

AUDIT TENURE AND FINANCIAL REPORTING IN OMAN: DOES ROTATION AFFECT THE QUALITY?

Saeed Rabea Baatwah*

*Hadhramout University, Yemen

Abstract

The purpose of this study is to provide an empirical result concerning the quality of audit under a rotation policy in the Gulf Cooperation Council (GCC). Currently, countries from GCC tend to require the audit firms of public companies to be rotated within four or five consecutive years. This policy received worldwide criticisms which asserted it deteriorates the quality of financial reports - instead of increasing their quality. To achieve this purpose, we use 573 observations from companies listed in the Omani capital market implementing audit firm rotation because Oman is the leading country in GCC. Using discretionary accruals and modified audit opinion to proxy financial reporting quality, we find that audit firm tenure is not significantly associated with low quality financial reports. We also found that audit partner tenure is not positively and significantly associated with high discretionary accruals while it is positively and significantly associated with modified audit opinion. We classify our audit tenure into short and long tenure and find similar findings. Additionally and contrary to previous findings in Oman, we report that audit committee characteristics such as independence, size, financial expertise and number of meetings are not associated with high quality financial reports. Thus, our study contains several contributions to audit tenure debates in general and corporate governance practices in GCC in particular.

Keywords: Audit Rotation, Audit Tenure, Financial Reporting Quality, GCC, Oman

1. INTRODUCTION

This study examines audit rotation policy in the Gulf Cooperation Council (GCC) particularly in Oman by investigating whether audit tenure increases or diminishes the quality of financial reporting. The external auditor is a crucial corporate governance mechanism responsible for adding credibility to financial reports since financial reports are prepared by management which may introduce bias in these reports to hide self-interest behaviours (Jensen and Meckling, 1976; Watts and Zimmerman, 1986). Traditionally, audit literature considers the external auditor as an independent and expert party and this status allows him to discover and report errors or frauds in the financial reports (DeAngelo, 1981; Watts and Zimmerman, 1986). However, the capital market crisis of the last decade which included Enron and WorldCom scandals and the recent global financial crisis have shown that auditors cannot always be assumed independent because in these crises they were held to be involved in accounting irregularities (Batson, 2003; Beasley *et al.*, 2009). Accordingly, a stream of reforms in many countries was enacted to restore investors' confidence in the governance role of external auditors (for example, banning non-audit services and mandating audit rotation).

Current interest in literature concerning the role of auditors in financial reporting has concentrated on whether audit rotation policy adopted by most regulatory authorities does indeed ensure that the auditor will not compromise his

independence and at the same time continue to maintain the quality of financial reporting. Practitioners and academic researchers mostly do not agree with this policy. For example, audit firms such as the big4 audit firms state that audit rotation neither enhances their independence nor curbs over-familiarity and in addition it imposes incremental cost and complexity (PWC, 2013; KPMG, 2014b). Recently, Public Company Accounting Oversight (PCAOB) requested comments on audit firm rotation requirement for US companies (PCAOB, 2011) and most of the received comments suggested that the costs of this policy exceed the benefits (e.g. letters from IFAC, 2011; AICPA, 2011). Further, empirical research mostly finds that the quality of financial reports is deteriorated by mandating audit rotation as a result of the auditors losing the required knowledge and understanding about the client (e.g. Johnson *et al.*, 2002; Chen *et al.*, 2008; Gul *et al.*, 2009).

We concentrate on the aforementioned issue because there is a recent trend in GCC countries to adopt or consider this policy of rotation. For example, more recently, Capital Market Authorities in United Arab Emirates and Qatar required listed companies to rotate the audit firm/auditor within four (five) years. Currently, Kuwait and Bahrain regulatory authorities are considering audit firm rotation to be required for all listed companies. This trend could be motivated by the long-standing anecdote that auditors in these countries are unable to be independent and they are unable to produce high quality reports because the culture in these

countries encourages and appreciates social network (Haniffa and Hudaib, 2007). Thus, the auditor's independence may be enhanced by audit rotation and consequently also the quality of financial reports. A recent survey of audit committee members from GCC reveals that the majority of respondents support audit firm rotation and also that they are satisfied with the quality of their external auditors (KPMG, 2014a). However, there is a paucity of empirical research providing archival evidence on audit rotation from GCC. To our knowledge, there are very few studies that have examined this issue (Khasharmeh and Said, 2014; Baatwah *et al.*, 2015a; Mardini and Tahat, Forthcoming). Unlike this literature, we provide archival evidence instead of using a questionnaire method and employ more direct measures for financial reporting quality instead of merely using audit report timeliness.

Our evidence is based on data for companies listed on the Omani capital market for the following reasons. Oman is a leading country in implementing audit rotation in GCC and experts have recommended other GCC countries to follow the practice of Oman (Grant Thornton and ACCA, 2015). Further, Oman is the first country in Arab region adopting and implementing best practice corporate governance and ranked it at the top in terms of corporate governance framework and compliance (Hawkamah, 2006; Baydoun *et al.*, 2013). These two features will elevate audit firms and companies in Oman above others in GCC countries — they have had more and perhaps sufficient time to understand and effectively practice these requirements. In addition, Oman and other GCC countries are given little attention by corporate governance research (Baydoun *et al.*, 2013). We acknowledge Baatwah *et al.* (2015b) who examined internal and external corporate governance in Oman and find that the characteristics (quality) of audit committee mechanism are the only governance mechanism associated with audit report lag. Unlike the Baatwah study, we examine the corporate governance mechanism (external auditor) by using a large number of observations and more reliable measures for the quality of financial reports than audit report timeliness (DeFond and Zhang, 2014). Finally, it is reported that Oman is the country among 38 surveyed countries where manipulation of the earnings by managers is the highest (Ernst and Young, 2015). This will allow us to explore whether a lack of sufficient specific knowledge about a client constrains the auditors from preventing actual manipulation from taking place and prevents them from reporting earnings manipulation.

