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# Study of the Relationship between the Rotation of External Auditors and Audit Quality

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## Abstract

*Purpose - The objective of this research is to study the relationship between external auditor turnover and audit quality. To do this, we chose two measures of audit quality, namely discretionary accruals and the auditor's opinion. Design/ methodology/ approach - Using a sample of 37 Tunisian companies listed during the period from 2015 to 2021, the paper uses a logistic regression to investigate the association between the quality of the audit and the rotation of the auditors. Findings - The results obtained based on linear and logistic regression invalidate the two hypotheses which assume on the one hand that a long-term mandate negatively influences the quality of the audit, on the other hand the assumption that the rotation of the auditors has a positive impact on the quality of the audit. Contrary to what was expected in our research, the results of the logistic regression show that a long-term audit mandate has a positive effect on audit quality. Research limitations/ implications – This research may be of interest to many developing countries that has not a lot of studies on the audit turnover. Future research should focus on the link between audit turnover consequences to overcome the gap which might exist in the literature. Practical implications – Previous studies has shown how it is important to focus on audit opinion to reduce asymmetric information between managers and stockholders. And, this study offers some insights about audit shipping that should be analyzed to understand audit turnover. Originality/ value – This research highlights the role of audit opinion in the rotation of auditors in emerging markets. Consideration of this relationship may contribute to the understanding of the auditor turnover in developing countries.*

**Keywords:** *Auditor turnover; audit tenure; audit quality; opinion shopping.*

## Introduction

Accounting and financial information occupies a decisive place and always remains a final objective in any research, one of the measures to ensure the quality of the financial information produced by the financial statements is the control carried out by the external auditors. Thus, auditors are asked to play a key role in safeguarding and protecting the interests of savers by ensuring the smooth running and functioning of financial markets, and this, through the publication of reliable information to investors.

It should be noted that if the directors and managers of the company are well informed of the activity of the latter, it is considered a "black box" for investors and their only means of communication with the company are the financial statements prepared by management. With a view to guaranteeing reliable and necessary financial information for the efficiency of the resources used and with the improvement of the audit quality provided by the auditors, this will make it possible to strengthen the confidence of investors for the benefit of companies given that the financial statements reliable and transparent constitute a guarantor for them (Boubaker, 2018). Investors opt for different governance mechanisms in order to join and reconcile their interests with those of managers. Therefore, external audit appears as a governance mechanism and a solution to the problem of conflict of interest.

The main mission of the external auditor consists in verifying the regularity of the financial statements in accordance with the legal and regulatory provisions in force. The objective of its mission is to participate in and guarantee the reliability of financial information and to simplify the process of obtaining new capital for investors. Consequently, external auditors have a valuable role in informing financial market participants and providing them with some assurance about the reliability of financial information.

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The agency theory interprets the call for a quality external audit as a means of reducing managerial opportunism, regulating agency conflicts between the various stakeholders in the company, namely minimizing the problem of asymmetry of information between the various actors of the firm and to preserve the interests of the shareholders by preserving the reliability and the relevance of the financial statements. To this end, the external audit seems to be the most adequate solution to agency problems and will be able to limit the opportunistic behavior of managers and ensure more credibility to the financial statements prepared by the audited concerned. The effectiveness of the audit is dependent on two main characteristics which determine the quality of the audit, namely: the independence and the competence of the auditor. For the auditor to be efficient, he must first of all be independent and competent, able to face the pressures and intervention of the managers and to ensure the editing of the anomalies revealed.

Furthermore, the quality of the external audit is of enormous importance insofar as it makes it possible to satisfy the needs of users of financial information in complete reliability and precision, it thus represents a fundamental guarantee of the credibility of the accounts and the reliability of the reports disclosed by the auditors. The protection of this audit quality constitutes an essential element of trust for all users. (Butler et al. 2004).

In recent years, some accounting and financial scandals have taken place in different business areas (Enron in 2002, Batam in 2003 in Tunisia and Parmalat in 2003 in Italy; Worldcom in 2002 in the United States) which have largely affected the independence of the auditor and called into question the role assigned to him and which consists in guaranteeing the reliability of financial information as well as the effectiveness of the control procedures adopted at the level of the financial markets. These scandals have led some users to question the verification of the financial statements by the auditors and the effectiveness of their controls, hence the appearance of a crisis of confidence which requires the strengthening of control systems and this, in order to preserve the credibility of the financial statements. In order to regain investors' confidence in the financial markets, various measures have been taken by the legislators of different countries with the aim of guaranteeing the reliability of financial information and the quality of auditing. In this line, the legal audit presented an essential thought for the political and economic actors, which pushed the legislators of many countries to better adjust this profession. Following these scandals, the legislators adopted new laws relating to financial security by issuing new rules relating to the evaluation and control of the quality of external audit such as the "Sarbanes Oxley Act", (2002) in the United States, the law on financial security (2003) in France, the law on financial security (2005) in Tunisia....

This study aims to allocate a particular reflection to the procedure of rotation of the external auditors. The company is invited to replace the verifier with another at the end of the period. It should be noted that the duration of the mandate of the auditor is legally fixed in Tunisia at three years renewable three times at most for the private sector and twice when it comes to the public sector.

Our theoretical study is reinforced by an empirical study which will address a sample of 37 Tunisian companies listed on the Tunisian Stock Exchange Market, for a period of 7 years observed from the year 2015 to the year 2021.

Indeed, as part of our research while limiting ourselves to the case of listed Tunisian firms, we will focus on the study of the relationship between the rotation of external auditors and audit quality. Our capital interest relates to the rotation of the auditors and its impact on the quality of external audit while admitting a positivist epistemological positioning which is based on the confrontation of the hypotheses formulated inspired by the theory with an observed empirical reality. And then, we will test our hypotheses with reference to panel data modeling.

The purpose of our research consists on the one hand in the conception of the relationship between the rotation of external auditors and the quality of audit in the Tunisian case, and on the other hand, to deepen the research established on the effects of rotation external auditors on audit quality.

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The paper is remained as follows. Section 2 presents the literature review. Section 3 presents the research methodology used. The findings and their interpretations are provided in Section 4. Finally, Section 5 reports the main conclusions of this study and their limitations and policy implications.

## Literature Review

Our theme was based on the impact of rotation of external auditors on audit quality by referring to two main theories, namely agency theory and signaling theory, which are both complementary and for this reason he had recourse to an external audit. According to Jensen and Meckling (1976), the agency theory claims that the company consists of formal and informal contracts, developed between the individuals who formed its environment. The contracting parties are called one principal and the other agent. The agent-principal relationship that represents the main axis of agency theory is asymmetrical. Within a company or a society marked by a separation of decision and ownership function, the shareholders find themselves in a relationship called the agency relationship. Thus the shareholders are the principals and the managers are the agents (Lapointe, 2000). The agency theory considers that the company is a structure of contracts established between economic agents (suppliers, managers, shareholders, employees, etc.) marked by divergent interests from which each agent seeks to optimize its utility without take into account the optimization of the company's wealth.

To this end and in the event of the inability of the owners to ensure the proper management of their own firm either because of unavailability or incompetence, the management calls on a competent and experienced manager in the field of management of companies which automatically leads to a real separation between ownership and management. On the other hand, agency theory is based on the assumption that the separation between ownership and decision leads to conflict. To minimize these conflicts, the agency theory envisages the establishment of control bodies with the objective of guiding the managers so that they act in the interests of the owners. In order to protect against the agent's opportunistic behavior and consequently restrict conflicts of interest, it was deemed useful to find organizational mechanisms and procedures capable of adjusting the agent's behavior to the interests of the principal and therefore minimize agency costs.

To ensure this procedure, it is essential for both parties; principal and manager that they are subject to a control system. It is in this context that the audit represents one of the most important solutions to the problems of agency empowered to weaken the opportunistic behavior of managers and to offer more credibility to the financial statements prepared by managers (Watts and Zimmerman, 1986; Abdel-Khalik, 2002; Cochen et al., 2002). The role of the auditor is to ensure the quality of financial information within a specific regulatory accounting framework. The costs associated with the audit of the accounts are interpreted as agency costs borne by the shareholders in order to control the accounting information. Indeed, the intervention of the auditor is a necessary condition to ensure better quality of financial and accounting information (Jensen and Meckling, 1976). In addition, the external auditor is appointed to verify the accuracy and fairness of the financial information declared by the company for its partners. This is how the listener plays the role of a guarantor of trust (Shapiro, 1987). In order to minimize the information asymmetry and limit the agency cost, the theory prescribes the unavailability of the existence of an external audit. The adoption of the contractual procedure, namely the external audit aims to inspect and alleviate the opportunistic behavior of managers (Jensen and Meckling, 1976).

