MASTER THE DISASTER

Why CFOs must initiate natural catastrophe preparedness in 2019 and beyond
Introduction

Entrusted to manage their organizations’ capital in today’s rapidly transforming Industry 4.0 environment, chief financial officers (CFOs) confront competing demands for finite resources across the enterprise. Determining where to allocate capital affects the bottom line. Following recent major weather-related property damage and business interruption losses, CFOs must give more attention to better preparing their organizations for similar events in the future, say industry experts.

In this report, we present findings from our analysis of a cross-section of major publicly-traded companies that reported in their 10-K regulatory filings on the effects of Hurricanes Harvey, Irma and Maria in 2017, a record year for weather disasters. The surprising severity of these losses suggests that many CFOs should be allocating more capital to reduce the financial impact of natural disasters, or risk facing volatile balance sheets and other potential consequences of their inaction.
While insurance policies absorb most property damage and business disruption losses, they do not transfer all economic exposures. A prolonged interruption in business can gravely affect a company’s market share, free cash flow, investor confidence, share price, reputation and potential growth opportunities. Such dire impacts are not covered by insurance.

Many businesses appear to take the view that unpredictable events like hurricanes, fires and earthquakes are not likely to occur in the current earnings season. This undue concentration on short-term profit at the expense of long-term financial security can backfire disastrously in the aftermath of even a moderate natural disaster.

Obviously, the onus is on companies to methodically identify and assess natural disaster risks to commit the necessary capital to improve structural resilience. In this regard, the CFO is accountable. If the company is unprepared in its response to a natural disaster, a wide range of stakeholders—institutional investors, shareholders, Wall Street analysts, consumers and regulatory agencies—will be privy to this critical information.

CFOs cannot bury their heads in the sand, abdicating responsibility for these high-severity risks. “The buck stops with the CFO,” said FM Global CFO Kevin Ingram. “Board members, shareholders, investors and analysts during quarterly earnings calls will increasingly want credible information on the company’s preparedness for the next big one. And that requires the CFO to ask tough questions and undertake thoughtful cost-benefit and return-on-investment analyses for capital allocation purposes.”

Our review of 10-K filings of nearly 100 public companies that experienced property damage/destruction and business disruption from Hurricanes Harvey, Irma or Maria saw losses ranging from a few million to hundreds of millions of dollars. If such material losses continue to be reported in future filings, the companies’ CFOs will be called upon to answer difficult stakeholder questions, chief among them, “Why do the CFO and their business continue to be caught off guard in addressing this major financial exposure?”

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—Courteney Keatinge
Director, Environmental, Social & Governance Research
Glass Lewis & Co.
Such questions are more likely in the future, following the U.S. Securities and Exchange Commission’s clarified position on climate change risks. The SEC’s Guidance Regarding Disclosure to Climate Change instructs companies to treat the material risks from climate change like any other business risk. In 2017, three large oil and gas companies—Exxon, Occidental and PPL Corp.—passed landmark resolutions to disclose the risks that climate change posed to their business. Diverse companies in other industry sectors followed their lead in issuing similar resolutions in 2018.

Natural disaster preparedness is also a growing concern of institutional investors controlling more than three-quarters of the U.S. equity market cap and more than one-quarter of the global equity market cap. “Investors want to know if you have a factory in a region prone to natural disasters that the resilience of the building is unquestioned,” said Courteney Keatinge, director of environment, social and governance research at proxy advisory firm Glass Lewis & Co. “If this is not the case, they want the board to find out why. Climate change risks are very much on the minds of investors, for obvious reasons. In this regard, the CFO is on the hot seat.”

Taken as a whole, CFOs must elevate their consideration of the financial and economic implications of natural disasters in their capital allocation decisions. Taking proactive loss prevention measures now can moderate the long-term impact on the organization’s growth prospects, financial security and brand reputation among varied stakeholders. “CFOs should be comfortable that the organization is able to withstand natural disasters and their economic repercussions,” said Ingram.

An Alarming Tally

The year 2017 was a watershed in the history of property catastrophe losses. The total economic damage caused by natural disasters worldwide in 2017 exceeded US$337 billion (the second highest on record), of which US$144 billion represented insured losses (the highest on record).

Three hurricanes—Harvey, Irma and Maria—ranked among the five worst hurricanes in history. Global insured losses from wildfires surpassed US$14 billion, the highest ever in a single year. In the United States alone, more than 9.8 million acres burned in 2017, costing US$18 billion—triple the annual wildfire season record.

2018 did not offer much of a reprieve, with California reporting its largest wildfire damage losses in history. At print time, the losses from Hurricanes Florence and Michael were estimated to range from US$8.5 billion to US$13 billion. Meanwhile, a massive 7.5-earthquake and tsunami that struck Indonesia and killed approximately 3,000 people was a reminder of the unexpected fierceness of this natural disaster.