We use discretionary accruals and modified audit opinion to examine audit rotation in Oman. In particular, we investigate the association between audit firm/partner tenure and both discretionary accruals and modified audit opinion. Using pooled panel data models, our results reveal that audit firm tenure and audit partner tenure are not significantly associated with low quality financial reports as measured by discretionary accruals and modified audit opinion. Interestingly, we find that audit partner tenure is significantly and positively associated with modified audit opinion. Using

dichotomous measures for audit tenure (long and short), we report neither long nor short tenure associated with financial reporting quality. However, in supplementary analysis we find that the tenure of big4 audit firms and their partners are associated with low quality suggesting that audit rotation policy in Oman imposes high cost (low quality) for high quality auditors. Further, we find that audit committee independence, size, financial expertise and frequency of meetings are not significantly associated with discretionary accruals and audit opinion. Finally, we conduct robustness tests by changing the measurements of the variables, adding additional variables and testing for endogeneity, and after these procedures we are still able to report similar results as our main results.

Our study contributes to the literature in several ways. First, we respond to the call for investigating the corporate governance practices in Arab countries (Baydoun *et al.*, 2013). These countries undergo extensive reforms in relation to corporate governance practices and there is room for crucial development to upgrade the practice of corporate governance to an acceptable global level (Mohamed *et al.*, 2009). Second, Baatwah *et al.* (2015b) find no effect of employing an external auditor on the timeliness of audit report and claim audit committee quality substitutes for the role of external auditors in relation to the quality of financial reports. Our results suggest that the effect of current audit rotation policy in Oman hinders the auditors from providing high quality financial reports which points to a new direction that differs from previous findings. Further, our findings contribute to an on-going debate concerning audit firm/auditor rotation by suggesting that tenure is important for all types of auditor, for example, big4 audit firms.

Fourth, our study expands on past literature documenting the role corporate governance mechanisms plays on the quality of financial reports (Abbott *et al.*, 2004; Klein, 2002; Xie *et al.*, 2003). This research uses direct measures for the quality of financial reporting such as earnings management and restatement. Therefore, current research in Arab countries should use direct measures for the quality of financial reports in assessing the effectiveness of corporate governance practices. However, Baatwah *et al.* (2015b) report the audit committee in Oman is an effective corporate governance mechanism which in our study is found to have but an insignificant effect on discretionary accruals and audit opinion. Finally, our evidence can serve as an input for different policy makers in GCC countries (regulators, shareholders and boards of directors). Currently, the Oman and Kuwait consider implementation of new version of the code of corporate governance for all listed companies. Therefore, our empirical research provides a crucial input for assessing the current practices of corporate governance — particularly for the current audit rotation policy and audit committee requirements.

The remainder of the current study is organized as follows. The second section reviews prior literature. The third section describes the research method used to test the theme of interest of this study. In the fourth section, findings and

related discussions are presented. Final section provides the conclusion of the study.

2. BACKGROUND AND PRIOR LITERATURE

2.1. Code of corporate governance and audit rotation in Oman

Oman is a leading country in applying corporate governance best practices in the Middle-East region (Baydoun *et al.*, 2013). In the middle of 1990s and the beginning of 2000s, there were many cases of corporate scandals that resulted in a crisis of loss of trust in corporate management — particularly among small investors. Further, it is claimed that monitoring parties such as boards of directors and external auditors were not effective and in some cases they were involved in the fraud; so the argument went that the legal framework in place did not explicitly and deliberately determine the responsibilities of such parties (Dry, 2003; Saidi and Kumar, 2008) and lack of legal enforcement (Al-Yahyaee *et al.*, 2010). Accordingly, Omani regulators made major reforms to restore the investors' confidence. For example, Capital Market Authority (CMA) and Muscat Securities Market (MSM) were established on 9 November 1998 as independent parties responsible to regulate, oversee and manage securities traded in the capital market. Consequently, CMA issued extensive regulations to increase accountability, transparency and disclosure among public joint stock companies listed on the MSM. Among these regulations is the code of corporate governance which is the first code of its kind and the best corporate governance framework in the Middle East (Baydoun *et al.*, 2013). However, the application of the code is in its initial stages and there is room for making major improvements in the Omani code (Mohamed *et al.*, 2009).

The current code contains articles related to the composition and function of the executive management, board of directors, audit committee, external auditors, internal controls, related party transactions, and the corporate governance report. For example, the audit committee is required to comprise of at least three non-executive members of whom a majority is independent. Further, all members should be financially literate and at least one of them has to have financial expertise (Capital Market Authority, 2002). It is important to mention that the Omani code of corporate governance underwent several amendments (e.g. in 2009; 2012) and currently the CMA is intending to issue a new code by June of 2016 containing major revisions to the previous articles.

In respect to the requirements of an external auditor in the code of corporate governance, beside the Commercial Companies Law 4/74 and its amendments and Accounting and Auditing Profession Law 77/86, the code provides requirements to keep this mechanism effective in fulfilling its role. For example, the auditors of listed companies should be appointed by the board of directors and shareholders on a yearly basis, and rotated after four consecutive years with a cooling period of two years. They are also prohibited from providing most types of non-audit services, and any other types of service should be reviewed and approved by the audit committee. Further, the

auditors are required to review and report to the public whether the company complied with the requirements set out in the code or not. Despite these features, in terms of regulations, there is a paucity of studies examining the effect of these regulations in enhancing the role of auditors in Oman. To the best of our knowledge, we acknowledge Baatwah *et al.* (2015b) and Baatwah *et al.* (2015a) as the only studies that used Omani data to explore the auditors' role in financial reporting quality. However, this literature warns that the auditors in Oman are not effective. Unlike this literature, we extensively explore the auditors' role in Oman by investigating the role of auditor tenure on the quality of financial reports and using more recent data from listed companies in MSM.

2.2. Literature review and hypotheses development

Prior literature recognizes that the need for a separation between ownership and management is associated with the agency problem in which agents (managers) maximize their interest on the account of principals (owners/lenders) (Jensen and Meckling, 1976; Fama and Jensen, 1983). Scholars of the agency problem suggest various mechanisms — such as establishing a board of directors, managerial ownership, control market and external auditors — in order to mitigate this problem. Jensen and Meckling (1976) and Watts and Zimmerman (1986) argue that agency costs could be mitigated by providing credible financial reports and that this credibility can only be given by persons outside of the company (e.g. external auditor). Fan and Wong (2005) contend that board of directors and the occurrence of takeovers militate against solving the agency problem in developing markets and find that external auditors are the most effective governance mechanism in these markets. However, prior literature (e.g. DeAngelo, 1981; Fama and Jensen, 1983) suggest that the external auditor might fail to effectively fulfill this responsibility if he has insufficient independence and expertise.

