loss) of equity securities.
<b>Independent variables</b>		
External audit variable	TENURE	Number of consecutive years that the auditor has audited the bank.
	REPUT	Binary variable that takes '1' if the auditor is a member of the Big 4, and '0' otherwise.
Control variables	LASSET	Bank size, measured by the natural logarithm of the book value of the bank's total assets.
	ROA	Return on Assets = Net Profit / Total Assets.
	CAR	Capital ratio = Own funds / Total Assets.

## RESULTS AND DISCUSSIONS

### Descriptive statistics

The descriptive statistics of the variables are presented in Table 2 below.

Table 2. Descriptive statistics of the study variables

<i>Variable</i>	<i>Medium</i>	<i>Min</i>	<i>Max</i>	<i>Standard deviation.</i>	<i>Observation</i>
<i>PROD / TA</i>	.019036	.000013	.0966906	.0173715	140
<i>DPROD / TA</i>	.1340704	.000062	.4892164	.1210084	140
<i>TENURE</i>	3.75	0	10	2.42328334	140
<i>REPUT</i>	0.61428571	0	1	0.48851138	140

In the table above, income on the sale of securities is 1.90%, with a standard deviation of 1.73% indicating the low volatility of this variable. Discretionary income on the sale of securities is 13.4% on average with a minimum of 0.0062% and a maximum of 48.92%. The standard deviation is 12.10% indicating the low volatility of this variable. For external audit quality, the descriptive statistics show that the average tenure is 3.75 with a minimum of 0 and a maximum of 10. The standard deviation is 242% indicating the high volatility of the tenure variable. While reputation is 0.61 on average with a minimum value of 0 and a maximum value of 1, a standard deviation of 0.48% indicating an average volatility obtained within our sample.

### Results and Discussion

Table 3. Regression results of the estimate of the effect of audit quality on discretionary products on disposal of securities

	<i>Coefficient</i>	<i>Std. Err.</i>	<i>z</i>	<i>P&gt;  z </i>	<i>[95% Conf. Interval]</i>	
<i>TENURE</i>	.0072784	.0037742	1.93	0.056 *	-.0001912	.0147481
<i>REPUT</i>	-.0069421	.0030714	-2.26	0.026 **	-.0130207	-.0008635
<i>ROA</i>	-.2759353	.1224877	-2.25	0.026 **	-.5183537	-.0335168
<i>CAR</i>	.0157547	.0083736	1.88	0.062 *	-.0008176	.032327
<i>LASSET</i>	-.0352785	.0039132	-9.02	0.000 ***	-.0430232	-.0275337
<i>Const</i>	.4861721	.0484431	10.04	0.000 ***	.3902971	.582047

\*\*\*: significance at the 1% threshold, \*\* significance at the 5% threshold and \* significance at the 10% threshold

Examining the results presented in the table above, the reputation of the auditor shows a significant and negative relationship between this variable and real earnings management measured by discretionary products on the sale of securities. This allows us to confirm hypothesis H1. This result, being consistent with the postulates of agency theory, is consistent with that of Choi et al. (2018), who found that belonging to the Big 4 limits real earnings management. Our result is in line with the findings of Umar et al (2021). They proved that the risk of real earnings management decreases when firms are audited by BIG 4 auditors. However, this finding turns out to contrast that of Cohen and Zarowin (2010) and Chi et al. (2011) who found that Big 4 firms limit accounting flexibility of banks and push managers to opt for real earnings management, which is more difficult to distinguish from optimal business decisions. This result also contradicts those of Sitanggang et al. (2019) and Khanh and Khuong (2018) who empirically found no relationship between auditor membership to the Big 4 group and the practical of real earnings management.

As for the tenure, we found that it has a significant positive effect on discretionary product on equity securities. Our hypothesis H2 is therefore confirmed. This finding, which contrasts the postulates of agency theory that governance mechanisms, in particular audit, allow for a better control of financial information, is consistent with that of Cohen and Zarowin (2010) who found that the longer the auditor's term of office increases, the more likely it is that earnings will really be managed. This finding can be explained by the tendency of bank managers in our sample towards real earnings management, since accounting management is easier to detect by auditors (Roychowdhury, 2006, Graham et al., 2005, Cohen et al., 2007).

## CONCLUSION

Research on the relationship between governance mechanisms and earnings management has mainly focused on accounting earnings management. This study has the merit of focusing on a dimension that is much less studied in the literature, namely real earnings management of banks. Indeed, following the succession of accounting scandals, in recent years managers have increasingly made recourse to real earnings management as a substitute for accounting earnings management which is easier to detect. Studying the relationship between external audit quality and real earnings management in a sample of Tunisian banks observed during the 2006-2019 period, we reached several conclusions. First, Tunisian banks opt for real earnings management, in particular discretionary products on sale of securities. Second, reputation of audit firms, which represents an important factor of external audit quality, is found to have a disciplinary role in real earnings management of Tunisian banks. However, auditor tenure seems to accentuate the latter. Third, this study enriches the debate on the role of external audit quality in mitigating earnings management, and this by examining the real dimension of earnings management, which recently has started to attract the attention of researchers, following the accounting scandals that have taken place in recent decades.

Accordingly, this study thus draws some implications. First, auditor tenure should be reduced in order to increase auditor independence allowing them consequently to limit real earnings management. In addition, the banks included in our sample should continue to appoint auditors belonging to the Big 4 Group who prove to be more apt to limit real earnings management practices, although these latter are more difficult to detect than accounting earnings management.

Finally, like any study, ours has some limitations. Indeed, this study is limited to audit quality as measured by only two indicators. However, other indicators to measure audit quality, such as auditors' sector expertise, co-commissioning, etc. can shed more light on its disciplinary role in real earnings management. A second limitation relates to the measures of real earnings management. Indeed, our study was limited to discretionary products on sale of securities while other measures could be used to better reinforce the robustness of our empirical conclusions, in particular securitization.

## AUTHOR CONTRIBUTIONS

**Conceptualization:** Amina Zgarni

**Data Curation:** Amina Zgarni

**Formal Analysis:** Amina Zgarni

**Funding Acquisition:** Amina Zgarni

**Investigation:** Amina Zgarni

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### CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

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All authors contributed equally to the conception and design of the study.

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