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Auditor Tenure and Audit Quality

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Introduction

Auditor quality is an important determinant in the accuracy of financial statements and depends on auditors’ skills and independence. Many large US corporations have collapsed in recent years due to poor audit quality and, in particular, a lack of auditor independence. Previous research suggests that mandatory auditor rotation can help ensure auditor independence (Catanach Jr. and Walker 1999; GAO 2003; ICAEW 2002). However, opponents argue that this type of regulation would increase audit cost and decrease audit quality (Arrunada and Paz-Ares 1997; Catanach Jr. and Walker 1999; GAO 2003; ICAEW 2002; Petty and Cuganesan 1996).

Despite previous discussion about the potential positive and negative impacts of a long-term auditor-client relationship on auditor independence, there is only a small amount of empirical evidence on this topic and it is controversial. Before the implementation of mandatory auditor rotation, it is necessary to empirically examine whether or not a long-term auditor-client relationship reduces audit quality. This paper uses the likelihood of a going-concern opinion as a proxy for audit quality and examines the relationship between audit quality and auditor tenure.

Literature Review

Previous researchers that support the implementation of mandatory rotation include Davis, Soo and Trompeter (2000), Carey and Simnett (2006), Chi and Huang (2005), Chiang (1999) and Fan and Chen (2004). Davis, Soo and Trompeter (2000) found that auditor tenure is positively related to absolute discretionary accruals and negatively related to absolute analyst forecast errors. These findings imply that management has a greater reporting flexibility and is able to meet earnings forecasts more easily as auditor tenure increases.

Carey and Simnett (2006) use data from Australian X to measure audit quality in three different ways: the auditor’s propensity to issue a going-concern audit opinion, the direction and amount of abnormal working capital accruals; and earnings benchmarks performance. Their results indicate that when audit quality is measured by the propensity to issue a going-concern audit opinion, it is lower for an auditor with longer tenure. When audit quality is defined as barely exceeding earnings benchmarks, there is only partial evidence that audit quality is negatively associated with a long-term audit partner. Finally, there is no evidence showing that audit tenure is associated with abnormal working capital accruals. Chi and Huang (2005) found that discretionary accruals are greater for both relatively longer and relatively shorter auditor tenures. Chiang (1999) found that an auditor’s propensity to issue a going-concern audit opinion is lower when the tenure exceeds 7 years. Fan and Chen (2004) also measured earnings quality with discretionary accruals and found that both relatively long and relatively short tenures have an adverse effect on earnings quality.

Conversely, other research in this field does not support the argument that longer auditor tenure will decrease audit quality. Many studies indicate that a longer auditor tenure means higher audit quality. Johnson, Khurana and Reynolds (2002), Myers, Myers and Omer (2003), Lee and Lin (2005), Jiang and Yang (2005), Chi (2004), Hsieh (2004) and Su (2005) suggested that discretionary accruals have either a significantly negative association or no significant association with auditor tenure. In addition, these researchers do not support the argument that auditors give their clients greater flexibility in managing their earnings to maintain a longer relationship with them. However, other research indicates that with longer tenure, the auditors’ ability to restrict the magnitude of earnings management increases.

The American Institute of Certified Public Accountants (AICPA) (1992) indicates that the likelihood of an audit failure in the first two years of an auditor’s tenure is threefold higher than the rest of X. Carcello and Nagy (2004) found that financial reporting fraud is more often associated with a short auditor tenure, i.e., less than three years. In addition, there is no significant difference between the likelihood of financial reporting fraud for long tenure (more than nine years) and medium tenure (four to eight years). These two papers show that a relatively short tenure has an adverse effect on audit quality, while a relatively long tenure does not decrease audit quality. Mansi, Maxwell and Miller (2004) found that auditor tenure is negatively related to the cost of debt financing. Ghosh and Moon (2005) used earnings response coefficients from returns-earnings regressions as a proxy for investor perceptions of earnings quality. They found a positive association between investor perceptions of earnings quality and tenure. Hence, these

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two papers are consistent with the hypothesis in this paper that investors perceive auditor tenure as improving audit quality.

Knechel and Vanstraelen (2007), Louwers (1998) and Geiger and Raghunandan (2002) used an auditor’s propensity to issue a going-concern audit opinion as a measure of audit quality. However, none of these papers found evidence that a long audit tenure leads to lower audit quality.

**Research Design**

This study used a sample of 1,981 company-year observations of potentially financially stressed companies over an eight-year period (1995–2002) for empirical analysis. A company is considered to be potentially financially stressed if any one of its operating income, net income, retained earnings, working capital, or operating cash flow projections for the current fiscal year is negative. To avoid other possible confounding effects, we deleted the company-year with the first year of the auditor tenure.

