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# Audit fee pressure and audit risk: evidence from the financial crisis of 2008\*

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## Abstract

This paper investigates whether the downward pressure on audit fees during crisis affects the audit fee structure. The empirical results reveal the following: First, audit fees dropped significantly during the financial crisis period. Second, auditors respond differently to small clients and risky clients when facing downward pressure on audit fees. Finally, the above mentioned findings are more pronounced when the client is under high pressure to reduce expenses. Collectively, the above results provide useful insights into how auditors behave when they are under pressure to reduce audit fees.

Keywords:

[Audit fee](#)   [audit risk](#)   [financial crisis](#)   [fee pressure](#)

# Notes

\* Accepted by Hong Hwang. We have received helpful comments from seminar participants at Seoul National University and the Korean Accounting Association's annual conference. All remaining errors and omissions are our own.

1. See Reason ([2010](#)) for audit-firm level statistics on audit fee changes in year 2008 and various anecdotal evidences on the downward audit fee pressure exerted to auditors. According to the statistics reported in Reason ([2010](#)), audit fee dropped by an average 5–8% in 2008.
2. Given that crisis is an exogenous shock which affects all firms, the reduced audit fees may not unilaterally lead to reduced audit effort. It is possible that, despite the reduced audit fees, auditors may still exert adequate audit effort to maintain reputation and more effectively allocate resources during crisis for a subset of firms.
3. Watts and Zuo ([2011](#)) explain that the financial crisis is an exogenous shock that is not related to most individual firms. However, we acknowledge that it may be related to country-level economic situation, which may affect firm performance.
4. For example, in year 2008 alone, audit fee dropped by an average of 11.4, 11.2, 3.3, and 9.0% for the clients of PwC, Ernst & Young, Deloitte & Touche, and KPMG, respectively (Reason [2010](#)).
5. The financial crisis greatly influenced the Korean economy. For instance, the Korean won fell by around 25% against the US dollar by the end of 2008. The stock price index also collapsed by 27% during the same period. It took about 3 years for Korean economy to fully recover from the crisis and get back to normal. Korea also experienced a similar audit fee reduction during the period and many voiced against the downward trend.
6. Consistent with this view, Whitehouse ([2012](#)) explains that the number of identified deficiencies in 2010 increased substantially in PCAOB's audit firm inspection report.
7. In a similar vein, Choi et al. ([2008](#)) report that audit fee increases monotonically as the country-level legal liability that auditors face, which determines the audit risk in each country, increases.

8. Prior studies show the positive relation between audit fee and audit effort, which may not hold true in crisis case. Since crisis affects all firms to reduce expenses, including audit fees, auditors may have incentives to exert adequate audit effort despite the reduced audit fees because of the potential idle audit hours.

9. Another possibility is that auditors absorb the fee pressure by reducing engagement profitability. However, such reasoning is based on a conjecture as Beck and Mauldin ([2014](#)) explain that it is not likely to be a widespread phenomenon.

10. It is documented that large clients pay greater audit fees and purchase more non-audit services from auditors (e.g. Ashbaugh, LaFond, and Mayhew [2003](#); DeFond, Raghunandan, and Subramanyam [2002](#); Frankel, Johnson, and Nelson [2002](#)).

11. The determinants of audit fees can be broadly summarized as the following three factors: size, complexity, and audit risk of the firm (Choi et al. [2008](#); Simunic [1984](#)). In H1, we include only firm size and audit risk. We do not include complexity in the hypothesis because we are not able to delineate the effect of downward fee pressure on the coefficients on the variables related to complexity. It is possible that auditors may charge higher fees for clients with more complex operations due to the increased audit hours required to obtain a certain level of confidence in the riskier period. However, it is also possible that auditors absorb the increased level of effort related to complexity (Menon and Williams [2001](#)). To investigate these effects, we examine the change of coefficients on the variables related to complexity in our empirical analyses, along with variables capturing firm size and risk.

