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Litigation risk, accounting quality, and investment efficiency☆

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ABSTRACT

This paper examines the moderating effect of litigation risk on the relationship between accounting quality and investment efficiency. We use directors' and officers' (D&O) liability insurance as a proxy for litigation risk, accruals quality for accounting quality, and investment cash flow sensitivity for investment efficiency (Biddle & Hilary, 2006; Hovakimian & Hovakimian, 2009). Using Canadian data from 1998 to 2008, we show that firms with higher D&O insurance coverage exhibit lower quality accruals. Moreover, the previously documented negative association between accruals quality and investment cash flow sensitivity is stronger (weaker) when abnormal D&O coverage is low (high), suggesting that the role of accounting quality in facilitating investment efficiency is conditional upon observable litigation risk.

1. Introduction

This paper examines the effect of a determinant of litigation risk on the relationship between accounting quality and investment efficiency. Litigation risk mitigates agency problems and promotes greater accounting quality; and greater accounting quality, in turn, enhances capital allocation efficiency (Biddle & Hilary, 2006). Accordingly, factors that might reduce litigation risk can undermine the deterrent effect of litigation risk, inducing opportunistic behaviors by managers, reducing accounting quality and investment efficiency. We argue that directors' and officers' (D&O) liability insurance reduces litigation risk, and we examine the association of D&O insurance, accounting quality, and investment efficiency.

We exploit a unique institutional setting in Canada, where firms are required to disclose D&O insurance information. We use disclosed D&O coverage limits to measure litigation risk and posit that managers and directors with high abnormal coverage limits face low litigation risk. Under these observable conditions we hypothesize that the relationship between accounting quality and investment efficiency is altered.

Consistent with extant evidence, we confirm a negative association between abnormal D&O coverage limits and accruals quality. Moreover, we find that the documented negative association between accounting quality and investment cash flow sensitivity is weaker when abnormal D&O insurance coverage limit is high. Overall, our findings suggest that litigation risk is an important governance mechanism that ensures the quality of accounting information and improves capital allocation efficiency by reinforcing the role of accruals in investment financing decisions. Our findings are robust to alternative measures of accounting quality and investment efficiency.

Our research contributes to the literature in the following ways. First, we extend prior research on accruals quality and investment efficiency by documenting that observable risk exposure moderates the association between accounting quality and investment efficiency. Our results highlight the importance of litigation risk in ensuring the quality of accounting information and promoting investment efficiency. Second, we provide evidence on the effects of litigation risk on accruals quality. Prior studies use accounting restatements or earnings conservatism as a proxy for accounting information quality or exploit cross-country differences in legal institutions (Burgstahler, Hail, & Leuz, 2006; Chung & Wynn, 2008; Kim, 2005; Leuz, Nanda, & Wysocki, 2003; Lin, Officer, Wang, & Zou, 2013). Our firm-level evidence further underscores the importance of litigation risk even in an environment with a high level of investor protection, such as in Canada.

The remainder of the paper is organized as follows. In Section 2, we provide the literature review and the hypothesis development. Section 3 presents the sample selection and describes the research design. Section 4 discusses empirical findings, and Section 5 provides the results of robustness checks. Finally, Section 6 offers concluding remarks.

2. Related literature and hypothesis development

2.1. D&O legal liability insurance

To protect managers from personal legal liabilities arising from business decisions, many companies bear any costs of litigation against directors and officers through D&O insurance and indemnification

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provisions. In general, D&O insurance coverage usually (i) reimburses the firm for its indemnification payment for directors and officers, (ii) covers individual directors and officers for their wrongful acts to the extent that they have not been indemnified by the firm, or (iii) covers the firm to the extent that any legal action names it as defendant along with the directors and officers. Typical losses covered by D&O policies include compensatory damages, settlement amounts, and legal fees incurred in defense of claims arising as a result of the official acts of directors and officers.[1] D&O policies have the effect of shifting litigation risks from individual directors and officers to a third-party insurer to the extent of the dollar amount of coverage limits purchased, thus effectively reducing legal liability of a firm and its managers and directors.

2.2. Litigation risk and accounting quality

Litigation risk as an institutional factor mitigates agency costs (Burgstahler et al., 2006; Leuz et al., 2003). To the extent that litigation risk provides an effective constraint on management and reduces opportunistic behavior, a reduction in the expected litigation risk of managers could exacerbate agency problems and undermine the deterrent effect of litigation. Consistent with the notion, prior empirical evidence in the accounting and finance literature suggest that firms with high D&O insurance coverage limits tend to exhibit a high degree of managerial opportunism pertaining to legal liability (e.g., Boyer & Delvaux-Derome, 2002; Chalmers, Dann, & Harford, 2002; Chung & Wynn, 2008).

In particular, recent studies demonstrate that high D&O coverage limits affect managers' reporting choices for earnings. Kim (2005) and Lin et al. (2013) find a significantly positive association between D&O coverage limits and the likelihood that firms restate earnings, while Chung and Wynn (2008) report a negative association between insurance coverage and earnings conservatism. Using accruals quality as a proxy for accounting quality, we expect firms with high D&O coverage limits to be associated with lower accruals quality.