There are two streams of literature that endeavour to explain how the auditors can maintain (lose) their independence and power to apply their expertise. The first stream focuses on how rendering non-audit services can enhance knowledge available to the auditor about the company and industry but by performing non-audit services and acquiring industry specific knowledge the auditor's independence could be threatened (e.g. DeFond *et al.*, 2002; Knechel and Sharma, 2012). The second stream examines the effect of tenure on the auditor's independence and expertise (Johnson *et al.*, 2002; Myers *et al.*, 2003). Much of literature in these streams assess the independence and expertise of an auditor by examining whether the association between the quality of financial reports and auditors is affected by long (short) tenure or large (small) proportion of non-audit services. Until today, there is no conclusive evidence supporting one single direction on the effect of earning non-audit fees and duration of tenure on the quality of work done by auditors (Knechel and Sharma, 2012; DeFond and Zhang, 2014). However, regulatory authorities from over the world continue to mandate audit rotation and ban non-audit services. The interest of this study is to examine audit rotation requirements in

Oman. Therefore, we will review the literature related to audit tenure.

Audit tenure refers to the length of time the external auditor has been employed by the company to provide independent verification of the company accounts. Prior literature assumes a positive association between audit tenure and audit quality. Johnson *et al.* (2002) explain this presumption in that long-tenured auditors gain more experience and knowledge concerning client affairs. These experienced and knowledgeable assist external auditors to better understand the client's accounting and reporting systems and develop effective and efficient audit procedures that can detect errors and fraud. Chen *et al.* (2008) and Chi *et al.* (2009) contend that audit quality increases with audit firm/partner tenure because client-specific knowledge and experience can only be acquired over time with the client and then produce a high-quality audit. However, there is a claim arguing that although the tenure could increase the familiarity of the auditor with the client's business and financial reporting process, the ability to report accounting irregularities to the public it is likely to be rare (General Accounting Office (GAO), 2003; Francis, 2004). This view is challenged by the argument concerning the litigation and reputation incentives of auditors (Ruiz-Barbadillo *et al.*, 2009) and by most empirical evidence that documents long auditor tenure does not impair audit quality (Knechel and Vanstraelen, 2007; DeFond and Zhang, 2014).

Further, empirical evidence supports the high quality of long-tenured auditors. It is reported that companies with a long-tenured auditor have high quality accruals (Johnson *et al.*, 2002; Myers *et al.*, 2003). Carcello and Nagy (2004) investigate the association between audit tenure and fraudulent reporting and find that fraudulent reporting is significantly more likely to occur with a short tenure auditor than with a long tenure auditor suggesting that no deterioration in auditor quality is caused by longer auditor tenure. Subsequent research also supports that long audit tenure does not threaten audit quality, and rejects the idea of audit rotation (Gul *et al.*, 2009; Chen *et al.*, 2008; Lim and Tan, 2010; Knechel and Sharma, 2012; Knechel and Vanstraelen, 2007; Corbella *et al.*, 2015). Overall, most empirical evidence challenges mandatory rotation policy proposed by most regulators in the world.

Although there are conflicting arguments for and against audit rotation and most evidence from more developed markets favour long-tenured audit/client relationship policy, Oman and more recently other GCC countries mandate audit firm rotation. Prior literature acknowledged the importance of auditors in such markets (Al-Ajmi, 2009) but the issue of independence is recognized because these countries are characterized by strong social ties and Arab traditions (Haniffa and Hudaib, 2007). This could be the main motivation for audit rotation in these countries. However, whether audit firm rotation policy in these countries achieved its objective is an empirical question. Very few empirical researches from these countries examine the trend in applying audit firm rotation. For example, using a questionnaire instrument and primary analysis methods, Khasharmeh and Said (2014) find that auditors in Bahrain perceive audit

firm rotation has a positive effect on audit quality. On the other hand, for an Omani sample, Baatwah *et al.* (2015a) report that audit firm tenure is not associated with a timely audit report. This finding could add another explanation for Baatwah *et al.* (2015b) who find an external auditor does not assure effective corporate governance in Oman. Mardini and Tahat (Forthcoming) use a questionnaire survey for a Qatari sample and find that audit rotation enhances financial reports quality and investors' confidence in these reports.

If we believe in the positive effect of long auditor tenure on the quality of financial reports and we accept the recent result of Omani empirical research, it is possible to claim that audit firm rotation in Oman undermines the governance role of the auditors because the quality of financial reports requires the auditor to have knowledge about client operations, risk, and accounting systems which can be better obtained if that auditor has long tenure and/or provides non-audit services (Knechel and Sharma, 2012). However, in Oman, the auditors are prohibited from providing most types of non-audit services to their clients. Thus, auditors in Oman lack sufficient knowledge about their clients, which in turn, hinders them from providing high quality financial reports. Based on these arguments and empirical evidence, we suggest that the audit firm rotation in Oman could have a negative effect on financial reporting quality. Thus, we propose the following hypothesis:

H1: Audit firm rotation is negatively correlated with the quality of financial reports.

In Oman, the engaged audit partner is required to provide his name on the audit report (Capital Market Authority, 2008). This feature allows us to collect data about the tenure of the audit partners. Thus, we investigate whether the audit firm or the audit partner should be rotated within four years in Oman. The recent audit tenure literature focuses on audit partner rotation (e.g. Carey and Simnett, 2006; Chen *et al.*, 2008; Chi *et al.*, 2009) and suggests that imposing mandatory rotation for the audit partner is more beneficial for audit quality than imposing it on the audit firm. If we assume the claim by Omani regulators about audit firm rotation to be correct, it is most likely that an auditor partner will be more affected by long tenure than an audit firm. However, in the case of Oman, the four years rotation policy is perhaps too short to conclude a threat of audit independence or a cohesive knowledge about the client's business (Chen *et al.*, 2008; Gul *et al.*, 2009). Although four years rotation policy is not enough to conclude any threat or benefit to the quality of audit and financial reports, we assume that audit partner rotation policy has a lesser negative effect on the quality of reports than audit firm rotation. Thus, we propose the following hypothesis:

H2: The quality of financial reports is more affected by the rotation of an audit partner than an audit firm.

