



“The Value of Enterprise Risk Management”

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Synopsis by Mattie Merriman

It is not surprising that firms have implemented or are thinking about implementing ERM programs as there are many known benefits to ERM programs. Less earnings variability, increasing capital efficiency, reducing external capital costs, and synergies among risk management activities represent potential motivation for ERM adoption.¹ Furthermore, ERM is believed to promote risk awareness and smooth operational strategic decision-making. Yet, there is a lack of empirical evidence on the value ERM gives to a firm and the question continues to arise whether there is value in ERM use. Many firms decide not to use ERM programs because, as Sim Segal of Deloitte Consulting points out, “corporate executives are justifiably uncomfortable making a deeper commitment to ERM without a clear and quantifiable business case.”² Hoyt and Liebenberg seek to find an answer to the question of whether ERM programs add value and ultimately create one of the first studies to show the positive impact of ERM use.

Why ERM should add value to the firm?

The authors offer many reasons that support the rationale that ERM should add value to a firm. For example, by integrating decision making across all risk classes, risk managers can reveal natural hedges which can lead to a better understanding of the aggregate risk inherent in various business activities. An ERM view enables the identification of such interdependencies, thereby leading to better prescriptions for risk handling.

ERM could further increase the value of a firm by improving the information about the firm’s risk profile. The increase in information will encourage opaque firms to better inform outsiders of their risk profile and represent their commitment to risk management. Furthermore, ERM will likely decrease the costs of external capital and regulatory scrutiny by enhancing what firms disclose.³

Lastly, rating agencies, through their financial reviews, have increased their focus on risk management and ERM activities. In October 2005, S&P announced that “with the emergence of ERM, risk management will become a separate, major category of its analysis” further proving the future incentives and value implication of the use of ERM programs in insurers.⁴ This review of ERM programs will mean that firms with ERM programs will be determined as more creditworthy, affecting both the equity and debt sides of the firm. Because of this increased focus on risk management and ERM, Hoyt and Liebenberg performed this study to measure the extent that firms have engaged in ERM programs and to assess if the use of ERM programs does in fact enhance firm value.

¹See Miccolis and Shah, 2000; Cumming and Hirtle, 2001; Lam, 2001; Meulbroek, 2002; Beasley, Pagach, and Warr, 2008

²See Hoyt and Liebenberg, 796

³ See Meulbroek, 2002

⁴ See Hoyt and Liebenberg, 798

Sample, Data, and Empirical Method

This study focuses on ERM within the management of publically traded insurance firms in the United States to control the differences in regulations and markets across industries. Using the merged CRSP/Compustat database, a sample of insurance companies that operated between the years 1995-2005 was drawn. The sample consisted of 275 insurance firms. The authors' next step was to figure out whether each individual firm engaged in ERM, as there is no requirement for firms to report ERM activity. The researchers utilized search engines and strung together phrases common to ERM programs such as "holistic risk management" and "chief risk officer." If there was a search "hit" for a firm they reviewed it to make sure there was evidence ERM activity for that firm, and if so, it was then dated and coded. All "hits" were sorted to locate the earliest proof of ERM activity for each firm. The final sample is made up of 117 firms and 687 firm-year observations. A dummy variable, *ERM*, was used to represent whether the insurer was an ERM user during any year in the period. An *ERM* value of 1 was given to firm-years beginning with and the following the first evidence of ERM use, and was equal to 0 for firm-years before the first indication of ERM use.

This study estimates the effect of ERM on Tobin's Q. Tobin's Q is "a ratio that compares the market value of a firm's assets to their replacement value."⁵ Tobin's Q is measures overall firm value in a manner similar to net present value.⁶ The numerator of the ratio is the market's valuation of the firm's cash flows while the denominator measures the asset cost of the investment. A higher Tobin's Q indicates that the firm's stock is more valuable than the replacement cost of its assets. To estimate the model, the authors employ a treatments effects approach which captures the endogeneity of ERM and the effect of ERM on firm value using Tobin's Q.

Discussion of Q Determinants

The authors explore their hypothesis that firms with ERM practices will have a higher Tobin's Q ratio than non-ERM users, and simultaneously consider other observable factors expected to be related to Tobin's Q. These factors include: *size*, *leverage*, *sales growth*, *ROA*, *Div_Ind*, *Div_Int*, *dividends*, *insiders*, *life* and *beta*. It is necessary to control for size of the firms because there is proof that large firms are more likely to have ERM programs than small firms. The log of book value of assets was used to control for firm size. A leverage variable is also included to account for the tie between firm value and capital structure. A historical (1-year) sales growth is used as a substitute for future growth opportunities. ROA is included in the regressions as a control for firm profitability. In order to control the effect of industrial and international diversification, due to the fact that many of the insurers used in the study are members of conglomerates that operate in other industries and countries, dummy variables are used for each. Additionally, a dummy variable (*life*) is set equal to 1 for insurers who are primarily life insurers and 0 for all others because it is needed to control any possible differences in Q that are related to industry sector. Furthermore, if the firm paid a dividend in the current year, a payment indicator (*dividends*) is included.⁷ Variation in the Tobin's Q that is due to cross-sectional differences in managerial incentives is controlled by using the percentage of shares owned by insiders. This is important because there is data that links insider share ownership to firm value. Firm beta is included as an independent variable in order to manage variation in Q due to greater volatility. Lastly, a variable for year is used to control time variations in Q over the sample period.

Key Findings

⁵See Hoyt and Liebenberg, 800

⁶See Doherty, Integrated Risk Management, p. 326.

⁷See Allayannis, Weston, 2001; Lang, Stultz, 1994

In the final sample, ERM users make up 8.5% of all firm-years and the median Q value is 1.036. Descriptive statistics suggest that firms with ERM programs are valued approximately 4% higher than firms with no ERM programs. The results also convey that the financial characteristics between ERM users and non users are systematically different, with ERM users being larger, have higher levels of institutional ownership, less leveraged, less opaque, less financial slack, and lower return volatility than ERM non-users

To test the hypothesis that ERM initiatives have been associated with increased firm value, the authors employed a maximum-likelihood treatment effects model where the ERM and Q relationships are estimated jointly. The magnitude of the positive and significant coefficient of ERM signifies that insurers who participate in ERM activities are valued about 20% higher than ERM non-users; a key finding of this study.

Overall, this study is a starting point into research behind the impact of ERM on firm value. Because of the relatively small sample size and the inability of knowing the extent to which a firm is using ERM, this study has its limitations and therefore future studies using a larger sample are necessary to expand on this important contribution to the growing literature on ERM.

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