2.3. Litigation risk, accounting quality, and investment efficiency

An accounting and disclosure system that promotes transparency is required for an efficient functioning of a financial system (Rajan & Zingales, 2003). Botosan and Plumlee (2005), among others, provide empirical evidence that there exists a negative association between disclosure quality (as measured by analysts' rankings of annual report disclosures) and costs of capital. Furthermore, prior studies suggest that information asymmetry between managers and outside capital providers creates frictions in the investment process through tighter financing constraints, forcing firms to rely more on internally generated cash flows than external funds to finance their investments (e.g., Hovakimian & Hovakimian, 2009). Using accruals quality as a proxy for accounting information quality and investment cash flow sensitivity for investment efficiency, Biddle and Hilary (2006) provide international evidence that higher accruals quality reduces firms' investment sensitivity to their internally generated cash flows, increasing investment efficiency.

We, however, argue that D&O insurance would undermine the role of accounting quality in improving investment efficiency, since D&O insurance reduces the litigation risks of managers.[2] To the extent that the quality of accounting is less influential in investment decisions for firms with low observed litigation risk, we should observe a weaker effect on capital investment decisions when accounting quality is compromised by excessive D&O insurance coverage limits. This leads to our hypothesis stated in an alternate form as follows:

H_A. The effect of accruals quality on investment efficiency is weaker for firms with high D&O coverage limits than for firms with low D&O coverage limits.

3. Sample selection and research design

3.1. Sample selection

Table 1 presents the criteria for sample selection. We examine Canadian firms listed on the TSX because their insurance data is publicly available. D&O insurance data are hand-collected from proxy circulars that are available on www.sedar.com. Our initial sample includes 6288 firm-years of 582 firms from 1998 to 2008 that were listed at least once on the TSE 300 index (currently the S&P/TSX Composite Index). To examine whether a firm changed its cross-listing status during a fiscal year, we check the date range of firms listed on the CRSP (Center for Research in Security Prices). The firm-years in the date range on CRSP are classified as cross-listed, while firm-years not in the date range on CRSP are classified as local. This check enables us to exclude the firms that changed their cross-listing status during a year, resulting in the exclusion of 2228 firm-years of 190 firms. After this exclusion, our sample includes both cross-listing-only and local-listing-only firms. We then remove 1023 firm-years of 89 firms that were merged, acquired, or went bankrupt during our sample period, and then 1324 firm-years of 69 firms that did not have information on D&O insurance coverage limits. Next, we exclude 174 firm-years of 25 firms with unavailable governance data. Further, we eliminate firms that do not carry D&O insurance and firm-years that do not have the necessary financial data to measure accruals quality, resulting in 909 firm-years of 183 firms. Finally, we remove 45 firm-years with unavailable financial data to measure investment efficiency.

3.2. Research design

3.2.1. Measurement

First, we measure expected litigation risk using abnormal D&O coverage limits (beyond the optimal level of insurance coverage limits that a firm would carry) after controlling for litigation risk and other firm characteristics. The abnormal coverage limits (ABCOV) are residuals obtained using the following Eq. (1).

$$\begin{aligned} \mathrm{LNCOV} = {} & \alpha_0 + \alpha_1\mathrm{SIZE} + \alpha_2\mathrm{CROSS} + \alpha_3\mathrm{MBRATIO} + \alpha_4\mathrm{DEBT} + \alpha_5\mathrm{RISK} \\ & + \alpha_6\mathrm{ROA} + \alpha_7\mathrm{ACQDIVESTOR} + \alpha_8\mathrm{HIGHTECH} + \alpha_9\mathrm{REGULATE} \\ & + \alpha_{10}\mathrm{OUTSIDE} + \alpha_{11}\mathrm{OUTBLOCK} + \varepsilon \end{aligned} \tag{1}$$

where LNCOV = the natural log of D&O insurance coverage limits; SIZE = the natural log of lagged total asset; CROSS = 1 if a firm is cross-listed in the U.S. market during a whole fiscal year, and 0 otherwise; MBRATIO = the market-to-book value ratio; DEBT = the ratio of debt to assets; RISK = standard deviation of lagged returns on assets over the past five years; ROA = return on assets; ACQDIVESTOR = 1 if the book value of total assets at the end of the fiscal year increases or decreases by more than 25% from the beginning of the fiscal year, and 0 otherwise; HIGHTECH = 1 if a firm is a member of the Pharmaceuticals (SIC codes 2833–2836), R&D Services (8731–8734), Programming (7371–7379), Computers (3570–3577), or Electronics (3600–3674) industries, and 0 otherwise; REGULATE = 1 if a firm is a member of

[1] The claims related to violations of the Employee Retirement Income Security Act (ERISA), bodily injury, emotional distress, or damage to tangible property are commonly excluded from the scope of D&O liability insurance coverage.

[2] According to a classic economic theory, full insurance is not offered by an insurer even in a competitive market. Exclusion clauses are included in the policy so that the insured has an incentive to take proper care. However, Baker and Griffith (2010) indicate that D&O insurers do not condition their coverage on the insured's level of care, that the wording of a typical D&O insurance policy limits the scope of moral hazard exclusion, and that the fraud exclusion almost never works against managers.