The last major earthquake in the U.S. was the 6.7-magnitude Northridge Earthquake in 1994, which cost US$25.6 billion (in 2017 dollars). Seattle’s 6.8-magnitude Nisqually Earthquake in 2001, by comparison, caused less than US$4 billion in economic damage. Both cities now confront the possibility of a catastrophic earthquake: The U.S. Geological Survey predicts a 99.7 percent chance of a 6.7 magnitude earthquake occurring in Los Angeles, California, USA within the next 30 years, and a 50 percent chance of a 7.0-magnitude earthquake occurring in the Bay Area of San Francisco, California, USA by 2044.
Most companies operating in the United States, for example, are vulnerable to the financial and economic impacts of a natural disaster, from wildfires in the western U.S. to tornadoes in the Midwest to hurricanes in the southern and eastern parts of the country. It’s not a matter of “if” a natural disaster will strike, but “when.” Some businesses and communities are taking these threats seriously, engineering buildings to withstand the impact of a natural disaster and regularly testing their emergency response plans. With regard to hurricanes, risk mitigations include impact-resistant doors and windows and securement of the roof to reduce the possibility of it literally being sucked off the building. As a resident of Puerto Rico told CNN after Hurricane Maria devastated the U.S. territory, “When the roof came off, that was when the devil came in.”

But, as our review of 10-K reports related to the major 2017 hurricanes reveals, the financial severity of many companies’ disaster-related losses suggests even more can and should be done.

**Weather Severity**

There is growing scientific consensus that certain aspects of climate change—rising sea levels, higher rainfall volume and prolonged droughts—could pose significant business property risks if ignored.

A 2018 survey by audit firm EY of more than 60 institutional investors (representing US$32 trillion in assets under management) indicates that nearly eight in 10 consider climate change to be a “significant risk,” with most stating that enhanced reporting of these risks needs to become a priority. “Climate risk is a mainstream investor concern,” the report stressed.
Such business risks are expected to intensify. In October 2018, the United Nations’ Intergovernmental Panel on Climate Change released a landmark study suggesting a speeded-up timetable for the effects of climate change, including more devastating wildfires and coastal floods.

“Climate change risks are a very important issue for all companies to be considering, as it impacts all of them in different ways,” said Keatinge from Glass Lewis. “Boards are now coming to terms with this issue from a strategic and operational perspective. It is becoming clearer that systematic changes in the climate affect not just the physical and ongoing business risks of companies, but also such dimensions as the availability of water and food, where people live, and future regulations, which also impact companies.”

She pointed out the work of the Task Force on Climate-Related Financial Disclosures. “The task force seeks greater transparency of companies’ climate change risks and more stringent board oversight of these exposures,” said Keatinge. “Proxy votes this year indicate tremendous momentum for greater board governance of climate change risks. We’ve also seen exponential growth in the number of companies adopting 2-degree scenario reporting. Those that fall behind in these regards will be considered laggards by investors and other shareholders.”

Our review of companies’ 10-K annual reports following the major 2017 hurricanes corroborates investors’ growing concerns over the financial and economic impact of natural disasters. Below are just a few findings across different industry sectors:

- A large power company in the southeastern United States reported US$333 million in storm-related asset damage from Hurricanes Irma and Maria, as well as other storms.
- A large bank holding company reported US$53 million in hurricane-related losses during the third quarter of 2017, primarily affecting its retail automotive loan portfolio.
- A Fortune 500 American health care company reported a US$32 million third-quarter 2017 charge related to the impact of Hurricane Maria in Puerto Rico, and a negative impact on fourth-quarter sales of approximately US$70 million.
- A large global U.S.-based pharmaceutical company reported US$43.4 million in costs associated with the temporary shutdown of its Puerto Rico-based facilities following Hurricane Maria.
- A major American multinational information technology company reported US$93 million in disaster charges as a result of Hurricane Harvey.
- A large U.S. department store chain reported US$16 million in losses related to the costs of property damage from Hurricanes Harvey, Irma and Maria.
- A major American conglomerate headquartered in New York cited net catastrophe losses of US$256 million from the three hurricanes and California wildfires.
- A large American beverage producer reported a one percent impact in its operating profit performance related to hurricane damage costs.

This list merely scratches the surface. While most companies offset their property damage and business disruption losses through insurance, several entities reported disaster-related costs that were uninsured. A case in point is a large medical device manufacturer that cited difficulties in sourcing alternate manufacturing facilities to produce its products following damage to the company’s facilities in Puerto Rico.