3. METHOD

3.1. Sample

The initial sample of the study consists of all companies listed on MSM over a period from 2006 to 2013. This yielded a total of 955 observations.

Financial companies were excluded due to their uniqueness in terms of the accounting system and regulations — and so our sample was further reduced to 699 observations. Different sources of data were used to collect the relevant data for the variables of interest. Since there were so many cases of missing data for some variables, our sample was further reduced to 573 observations. It should be mentioned that limited data available for audit partner tenure reduced our sample for testing the second hypothesis to 508 observations because one of the audit firms (PriceWaterhouseCooper) did not provide the name of signed partner. The sources used to collect the data in the current study are OSIRIS database, DataStream and annual reports. The collected data includes information on companies for the period 2006-2013. This period is selected because this period covers the recent global financial crisis that hit many capital markets — one of them being MSM. Thus, lessons could be learned by the regulators and companies from this crisis. Second, data availability in the period before 2006 is problematic due to the larger number of missing data in this earlier period. Finally, this period represents the latest source of information available at the time when the study was initially conducted.

3.2. Empirical models

The models presented below are suggested for testing our hypotheses. Following most prior literature (e.g. Carey and Simnett, 2006; Chi *et al.*, 2009), we use earnings quality and audit report content as measures for the quality of financial reports. Further, these models are tested by using the pooled panel data approach with robust standard errors clustered at company level to correct heteroscedasticity and autocorrelation problems (White, 1980; Rogers, 1993). In addition, we winsorize all continuous variables at 1% and 99% to eliminate outliers in the data. Earnings quality model is tested by pooled OLS regression while audit report content is tested by using pooled logistic regression. The following are the equations for these models:

$$ERQ_{it}/ADOP_{it} = \beta_0 + \beta_1 ADFT_{it} + \beta_2 ADFSZ_{it} + \beta_3 ACID_{it} + \beta_4 ACSZ_{it} + \beta_5 ACFEX_{it} + \beta_6 ACM_{it} + \beta_7 LNCOSZ_{it} + \beta_8 PROF_{it} + \beta_9 LEV_{it} + \beta_{10} GROTH_{it} + \beta_{11} LOSS_{it} + \beta_{12} OCF_{it} + \beta_{13,10} YEARDUMS_{it} + \beta_{14,7} IDSTRDUMS_{it} + \varepsilon_{it} \quad (1)$$

$$ERQ_{it}/ADOP_{it} = \beta_0 + \beta_1 ADPT_{it} + \beta_2 ADFSZ_{it} + \beta_3 ACID_{it} + \beta_4 ACSZ_{it} + \beta_5 ACFEX_{it} + \beta_6 ACM_{it} + \beta_7 LNCOSZ_{it} + \beta_8 PROF_{it} + \beta_9 LEV_{it} + \beta_{10} GROTH_{it} + \beta_{11} LOSS_{it} + \beta_{12} OCF_{it} + \beta_{13,10} YEARDUMS_{it} + \beta_{14,7} IDSTRDUMS_{it} + \varepsilon_{it} \quad (2)$$

Table 1 provides a brief summary of the definitions of the variables. The dependent variables for this study are absolute discretionary accruals and modified audit opinions. Using the modified Jones model and a one-digit GICS industry classification, we estimate discretionary accruals for each year and industry (Dechow *et al.*, 1995).¹ We

require at least eight companies for running the modified Jones model and to estimate discretionary accruals. Then, we compute the absolute value for discretionary accruals. Prior literature suggests that high value of absolute discretionary accruals is an indicator of low quality financial reports (Chen *et al.*, 2008; Gul *et al.*, 2009). Thus, to test our hypotheses, we predict that increasing the tenure of an auditor is not associated with high discretionary accruals. The second measure for financial reporting quality is a modified audit opinion. Modified audit opinion is measured according to prior literature by using a dichotomous approach where one is coded for companies which received a modified audit opinion and zero for those who received an unmodified audit opinion (DeFond *et al.*, 2002; Carey and Simnett, 2006; Francis and Krishnan, 1999). This literature suggests that the inclination of issuing a modified audit opinion is an indicator of high quality audit. To test our hypotheses, we assume that the propensity of issuing modified audit opinion will not be compromised by increasing the tenure of auditors.

For our main independent variables, we follow most of the prior literature to define (e.g. Carey and Simnett, 2006; Chen *et al.*, 2008). This literature uses continuous measurement of audit tenure, which is the number of consecutive years the audit firm was the company's external auditor. Further, this literature employs dichotomous measure for audit tenure where the tenure is classified into long and short tenure. Most of this literature considers auditors with tenure three or two years or less as short tenure. Thus, in the Oman context where the maximum tenure is four years, we classify the tenure of auditor as short if the auditor has two years or less engagement period with the client while as a long if the auditor has four years engagement period with the client.

We incorporate sets of control variables that have been found to have an impact on financial reporting quality. The first set is audit committee characteristics (composition, size, expertise, and activity). These characteristics when they display a positive aspect — such as greater expertise or more frequent meetings — are predicted to enhance the quality of financial reporting (Klein, 2002; Xie *et al.*, 2003). Further, Baatwah *et al.* (2015b) find in Oman that the audit committee is the most effective corporate governance mechanism in relation to audit preventing report lag. The second set relates to company characteristics (company size, profitability or loss, leverage, growth, and cash flow). These variables are predicted to influence financial reporting quality because they are associated with incentives for manipulating the earnings and audit risk. The third set is related to auditor type audit (big4 and non-big4 audit firms). Prior literature predicts big4 audit firms are associated with high quality reports because they have more experts and are more motivated to maintain their reputation than the other type of auditors (Gul *et al.*, 2009). Finally, we include a set of dummy variables for controlling the time and industry effects.

¹ We use a modified Jones model to estimate discretionary accruals because it is the most used measure in the literature (DeFond and Zhang, 2014) and it was recently found that Jones-type models are more reliable measures for discretionary accruals as it is associated with less measurement error compared to other measures (Keung and Shih, 2013). Further, we use 1-digit GICS industry classification to classify our sample into specific

industries because using sub-classification of Omani MSM or 2/3-digit GICS will limit the size of our sample as the number of listed companies in Oman is small. Thus, our sample companies are classified into 5 industries (industrial, energy, consumer discretionary, materials and consumer staples).