In reality, the annual financial statements are summaries of the company's activities and can be used externally; they are used by several actors in an evaluation and diagnostic approach to help make a decision (Raffegeau et al. 1994). In this context, the audit can be analyzed from an economic point of view, in particular as an activity that "reduces" agency costs according to the concept of reputation (Richard, 2003). Watts and Zimmerman (1986) think that according to the economic role of the external audit, this one is a means to reduce the costs of agency.

Thus, for the agency relationship to be correct and relevant, it therefore appears that the auditor must be independent. The independence of the auditor remains among the two conditions determined by De

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Angelo (1981) of the quality of the audit. Also, the competence and independence of an auditor form the essential pillars of audit quality. Finally, the external audit was mentioned according to the agency theory as one of the governance mechanisms that ensures the reduction of information asymmetry, the reduction of agency costs and the resolution of agency conflicts related (Jensen and Mechling, 1976; Anderson *et al.* 1993; Yeoh et Jubb, 2001).

The agency theory is based on the relationship of the shareholder vis-à-vis the manager, however and within the framework of the theoretical perspectives, can we affirm that its attention is focused on the relationship of the investor with regard to the leader within a context of informational asymmetry. Tremblay *et al.* (1994) believe that the signal theory focuses on the reality that the various stakeholders attached to a company hold asymmetric and incomplete information.

Information asymmetry is often defined as the unequal distribution of information between information-rich economic agents and information-poor economic agents. In other words, the asymmetry of information leads to the fact that the leader is the only person likely to understand the global environment of the company because he is involved in the management of the company and within the business.

It is in this context that Spence (1973) demonstrated that perfectly informed economic agents can be invited to communicate their own information to less informed economic agents.

Thus, well-informed leaders will try to transmit signals to the company's external partners referring to the specificities of the entity they lead. The role of the auditor is considered essential in the sense that his audit report is appreciated as a signal that assesses the regularity and sincerity of the financial statements. Therefore, the use of external audit can be appreciated as a means practiced by managers to announce a signal to investors. The call for audit missions is also an expression transmitted by the company to explain to the market the reliability of its governance system.

*Auditor Rotation: A Signal for Opinion Shopping*

During the preparation of the audit report and in the event of the issuance of an unfavorable opinion, the auditor's opinion will be considered as a negative signal in view of the users of the financial statements and can therefore no longer have complete confidence in the financial information. In order to remedy this negative opinion, the audited company may use opinion shopping to seek a favorable opinion by calling on a new auditor (external opinion shopping). According to the SEC (Securities and Exchange Commission), opinion shopping is "the practice of finding an auditor willing to support an accounting treatment intended to help the company achieve its reporting objectives even if these accounting treatments may question the credibility of financial information" (SEC, FRR31).

Also, the SEC considers opinion shopping to consist of a company seeking an audit firm willing to issue an unqualified opinion that concludes that the company's financial statements are fairly presented.

In the same vein, companies frequently try to change listeners each time they give a negative opinion in order to improve their own images [Craswell (1988) and Citron and Taffler (1992)].

Lenox (2000) indicated that companies which proceed to the changes of auditor during a denial of certification of their financial statements are more likely to obtain a favorable audit opinion the following year. In the same context, other studies have shown that failing companies change external auditors more frequently than companies whose figures are clear and correct (Schwartz and Menon, 1985, Krishnan, 1994; and Senteney et al. 2006) .

In reality, firms change auditors for the following reasons:

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- If the auditors appear quite rigorous and severe in the application of accounting principles (Krishnan, 1994);

- In case of obtaining negative opinions (Chow and Rice, 1982);

- In case the manager of the company seeks a more favorable opinion (Craswell, 1988).

Moreover, a study elaborated by Chow and Rice (1982) for a sample of American companies proves that the companies which often opt for the change of their auditors are those which received an audit report refusing the certification of the financial statements or presenting an adverse opinion with an adverse opinion. These results are consistent with those of Citron and Taffler (1992) in the UK and Craswell (1988) in Australia.

*Change of the Auditor: A Signal on the Good Quality of External Audit*

The rotation of auditor's means, according to the legislator, changing the auditor at the end of each mandate, with a limitation of three years for Tunisia, five years for the United States and six years for France, in order to safeguard the independence of the auditor.

Therefore, the rotation of auditors appears to be an effective way to ensure the independence of the auditor and thereafter, the audit quality remains closely linked to the independence and integrity of the auditor.

In order to protect the interests of shareholders, the external auditor must demonstrate his independence during his mandate since the quality of the audit is based mainly on the plausibility, transparency and credibility of the reports published by the auditors (Veronina et al. 2005). According to Piot and Janin (2005), a long audit mandate poses a risk to the independence of the auditor and subsequently undermines audit quality. In fact, when new listeners aren't personally bound by previous decisions, they can change their judgment, discuss issues, and understand them better.

The use of mandatory audit firm rotation preserves auditor independence and promotes audit quality for the following reasons: First, it hinders the audit team from forming a familiar relationship with the audited company; furthermore, it announces a new vision and objective for the new firm; in addition, it contributes to the improvement of the quality of the audit since the new audit firm reviews the work of its predecessor. Finally, it reduces the risks associated with institutional familiarity. The choice of an auditor of remarkable quality during the initial offer of the securities can minimize the cost of control "monitoring cost" given that the credibility linked to the financial statements is positively linked to the reputation of the auditor (Menon and Williams 1991). We can deduce according to the theory of signals that the rotation of the listener can be an index of an "opinion shopping" but it is not the suitable solution to increase the independence of the listeners but it can also be like a signal of a good quality audit.

## The Impact of Long Tenure on Audit Quality

Geiger and Raghunandan (2002) believe that long-term relationships between auditors and auditees can affect auditor independence and negatively affect audit quality. For example, in the United States, the Metcalf Commission report argues that the long-standing ties between business and accounting firms can lead to such a close convergence of interests between accounting firms and auditees (management) that hampers auditors to act in a completely independent manner and accountants to act in a truly independent manner. (Geiger and Ragunanda, 2002).

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In fact, a lasting language relationship between the audit firm and its client threatens to affect the independence of the auditor. Thus, according to Carey and Simnett (2006), from a determined period and from a certain duration, the auditor loses his independence.

Davis et al. (2003) present rationales and arguments that tenure length is associated with a decline in audit quality. Regarding the Korean context, Chung (2004) observes that discretionary accruals weaken at the level of companies that opt for mandatory rotation.

Chu et al. (2018) find that a longer tenure of audit firms for clients with increased litigation risk reduces audit quality.

Along the same lines, Meyer et al. (2007) indicate that auditor tenure has a negative impact on audit quality in the eyes of investors. As a result, collusive relationships can be created between auditors and auditees, which leads to a reduction in the rate of credibility, regularity and sincerity of certified financial statements. Similarly, in their own study, Bell et al. (2015) find three main consequences:

(1) for first-year audits, audit quality is lowest, (2) after the first-year audit, audit quality improves, and (3) when the duration of the audit becomes very long, the quality of the audit decreases slightly. However, some researchers such as Myers et al. (2003), Chi Huang (2005) and Chen et al. (2008) find that a decline in audit quality is not related to long tenure. Moreover, according to Lyer and Rama (2004) there is no evidence that the long tenure affects the independence of the auditor. For all these reasons, and all other things being equal, we advance the following hypothesis:

**Hypothesis l: A long tenure of the auditor has a negative impact on audit quality.**

*The Impact of External Auditor Rotation on Audit Quality*

The rotation of auditors has been the subject of various academic and professional debates, thus Magolis et al. (2011) took the initiative to address the issue of mandatory cabinet rotation in 1930 by considering its advantages and limitations.

Several countries have adopted laws on financial security such as the law on financial security of 2005 in Tunisia, the law promulgated in France in August 2003 and the law on financial security in the United States (Sardanes-Oxley law of , July 2002). These laws require the rotation of external auditors in order to guarantee their independence, since the assessment of audit quality is based on the independence of the auditor and his ability to detect anomalies could be threatened by collusion with the audited company.

Carey and Simnett (2006) illustrate the effect of rotation/duration on auditor independence and identify three phases of the audit task. At the first stage (first two years), the quality of the audit may be lower due to a lack of understanding of the audit of the company and its environment (competency issues). The second stage is characterized by excellent audit quality associated with the development of specific expertise. The third stage begins the 6 years and reflects the risk and the birth of familiarity which leads to a decline in the quality of vigilant auditing and the lack of critical vision (raising the question of independence).

The mechanism of rotation of external auditors and its impact on audit quality has been the subject of several studies and research. It is within this framework that the following researchers have addressed this issue: Raghunandan (2002); Johnson et al. (2002); Myers et al. (2003); Carcello and Nagy, (2004); Chi and Huang (2005); Carey and Simnett (2006); Gül et al. (2007); Knechel and Vanstraelen, (2007); Jenkins and Veury (2008); Manny et al. (2008) and Chen et al. (2008); Davis et al. (2009); Bell et al. (2015). The majority of this research has found a positive association between audit quality and firm tenure. However, some of them believe in the existence of a negative association (Chi & Huang, 2005; Carey & Simnett, 2006; Davis et al. 2009).

