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Risk and ERM: Worth the risk?

Multinationals are having to face the reality of implementing enterprise-wide risk management practices. Paul Klumpes summarises his research into the effectiveness of ERM in such firms

07 MAR 2013 | PAUL KLUMPES

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In recent years, much attention has been paid to the adoption of enterprise risk management (ERM) by financial firms, but what about non-financial firms? In the broader corporate sector, we have examples of corporate failure, such as Enron, and of poor management governance or risk management practices, such as BP's Gulf of Mexico oil spill. Both highlighted the need for greater knowledge about enterprise-wide risk management in non-financial firms, where risk-taking activities are more opaque from both regulatory and political perspectives.

In response to the Sarbanes-Oxley Act 2002, as well as the financial crisis in 2007-2008, managing risk from a holistic perspective is becoming a major consideration for multinationals.

The Enron scandal and BP's Gulf of Mexico oil spill highlighted the need for greater knowledge about

In recent years, the US Securities and Exchange Commission has issued guidance on risk factor disclosures, including, since 2003, future off-balance sheet commitments and obligations and, more recently, cyber security or information breaches. Rating agencies have also extended their monitoring of ERM adoption to the non-financial sector.

However, guidance is limited to narrative reporting on specified financial risk management of financial instruments under Generally Accepted Accounting Principles (GAAP) in the US and other international

accounting standards. Little is known about the connections between risk culture, risk tolerance and the incentives facing industrial firms.

Similarly, the influence that such issues have on corporate strategies and governance practices remains unexplored.

risk management in non-financial firms

Prior research

US-based studies of the financial sector (Hoyt et al, 2009; Eckles et al, 2010; Hoyt and Liebenberg, 2011) found that US insurance firms adopting ERM were likely to lower their marginal cost of adopting risk. This created incentives for profit-maximising firms to reduce total risk while increasing the firm's value. By combining the firm's risks into a risk portfolio, an ERM-adopting firm was arguably better able to:

> recognise the benefits of natural hedging;

> to prioritise hedging activities towards the risks that contribute most to the total risk of the firm;

> and to optimise the evaluation and selection of available hedging instruments. Thus it was asserted that ERM-adopting firms would realise a greater potential reduction in risk per dollar spent.

It was argued that this reduction in the marginal cost of managing risk encouraged firms to maximise profit and further reduce risk until the marginal cost of risk management equaled the marginal benefit.

However, other research has questioned the value added by ERM adoption. A number of papers have discussed the importance of risk management issues for organisational forms (Miller et al, 2008) and for business continuity management (Power, 2009). However, the impact of specific forms of risk, such as market risk or idiosyncratic risk, on the financing, accountability and effective management control of organisations affected has not attracted any attention from researchers studying ERM adoption.

Of the limited evidence on financial firms, Hoyt and Liebenberg (2009) found a large valuation premium for ERM adopters, whereas Beasley et al (2008) found insignificant negative share price returns around the time of the public announcement of first-time ERM adoption. Eckles et al (2010) found that, after adopting ERM, firm risk decreased and accounting performance increased for a given unit of risk, complementing the findings of Hoyt and Liebenberg (2011), which were based on market valuations. In addition, prior research does not look at control mechanisms for other sources of firm-wide risk, such as pension funding risk, or, specifically, hedged and unhedged sources of interest rate, commodity and foreign exchange risks.

We therefore undertook further research to investigate the extent of interconnection between ERM adoption and on- and off-balance sheet financing, and accounting and corporate governance quality.

Our contribution

We investigated the incentives facing a range of non-financial multinationals listed in the Fortune 500 and FTSE Eurotop 300 (now the FTSEurofirst 300) that adopted ERM before, during and after the financial crisis in 2007-2009. We were specifically interested in whether the propensity to adopt ERM was associated with managerial incentives, such as return on equity, risk to reward, overall firm risk, after controlling for both on-balance sheet retention, such as pension fund exposures, and off-balance sheet risk transfer, both via hedged and unhedged interest rate, currency and commodity derivatives.

Besides controlling for standard firm characteristics, such as leverage and profitability, and economic factors used by prior research to explain ERM adoption incentives, such as taxation, we also incorporated variables reflecting off-balance-sheet risk transfer mechanisms. These included captive insurers, unused credit facilities and operating leases, as well as cosmetic accounting accruals quality and governance quality.

Prior research (Powers, 2009) also argued that ERM adoption was primarily for cosmetic or instrumental reasons, rather than to reduce information asymmetry among investors. As a result we decided to look at whether cultural differences between European and US multinationals and differences between US GAAP versus International Financial Reporting Standards (IFRS) and related regulatory environments influenced the incentives for ERM adoption.

Results

We found that adoption of ERM by multinational non-financial firms is inter-related with both firm hedge accounting policies and managerial discretion. Our hypothesis is that sources of both market risk and idiosyncratic risk mitigate the ability of ERM-adopting firms to produce greater risk reduction.

Various sources of firm-specific risk, such as pension risk and hedge accounting policies, as well as GAAP quality, interact with ERM to affect incentives for multinationals to reduce their risk.

Consistent with this hypothesis, we found that firms adopting ERM experience a reduction in stock return volatility – but only for the two-year period following implementation.

Our results also established that income smoothing, GAAP choice and geographical complexity mitigate the effect of ERM adoption on risk and return volatility for ERM adopters. In addition, our supposition that European firms have a greater propensity to adopt ERM than US firms, partly owing to greater risk tolerance, was confirmed. For instance, they are more likely to use speculative than hedged derivatives.

Further research needs

Further research is needed to extend our findings in a number of directions. Corporate governance effectiveness is likely to be enhanced in complex organisations that adopt more sophisticated ERM systems. There is also an important link between the maturity of ERM adoption and the patterns and magnitude of various sources of value-added performance over time. Lastly, there is likely to be a link between the propensity of ERM adoption and the quality of risk reporting.

I am currently involved with an Actuarial Profession working party that hopes to present its findings on this issue in the near future. This topic is likely to be of interest to actuaries, rating agencies and other risk professionals to further develop existing ERM practices by multinationals.

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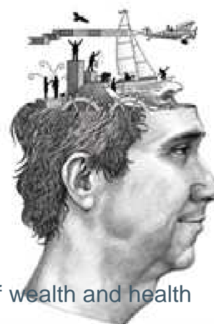

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