Table 1. Variables definitions

<i>Dependent variables</i>	
ERQ	Absolute discretionary accruals estimated using modified Jones model;
ADOP	Indicator variable equal to 1 if a client received modified audit opinion, 0 otherwise;
<i>Independent variables</i>	
ADFT	Number of consecutive years that audit firm/auditor is appointed as external auditor for company;
ADPT	Number of consecutive years that audit partner is appointed as external auditor for company;
LADFT	Indicator variable equal to 1 if the audit firm/auditor is associated with the client for a period 4 consecutive years, 0 otherwise;
LADPT	Indicator variable equal to 1 if the audit partner is associated with the client for a period 4 consecutive years, 0 otherwise;
SHADFT	Indicator variable equal to 1 if the audit firm/auditor is associated with the client for a period 2 consecutive years or less, 0 otherwise;
SHADPT	Indicator variable equal to 1 if the audit partner is associated with the client for a period 2 consecutive years or less, 0 otherwise;
<i>Control variables</i>	
ADFSZ	Indicator variable equal to 1 if the audit firm is big-4, 0 otherwise;
ACID	Proportion of independent directors on AC;
ACSZ	Number of directors on AC;
ACFEX	Proportion of directors on AC with accounting expertise;
ACM	Number of meetings held by AC during the year;
LNCOSZ	Natural log of total assets;
PROF	Proportion of net income to total assets;
LEV	Total debt to total assets;
GROTH (%)	Changed in sales scaled by lagged sales;
LOSS	Indicator variable equal to 1 if the company reported a loss for the last three years, 0 otherwise;
OCF	Absolute value of cash flow from operations scaled by total assets;
YEARDUMS	Indicator variables equal to 1 if the year is 2007, 2008, 2009, 2010, 2011, 2012 or 2013, 0 otherwise;
IDSTRDUMS	Indicator variables equal to 1 if the company from one of these industries (energy, consumer discretionary, materials and consumer staples), 0 otherwise.

4. RESULTS

4.1. Descriptive data

Table 2 contains descriptive statistics for the variables for the full sample of 573 observations. However, the statistics for audit partner tenure variables is for a sample of 508 observations. For the sake of brevity, we discuss the results in relation to our main variables, financial reports quality measures, and audit tenure measures. Therefore, the results for the control variables can be studied in the table. In Panel A, mean (median) absolute discretionary accruals is 0.28 (0.23), which is significantly large compared with developed countries (e.g. Balsam *et al.*, 2003). This is not surprising as the recent report indicates that among 38 surveyed countries Omani managers are those who manipulate their firms' earnings most. We also observe that approximately 8% (0%) of our sample received a modified audit opinion. This is a very small percentage particularly in a setting with high occurrence of earnings manipulation (Francis and Krishnan, 1999).

In relation to audit tenure variables, the mean (median) for audit firm tenure is 2.37 (2) years while for audit partner is 2.17 (2) years. Because the means of audit firm and partner are approximately the same, it can be concluded that turnover of partners within audit firms is less likely to happen. One explanation for such a trend is that because the tenure for audit firm/auditor in Oman is 4 years, audit firms are struggling to allow their partners to have sufficient time to understand the client's business. Alternatively, the audit firms are likely to have a limited number of partners to rotate among their clients. As for short and long tenure, we note that 21% and 26% of our sampled companies have long tenure with their audit firm and partner

respectively. In addition, we observe that short-tenured audit firms and partners are respectively associated with 55% and 56% of our sample. Overall, the mean for audit firm/partner tenure in Oman is very short.

4.2. Univariate tests

We conduct preliminary tests, group difference tests and a correlation matrix, to test the key variables of this study. Using parametric tests, Panel B of Table 2 shows results for means differences for our dependent variables based on short and long tenure of audit firm/partner. We can observe that the mean differences of our dependent variables are neither significant for short nor for long tenure audit firm or audit partner. Further, the correlation matrix in Table 3 shows that the correlations between financial reporting quality measures and audit firm/partner tenure measures are very small and insignificant. These are the preliminary results which can suggest that audit rotation policy in Oman undermines the governance role of external auditors. However, we defer our conclusion to the results of regressions because the results of regression are more reliable for testing hypotheses than univariate results. In addition, univariate analysis provides us with a mean to check the presence of a multicollinearity problem in our data. In Table 3, we note that the correlations between the independent variables are not higher than 0.70 which indicate there is no need to be concerned about the multicollinearity problem (Gujarati and Porter, 2009). We should note that there are some variables in Table 3 with a correlation higher than 0.70 (e.g. ADFT and ADPT; ADFT and SHADFT). However, these variables are not included together in one model.

Table 2. Disruptive statistics for variables included in the models

Panel A: Descriptive statistics					
Variable	Mean	25th%	Median	75th%	S.D.
ERQ	0.28	0.09	0.23	0.40	0.24
ADOP	0.08	0.00	0.00	0.00	0.27
ADFT	2.37	1.00	2.00	3.00	1.11
ADPT	2.17	1.00	2.00	3.00	1.10
LADFT	0.21	0.00	0.00	0.00	0.41
LADPT	0.26	0.00	0.00	1.00	0.44
SHADFT	0.55	0.00	1.00	1.00	0.49
SHADPT	0.56	0.00	1.00	1.00	0.49
ADFSZ	0.65	0.00	1.00	1.00	0.48
ACID	0.91	1.00	1.00	1.00	0.21
ACSZ	3.36	3.00	3.00	4.00	0.66
ACFEX	0.22	0.00	0.25	0.33	0.23
ACM	5.79	4.00	5.00	5.00	1.35
LNCOSZ	16.51	15.46	16.45	17.56	1.42
PROF	0.04	0.01	0.05	0.10	0.11
LEV	0.51	0.25	0.06	0.11	0.09
GROTH (%)	27.24	0.04	10.82	25.90	204.04
LOSS	0.19	0.00	0.00	0.00	0.39
OCF	0.11	0.04	0.09	0.17	0.09

Panel B: Means differences for ERQ and ADOP based on audit tenure measures groups						
Variable	ADFT		Manny-Whitney t.test	ADPT		Manny-Whitney t.test
	SHORT	LONG		SHORT	LONG	
ERQ	0.29	0.28	0.182	0.29	0.28	0.745
ADOP	0.09	0.07	0.838	0.08	0.07	0.402