Other opinions assume that rotation reinforces the external auditor's perception of independence (Winters, 1978; Kemp et al. 1983; Wolf et al. 1993; Brody and Moscove, 1998; Ramsey, 2001; Arel et al., 2005;

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Jennings et al., 2006).Similarly, Sari and Indarto (2019) found that rotating an external auditor increases audit quality if the new auditor is a Big 4. Similarly, Junaidi et al. (2016) and Kim et al. (2019) also inferred that investors view mandatory audit firm rotation positively, as it reduces the cost of equity and increases auditor skepticism and independence.

However, some studies show that auditor rotation has neither improved nor led to better audit quality (Litt et al. 2014). For all these reasons, and all other things being equal, we have chosen to test the following hypothesis:

**Hypothesis 2: Auditor rotation has a positive impact on audit quality.**

During the theoretical phase of this work, an attempt has been made to invoke some studies on which the hypotheses of the present research have been developed and which aim to analyze the role of the rotation of external auditors in the evaluation of the quality of 'audit. We will move on to the presentation of our methodology in the next paragraph.

## Design/Methodology/approach

Our study focused on a sample of 37 non-financial Tunisian companies listed on the stock exchange observed over a period of seven years (2015 to 2021). To collect the data, we opted to refer to the annual reports and financial statements published on the site of the Financial Market Council (CMF), the Tunis Stock Exchange (BVMT) and on the site of the stock market intermediary (MACSA).

*Measurement of Variables*

*The Dependent Variable: Audit Quality*

The dependent variable is "audit quality". The review of previous literature on audit quality emphasizes the definition suggested by De Angelo (1981), who defined audit quality as the market's assessment of the joint probability that a given auditor will simultaneously discover a significant anomaly or irregularity in the accounting system of the client company and mention it. In his studies De Angelo (1981) proved that audit quality depends on the auditor's skills to detect anomalies and his independence to communicate these anomalies. It is for this reason that the auditor must be both competent and independent.

The independence of the external auditor plays an important role in audit quality since it ensures the integrity and objectivity of the judgments made by the auditors. Thus, auditors must be independent in order to gain the confidence of users of financial information in the opinion announced in their audit reports.

In addition, audit quality is essentially based on the competence of the external auditor, which enables him to detect all errors and violations inserted in the accounting documents of the audited company. To successfully accomplish his audit mission, the auditor must be distinguished by solid professional knowledge, in-depth training and experience in the audit field.

Our study retained two proxies for the quality of the external audit, namely: the opinion of the external auditor and discretionary accruals. Our choice concerned these two measures which are the most frequent, especially since they have already been justified in the literature. Our dependent variable is measured as a result of two alternative modalities.

Several researchers have opted for the use of discretionary accruals as an indicator of audit quality and have subsequently shown that the level of discretionary accruals has an effect on audit quality. We cite as an example Sylvia et al. (2012), Lawrence et al. (2011).

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According to Lawrence et al. (2011) The practice of discretionary accruals as a measure of audit quality is distinguished as a benefit as it expresses the auditor's application of accounting standards.

Based on reviews by Defond and Subramanyam (1998) of the behavior of discretionary accruals. The analysis of the results showed that these accruals are close to zero two years before the rotation of the auditor, becoming negative the last year with the new auditor.

In this regard, Francis and Krishnan (1999) believe that the possibility of formulating an incorrect and erroneous report is more likely in companies with a high level of discretionary accruals.

Additionally, Sylvia et al. (2012) believe that poor audit quality is often the consequence of a high level of discretionary accruals existing in audited companies.

To ensure the appreciation of discretionary accruals, an estimation model must be used. To this end, different models suggested in the literature were the source of the limits that were suggested to them. In this respect and with the aim of remedying the insufficiency of the models of De Angelo (1986) and Healy (1985), based on the hypothesis which rejects the influence of the firm's economic circumstances on the amount of total accruals, Jones (1991) included the change in turnover and gross fixed assets. This model is opposed to an essential limit which assumes that the turnover cannot be manipulated. manipulate turnover.

To remedy this limitation and with a view to perfecting this model Sweeney, Dechow, Sloan (1995) proceeded with the modification of the Jones model while taking into account the variation of customer accounts by adjusting the variation of turnover by the change in trade receivables.

Consistent with previous research (Myers et al. 2003; Kwon et al. 2014; Kim et al. 2015; Cameran et al. 2016; Payne et al. 2021), we use discretionary accruals (DA) as a proxy to measure the audit quality. Empirical studies conducted by (Kothari, Leone and Wasley, 2005; Brath et al. 2001; Beneish, 1997) believe that the neglect of performance indicators represents a limit to the estimation model, and they have subsequently proved that the estimation models are affected by the current and past performance of the firm from which discretionary accruals can be detected. In this study, we opted for the model proposed by Kothari et al. (2005) adjusted by performance. However, discretionary accruals are calculated by first estimating the total amount of accruals, which is composed of "normal or non-discretionary accruals" and "discretionary accruals" (Janssen 2017).

Total Accruals (AT) = Normal Accruals (AN) + Discretionary Accruals (AD)

Indeed, discretionary accruals are determined by the difference between total accruals and normal accruals. The formula is:

$AD_{it} = TA_{it} - AN_{it}$

$$\frac{\mathbf{TA_{it}}}{\mathbf{Actif_{t-1}}} = \alpha_0 + \frac{1}{\mathbf{Actif_{t-1}}} + \alpha_1 \frac{(\mathbf{\Delta CA_{it} - \Delta CCR_{it}})}{\mathbf{Actif_{t-1}}} + \alpha_2 \frac{\mathbf{IMMO_{it}}}{\mathbf{Actif_{t-1}}} + \alpha_3 \mathrm{ROA}_{\mathbf{t-1}} + \mathbf{\varepsilon_{it}}$$

With TAi,t is the total amount of accruals of firm i for year t:

= Net income – operating cash flow

$A_{i,t-1}$ is the total amount of assets of firm i in year t-1.

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$\Delta CA_{i.t}$ is the difference between the turnover of year t and t-1 for firm i.

$\Delta CCR_{i,t}$ is the difference between the net customer accounts for year t and the customer accounts for year t-1.

$IMMO_{i,t}$ is equal to the amount of gross fixed assets (excluding financial fixed assets) of firm i for year t.

$ROA_{t-1}$, Economic performance for period t-1 equal to the ratio between net income and total assets.

t: The year index included in the estimation period of company i in year t.

$\alpha^1$ $\alpha^2$ $\alpha^3$ $\alpha^4$ are estimated based on data from a sample of companies

εi,t: the error term of this model represents the proportion of discretionary accruals

In the model of Kothari (2005) the normal accruals are measured by the following formula:

$$ANit = \alpha_0 + 1/(Actif_{t-1}) + \alpha_1((\Delta CA_{it} - \Delta CCR_{it}))/(Actif_{t-1}) + \alpha_2 IMMO_{it}/(Actif_{t-1}) + \alpha_3 ROA_{t-1}$$

With :

$AN_{it}$ = the amount of normal accruals of company i in year t

The amount of discretionary accruals for year t of company i is estimated by the following formula:

$$ADit = TA_{it}/(Actif_{t-1}) - AN_{it}$$

The residual of this regression represents the discretionary accruals, which constitutes our proxy for audit quality: AD = εi,t

The second proxy for audit quality concerns the auditor's opinion. To this end, his opinion represents the most important phase of the audit report since it summarizes the conclusions of the audit mission.

Multiple studies have investigated the relationship between auditor turnover and the pattern of the audit report. Indeed, De Angelo (1981); Chow and Rice (1982); Craswell et al. (2002); Krishnan, (1994); Lenox, (2005); Omri et al. (2014) believe that the auditor's opinion is often used as a proxy for external audit quality. Like the above-mentioned researchers, Carey and Simnett (2005) adopted the auditor's opinion type as a proxy for audit quality. For this reason, they investigated the relationship between listener turnover and opinion change.

The application of this measure makes it possible to compare study results with studies carried out by other researchers in the same context.

The variable indicated below represents the auditor's opinion: "OPADT": which is a binary variable that takes the value 1 if the audit opinion is unqualified and 0 if the audit opinion is modified subject to adverse reservations or disclaimer of opinion (Omri, 2014).

*Independent Variables*

According to the Tunisian legislator, the rotation means the change of the auditor of each firm at the end of his mandate, (three years for Tunisia, while it is five years in the United States and six years for France) in order to preserve the independence of the external auditor.

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The rotation of auditors has raised particular attention and has always been considered as a tool to reinforce the independence of auditors.

The listener rotation variable is shown as follows:

"CHADT": which is a binary variable that takes the value 1 if there is a change in the listener, and 0 if not (Mali and Lim 2017).

Legislation and professional bodies generally consider that the main reason for questioning the independence of the auditor is the seniority of the duration of the audit mandate. To this end, supporters of the systematic rotation of external auditors consider that the long duration of the audit mandate creates a bond of familiarity between auditors and managers.