“We may be unable to manufacture the relevant products at the previous levels or at all,” the company stated. “Because of the time required to approve and license a manufacturing facility, the CFO’s job is to put capital where it is needed; were they to conduct a more systematic cost-benefit analysis of natural disaster risk preparedness, they would realize that allocating capital toward loss prevention provides significant long-term returns.”

PROFESSOR HOWARD KUNREUTHER CO-DIRECTOR, CENTER FOR RISK MANAGEMENT AND DECISION PROCESSES THE WHARTON SCHOOL, UNIVERSITY OF PENNSYLVANIA
a third-party manufacturer may not be available on a timely basis to replace production capacity in the event manufacturing capacity is lost.”

Large companies are not the only ones to endure the financial and economic impacts of natural disasters. Approximately 61 percent of small companies in areas designated by the Federal Emergency Management Agency (FEMA) as susceptible to natural catastrophes experienced revenue losses up to US$25,000 in 2017; 35 percent experienced losses exceeding this amount. FEMA estimates that 40 percent to 60 percent of small businesses fail to reopen after a natural disaster. Certainly, the closure or impairment of small businesses that supply larger companies with parts, components, tools and equipment can affect the ongoing business operations of those other organizations.

**Sizing Up the Impact**

We reached out to several experts on the financial and economic impact of natural disasters. We were curious about their reactions to the public filings and their perspectives on the need for CFOs to take a more active role in managing these exposures. All of the experts agreed that more could be done.

“There is no question that companies, governments and consumers have a tendency to downplay and dismiss events that are erroneously perceived as low-probability. They are likely to be under the mistaken impression that these potentially disruptive events won’t happen to them, and hence there is no need for them to invest the time and money into preparing for them,” said Howard Kunreuther, a professor of decision sciences and public policy and co-director of the Center for Risk Management and Decision Processes at the University of Pennsylvania’s Wharton School.
“Despite all that humanity has learned about the risk damage and disruption caused by hurricanes, wildfires, tornadoes and earthquakes, and the steps that can be taken to reduce their economic impact, the material losses produced by these events continue apace,” Kunreuther added. “Despite evidence to the contrary, people tend to hope for the best instead of preparing for the worst.”

Robert Hartwig, associate professor of finance and director of the Risk and Uncertainty Management Center at the University of South Carolina’s Darla Moore School of Business, attributes the economic costs of many natural disasters partly to government inertia. “We’ve seen a perpetuation of poor public policy decisions, in which people and businesses are allowed to locate anywhere they want in structures that are inappropriate given the natural disaster risks,” Hartwig said.

“This virtually guarantees that catastrophe insurance claim frequency and severity will only get worse,” he added. “We need the political will of the federal government to say that it will no longer encourage risky zoning and land use rulemaking on the part of local governments, since it is local government that authorizes permits for construction activities in climate-vulnerable areas. Local building codes must reflect the actual risks, which are well understood.”

Both professors were apprised of the findings of our review of natural disaster losses in public company 10-K filings. “Your review clearly shows that natural disaster risks materially impact a company’s ability to operate (and) have some adverse impact on earnings,” said Hartwig. “(While) there’s no question that reducing the financial severity of such events is a critical component of every company’s risk management program, companies continue to exhibit major vulnerabilities, as evidenced by disclosures in their 10-Ks.”

Hartwig said he expects natural disasters to “get lots of ink in future financial filings because I don’t think they’re currently getting the attention they’re due.”
Kunreuther was explicit about the need for CFOs to take charge of the situation. “A company that reports three successive years of natural disaster losses would not appear to be examining these risks and potential worst-case scenarios in a thoughtful and deliberative fashion,” he said. “Were I a shareholder or investor in this company, I would reconsider retaining my shares. Companies often think a ‘one-in-one-hundred-year risk’ of a major disaster is so unlikely that it is below their threshold level of concern. In reality, it can happen tomorrow and be extremely destructive.” When viewed over the typical 30-year lifespan of a building, the ‘one-in-one hundred-year risk’ has a 26 percent chance of occurring at least once during that time period.

If such a severe disaster did occur tomorrow, this does not provide a reprieve—a similar event can occur again in the very near future, he added. “The CFO’s job is to put capital where it is needed; were they to conduct a more systematic cost-benefit analysis of natural disaster risk preparedness, they would realize that allocating capital toward loss prevention provides significant long-term returns.”

Such analyses can be rigorous. “Obviously, you need to identify which of your assets are at risk, as well as those of supply partners,” said Jane Montgomery, a partner at law firm Schiff Hardin LLP who specializes in complex corporate environmental liabilities. “Assuming you are in fact at risk, you need to think through the many complicated scenarios in which the organization may be affected. For example, a company damaged by a hurricane or flood may unintentionally contribute to an environmental hazard that impairs its reputation, resulting in a market share loss.”

