Determinants of Capital Holdings: Evidence from the Canadian Property/Casualty Insurance Industry

There is an ongoing debate between the regulatory bodies and firms in the Canadian property/casualty insurance market with respect to the level of capital a firm needs to hold. While firms often view regulatory requirements as excessive and in contrast to their objectives of optimizing capital use and maximizing Return on Equity (ROE), the regulator is more concerned with adequacy of capital in the short and long-term.

The objective of this paper is to explore the capital holdings of Canadian property/casualty insurers relative to regulatory requirements and firms’ risk exposures. In particular, the paper addresses the following issues. Are the levels of reserve capital in the property/casualty insurance industry in Canada driven by the regulatory regime or are they optimally determined by a firm’s exposure to risk? Do legislated capital holdings affect firm profitability? Finally, the paper explores the relationship between Best’s ratings and a firm’s capital holdings.

Using A.M. Best WinTrac data for a cross section of Canadian insurers for the year 2000, we find that the median excess capitalization, as measured by the proportion of assets held in excess of statutory levels, was 27%. The median dollar amount of assets held in excess of statutory levels for all firms was $13,866. Almost half of the variation in firm holdings of excess capital can be explained by firm size. Larger firms tend to hold a greater dollar amount of excess capital, smaller firms, however, held proportionately more in excess capital. However, the majority of other variables that were found to be relevant predictors of capital holdings of U.S. insurers did not explain holdings of Canadian insurers, and those variables which are significant explain little of the variation in capital held by Canadian insurers. These results provide an indication that firms in general determine their capital holdings by adding a certain margin to the minimum regulatory requirements rather than on the basis of their risk characteristics. We find no strong support against our view that the regulatory regime is the major determinant of capital holdings.

Furthermore, our study finds no support for the argument that higher capital levels produce lower returns on equity for firms. As expected, the most important predictors of a firm’s ROE were its operating results. Firms with higher ROEs had lower underwriting ratios and higher investment yields. We find no support for the hypothesis that excess capital holdings are one of the causes of poor industry profitability.

The study also finds no significant relationship between greater capitalization levels and a firm’s Best’s ranking. This is in support of the argument that the Canadian market does not attach the same level of importance to Best’s ratings. The key indicators of ratings were firm size, firm ownership and return on equity.

The relationships among capital holdings, regulatory capital requirements and performance that underpin the Canadian property/casualty industry are greatly complicated and research to-date has done very little in explaining them. We view this study as a first step towards this direction. We hope that our initial results will lead to a continued dialogue on capital holdings for property/casualty insurers in Canada that will eventually enhance our understanding on the subject matter.