Note: *p<.10; **p<.05; ***p<.01

Table 3. Pearson correlations

ERQ	1							
ADOP	0.03	1						
ADFT	-0.02	-0.01	1					
ADPT	-0.01	0.03	0.88	1				
LADFT	0.01	-0.04	0.76	0.65	1			
LADPT	0.02	-0.02	0.68	0.75	0.89	1		
SHADFT	0.01	0.04	-0.89	-0.78	-0.58	-0.52	1	
SHADPT	0.01	0.00	-0.79	-0.89	-0.51	-0.59	0.88	1
ADFSZ	0.10	-0.19	-0.02	-0.11	-0.01	-0.09	0.00	0.08
ACID	0.01	-0.29	-0.02	-0.03	-0.02	-0.03	0.03	0.01
ACSZ	-0.02	-0.12	0.04	0.03	-0.02	0.06	-0.03	-0.03
ACFEX	0.07	-0.09	-0.01	0.03	0.01	-0.01	-0.01	-0.01
ACM	0.03	-0.19	0.06	0.06	-0.07	0.03	-0.07	-0.07
LNCOSZ	0.05	-0.21	0.02	-0.01	0.02	-0.02	-0.02	0.03
PROF	0.04	-0.36	0.11	0.08	0.08	0.06	-0.10	-0.08
LEV	-0.00	0.38	-0.06	-0.01	-0.07	-0.05	0.05	0.02
GROTH	0.04	0.03	0.04	0.03	0.01	0.01	-0.06	-0.02
LOSS	-0.01	0.31	-0.03	-0.01	-0.05	-0.03	0.01	0.01
OCF	0.07	-0.13	0.01	0.00	0.03	0.03	0.00	0.00
Variable	ADFSZ	ACID	ACSZ	ACFEX	ACM	LNCOSZ	PROF	LEV
ADFSZ	1							
ACID	0.13	1						
ACSZ	0.09	0.12	1					
ACFEX	-0.09	0.15	-0.18	1				
ACM	0.05	0.17	0.09	0.08	1			
LNCOSZ	0.40	0.06	0.10	-0.06	0.04	1		
PROF	0.13	0.04	0.02	0.03	0.21	0.30	1	
LEV	-0.13	-0.12	-0.13	-0.01	-0.09	-0.09	-0.39	1
GROTH	-0.01	-0.04	0.02	0.00	0.04	0.02	0.15	0.07
LOSS	-0.17	-0.13	-0.02	0.05	-0.05	-0.33	-0.45	0.25
OCF	0.03	0.03	-0.06	0.10	0.02	0.00	0.24	-0.22
Variable	GROTH	LOSS	OCF					
GROTH	1							
LOSS	0.08	1						
OCF	-0.09	-0.18	1					

4.3. Regressions results

Our empirical results are reported in Tables 4 and 5. In Table 4, the results of pooled OLS and logistic

regressions of ERQ and ADOP on audit firm tenure measures are reported. These regressions test the first hypothesis of the study using the full sample of

573 observations. These regressions show that our selected variables are significantly and highly explained by the variance in our dependent variables (R^2 approximately 26% for ERQ and 45% for ADOP; $p < 0.001$). On the other hand, Table 5 shows the results for pooled OLS and logistic regressions of ERQ and ADOP on audit partner tenure. This table shows results of testing the second hypothesis for 508 observations. This table also shows that the selected variables are significantly predicting our dependent variables (R^2 approximately 27% for ERQ and 50% for ADOP; $p < 0.001$). The following are discussions of the results of testing our hypotheses.

4.3.1. Audit firm tenure and financial reporting quality (H1)

Tests using continuous and dichotomous measures for audit firm tenure quantitatively support our hypothesis, which argued that audit firm rotation in Oman impairs the governance role of auditors in relation to the quality of financial reports. In Panel A of table 4, it is shown that ADFT is positively but insignificantly associated with ERQ (coeff=0.003; $t.stat=0.37$). For LADFT and SHADFT are also positively and insignificantly related to ERQ (coeff=0.006; $t.stat=0.21$ and coeff=0.011; $t.stat=0.50$ respectively). As for ADOP, Panel B of table 4 reports that ADFT, LADFT and SHADFT are positively associated with ADOP but it is not qualitatively significant (coeff=0.239; $t.stat=1.60$, coeff=0.424; $t.stat=0.84$ and coeff=0.090; $t.stat=0.23$ respectively). Results for control variables suggest that only GROTH is significantly associated with ERQ and PROF, LEV and LOSS are significantly associated with ADOP. These results additionally indicate that audit committee characteristics are not associated with the quality of financial reporting. The latter result contradicts the recent findings by Baatwah *et al.* (2015b) and suggests that the best measure for testing the effectiveness of the audit committee is using direct measure for financial reporting quality (discretionary accruals or report content). Therefore, we can conclude that the audit committee mechanism is not effective in Oman.

These results challenge the audit rotation policy in Oman and suggest that audit firms/auditors in Oman should have sufficient time to get to know a client's specific industry and business characteristics. It is hard for an auditor to detect accounting irregularities in the financial information of his client without sufficient familiarity with the accounting system used by the client and most accounting issues in the industry that the client operates in. Our results are consistent with findings, among others, of Myers *et al.* (2003) and Carcello and Nagy (2004) that contend that long term association between auditor and client does not destroy the governance role of auditor over the financial reports.

We support our second hypothesis which suggests that audit rotation policy has a less important negative effect on an audit partner than on audit firms. Table 5 reports results in relation to the second hypothesis. Columns 2 and 3 of Panel A show that ADPT is positively but insignificantly associated with ERQ (coeff=0.006; $t.stat=0.57$). Further, similar results are presented in columns 3 and 4, which suggest that LADPT and SHADPT are

positively and insignificantly associated with ERQ (coeff=0.028; $t.stat=0.81$ and coeff=0.001; $t.stat=0.03$ respectively). Results for ADOP and audit partner tenure are shown in columns 3 and 4 of Panel. The results, however, indicate that the relation between ADPT and ADOP is positive and significant (coeff=0.328; $t.stat=1.64$). Further, LADPT is positively associated with ADOP (coeff=0.489; $t.stat=0.71$) while SHADPT is negatively associated with ADOP (coeff=-0.039; $t.stat=0.06$). However, both variables are not statistically significant. For control variables, we find that the same control variables in table 4 have the same effect on ERQ and ADOP except for LOSS, OCF and ACID.