Montgomery cited the importance for public companies to adhere to guidance on climate risk disclosures. In addition to the SEC’s clarified position, she noted that several state laws and regulations require the issuance of climate-related reports and disclosures. “All such disclosures must be taken into consideration by a company in putting together an effective disaster risk mitigation strategy,” she said.

Such strategies should not be left exclusively to the organization’s risk manager, given the potential for substantial business and market threats beyond insurable exposures. Nor can the board of directors be held fully responsible. “The bandwidth of boards and senior management to deal with this issue has narrowed, given the multitude of other C-suite and board-level risks that companies are grappling with, such as cyber and competitive threats that are viewed as more immediate,” said Hartwig.

The solution may come down to the CFO.

“Natural disaster risks materially impact a company’s ability to operate (and) have some adverse impact on earnings…and as such must be addressed by CFOs directly.”

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The Role of the CFO

Risk managers, who typically have an inward-looking role in their organizations, often are charged with improving risks that currently exist. Certainly, that can reduce a company’s vulnerability, but some risk still often remains. The CFO, with their executive-level role and outward-looking focus, has the power and ability to eliminate some risks entirely. For example, investing US$2 million to fortify a critical plant against flood exposure often falls under the responsibility of the risk manager. In contrast, a CFO has the influence to say, “Let’s abandon this plant in the middle of a flood plain and build a new one on high ground.” While there is great value to be gained by the risk manager improving the risk, there is even greater value when the CFO decides to eliminate the risk altogether.

Many companies that experienced significant losses from natural disasters in 2017 subsequently acknowledged that they were unprepared for the severity of the events.

We surveyed executives at large U.S.-based companies with operations in Texas, Florida or Puerto Rico, two states and a territory enduring the brunt of 2017’s three major hurricanes. Revenues at each of these businesses exceeded US$1 billion. Almost two-thirds (64 percent) of the respondents said one or more of the hurricanes had an adverse impact on operations. Of these companies, 62 percent admitted they were “not completely prepared” to deal with the hurricanes’ effect, with 68 percent citing plans to make changes to their risk management strategies going forward.

These changes include enhancing their disaster recovery and business continuity plans, investing more in property loss prevention, and reasessing the supply chain risk management strategy. Such actions tend to produce a significant return on investment: For every US$1 a company spends to protect structures from hurricane, wind and flood damage, estimated loss exposures decrease by an average US$105, in relation to these companies’ associated reductions in property loss and business disruption exposures. These findings are drawn from our analysis of more than 10,000 wind- and flood-related investments by 1,800 FM Global clients from 2008 through 2017.

It is not much of a stretch to conclude that similar loss prevention investments would achieve comparable returns in regions susceptible to other types of natural disasters. The decision to allocate capital towards these ends remains with the CFO.

“In making such determinations, the CFO needs to ask the company’s risk manager about the extent of actions taken to improve resilience by reducing these exposures to manageable levels, and the breadth of insurance protection to absorb remaining risks,” Ingram said. “However, if the CFO is relying exclusively on risk management to address these issues and not asking questions, that would give me pause. Severe economic impacts outside the insurance contract can occur, including sizable decreases in share price, free cash flow and market share, as well as missed growth opportunities.”
To assist a determination of the total financial impact of a major property loss event after insurance recoveries, CFOs should consider using valuation-based models. The data produced by such models can provide a CFO with a more complete picture of a natural disaster’s possible impact on market share, investor confidence and missed growth opportunities.

Armed with this knowledge, CFOs can discuss with risk managers how the company’s resilience strategy is offsetting these threats, enhancing the knowledge needed to allocate capital to address gaps in loss prevention. “If the CFO doesn’t lead the charge to invest in reducing these exposures, they will be the ones that stakeholders hold accountable for not properly addressing the risks,” said Ingram.

And for good reason. A company’s profitability and survivability are on the line. “Major natural disasters, more than ever, threaten to interrupt tenuous global supply chains, increase cash flow volatility and inflict lasting harm on customer relationships,” Hartwig said. “Severe natural disasters thus have the potential to become capital events, and as such must be addressed by CFOs directly and not merely relegated to risk managers.”

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About FM Global

Established nearly two centuries ago, FM Global is a mutual insurance company whose capital, scientific research capability and engineering expertise are solely dedicated to property risk management and the resilience of its client-owners. These owners, who share the belief that the majority of property loss is preventable, represent many of the world's largest organizations, including one of every three Fortune 1000 companies. They work with FM Global to better understand the hazards that can impact their business continuity in order to make cost-effective risk management decisions, combining property loss prevention with insurance protection.