12. Korea Corporate Governance Service is a non-for-profit organization, aimed at improving the level of corporate governance in Korea. CGI is constructed from detailed surveys of companies listed on the Korean Stock Exchange in five different aspects: protection of shareholders' rights, board structure, corporate disclosure, audit committee activities, and dividend policy. The higher the value of CGI, the stronger the level of corporate governance. The variable CGI has been widely used by various Korean studies (e.g. Choi and Yoon [2006](#)).

13. The marginal effect of crisis on audit fees is estimated as follows:  $\exp(11.313) - \exp(11.313 - 0.043) = \text{US\$ } 81,879 - 78,433 = \text{US\$ } 3446$ .

14. The mean value of AUDFEE during pre-crisis (crisis) is 11.285 (11.340). The coefficient on SIZE during pre-crisis is 0.361 and a standard deviation of SIZE is 1.318.

Thus, a one-standard deviation increase in SIZE is computed as  $0.361 \times 1.318 = 0.476$ . The marginal effect of a one-standard deviation increase in SIZE on audit fees during pre-crisis is estimated as  $\exp(11.285 + 0.476) - \exp(11.285) = \text{US\$ } 128,130 - 79,619 = \text{US\$ } 48,511$ . In a similar way, the marginal effect of a one-standard deviation increase in SIZE on audit fees during crisis period is estimated as  $\exp(11.340 + 0.440) - \exp(11.340) = \text{US\$ } 130,669 - 84,120 = \text{US\$ } 46,549$ . Thus, there is a  $\text{US\$ } 48,511 - \text{US\$ } 46,549 = \text{US\$ } 1,962$  difference in the effect of SIZE on audit fees between pre-crisis and crisis period.

15. Other coefficients do not show any significant differences between the pre-crisis period and the crisis period with the exception of LIQ. However, we do not provide additional explanation on the significance of the coefficient on LIQ because subsequent analyses show that the change of coefficient on LIQ is not significant.

16. We additionally assess the statistical difference in the regression coefficients between the two periods using the Wald test. Following the methodology used in Haw, Lee, and Lee ([2014](#)), we employ a seemingly unrelated regression system combining the two periods. The (un-tabulated) results suggest that the differences in the coefficient on SIZE, ZSCORE, and NONCL between the two periods are statistically significant.

17. The mean values of AUDFEE for poor-performing firms and financially constraint firms are 11.326 and 11.296, respectively.

18. While the coefficient on CRISIS is not significantly different in the poor- and good-performing firms, the level of significance is higher for clients with poor performance, lending some support to H2a.

19. Assessing the statistical difference in the regression coefficients using a seemingly unrelated regression system shows similar results. The differences in the coefficient on SIZE and NONCL between the two periods are statistically significant at  $p < 0.01$  and at  $p < 0.01$ , respectively. However, the p-value of the differences in the coefficients on ZSCORE between the two periods is 0.592.

20. While we do not tabulate the results for simplicity, we can provide the results upon request.

21. We also conduct analysis using the subsample partitioned by financial constraints. When we run Equation ([1](#)) using each subsample, the coefficient on CRISIS is  $-0.021$

and is statistically significant at  $p < 0.10$  for firms with financial constraints, while it is insignificant for firms without financial constraints. That is, the general level of audit fees is lower during the crisis period than the pre-crisis period only for firms with financial constraints.

22. During the crisis period in Korea, the government temporarily allowed firms to adopt the asset revaluation model as a way out of crisis (Kim and Kim and Kim [2012](#)). In the revaluation model, an asset is initially recorded at cost but subsequently its carrying amount is increased (or decreased) to account for any changes in the market value. The revaluation model enabled many firms to write up their fixed assets to reflect the increased market value. However, even though the carrying amount is increased to the market value through asset revaluation, the intrinsic value of the asset remains the same. Thus, for such cases, measuring firm size using total asset may not be a proper representation. To avoid the confounding effect of asset revaluation on the changes in audit fees, we measure firm size using total sales instead of total assets and find that our previous results remain unchanged when measuring size with total sales.

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