For the independent variable change of auditors (CHADT), we retain a second independent variable, namely the duration of the audit mandate (DMADT:).

In this regard, the seniority of the auditor is assessed through the successive years of the auditor's mission within the company (Mayangsari, 2007).

The tenure variable is represented as follows:

"DMADT": this dummy variable coded 1 in case the number of successive years of audit within the same company is equal to or greater than 3 years and 0 otherwise (Singer et al. 2018).

*Control Variables*

The control variables are considered relevant in view of their important roles and their influences on the quality of external audits. For this purpose, three control variables are distinguished, namely the size of the company, the size of the audit firm and the profitability of the company.

*Company size*

The size of the company is a possibly remarkable determining factor in the choice of the external auditor (Lennox, 2005). The researchers listed below, Copley et al. (1995), Abbot and Parker (2000), Piot (2001), Niemi and Sundgren (2003), Velury et al. (2003), Hay and Davis (2004), Lennox (2005), Kane and Velury (2005), Fan and Wong (2005), Lajmi and Gana (2011), Dumontier et al. (2006) assert the existence of an indisputably positive relationship between the quality of the auditor chosen and the size of the audited company. Also, various researchers such as Defond (1992), Cameran (2005) and O'sullivan and Diacon (2002) confirm the close link between the choice of a competent, experienced auditor with a strong reputation and the size of the audited company.

*Type of Audit Firm*

The relationship between audit firm and audit quality has prompted several previous studies that have confirmed the existence of a positive association between them (Francis et al. 1999; Gul et al. 2001; Craswell et al. 1998 Teoh and Wong, 1993). The size of the audit firm is therefore considered as a criterion for assessing audit quality.

In this respect, the large audit firms previously called "big eight", especially during the eighties, recently transformed into "big four", are working to develop very powerful reciprocal monitoring systems to mitigate agency problems ( Watts & Zimmerman, 1981; Francis & Wilson, 1998; Johnson & Lys, 1990; Firth & Smith, 1992). Also, De Angelo (1981) thinks that large audit firms have the necessary capital allowing them to be more independent and empowered to ensure a good quality audit.

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However, and according to researchers Craswell et al. (2002), Reynolds et al. (2007) large audit firms seek to be severe and rigorous in issuing the opinion, also Piot (2010) adds that the big 4 firms have an appreciable audit quality for the three reasons following:

- Firstly, this type of firm has broader and more varied resources and skills (eg training policies, technical expertise, network logic, etc.), which makes them more capable of detecting accounting irregularities in complex organisations.

- Secondly, large firms are called upon to safeguard their reputation, which is considered to be a determining factor in their future higher revenues, which is why the Big 4 are adopting an accounting discipline mechanism for managers.

-Thirdly, the diversification of the client portfolio within these firms weakens the individual pressure exerted by managers.

In the United States, the Big 4 were also considered to provide better and deeper assurance on financial reporting than others (Teoh & Wong, 1993). According to Lawrence et al. (2011), Big 4 audit firms can offer better audit quality because their size can contribute to stronger and more comprehensive training programs, standardized audit methodologies and quality controls. appropriate assignments and quality control of assignments. Finally, Douthett et al. (2001), Moizer (1997) and Simunic and Stein (1987) confirmed a close relationship between the size of the firm and the quality of the audit performed.

The previous opinions of the researchers lead us to infer that the big 4 are able to produce better audit quality, so we expect a strong relationship between the size of the firm and the quality of audit provided.

*The Profitability of the Company*

Jensen and Lys (1990) and Abott and Parker (2000) asserted the existence of a positive association between firm profitability and the choice of a high quality auditor. Previous studies consider that this variable reflects an impact on the change of the auditor and consequently on the quality of the audit since the rotation of the auditors gives rise to a favorable opinion called "opinion shopping".

We will consider a close and positive relationship between company profitability and audit quality. To this end, in this research, the profitability of the company will be measured by the ROA variable which reflects the ratio of net results to total assets.

For this study, the "ROA" variable was used to measure operational performance.

*The Study Model*

During this subsection, we will essentially present the model to be estimated while insisting on the fact that our objective is to test the impact of the rotation of external auditors on audit quality in addition to statistical tools.

The first model will be expressed as follows:

$$AD_{it}=\alpha_0+\alpha_1 CHADT_{it}+\alpha_2 DMADT_{it}+\alpha_3 TPADT_{it}+\alpha_4 TAES_{it}+\alpha_5 ROA_{it}+\varepsilon_{i,t}$$

With:

"i" represents the company, subject of the study, and "t" represents the period considered for the estimate; $\alpha_1$ $\alpha_2$ $\alpha_3$ $\alpha_4$ $\alpha_5$: represent the unknown parameters of the model to be estimated and $\varepsilon_{i,t}$: constitutes the error term.

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CHADT: change of auditor: which is a binary variable that takes the value 1 if there is a change of auditor for the year concerned, and 0 if not.

DMADT: duration of the auditor-audited mandate: measured by the number of consecutive years that the auditor has carried out the audit of the company. Concretely, this variable is binary, it takes the value 1 if the number of consecutive years is 3 years or more, and 0 if not.

TPADT: Types of auditor: which is a binary variable that takes the value 1 if the company is audited by a "BIG4", and 0 if not.

TAES: the size of the company: this is a variable measured by the natural logarithm of the total assets of the company "i" for the year "t".

ROA: the company's profitability: this variable is measured by the RN/TA ratio, which is the ratio between net income and total assets.

The second model will be expressed as follows:

$$OPADT_{it}=\alpha_0+\alpha_1 CHADT_{it}+\alpha_2 DMADT_{it}+\alpha_3 TPADT_{it}+\alpha_4 TAES_{it}+\alpha_5 ROA_{it}+\varepsilon_{i,t}$$

With :

OPADT: Reflects the auditor's opinion, which is a dichotomous variable that carries the value 1 in the event of pure and simple certification and 0 in the event of certification with reservations.

It is reported that this adopted model is inspired by the model used by Mohapatra et *al.* (2021) in the Indian market.

## Findings

In this section, we will proceed to the presentation of the results of the estimation of the chosen models, as well as the interpretation of these results where the audit quality was measured by the discretionary accruals in the first place and by the opinion of the listener in a second place. We will first present the descriptive statistics, then the multivariate analysis and finally the bivariate analysis.

*Descriptive Analysis*

This descriptive analysis concerns the different variables used. The above-mentioned analysis relates to the characteristics of the variable to be explained, of the explanatory and control variables. It provides a preliminary idea of a possible relationship between audit quality and auditor turnover.

*Descriptive Statistics of Continuous Variables*

Descriptive statistics lead us to have an idea of the trends and orientations of the data retained in terms of average, standard deviation, minimum, maximum, frequency. Table 8 summarizes the results of the descriptive analysis of the quantitative variables.

**Table 1-** Descriptive statistics of quantitative variables

| Variables | Observations | Mean | std | Minimum | Maximum |
|---|---|---|---|---|---|
| **AD** | 259 | -0.0042101 | 0.0936972 | -0.431417 | 0.298104 |
| **TAES** | 259 | 18.7218 | 1.292849 | 15.18538 | 22.10865 |

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| | | | | | |
|---|---|---|---|---|---|
| **ROA** | 259 | 0.0406038 | 0.1307362 | -0.4107219 | 1.604002 |

| VARIABLES | CATEGORIE | FREQUENCE | % | CUMUL |
|---|---|---|---|---|
| | 0 | 44 | 16.99 | 16.99 |
| **OPADT** | 1 | 215 | 83.01 | 100 |
| | Total | 259 | 100 | |
| | 0 | 210 | 81.08 | 81.08 |
| **CHADT** | 1 | 49 | 18.92 | 100 |
| | Total | 259 | 100 | |
| | 0 | 79 | 29.34 | 29.34 |
| **DMADT** | 1 | 183 | 70.66 | 100 |
| | Total | 259 | 100 | |
| | 0 | 149 | 57.53 | 57.53 |
| **TPADT** | 1 | 110 | 42.47 | 100 |
| | Total | 259 | 100 | |

According to this table, the mean of the discretionary accruals variable is negative - 0.00421. This result clearly indicates that Tunisian companies do not exercise discretionary accounting manipulations, which leads us to deduce that the discretionary accruals variable in our case has a positive impact on audit quality.

The analysis of the control variables shows that the average size of the audited firms is 18.72, while the average of the profitability variable is 0.04060. This means that Tunisian companies have a profitability of 4.60% on average

*Descriptive Statistics of Qualitative Variables*

**Table 2**- Descriptive statistics of qualitative variables

For the qualitative variables, it can be seen that most of the audit reports in the sample (83.01%) were certified without reservations while 16.99% of the reports had an opinion with reservations. It can be seen

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that only 18.92% of the companies in this case studied opt for the change of their listeners. Nevertheless, we note that 70.66% of companies retain their auditors for a term of three years or more. In addition, 42.47% of observations recorded the choice of a big 4 audit firm, which means that the majority of Tunisian firms (57.53%) are audited by non-big 4 firms.

