Outperforming in the P&C Industry

Quantifying the Value of Enterprise Risk Management

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Introduction

Enterprise Risk Management: What It Is and Why Its Value Matters

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ERM is the discipline by which an organization in any industry assesses, controls, exploits, finances, and monitors risks from all sources for the purpose of increasing the organization’s short- and long-term value to its stakeholders.

– Casualty Actuarial Society, Committee on Enterprise Risk Management

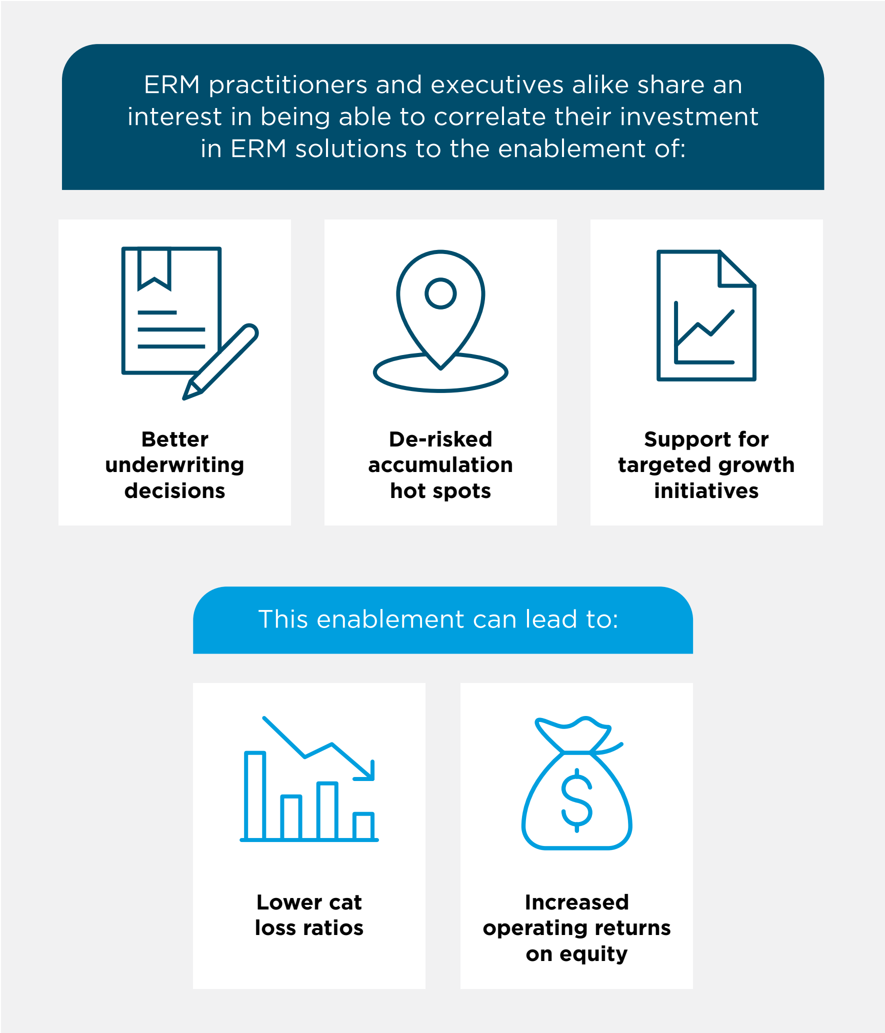
Most organizations have long viewed enterprise risk management (ERM) as a cost center – but we believe they shouldn’t. ERM practitioners deliver true value for their organizations. Before we can measure this value, we must first define what we mean by ERM.

Although (re)insurers often end up with the lion’s share of catastrophic risk, organizations in every industry are exposed to risks of various shapes and sizes. The risk landscape is more complex than many organizations realize. They tend to see risk as a series of individual risk sources – such as interest rates, market volatility, catastrophes, current accident year underwriting excluding catastrophes, credit, reserve volatility, foreign exchange, operational, and strategic. But it’s the evolution within each source and the interactions between these sources that make risk so complicated. For example, the global pandemic is causing (re)insurers to not only be hit by insurance losses, but also experience market volatility in their investment portfolios. We can also see significant volatility in a single risk area: catastrophes. Consider that climate change is intensifying natural catastrophe (nat cat) risk in a correlated manner across perils that have historically been managed in isolation. Climate change also has the ability to create inflationary forces as it changes – for instance, in the composition of the energy sector. These inflationary forces can send dependency ripples into other risk source buckets, affecting areas such as non-cat pricing, reserving, and investment portfolio returns.

