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The Risk/Earnings Ratio

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New Perspectives for Achieving Bottom-Line Stability

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Michael Vitacco,
global fire protection manager, Goodyear Tire and Rubber Company

Eye-Opening Findings

Compelling research into FORTUNE 1000-size companies pinpoints a correlation between the earnings stability of large multinational corporations and their ability to manage physical plant and other property-related risks. By adopting strong risk management practices to prevent fire, natural hazards and other causes of property loss and business disruption, the findings suggest that a company will reduce the frequency and severity of these loss exposures (if not prevent them), and may reduce its earnings volatility too—a striking outcome.

The results of this study arrive at a time when many organizations continue to reduce budgeted capital and other resources across diverse functional areas and operations, including physical risk management. While reductions in expenses are a critical necessity for many enterprises, the research suggests there are negative consequences to cutting back on physical loss prevention resources. Such cutbacks may instigate potential earnings volatility to the detriment of shareholders. Maintaining or increasing these resources, the study contends, will guide bottom line improvements, potentially increasing earnings stability and shareholder value.

The study of physical risk management and the potential impact on earnings stability was commissioned by commercial and industrial property insurer FM Global and conducted by Oxford Metrica, an independent strategic adviser to FORTUNE 500 companies that provides research-based intelligence on all aspects of financial performance. Oxford Metrica perhaps is best known for its quantitative assessments of critical reputation issues, measuring the impact of crises on a company's reputation and shareholder value performance, and identifying the key drivers of recovery.

This new study, according to Dr. Deborah Pretty, the Oxford Metrica principal who headed the research effort and author of *Risk Financing Strategies: The Impact on Shareholder Value*, "indicates both empirically and quantitatively that there is a strong correlation between physical risk management and earnings stability."

Simply put, by pursuing strong physical risk management processes and systems to prevent the likelihood of losses caused by fire, natural hazards, equipment failure, human error and other perils, a company will potentially reap a measurable reduction in earnings volatility—the degree to which earnings fluctuate over a given period of time.

The study finds that companies, with best practices in managing their property risks, produced earnings on average that were 40 percent less volatile than companies with less advanced physical risk management. "The study indicates that resources allocated to control property risks are well-spent, given the demonstrable improvement in earnings stability, a key driver of shareholder value," Dr. Pretty says.

The research findings present persuasive evidence of a significant return on investment in physical risk management. Scott Morrison, senior vice president and chief financial officer of Ball Corporation, a large, publicly traded supplier of metal and plastic consumer packaging products, says the correlation is useful data to keep in mind in terms of resource allocations. "The research findings make sense. Shutting down one of our 50 plants worldwide because of a fire, for example, would obviously affect performance. The more volatility you take out of your performance the greater the reliability of earnings, which translates into a more consistent valuation by Wall Street. Likewise, the more resources a company earmarks toward reducing physical risk, the higher the opportunity for enhanced shareholder value." Ball Corporation is traded on the New York Stock Exchange.

Culling the Data

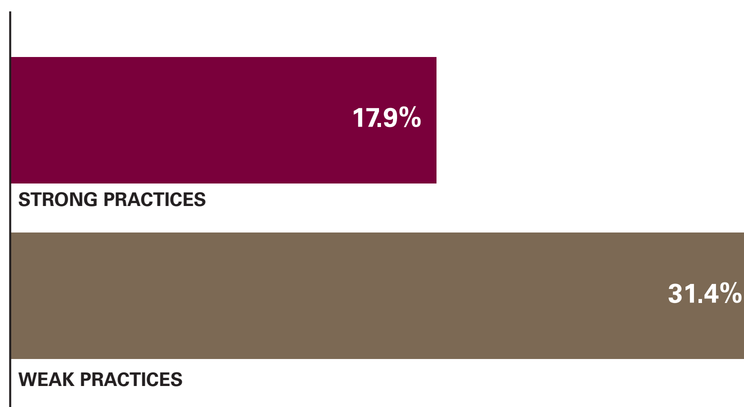
In its research, Oxford Metrica compared the physical risk management practices of 520 large (more than US$1 billion in annual revenue) multinational companies with these organizations' financial performance over two periods of several years each, to increase statistical accuracy. In assessing the companies' management of their physical risks, the firm leveraged proprietary data provided by FM Global, the companies' global property insurer. FM Global rates its commercial clients on a 1-to-100 scale for property risk management practices—a score of 100, for example, is an indicator of exceptional physical risk management practices.