*Multivariate Analysis: The Linear Regression Method*

*Panel Data Testing*

Panel data is composed of two dimensions: an individual dimension which concerns (individuals) and a temporal dimension which concerns (time).

We will present in what follows, the tests performed on the panel data, and this, in five levels: the test for the presence of individual effects, the Hausman test, the heteroscedasticity test, the correlation test and the Bright independent variables. In order to verify the homogeneity or heterogeneity of the sample and to examine the existence of individual fixed effects, we will use the Fisher test.

So, we will use the Fisher test to test the following hypotheses:

H0: If the Fisher probability is greater than 5%, then we use the ordinary least squares (OLS) method to control for the fixed effect.

H1: If the Fisher probability is less than 5%, then we use the generalized least squares (GLS) method to control for the unobservable effect

The results obtained after this test run on STATA admit to accepting H0 namely: the presence of fixed effects, as summarized in the following table:

The Fisher statistic is of the order of 1.46, i.e. a significance level of 0.0544 (above the 0.05 threshold) and indicates the homogeneity of the individuals in our sample and confirms the presence of fixed effects.

**Table 3**. Test for the presence of individual effects

| | **Modèle** |
|---|---|
| Test de Ficher(2) | 1.46<br>-0.0544 |

Hausman test

The Hausman test (1978) allows us to know the nature of the effect and to choose the best specification for the estimation of the coefficients of the models on panel data: namely, the random effects model or the random effects model. fixed.

Thus, the null hypothesis and the other alternative of this test are presented as follows:

H0: presence of random effect (independence between errors and explanatory variables)

H1: presence of fixed effect (dependence between errors and explanatory variables)

If the Hausman test indicates a probability greater than 5%: we accept H0.

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If the Hausman test indicates a probability lower than 5%: we accept H1.

**Table 4**. Hausman test

| | **Modèle** |
|---|---|
| Test de Chi(2) | 19.52<br>-0.0015 |

The Wald Chi statistic for two at five degrees of freedom is of the order of 19.52, with a level of significance of 0.015 below the 10% confidence level, which shows that the individual effects are fixed.

The results of this test allow us to accept H1, namely: the presence of a fixed effect.

Heteroscedasticity test

To deal with the problems often encountered during heteroscedasticity, it is considered necessary to know how to detect and correct them by applying a BreuschPagan test (1980).

**Table 5**. Breusch-Pagan test

| | **Modèle** |
|---|---|
| Test de Chi(2) | 0.45<br>-0.2502 |

The Chi2 statistic is of the order of 0.45, i.e. a significance level of 0.2503 above the 5% threshold. The result of the Breusch Pagan test does not verify the presence of a heteroscedasticity problem.

Correlation matrix

The correlation matrix ensures the detection of the problem of bivariate multicollinearity observed between the variables of the study, that is to say, it makes it possible to measure the degree of correlation. If the value is greater than 0.800, it can be said that this problem remains (Judgeetal.2007).

**Table 6.** Correlation matrix

| | AD | CHADT | DMADT | TPADT | TAES | ROA |
|---|---|---|---|---|---|---|
| AD | 1 | | | | | |
| CHADT | 0.106 | 1 | | | | |

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| | | | | | | |
|---|---|---|---|---|---|---|
| DMADT | -0.1515 | -0.5279 | 1 | | | |
| TPADT | -0.0982 | 0.0437 | -0.0982 | 1 | | |
| TAES | 0.0318 | 0.0434 | -0.1056 | 0.322 | 1 | |
| ROA | -0.1333 | -0.0131 | 0.0327 | 0.0311 | 0.0724 | 1 |

According to the correlation matrix, we notice the absence of strong correlations (exceeding the threshold of 0.8). This leads us to conclude that there is no problem of multicollinearity between the variables studied.

Variance Inflation Factor (VIF) test

To ensure that there are no multicollinearity problems, the VIF statistics must be used after each regression. According to Chatterjee & al. (2000) believe that a multicollinearity problem is detected when the VIF is greater than or equal to 10 and the mean of the VIF is greater than or equal to 2.

If the VIFs are less than 5, we can deduce that there is no multicollinearity problem.

VIF=1: No correlation

1<VIF<2: moderate correlation

VIF>2 to 10: high correlation

It is also necessary to check that the average of the VIF is less than 2 and that the value 1/VIF is greater than 0.1.

**Table 7**. Variance inflation factors (VIF)

| **Variables** | **VIF** | **1/VIF** |
|---|---|---|
| **CHADT** | 2.13 | 0.468495 |
| **DMADT** | 2.17 | 0.461778 |
| **TPADT** | 1.12 | 0.891404 |
| **TAES** | 1.13 | 0.885157 |
| **ROA** | 1.01 | 0.992604 |
| **VIF MOYENNE =**1.51 | | |

This table illustrates that the value of the VIF is less than 5 for the explanatory variables, which consequently proves that the model retained does not present any problem of multicollinearity.

*Interpretation of Results*

The aforementioned assumptions are verified as follows:

**Table 8**. Results of linear regression estimation

| **Variab** | **predict** | **Coefficie** | **Std.Err.** | **Z** | **Signification** |
|---|---|---|---|---|---|

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| les | edSign | nt | | | p> \| Z \| |
|---|---|---|---|---|---|
| **CHADT** | + | -0 | 0.0225435 | -0 | 0.756 |
| **DMADT** | - | -0 | 0.0217595 | -1 | 0.168 |
| **TPADT** | + | 0.02 | 0.0288082 | 0.8 | 0.448 |
| **TAES** | + | 0.05 | 0.0234201 | 2 | 0.053** |
| **ROA** | + | -0.2 | 0.0493489 | -4 | 0.000*** |
| | | | | | |
| **$R^2$=0.0935/Prob>Chi2=0.0007/N(observations)=259** | | | | | |

*: significant at the 10% level / **: significant at the 5% level / ***: significant at the 1% level

**The quality of the model in terms of explanatory power is evaluated by the Pseudo $R^2$ test**

According to the analysis of the data indicated in table 15, we note that the explanatory power of the model of this study is presented at a value of 9.35%, which indicates the variability of the level of accruals justified by the independent variables chosen.

**Interpretation of the estimated coefficients**

The interpretation of this table leads us to deduce that there is a negative association between the discretionary accruals, the change of the auditors, the duration of mandate and the profitability of the company while there is a positive relationship between the discretionary accruals , the type of firm and the size of the company.

According to the results presented in table n°8, the variable CHADT influences negatively and not significantly the quality of external audit ($p=0.756 > 0.1$). This result shows that the change of auditors has no impact on the quality of external audit.

This idea is supported by Ardhani *et al.* (2019) who find no statistically significant relationship between auditor turnover and audit quality

We can deduce in conclusion that the theory of signals indicates that the turnover of the listener can be an index of an "opinion shopping" but it is not the suitable solution to increase the independence of the listeners but it can also be as a signal of a good quality audit.

Moreover, the result obtained contradicts most of the results of the aforementioned research, which proved that the change of auditors, called by the Tunisian legislator, the rotation of auditors, has a positive influence on audit quality.

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Regarding the duration of the audit mandate, this has a negative and statistically insignificant effect on audit quality. This result converges with the study by Nafti *et al.* (2011) who showed in their studies that the DMADT variable has no effect on audit quality.

Following the analysis of the control variables in our model and their relationship with audit quality. We observe that the TPADT variable has a positive and statistically insignificant correlation coefficient ($p=0.448 > 10\%$) on the quality of external audit, which means that the type of audit firm has no effect on the quality of the external audit. external audit quality.

This empirical analysis invalidates our suggestion that the reputable Big Four auditor provides better external audit quality. Hence our results diverge from the research of Francis *et al.* (1999); Gül *et al.* (2001); Craswell et al. (1998); Teoh and Wong (1993) who confirmed that the type of audit firm has a positive incident on audit quality.

In addition, the company size variable displays a positive and significant coefficient at a significance level of 5%. This means that the size of the audited firm has a positive effect on the quality of external audit. This finding is consistent with recent research findings (Mohaptra *et al.* 2021).

Finally, with regard to the ROA variable, it shows a negative and significant coefficient at the 1% level. The negative direction deduced after the results of the estimation of the regression between the profitability of companies and the quality of audit can be justified by the fact that the profitability of companies registers to a negative and significant incident on the quality of external audit .

This finding also contradicts the results put forward by Jensen and Lys (1990) and Abott and Parker (2000) who showed from their studies that the profitability of the company is positively associated with the choice of an auditor with high quality. This invalidates our suggestion.