Based on several previous studies, including Behn, Kaplan and Krumwiede (2001), Carcello, Hermanson and Huss (1997, 2000), Chen and Church (1992), De-Fond, Raghunandan and Subramanyam (2002), Dopuch, Holthausen and Leftwich (1987), Liu and Wang (2005), Raghunandan and Rama (1995) and Reynolds and Francis (2001), this study uses the following logistic regression to estimate the likelihood that an auditor will issue a going-concern opinion. Two definitions of auditor tenure are employed: CPA tenure and CPA-firm tenure. The predicted sign of each variable is denoted in the parentheses.

\[
GC = f(Size, DR, CR, ΔCR, Loss, Cash, Pre_GC, \text{Big5, Investment, Finance, Tenure})
\]

where

- \( GC \) : a dummy variable with a value of 1 if a going concern opinion is issued this year and 0 otherwise,
- \( Size \) : firm size, measured with natural log of sales,
- \( DR \) : the debt ratio,
- \( CR \) : the current ratio,
- \( ΔCR \) : percentage change in current ratio, i.e., \( (CR_t - CR_{t-1})/CR_t \),
- \( Loss \) : a dummy variable with a value of 1 if the operating income is negative for both this and last year and 0 otherwise,
- \( Cash \) : operating cash flow divided by total liabilities,
- \( Pre_GC \) : a dummy variable with a value of 1 if a going concern opinion is issued last year and 0 otherwise,
- \( Big5 \) : a dummy variable with a value of 1 if the company is audited by a Big 5 CPA firm and 0 otherwise,
- \( Investment \) : the sum of cash and investment, divided by total assets,
- \( Finance \) : a dummy variable with a value of 1 if the firm issues equity or debt in the subsequent year and 0 otherwise,
- \( Tenure \) : auditor tenure, where \( Tenure\_CPA \)

\( Tenure\_Firm \) is defined as the CPA tenure and \( Tenure\_Firm \) is defined as the CPA-firm tenure.

**Empirical Findings**

Table 1 shows the results of the logistic regression model in this paper. Panel A of Table 1 indicates that the model is statistically significant. All control variables have the expected signs with the exception of Size, whose sign is inconsistent with expectations. In addition, \( DR \), \( Pre_GC \) and \( Finance \) are significant at 1% and \( Loss \) is significant at 5%. The \( Tenure \) coefficient is 0.083 when measured as CPA tenure and 0.072 when measured as CPA-firm tenure. Both values are statistically insignificant whereby we did not find a significant relationship between tenure and audit quality for Panel A of Table 1 results, where the tenure was measured as CPA tenure or CPA-firm tenure.

Following the examples of Johnson, Khurana and Reynolds (2002), Carcello and Nagy (2004) and Nagy (2005), this study classifies auditor tenure into three subgroups and replaces Tenure in the logistic regression model with two dummy variables: (1) \( Tenure\_short \), where the length of the auditor tenure is relatively short (i.e., 2 or 3 years) and zero otherwise and (2) \( Tenure\_long \), where the length of the auditor tenure is relatively long (i.e., 9 years or longer) and zero otherwise. Panel B of Table 1 shows the regression results, which show no material change in the coefficients of the control variables when using dummy variables to define auditor tenure instead of number of years. \( DR \), \( Pre_GC \) and \( Finance \) are still significant at 1% and \( Loss \) is still significant at 5%. The entire model is also significant. The tenure result in Panel B indicates that \( Tenure\_short \) is insignificantly positive and \( Tenure\_long \) is significantly positive. A company's probability of receiving a going concern opinion is higher when auditor tenure is nine years or longer compared to when the auditor has a medium tenure (4–8 years). Consequently, the results of Panels A and B do not support the argument for mandatory rotation because longer tenure will have adverse effects on audit quality.

This study conducts the following sensitivity analyses: (1) Limit the sample period to 1999–2002 because SAS No. 33 The Auditor’s Report on Financial Statements, which modifies the format of a going-concern opinion, became effective on December 31, 1999; (2) Restrict \( GC = 0 \) to (a) the firm-year with a standard unqualified opinion or (b) the firm-year with either a standard unqualified opinion, or an unqualified opinion modified with mandatory change using accounting principles, or limit the sample to the electronic industry only; (3) Test the effect of the firm's age on the relationship between auditor tenure and audit quality, where firm age is an additional control variable; (4) Limit the sample to firm-years with relatively lower current ratio and losses for both current and previous years; (5) Delete observations with extreme values; and (6) Restrict the sample to the electronics industry. None of these analyses reveal a negative association between auditor tenure and audit quality.
Conclusions
After controlling for the effects of client size, financial condition, prior period audit report opinion, auditor type, the ability of the company to dispose of assets to obtain cash and the ability of the company to new issue of stocks or bonds next year, we do not find any evidence that the likelihood of a going-concern opinion is significantly negatively related to auditor tenure, whether the auditor tenure is defined as CPA tenure or CPA-firm tenure. Therefore, our results do not support the argument that long auditor tenure has adverse effects on audit quality. On the contrary, if we specifically define auditor tenure as short, medium and long tenures (rather then the number of years), limit the sample period to 1999–2002 (the period after the effective date of SAS No. 33 The Auditor’s Report on Financial Statements), restrict GC = 0 to (1) the firm-year with a standard unqualified opinion, or (2) the firm-year with either a standard unqualified opinion or an unqualified opinion modified for mandatory change in accounting principle and limit the sample to the electronic industry only, the empirical results indicate that there is a significantly positive relationship between auditor tenure and audit quality. These results are largely consistent with the argument that longer auditor tenure can enhance audit quality.

Although empirical results indicate that auditor tenure is non-significantly or significantly positively related to audit quality, we cannot conclude that mandatory auditor rotation will result decrease audit quality. An auditor’s motivation and behavior under mandatory auditor rotation will be different than without mandatory auditor rotation. Hence, to explore mandatory auditor rotation effects on audit quality, we should compare audit quality with and without mandatory auditor rotation. Therefore, our results do not support the argument that longer auditor tenure can enhance audit quality.

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