The bottom line: Companies with strong physical risk management practices, on average, produced earnings that fluctuated by 17.9 percent, whereas companies with weak physical risk management practices, on average, had earnings that fluctuated by 31.4 percent. The stronger the physical risk management practices, the lower the earnings volatility; the weaker the physical risk management practices, the higher the earnings volatility. "The results reveal a strong correlation between earnings stability and property loss prevention," Dr. Pretty observes (*See Chart 1*).

The study findings are further supported by FM Global's internal quantitative research. The company, which insures one of every three FORTUNE 1000-size companies in more than 130 countries, is privy to extensive underwriting and engineering information on its clients' businesses, their physical risks, vulnerabilities, loss history and risk quality (i.e., level of physical protection and facility risk management practices).

Chart 1

Correlation between Physical Risk Management Practices and Earnings Volatility (2005–07)



"As a public company, earnings stability is a major strategic goal. Now that there is a demonstrated correlation between physical risk management and earnings, our work takes on even greater meaning."
Rick Moroney, environmental, health and safety manager, Raytheon

"We're in an opportune position to evaluate the frequency of property losses and their individual severity, and then compare this information to each company's physical risk management practices," explains Jeff Burchill, FM Global senior vice president and chief financial officer.

FM Global has discovered that the average risk of a property loss is 20 times larger for companies with weak physical risk management practices than for those with strong physical risk management practices. A location with weak physical risk management practices is more than twice as likely to experience a property loss, not to mention a consequent disruption in its business operations.

Factoring in the financial costs of these losses indicates that the average loss at a location deemed to have weak physical risk management practices exceeds US$3 million, compared with approximately US$620,000 for a company that manages its physical risks well *(See Chart 2)*.

Further examination of the data reveals other alarming statistics. The average risk of a property loss caused by fire, for example, is 55 times greater for a company with weak physical risk management practices than for those with strong practices. The severity of the fire loss also is much higher—exceeding an average US$3.2 million per loss, compared with less than US$725,000 on average for companies with strong physical risk management practices (*See Chart 3)*.

With regard to property exposures related to hurricanes, earthquakes and other natural hazards, overall the average risk for companies with weak risk management practices was 29 times larger than those with strong practices. The average natural disaster loss per location for companies with inferior risk management practices exceeds US$3.4 million per loss, compared with an average US$478,000 for companies with more advanced processes. Also, companies with inferior practices were more than twice as likely to experience a natural disaster-related property loss *(See Chart 4)*.

A Judicious Investment

What do these findings mean in terms of corporate performance? Simply that preventing the potential of fire and natural disasters, which are major drivers of property loss and related business disruptions, provides confirmable bottom-line benefits. Similarly, investing in preventing two other major contributors to property losses—human error and equipment breakdown—also can enhance corporate performance. There are no guarantees, of course. But, the findings demonstrate a significant return on investment in physical loss prevention.

The most important revelation is the apparent correlation between the management of property risks and earnings stability. "The study presents persuasive evidence of a clear correlation between earnings and physical risk management," says Michael Vitacco, global fire protection manager at

Chart 2
All Property-Related Perils:
Physical Risk Management Practices vs. Average Loss Severity (2005–08)

"Reliability in the performance of our physical assets is a component of our reputation. The way to improve this reliability is to invest in the physical safety and security of our plants."
Scott Morrison, chief financial officer, Ball Corporation

Goodyear Tire and Rubber Company. "This should assist finance departments with making more informed decisions about resource allocations."

Ball Corporation's CFO points out another side benefit to superior physical risk management: "Reliability in the performance of our physical assets is a component of our reputation. The way to improve this reliability is to invest in the physical safety and security of our plants. We want our employees to work in a safe environment and don't want to disappoint our customers by not being able to supply their needs because of a business disruption. That's why improving physical risk management is a key initiative," says Morrison.

Leveraging internal research and loss prevention engineering services also can advance property risk management at a companies' facilities. Goodyear, for instance, has prioritized which of its facilities require immediate upgrades in fire protection equipment. "Companies only have so much money to spend on physical upgrades, requiring a systematic process for determining which sites require enhancements first," Vitacco explains.