*The Results of the Bivariate Analysis of the Variables: Logistic Regression*

*Results of the Bivariate Analysis*

Before resorting to parametric or non-parametric tests, it is considered useful to examine the normality of the distribution of the variables. It is in this sense that to determine the comparison test to use, it is first necessary to test the normality of each numerical variable. Otherwise one must ensure the compatibility of the sample distribution with the Gaussian hypothesis of the variable.

For this purpose, the following tests can be used: Kolmogorov-Smirnov test, Kurtoisis and Skewness, Shapiro-Wilk.

Kolmogorov–Smirnov test: In the case of our research, we preferred to use the Kolmogorov-Smirnov test, which is considered the most resistant in most situations (Borcard, 2005).

The results obtained from this test are shown below.

**Table 9**. Kolmogorov-Smirnov normality test

| **Indicateurs** | **Groupes** | **SIZE** | **ROA** |
|---|---|---|---|
| **Z de Kolmogorov Smirnov** | G1:0 | 0.035 | 0.4434 |
| | G2:1 | -0.2717 | -0.0047 |
| **Signification** | G1:0 | 0.914ns | 0.000*** |
| | G2:0 | 0.076ns | 0.998 |

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Kolmogorov-Smirnov test for one sample (H0: the distribution function observed follows the normal law;

Rejection H0:*** significant at the 5% level, not significant.

The table relating to the test of normality (K-S) shows that only the distribution of the variable which represents the size of the company is normal in the two groups (1 and 2) although these same results exclude the assumption of normality for the variable ROA

Also, the variable adopted to verify the normality test can be the subject of a parametric test of comparison of Student means. In the case of the absence of a Gaussian distribution, this analysis must be supplemented by a Mann-Whitney comparison test.

Once the variable SIZE is checked, one can for this purpose use the parametric tests which rest on the assumption of normality, distinguished by two parameters: the average and the standard deviation.

**Table 10**. Student's test for comparison of means

| Indicateurs | Groupe | Observation | L'écart | Moyenne | Différence | Test de student | |
|---|---|---|---|---|---|---|---|
| | | | | | | T | Signification |
| TAES | G1 :0 | 44 | 0.244466 | 19.2442 | 0.629313 | 2.9866 | 0.9985ns |
| | G2 :1 | 215 | 0.081245 | 18.61489 | | | |

The use of the student test of comparison of the means leads to judge whether the difference observed between the means is attributable to a systematic cause or, if necessary, can be considered as an effect of fluctuation occurring by chance.

T: Student's test of equality of means (Ho: mean of group 1 = mean of group 2); Ns: not significant

If the study of the probability obtained is greater than 10%, H0 is confirmed, which implies the absence of a significant difference between the two groups.

The results obtained from the Student test illustrate that the two groups are homogeneous for the variable TAES, and consequently we admit H0.

*Multivariate analysis: the binary logistic regression method*

*Correlation matrix*

The correlation matrix ensures the detection of the problem of bivariate multicollinearity observed between the variables of the study, i.e. it makes it possible to measure the degree of correlation

If the value is greater than 0.800, it can be said that this problem remains (Judge et al. 2007).

The correlation matrix is determined in the table below:

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**Table 11**. Correlation matrix

| | OPADT | CHADT | DMADT | TPADT | TAES | ROA |
|---|---|---|---|---|---|---|
| **OPADT** | 1.0000 | | | | | |
| **CHADT** | 0.106 | 1.0000 | | | | |
| **DMADT** | -0.1515 | -0.5279 | 1.0000 | | | |
| **TPADT** | -0.0982 | 0.0437 | -0.0982 | 1.0000 | | |
| **TAES** | 0.0318 | 0.0434 | -0.1056 | 0.3220 | 1.0000 | |
| **ROA** | -0.1333 | -0.0131 | 0.0327 | 0.0311 | 0.0724 | 1.0000 |

It can be seen from the correlation matrix that the coefficients seem low, also, we can notice the absence of the problem of multicollinearity between the variables incorporated in the same model.

*Results Interpretation*

In this study, we opted for logistic regression as a multivariate method.

For Desjardins (2005) logistic regression is a technique for adjusting a regression surface to data whenever the dependent variable is binary.

**Table 12**. Results of logistic regression estimation

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| Variables | Signe | Coefficient | Std.Err. | Z | Signification |
|---|---|---|---|---|---|
| | | | | | **p>\|Z\|** |
| CHADT | + | 0.1627482 | 0.5855341 | 0.28 | 0.781 |
| DMADT | - | 0.8730013 | 0.5160443 | 1.69 | 0.091* |
| TPADT | + | 1.038583 | 0.3976672 | 2.61 | 0.009*** |
| TAES | + | -0.5907066 | 0.1468722 | -4.02 | 0.000*** |
| ROA | + | 10.24785 | 2.205544 | 4.65 | 0.000*** |

$R^2$=0.1839/Prob>Chi2=0.0000/Nombre d'observation= 259

*:significant at the 10% level / **: significant at the 5% level / ***: significant at the 1% level

The quality of the model in terms of explanatory power is assessed by the $R^2$ test:

According to the analysis of the data indicated in table 12, we note that the explanatory power of the model of this study is presented at a value of 18.39% which indicates that the variability is justified by the independent variables chosen.

*Interpretations of the estimated coefficients*

The interpretation of this table leads us to deduce that there is a negative association between the auditor's opinion and the size of the firm. While there is a positive relationship between the opinion of the auditor, the change of external auditors, the tenure, the type of audit firm, and the profitability of the firm.

The table shows that there is a positive and non-significant association between the variable change of auditors and the quality of external audit.

This idea is also supported by Ardhani et al. (2019) who find no statistically significant relationship between auditor turnover and audit quality. In addition, the studies of Knechel and Vanstraelen (2007) show that the change of auditors has no impact on the quality of external audit.

The result we have reached does not coincide with the majority of the results of the aforementioned studies that have argued for the rotation of auditors as a means of improving the quality of external audit.

Contrary to the direction of the expected relationship, we find in this study that the DMADT variable generated a positive and significant coefficient. Indeed, a long mandate has a positive influence on the quality of external audit. Hence the hypothesis that the long tenure has a negative effect on audit quality is rejected.

The proof of a positive relationship between a long-term mandate and audit quality can be justified by the fact that seniority in the exercise of mandate offers the auditor to better understand and master the particularities and characteristics of his client.

This result is aligned on the one hand with the ideas of Ghosh and Moon (2005) who assume that a long tenure is a tool for improving audit quality by favoring the informative content of financial statements and on the other hand with Jackson et al. (2008) who specify that a language length of the auditor's mandate improves audit quality.

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With regard to the control variables examined, we find that the standard variable of the audit firm and the firm's profitability are positively and significantly associated with audit quality at the 1% level. Nevertheless, a negative and significant association appears between the company size variable and audit quality. Following the analysis of the multivariate results, we noticed the existence of a positive and significant effect of the variable TPADT on audit quality.

This deduction is justified by the fact that the Big Four firms ensure good audit quality, thanks to their use of technologies that are too advanced when detecting anomalies and errors in the company's accounts. In addition, large firms are able to reveal opportunistic behavior of managers because of their use of a more organized and structured audit process and more advanced means of control investigation than small firms. This result is therefore similar to that of Pittman and Fortin (2004).

The variable relating to the size of the company showed a negative and statistically significant coefficient at a threshold of 1% on audit quality. The negative sign in this case reflects the proportionality of the right choice of a high quality auditor, in other words the more the size of the company increases the lower the possibility of choosing a good quality auditor, this leads us to conclude that the size of the audited company has a negative impact on the auditor's opinion and therefore on audit quality.

This result is contrary to the opinions of Cameran (2005) and O'sullivan and Diacon (2002) who affirm the close link between the choice of a competent, experienced auditor with a strong reputation and the size of the audited company. These add more than the need for the best quality auditor will be solicited the more the audit fees will be high and demanded.

Regarding the ROA variable, it has a positive and statistically significant impact. For this purpose the results obtained from the bivariate analysis and the results of the logistic regression affirm this result are in conformity with those of Jensen and Lys (1990) and Abott and Parker (2000) having affirmed that the profitability of the company is linked in a positive and meaningful way with the choice of a high quality listener.

## CONCLUSION

The main objective of this research was to empirically verify the relationship between the rotation of external auditors and the audit quality of listed Tunisian companies.

To achieve this objective, we have tried to highlight the many previous studies that have addressed this issue. In this regard, it has been argued that the choice of the external auditor can be influenced on the one hand by the variables of interest (change of auditors, the duration of the mandate) and on the other hand by control variables (size of company, type of audit firm, and profitability of the company). Based on the work of Omri et al. (2014), the dependent variable associated with the choice of audit quality was measured by the auditor's opinion. We also measured the dependent variable by discretionary accruals, this approximation is also inspired by the work of Payne et al. (2021) and work by Mohapatra et al. (2021).

Our models affected a sample of 37 listed Tunisian companies observed during a study period of seven years (2015-2021), i.e. 259 observations.

