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# Do auditors care about real earnings management in their audit fee decisions?

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## Abstract

This study investigates whether auditors incorporate the implications of potential litigation risk arising from their client firms' using real earnings management (REM) to manage earnings. Using a large sample of US firms, we find that REM is positively related to audit fees and that this relation is incremental over and beyond the effects of accrual-based earnings management and other control variables. We also find that the positive relation between REM and audit fees is stronger for firms with sophisticated investors or higher stock price sensitivity to accounting earnings. Finally, we find that this positive relation is more pronounced for firms with financial constraints where REM is more likely to stem from managerial opportunism and is perceived as riskier by auditors. These findings are robust to endogeneity controls and various sensitivity tests.

Keywords:

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## Notes

1. For example, the other client characteristics include client satisfaction, bargaining power, governance mechanisms, and internal control quality. Auditor characteristics include auditor size, non-audit services, auditor change, direction of auditor change, auditor industry specialization. Finally, audit environments include Sarbanes-Oxley Act (SOX) passage, the legal regime of the country where the client is located, cross-listing, the education requirement for new accountants, and audit market competition (Palmrose [1986a](#), [1986b](#); Francis and Simon [1987](#); Simon and Francis [1988](#); Craswell, Francis, and Taylor [1995](#); Behn et al. [1999](#); Craswell and Francis [1999](#); Johnstone and Bedard [2001](#); Abbott et al. [2003](#); Ashbaugh, LaFond, and Mayhew [2003](#); Whisenant, Sankaraguruswamy, and Raghunandan [2003](#); Chaney, Jeter, and Shivakumar [2004](#); Hay, Knechel, and Wong [2006](#); Huang et al. [2007](#); Hogan and Wilkins [2008](#); Choi et al. [2009](#); Huang, Raghunandan, and Rama [2009](#); Allen and Woodland [2010](#); Hay and Knechel [2010](#), among others).
2. Frankel, Johnson, and Nelson ([2002](#)), Ashbaugh, LaFond, and Mayhew ([2003](#)), and Srinidhi and Gul ([2007](#)) examine this relation in the reverse direction to our paper, namely, the effect of audit fees (and non-audit fees) on earnings management.
3. However, Antle and Gordon ([2006](#)) report a negative relation between audit fees and their measure of signed discretionary accruals, which is inconsistent with Abbott,

Parker, and Peters (2006) and Krishnan et al. (2013).

4. The measured REM from statistical models could be due to measurement errors rather than due to firms' actual earnings management through real operation adjustments.
5. Krishnan et al. (2013) report the pecking order of auditor response to risky clients: Auditors first charge higher audit fees as risk increases for clients with an acceptable level of risk. However, if the risk exceed the auditors' tolerance level, auditors resign from their clients. Thus, it is natural to examine the audit fee change first to look at auditors' responses before moving to their resignation decisions.
6. We use total accruals as the dependent variable of this model to measure the intensity of AEM instead of current accruals used in Dechow and Dichev (2002) because the competing variable (i.e. REM proxies) includes research and development expenditure (R&D), which is an investment in intangible assets, as one component. Including depreciation and amortization expenses, the latter of which is directly related to intangible assets and R&D expenditures, in measuring AEM variables allows more a reasonable comparison between AEM and REM. However, the main implications are unaltered when using current accruals to measure AEM proxies.
7. We first calculate the standardized ranks of each individual REM measures based on their raw values. Then we take the average of the standardized ranks of three REM proxies and use this average as the 'raw' value of the composite measure of REM (i.e. AbREM) as the dependent variable in the first-stage model.
8. Note that HHI is an inverse measure of product market competition.
9. We conventionally refer to the successor of Big 5, i.e. Big 4, as Big 5 in this study.
10. The main results are qualitatively very similar when we use the rank values of DAC, P\_AbCFO, P\_AbProd, P\_AbDiscE, and P\_AbREM instead of their raw values.
11. This is consistent with Gul, Chen, and Tsui (2003). They report a significantly positive coefficient on their measure of unsigned discretionary accruals in multivariate regressions. However, the univariate correlation between their unsigned discretionary accruals and the natural logarithm of audit fees is  $-0.223$  and significant at the 1% level in their Table 3.

12.  $\exp(6.61 + 0.682 \times 0.1239) - 741.5 = 66.4$ ,  $66.4/741.5 = 9.0\%$ , where 6.61 is median LNAFEE, 0.682 and 0.1239 are the coefficient on, and the standard deviation of, P\_AbREM, respectively, and 741.5 is median AFEE in thousands.

13. Because the sample proportion for auditor change from a Big 5 (non-Big 5) to a non-Big 5 (Big 5) is very small, a change in a Big 5 indicator is mostly coded as zero, which could result in a spurious coefficient.

14. The variable INST\_OWN has a value of one if institutional investors own any share in the firm, and zero otherwise. We alternatively measure institutional ownership using a continuous variable (i.e. the percentage of common shares owned by institutional investors to the outstanding shares). The results using this alternative measure are qualitatively similar. When the continuous INST\_OWN is interacted with DAC and P\_AbREM, the coefficients on DAC\*INST\_OWN and P\_AbREM\*INST\_OWN are both positive and significant at the 1% level (DAC\*INST\_OWN = 1.011, t = 3.246; P\_AbREM\*INST\_OWN = 0.403, t = 5.585). We retrieve institutional ownership data from Thomson-Reuters database.

15. Interestingly, we find that the coefficients on INST\_OWN are always negative (and significant in column (2)), suggesting that auditors charge lower audit fees for firms with institutional investors. A potential reason for the negative coefficient is the reduced audit risk for such firms due to strong governance mechanisms (e.g. Griffin, Lont, and Sun [2008](#)).

16. All financial constraint measures are adjusted to make the higher values represent more financially constrained. Refer to the [Appendix](#) for the detailed variable definitions.

17.  $|DAC|$  is used instead of DAC, and  $|AbCFO|$ ,  $|AbProd|$ ,  $|AbDiscE|$ , and  $|AbREM|$  are used instead of their signed variables to construct  $P_{|AbCFO|}$ ,  $P_{|AbProd|}$ ,  $P_{|AbDiscE|}$ , and  $P_{|AbREM|}$ . The analyses using the unsigned measures do not consider the direction of earnings management (i.e. income-increasing or income-decreasing earnings management) but focus only on the magnitude of earnings management. Because clients are less likely to use REM to deflate reported earnings than to inflate earnings (Gunny [2010](#)), most prior studies focus on the directional earnings management using the signed measures.

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