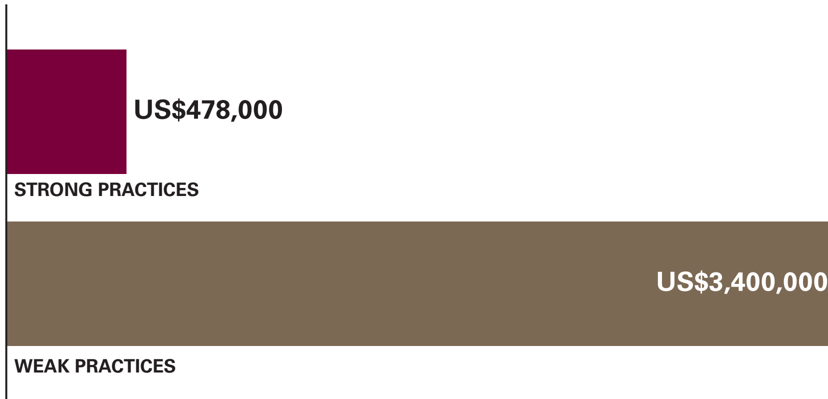
He points to ongoing improvements at a Goodyear tire manufacturing plant in Taiwan as an example. Small by comparison to other Goodyear plants that have insurable values five times higher, the Taiwan plant was among the least protected Goodyear facilities, lacking even a basic sprinkler system. "We set into motion plans to put in a water supply with pumps, tanks and yard mains to feed the hydrants and sprinklers, even before the plant experienced a small fire in the Banbury mixer that mixes the rubber compounds," Vitacco says. Upgrades at the plant are slated for completion within approximately two years.

At defense technology giant Raytheon, a company that self-insures a significant portion of its property losses, superior risk management is a "vital objective," says Rick Moroney, Raytheon environmental, health and safety manager. "We've got a lot of our own money on the line, so it is imperative for us to understand the physical risks at our 150 major sites and the hundreds of smaller facilities we operate. We model these risks, compare them, and then make determinations where our resources will be budgeted."

Chart 3
Fire:
Physical Risk Management Practices vs. Average Loss Severity (2005–08)

Chart 4

Natural Catastrophes:
Physical Risk Management Practices vs. Average Loss Severity (2005–08)



A Business Essential

The risk managers say the correlation between physical risk management and earnings stability gives them the evidence they need to continue to make improvements to their facilities. "Anything that supports our bottom line objectives—revealing costs that heretofore may have been hidden—has value here," says Moroney. "As a public company, earnings stability is a major strategic goal. Now that there is a demonstrated correlation between physical risk management and earnings, our work takes on even greater meaning."

"The study indicates that resources allocated to control property risks are well-spent, given the demonstrable improvement in earnings stability, a key driver of shareholder value."
Dr. Deborah Pretty, principal, Oxford Metrica

About FM Global

For 175 years, many of the world's largest organizations have worked with FM Global (www.fmglobal.com) to develop cost-effective property insurance and engineering solutions to protect their business operations from fire, natural disasters and other types of property risk. The metrics used as the basis for the research and statistics referenced in this report were derived from *Risk*Mark®, a fact-based analytics tool developed by FM Global that produces data to help users precisely understand the risk of major property loss at each facility, the potential business impact and the best solutions to address related vulnerabilities. With clients in more than 130 countries, FM Global ranks among *Fortune* magazine's largest companies in America and is rated A+ (Superior) by A.M. Best and AA (Very Strong) by Fitch Ratings. The company has been named "Best Property Insurer in the World" by *Euromoney* magazine and "Best Global Property Insurer" by *Global Finance* magazine.

About Oxford Metrica

Oxford Metrica (www.oxfordmetrica.com) is an independent research and analytics firm specializing in corporate reputation and international investments. Oxford Metrica has been recognized as a leading adviser in managing reputation recovery from crisis, in evaluating the benefits of establishing an international shareholder base, and in the provision of analytics on hedge fund performance and asset allocation strategy.

For additional information, please contact:
Steven Douvas, assistant vice president, market research
FM Global
270 Central Avenue
Johnston, RI 02919 USA
+1 (1)401 415 1889

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