In such a complex landscape, how can we manage risk? ERM practitioners need a dynamic and complex collection of tools.

Value

The Value of ERM Tools



Many ERM practitioners are already using tools of the trade and know their value firsthand. Their organizations have invested heavily in the software, data, analytics, catastrophe models, and highly trained personnel needed to manage risk. They know that their effectiveness in managing catastrophe (cat) risk is a function of the quality of the tools they use for the job.

These are substantial investments, and executives often question them. It's every executive's job to verify the return on each investment.

Study

P&C Outperform Study Framework: Quantifying the Return on ERM Investments

To help quantify the return organizations are achieving on their ERM investments, we recently aggregated publicly available financial data for companies using ERM solutions. These companies:

1. **Are the largest global (re)insurance holding companies**
2. **Have material catastrophic loss exposure**

Having selected a group of companies that had generated relevant results to study, we then selected two metrics that tie back to the value proposition of increasing the use of models and analytics in business decisions and the downstream financial impact to the management of catastrophic risk:

- **Cat loss ratios:** Companies that engage in rigorous cat modeling should improve their cat loss ratios. Depending on their lines of business, they may only make small improvements to their premiums, but they can almost always achieve large improvements in terms of their portion of market loss from individual catastrophes. By controlling accumulation hot spots, companies can avoid the outsized market share of losses that every (re)insurer dreads.
- **Returns on average equity (ROAE):** One component of net income – the numerator of this metric – is underwriting profitability. Cat loss ratios feed into the combined ratios that determine underwriting profitability. The denominator here is equity, which supports the risk of the firm. In many cases, this equity is driven by regulatory and rating agency forces, which are partially informed by cat model results. So, cat models and other ERM tools can allow organizations to manage capitalization levels, which can help improve returns by changing the base on which they're computed. To put it simply, every additional dollar of capital can support more business – and if that business is more profitable, then organizations can get a twofold return on their ERM investment.

Results

Over US$27 Billion in Avoided Losses*

Moody's RMS applied the study framework to the financial data of the companies selected. Companies enhancing their ERM as measured by an increased engagement with Moody's RMS Models and Analytics have outperformed their peers with:

Lower cat loss ratios
each year from 2015 to 2019 (average improvement is 2 points)

More stable ROAE
with a range that is half as wide over five years

US$3.9 million
of losses avoided per US$500 million of NEP in a mild cat year

US$27.9 billion
of cumulative cat losses avoided over five years

US$13.3 billion
of cat losses avoided in 2017

2.1 points
higher ROAE values over five years

US$40.8 million
of losses avoided per US$500 million of net earned premium (NEP) in a bad cat year

*This statistical methodology and the study results have been independently validated by Oxford Economics.

Conclusion

ERM Can Be a Profit Center

What can we take away from this study? There should be no surprise among (re)insurance professionals at the results outlined above. Numerous studies have previously demonstrated that implementing rigorous ERM frameworks can lead to better results for organizations.

Moody's RMS believes that:

- **Every (re)insurance company should invest in continually enhancing its ERM capabilities.** ERM is not a one-off activity – it's a continual process that requires companies to stay out in front of a constantly changing risk landscape.
- **Companies in all sectors should invest in the best ERM tools to address their specific risk profile needs.** The best tools are those that enable the best personnel to make the largest overall impact.
- **ERM practitioners who need these tools should be prepared to quantify the tools' impact on the bottom line.** The results of this study should empower ERM practitioners to make a case for cat models based on strong science and tools that enable better preparation for less-understood risks such as climate change.
- **ERM is not exclusively a cost center.** Executives should recognize the measurable value it generates and see the potential for ERM to pay for itself.

For more information on the study or to have your company benchmarked against the results, contact Moody's RMS.

Moody's RMS shapes the world's view of risk for insurers, reinsurers, financial services organizations, and the public sector, with Moody's RMS models underlying the nearly $2 trillion USD Property & Casualty industry. We empower organizations to evaluate and manage global risk from natural and man-made catastrophes, including hurricanes, earthquakes, floods, climate change, cyber, and pandemics.

Our unmatched science, technology, and 300+ catastrophe risk models help (re)insurers and other organizations evaluate and manage the risks of natural and man-made disasters. Leaders can address the risks of tomorrow with the Intelligent Risk Platform™, the only open cloud with collaborative applications and unified analytics that can power risk management excellence across organizations and industries.

Today's risk professionals trust Moody's RMS to help them manage and navigate the risks of natural and man-made catastrophes.

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