Table 4. Regressions of financial reporting quality measures and audit firm tenure

Panel A: Results of discretionary accruals				
Variable	ERQ			
	Coeff.est.	Test.stat	Coeff.est.	Test.stat
ADFT	0.003	0.37		
LADFT			0.006	0.21
SHADFT			0.011	0.50
ADFSZ	0.004	0.20	0.004	0.19
ACID	-0.024	0.70	-0.023	0.67
ACSZ	0.003	0.22	0.003	0.21
ACFEX	0.049	1.27	0.049	1.27
ACM	-0.001	0.11	-0.001	0.13
LNCOSZ	-0.007	1.07	-0.007	1.05
PROF	0.072	0.53	0.069	0.51
LEV	0.015	0.39	0.016	0.42
GROTH	0.001*	1.92	0.001*	1.92
LOSS	-0.015	0.40	-0.011	0.43
OCF	0.103	0.77	0.104	0.77
YEARDUMS	Included			
IDSTRDUMS	Included			
_cons	0.229**	2.04	0.254**	2.14
R-square	0.2618		0.2624	
F-value	12.50***		12.15***	
Panel B: Results of modified audit opinion				
Variable	ADOP			
	Coeff.est.	Test.stat	Coeff.est.	Test.stat
ADFT	0.239	1.60		
LADFT			0.424	0.84
SHADFT			0.090	0.23
ADFSZ	-0.896	1.49	-0.903	1.50
ACID	-1.358	1.56	-1.445	1.64
ACSZ	-0.729	1.48	-0.751	1.49
ACFEX	-2.082	1.46	-2.001	1.42
ACM	-0.151	0.66	-0.137	0.61
LNCOSZ	0.069	0.28	0.082	0.33
PROF	-5.668**	2.46	-5.220**	2.37
LEV	2.773***	2.76	2.773***	2.72
GROTH (%)	0.001	0.16	0.001	0.19
LOSS	0.868**	1.96	0.935**	2.25
OCF	-1.384	0.42	-1.547	0.47
YEARDUMS	Included			
IDSTRDUMS	Included			
_cons	-0.028	0.10	0.309	0.07
Pseudo R ²	0.4503		0.4473	
P-value	368.99***		351.19***	

Note: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$

4.3.2. Audit partner tenure and financial reporting quality (H1)

Overall, our results suggest that an audit partner is less affected by audit rotation policy than the audit

firm is. At the same time increasing the tenure of a partner it enhanced his ability to detect and report irregularities in the financial information. The results are consistent with the findings of Chen *et al.* (2008) and Chi *et al.* (2009) who also contend that audit firm rotation is more costly than audit partner rotation and the quality of the audit performed by the partner is enhanced as the tenure is increased.

Table 5. Regressions of financial reporting quality measures and audit partner tenure

Panel A: Results of discretionary accruals				
Variable	ERQ			
	Coeff.est.	Test.stat	Coeff.est.	Test.stat
ADPT	0.006	0.57		
LADPT			0.028	0.81
SHADPT			0.001	0.03
ADFSZ	0.018	0.92	0.019	0.95
ACID	-0.016	0.43	-0.015	0.41
ACSZ	-0.004	0.27	-0.004	0.32
ACFEX	0.042	0.95	0.042	0.97
ACM	0.002	0.25	0.002	0.25
LNCOSZ	-0.008	0.30	-0.008	1.15
PROF	0.043	0.53	0.044	0.31
LEV	0.012	0.33	0.013	0.34
GROTH	0.001**	2.18	0.001*	1.87
LOSS	-0.008	0.25	-0.007	0.23
OCF	0.079	0.57	0.075	0.54
YEARDUMS	Included			
IDSTRDUMS	Included			
_cons	0.259**	2.06	0.286**	2.10
R-square	0.2725		0.2736	
F-value	12.25***		11.95***	
Panel B: Results of modified audit opinion				
Variable	ADOP			
	Coeff.est.	Test.stat	Coeff.est.	Test.stat
ADPT	0.328*	1.64		
LADPT			0.489	0.71
SHADPT			-0.039	0.06
ADFSZ	-0.924	1.35	-1.009	1.43
ACID	-1.647	1.61	-1.740*	1.66
ACSZ	-0.666	1.20	-0.682	1.21
ACFEX	-1.589	1.10	-1.496	1.07
ACM	-0.151	0.73	-0.139	0.69
LNCOSZ	0.106	0.43	0.129	0.54
PROF	-7.006***	2.67	-6.461**	2.52
LEV	3.155**	2.43	3.188**	2.34
GROTH	0.004	0.86	0.003	0.77
LOSS	0.758	1.56	0.834**	2.02
OCF	-4.335*	1.75	-4.419*	1.77
YEARDUMS	Included			
IDSTRDUMS	Included			
_cons	-0.626	0.16	0.213	0.05
Pseudo R ²	0.5082		0.5036	
P-value	250.63***		269.97***	

Note: * $p < .10$; ** $p < .05$; *** $p < .01$

4.4. Supplementary analysis

4.4.1. Audit tenure and audit firm type

Collectively, the reported results in the current study undermine the audit rotation policy in Oman. We now examine the effect of audit rotation on the quality of financial reports based on the type of auditor. Prior literature argues that the ability of detecting and reporting irregularities in the financial reports depends on the type of auditor, and that big N audit firms mostly do have such ability (DeAngelo,

1981; Francis *et al.*, 1999; Francis and Yu, 2009). This literature links this ability with the fact that big N audit firms have strong incentives to be independent and have partners and staff with high levels of financial accounting expertise. Thus, we argue that if having length of tenure is not important for auditors, we would find that a big4 audit firm in most cases produce high quality financial reports regardless how long the firm is associated with the client. To test this proposition, we divide our sample into two samples based on the type of audit firm (BIG4 and NONBIG4) and run the first model for audit firm and partner tenure.