To this end, the findings of the logistic and linear estimation illustrate that the change of auditors has no significant effect on audit quality.

Regarding the duration of the audit mandate, our results based on linear regression showed that a long mandate has no impact on audit quality. However, at the level of logistic regression, the results observed indicate that the duration of the audit mandate has a positive and significant effect on audit quality. This result converges with the results obtained by Jackson et al. (2008) who estimated that a long mandate positively affects the quality of external audit.

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For the control variables of our first model or audit quality measured by discretionary accruals, we found that there is a positive and non-significant association between firm type and audit quality. In addition, there is a positive and significant association between firm size and audit quality. Finally, we found a negative and significant relationship between firm profitability and audit quality.

The analysis of the coefficients of the other control parameters provided for in our second model or the audit quality is assessed by the auditor's opinion and leads to a positive and significant incident of the type of the firm and the profitability of the company. On the other hand, the size of the company implies a negative and significant impact on audit quality.

This study contributes somewhat to the body of research on the relationship between external auditor turnover and audit quality. In reality, the analysis of this relationship on an emerging market like the BVMT is necessary given that the various previous studies have been developed in the Anglo-Saxon context.

Moreover, our research helps to enrich the previous literature on the topic of the relationship between external auditor turnover and audit quality. Since the various researches established in Tunisia have mainly addressed the listener turnover factors.

### Research limitations/implications

Like any human research work, this study has some limitations which are summarized below:

First, the size of the Sample studied is 37 companies. This limited number of companies is explained by the unavailability of information for companies not listed on the BVMT. Further research that targets unlisted companies would therefore be timely and beneficial.

Secondly, the period of this study turns out to be short compared to the expiry of the legal obligation for CAC rotations, which is set at nine years.

However, despite these limitations, this work represents a starting point for further research. Therefore, it would be desirable to adopt new measures to verify the nature of the relationship between the turnover of external auditors and audit quality.

## References

Abdel-Khalik, A.R. (2002), « Reforming corporate governance after Enron: shareholders Board of trustees and auditor », Journal of Accounting Public Politicy, Vol.21, pp.97-119.

Abbott, L.J., and Parker, S. (2000), « Auditor selection and audit committee charecteristics », Auditing: A Journal of Practice and Theory, Vol.19, pp.47-66.

Anderson, D., Francis, J.R., and Stokes, D.J. (1993), « Auditing directorship and the demand for monitoring », Journal of Accounting and Public Policy, Vol.12, no.4, pp.353-375.

Arel, B., Brody, R.G., and Pany, K. (2005), « Audit firm rotation and audit quality », The CPA Journal Online, Vol.75, no.1, pp.36-39.

Bell, T.B., Causholli, M., Knechel, W.R.,(2015). Audit firm tenure, non-audit services, and internal assessments of audit quality. J. Account. Res. 53 (3), 461–509.

Beneish, M. (1997), « Detecting GAAP Violation: implications for assessing earnings management among firms with extreme financial performance », Journal of Accounting and Public Policy, Vol.16, pp.271-309.

Brody, R.G., and Moscove, S.A. (1998), « Mandatory auditor rotation », National Public Accountant, pp.32-35

Butler, M., Leone, A.J., and Willenborg, M. (2004), « An empirical analysis of auditor reporting and its association with abnormal accruals », Journal of Accounting and Economics, Vol.37, pp.139-165.

Boubaker,Sabri, et al. (2018). Does Audit Quality Affect Firms' Investment Efficiency?. Journal of the Operational Research Society, 69(10), 1688-1699. DOI: 10.1080/01605682.2018.1489357

Cameran, M. (2005), « The audit firm rotation rule: A review of the literature », Bocconi University, document de travail, pp.68.

Cameran, M., A. Prencipe, and M. Trombetta. (2016). Mandatory Audit Firm Rotation and Audit Quality. European Accounting Review, 25 (1): 35–58. doi: 10.1080/09638180.2014.921446.

Carcello, J.V., and Nagy, A.L. (2004), « Audit firm tenure and fraudulent financial reporting », Auditing Journal of Practice and Theory, Vol.23-, no.2, pp.55-69. Carey, P., and Simnett, R. (2006), « Audit partner tenure and audit quality », The Accounting Review, Vol.81, n°3, pp.654-676.

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Carey, P., Geiger, M., and Connell, B. (2008), « Costs associated with going concern modified opinions: An analysis of the Australian audit market », Abacus. Sydney, Vol.44, n°1.

Chen, C.Y., lin, C.J., et Lin, Y.C. (2008), « Audit partner tenure, audit firm tenure and discretionary accruals: Does long auditor tenure impair earnings quality? », Contemporary Accounting Research, Vol.25, pp.415-445.

Citron, D.B., et Taffler, R J. (1992), « The audit report under going concern uncertainties: An empirical analysis », Accounting of Business Research, Vol.22, pp.337-345.

Cochen, J., Krishnamoorthy, S., and Wright, A.M. (2002), « Corporate governance and the audit process », Contemporary Accounting Research, Vol.19, pp.573-594.

Craswell, A. (1988), « The association between qualified opinion and auditor switches », Accounting and Business Research, Vol.73, pp.23-31.

Chen, Y., Maroney, R., et Houghton K. (2005), « Audit committee composition and the use of an industry specialist audit firm », Accounting and Finance, Vol.45, pp.217-239.

Chow, C.W., and Rice, S.J. (1982), « Qualified audit opinion and share prices: an investigation », Auditing Journal of Practice and Theory, fall, pp.35-53.

Copley, P.A., Gaver, J.J., et Gaver, K.m. (1995), « Simultaneous estimation of the supply and demand of differentiated audits: evidence from the municipal audit market », Journal of Accounting Research, Vol.33, pp.137-155.

Craswell, A.T., Stokes, D.J., et Laughton, J. (2002), « Auditor independence and fee dependence », Journal of Accounting and Economics, Vol.33, no.2, pp.253-275.

Craswell, A.T., Francis, J. et Taylor S. (1995), « Auditor brand name reputation and industry specialization », Journal of Accounting and Economics, Vol.20, pp.197-322.

Chu, L., Dai, J., Zhang, P., 2018. Auditor tenure and quality of financial reporting. J. Account. Audit., Finance 33 (4), 528–554.

Chi, W., and Huang, H. (2005), « Discretionary accruals, audit firm tenure and auditpartner tenure: Empirical evidence from Taiwan », Journal of Contemporary Accounting and Economics, Vol.1, pp.65-92.

Craswell, A.T., Francis, J. et Taylor S. (1995), « Auditor brand name reputation and industry specialization », Journal of Accounting and Economics, Vol.20, pp.197-322.

Davis, L.R., Soo, B.S., Trompeter, G.M., 2009. Auditor tenure and the ability to meet or beat earnings forecasts. Contemp. Account. Res. 26 (2), 517–548.

Davis, L.R., Soo, B., et Trompeter, G. (2003), « Audit tenure, auditor independence, and earnings management », Working Paper, Boston College.

De Angelo, L.E. (1981a), « Auditor size and audit quality », Journal of Accounting and Economics, Vol.3, pp.183-199.

Defond, M.L. (1992), « The association between changes in client firm agency costs and auditor switching », Auditing: A Journal of Practice and Theory, Vol.11, pp.16-31.

Dumontier, P., Chtourou, S., et Ayedi, S. (2006), « La qualité de l'audit externe et les mécanismes de gouvernance des entreprises : une étude empirique menée dans le contexte tunisien », Actes du 27éme congrès de l'Association Francophone de Comptabilité (AFC), Tunis.

Fan, P.H., and Wong, T.J. (2005), « Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia », Journal of Accounting Research, Vol.43, no.1, pp.35-72.

Francis, J.R., et Krishnan, J. (1999), « Accounting accruals and auditor reporting conservatism », Contemporary Accounting Research, Vol.16, pp.135-165.g

Firth, M., et Smith, A. (1992), « Selection of auditor firms by companies in the new issue market », Applied Economics, Vol.24, no.2, pp. 247-255. Flint, D. (1988), « Philosophy and principles of auditing », Macmillan Education, London.

Gul, F.A., Lynn, S., et Tsui, J. (2001), « Audit quality, management ownership and the informativeness of accounting earnings », Journal of Accounting Auditing and Finance, Vol.17, pp.25-49.

Geiger, M.A., and Raghunandan, K. (2002), « Auditor tenure and audit reporting failures », Auditing: A Journal of Practice and Theory, Vol.21, pp. 67-80.

Hay, D., Davis, D. (2004), « The voluntary choice of an audit of any level of quality », Auditing: A Journal of Practice and Theory », Vol.23, no.2, pp.37-53.

Jensen, W., and Meckling, W. (1976), « Theory of the firm : managerial behavior, agency cost and ownership structure », Journal of Financial Economics, Vol.3, pp.305-360.

Jenkins, D.S., et Velury, U. (2008), « Does auditor tenure influence the reporting of conservative earnings? », Journal of Accounting and Public Policy », Vol.27, no.2, pp. 115-132.