Table 6 suggests that ADFT is positively associated with ERQ for companies audited by big4 audit firms and negatively associated with ERQ for companies audited by non-big4 audit firms. However, ADFT for both samples is not statistically significant indicating that having longer tenure is crucial for all types of audit firms. Further, we find that ADPT is positively and significantly associated with ERQ for a sample audited by big4 audit firms while for a sample audited by non-big4 audit firms, ADPT is negatively and significantly associated with ERQ. This result interestingly suggests that the partners of big4 audit firms need more time to understand the specific characteristics of the client compared with the partners of non-big4 audit firms. One explanation can be given for the latter results is that because audit firms dominated the audit market in Oman their partners have limited time to devote to gaining an understanding of the business characteristics of each and every client. Overall, our results in this section are consistent with Gul *et al.* (2009) who suggest that big4 auditors are not able to apply their expertise to all clients since they need some time to deal with general and specific accounting issues, which, consequently, should increase the quality of financial reports.

Table 6. Regressions of discretionary accruals and audit tenure based on audit firm type

Variable	ADFT		ADPT	
	BIG4	NONBIG4	BIG4	NONBIG4
	Coeff.T. stat	Coeff.T. stat	Coeff.T. stat	Coeff.T. stat
ADFT	0.016	-0.019		
ADPT			0.026*	-0.019*
ACID	-0.009	-0.031	0.017	-0.029
ACSZ	-0.004	0.019	-0.017	0.019
ACFEX	0.087*	-0.014	0.083	-0.015
ACM	-0.003	0.004	0.002	0.004
LNCOSZ	-0.017**	0.012	-0.021**	0.011
PROF	0.109	0.093	0.139	0.099
LEV	-0.017	0.048	-0.017	0.048
GROTH	0.001	0.001	0.000	0.001
LOSS	0.006	-0.019	0.025	-0.020
OCF	0.036	0.206	-0.041	0.207
YEARDUMS	Included			
IDSTRDUMS	Included			
_cons	0.376**	-0.037	0.437***	-0.025
R-square	0.3186	0.2672	0.3447	0.2673
F-value	12.49***	4.29***	11.68***	4.30***

Note: * $p < .10$; ** $p < .05$; *** $p < .01$; BIG4 is indicator variable equal to 1 if the audit firm is one among known big4 audit firms, 0 otherwise; NONBIG4 is indicator variable equal to 1 if the audit firm/auditor is not big4 audit firms, 0 otherwise. See Table 1 for other variables definitions

4.4.2. Alternative measures for financial reporting quality

Overall, our main results suggest audit rotation policy in Oman has a negative effect on the quality of financial reports. However, this conclusion could be sensitive to financial reporting quality measures. Thus, as a robust test, we also employ alternative measures for our financial reporting quality measures. First, we use signed and positive discretionary accruals based on the modified Jones model. Second, we estimate discretionary accruals based on modified Jones model adjusted for performance (Kothari *et al.*, 2005). Untabulated results from these analyses suggest that the reported results in our main analysis are not quantitatively affected by using different measures for earnings quality. Further, we limit our sample for modified audit opinion to those companies with positive earning management. Francis and Krishnan (1999) argue that auditors are more likely to issue a modified audit opinion to clients with a large proportion of earnings management. Indeed the untabulated results turn out to be consistent with those reported in our main analysis.

4.4.3. Controlling for endogeneity

Endogeneity is a statistic issue faced by social science researchers among them accounting and corporate governance researchers (Larcker and Rusticus, 2010; Brown *et al.*, 2011). This literature acknowledges that omitting important variables from the regression is a key cause of this problem. Thus, our findings could be affected by this problem. Accordingly, we run our models using two-way fixed effects model which is a method to address the endogeneity problem in accounting and corporate governance literature (Brown *et al.*, 2011). Further, we add other control variables such as board characteristics (composition, size, meetings and expertise), concentration of ownership structure, company age and audit fees. Further, we replace board and audit committee characteristics by composite measures as used by Baatwah *et al.* (2015b). Untabulated results indicate that the reported results in main analysis are consistent even when we use fixed effects model upon adding additional control variables or changing their quantities. Thus, we can conclude the endogeneity problem is not pertinent significant in our data.

5. CONCLUSION

In the event of collapsing high profile companies (e.g. Enron and WorldCom) and also of audit firms (Arthur Andersen), attention has been extensively paid to the tenure of auditors which results in a trend among most capital market authorities over the world to impose mandatory audit rotation. However, an important question still debated among researchers is whether audit rotation enhances or deteriorates the governance role of auditor over financial reporting quality. Recently, most GCC countries adopted mandatory audit firm rotation presuming that audit firm rotation will bring fresh insight and greater monitoring over the business. Despite the fact that audit rotation literature is extensively generated in developed countries such as

US, UK and Australia, little attention has been given to this issue by researchers from GCC countries. Thus, we examine audit rotation policy by documenting the association between audit firm/partner tenure and financial reporting quality for an Omani sample. We find evidence suggesting that audit firm rotation constrains auditors from having (gaining) sufficient knowledge and understanding about their clients' specific characteristics. Particularly, we find that increasing audit firm tenure is not significantly associated with lower (higher) financial reporting quality as measured by discretionary accruals and modified audit opinion. Further, we find that increasing the tenure of an audit partner is not associated with deteriorated reported earnings quality and auditor independence. Interestingly, we found empirical evidence suggesting that current audit rotation policy imposes difficulties for those auditors who are characterized as high quality auditors such as the big4 audit firms. In addition, we find audit committee characteristics are not associated with high quality financial reports.

Our results complement prior research by highlighting the importance of tenure for the auditors in discharging their responsibility over financial reporting in a unique setting such as Oman. Our study emphasizes the importance of extending the tenure of audit firms to a longer period to allow the auditor adequate time to gain appropriate knowledge about their clients' specific characteristics. Further, our findings shed light on the role of tenure on the role of big4 audit firms in Oman as the empirical evidence from most developed countries indicated that this type of auditors produce high quality financial reports. However, our results suggest that in settings like Oman, these auditors are unable to provide high quality reports in the short-term. Further, we provide additional evidence in relation to the status of internal corporate governance mechanisms such as the audit committee. Finally, our results have policy implications for Omani and other GCC policy makers when they need to review their current policy in relation to audit rotation as well as the audit committee.

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