Krishnan, J. (1994), « Auditor switching and conservatism », The Accounting Review, Vol.1, pp.200-215.

Kothari, S.P., Leone, A., and Wasley, C. (2005), « Performance matched discretionary accruals measures », Journal of Accounting and Economics, Vol.39, pp.163-197.

Kwon, S. Y., Y. Lim, and R. Simnett. 2014. The Effect of Mandatory Audit Firm Rotation on Audit Quality and Audit Fees: Empirical Evidence from the Korean Audit Market. Auditing: A Journal of Practice & Theory 33 (4): 167–96. doi: 10.2308/ajpt-50814.

Kemp, R.S., Reckers, P.M.J., and Arrington, C.E. (1983), « Bank credibility: the need to rotate auditors », Journal of Retail Banking, pp.38-44.

Kim, S. M., Kim, S. M., Lee, D. H., & Yoo, S. W. (2019). How investors perceive mandatory audit firm rotation in Korea. Sustainability, 11(4), 1089. 10.3390/ su11041089.

Kim, H., Lee, H., Lee J.E. (2015). Mandatory Audit Firm Rotation And Audit Quality. The Journal of Applied Business Research, Vol 31,no3

Krishnan, J. (1994), « Auditor switching and conservatism », The Accounting Review, Vol.1, pp.200-215.

Journal of Ecohumanism
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Kenchel, W.R., et Vanstraelen, A. (2007), « The relationship between auditor tenure and audit quality implied by going concern opinions », Auditing: A Journal of Practice and Theory, Vol.26, no.1, pp.113-131.

Lajmi, A., & Gana, M. (2011). Struc-ture de Propriété et Qualité de l'Au-dit Externe: Cas des EntreprisesBelges Cotées. Montpellier: 32èmeCongrès de l'AFC.

Lapointe, P. (2000), « Structure de propriété, investisseurs institutionnels et performance de l'entreprise: le point des connaissances », Gestion, Vol.25, pp.75.86.

Lawrence, A., Minutti-Meza, M., and Zhang, P. (2011), « Can big 4 versus non big 4 differences in audit quality proxies be attributed to client characteristics? », The Accounting Review, Vol.86, n°1, and pp.259-286.

Lenox, C. (2000), « Do companies successfully and conservatism », The Accounting Review, Vol.1, pp.321-337.

Lenox, C. (2005), « Management Ownership and Audit Firm Size », Contemporary Accounting Research, Vol.22, pp.205-227.

Lyer, V.M., et Rama, D.V. (2004), « Clients' Expectations on Audit Judgments : A Note ».

Litt, B., Sharma, D.S., Simpson, T. and Tanyi, P.N. (2014), "Audit partner rotation and financial reporting quality", AUDITING: A Journal of Practice & Theory, Vol. 33 No. 3, pp. 59-86.

Johnson, W., and Lys, T. (1990), « The market for audit services: evidence from voluntary auditor changes », Journal of Accounting and Economics, Vol.12, pp.281308.

Junaidi, J., Miharjo, S. and Hartadi, B. (2012), "Does auditor tenure reduce audit quality?", Gadjah Mada International Journal of Business, Vol. 14 No. 3, pp. 303-315.

Jennings, M., Pany, K.J., et Reckers, P.M.J. (2006), « Strong corporate governance and audit firm rotation: effects on judges' independence perceptions and litigation judgments », Accounting Horizons, Vol.20, no.3, pp.253-270.

Johnson, V.E., Khurana, I.K., and Reynolds, J.K. (2002), « Audit firm tenure and the quality of financial reports », Contemporary Accounting Research, Vol.19, no.4, pp.637-660.

Johnson, W., and Lys, T. (1990), « The market for audit services: evidence from voluntary auditor changes », Journal of Accounting and Economics, Vol.12, pp.281308.

Mali, D. and Lim H.J (2017), «Conservative Reporting and the Incremental Effect of Mandatory Audit Firm Rotation Policy: A Comparative Analysis of Audit Partner Rotation vs Audit Firm Rotation in South Korea», Australia Accounting Review, pp00

Manry, D.L., Mock, T.J., et Turner, J.L. (2008), « Does increased audit partner tenure reduce audit quality? », Journal of Accounting, Auditing, and Finance, Vol.23, no.4, pp.553-572.

Mayangsari, S. (2007), « The auditor tenure and the quality of earnings: is mandatory auditor rotation useful? », Unhas Makassar, Vol.26, pp.1-25.

Menon, K., and Williams, D. (1991), « Auditor credibility and initial public offerings », The Accounting Review, Vol.66, pp 313-332.

Myers, J.N., Myers, L.A., and Omer, T.C. (2003), « Exploring the term of the auditorclient relationship and the quality of earnings: A case for mandatory auditor rotation? », The Accounting Review, Vol.78, pp. 779-799.

Meyer, M.J., Rigsby, J.T., Boone, J. (2007), « The impact of auditor-client relationships on the reversal of first-time audit qualifications », Managerial Auditing Journal, Vol.22, no.1, pp.53-79.

Moizer, P. (1991), « Independence », In STM. Sherer (ED.), Current Issues in Auditing, Paul Chapman Publishing. Moizer, P. (1997), « Auditor reputation: the international empirical evidence », International Journal of Auditing, Vol.1, no.1, pp. 61-74.

Nurhayati, S., & Prastiti, S. D. (2019). Pengaruh rotasi AUDIT FIRM, audittenure, dan reputasi AUDIT FIRM terhadap kualitas audit pada perusahaan manufaktur. Jurnal Akuntansi Aktual, 3(2), 165–174.

Omri, M.A. and Ben Abdennebi, A. (2014) 'Audit firm rotation and audit quality: case of the listed Tunisian firms'J. Economics and Business Research, Vol. 8, No. 3, 2014

Piot, C. (2001), « Agency costs and audit quality: evidence from France », European Accounting Review, Vol.10, no.3, pp.461-99.

Paper Piot,C., and Janin, R. (2007), « External auditors, audit committees and earnings management in France »,The European Accounting Review, Vol.16, no.2, pp.429-454.

Raffegeau, J., Dufils, P., et Ménonville, D. (1994), « L'audit financier », Presse Universitaire de France.

Ramsey, I. (2001), « Independence of Australian company auditors », Review of Current Australian Requirements and Proposals for Reform to the Minister for Financial Services and Regulation.

Richard, C. (2003), « L'indépendance de l'auditeur : pairs et manques », Revue Française de Gestion, Vol.147, pp.119-131.

Sari, G. P., & Indarto, S. L. (2019). Pengaruh pergantian auditor, tenur audit, dan frekuensi rapat komite audit terhadap kualitas laporan keuangan dengan kualitas audit sebagai variabel moderating. Jurnal Akuntansi Bisnis, 16(2), 230–245

Schwartz, K., Menon , K. (1985), « Auditor switches by failing firms », The Accounting Review, Vol.60, pp.248-261.

Senteney, D., Bazaz, M., and Ahmadpour, A. (2006), « Tests of the incremental explanatory power of auditor qualified opinion and audit firm changes in predicting impending bankruptcy », International Journal of Accounting, Auditing and Performance Evaluation, Vol.3, pp.434-451.

Simunic, D., and Stein, M. (1987), « Product differentiation in auditing: auditor choice in the market for unseasoned new issues », The Canadian Certified General Accountants' Research Foundation, Vancouver.

Singer, Z., Zhang J. (2018). Auditor Tenure and the Timeliness of Misstatement Discovery. The Accounting Review, Vol. 93, No. 2 , pp. 315–338

Shapiro, S. (1987), « The social control of impersonal trust », American Journal of Sociology, Vol.93, no.3, pp.623-658. Shockley, R.A., Holt, R.N. (1983), « A behavioural investigation of supplier differentiation in the market for audit services », Journal of Accounting Research, pp.545-64.

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Teoh, S., and Wong, T. (1993), « Perceived auditor quality and the earnings response coefficient », The Accounting Review, Vol.68, no.2, pp.346-67.
Veronina, T., Morris, R., et Gray, R. (2005), « Corporate financial transparency in Russia: an empirical study of Russian company practices », Working paper, University of new south wales and University of sudney.
Velury, U., Reisch, J.T., and O'Reilly, D.M.(2003), « Institutional ownership and the selection of industry specialist auditors », Review of Quantitative Finance and Accounting, Vol.21, no.1, pp.35-48.
Watts, R.L., et Zimmerman, J.L. (1986), « Positive accounting theory, Prentice-Hall, contemporary topics in accounting series », Englewood cliffs, New Jersey.
Winters, A.J. (1978), « Looking at the auditor rotation issue », Management Accounting, pp.29-30.
Wolf, F.R., Tackett, J.A., et Claypool, G.A. (1999), « Audit disaster futures: antidotes for the expectations gap? », Managerial Auditing Journal, pp.468-478.