



Preparing for the Worst: Natural disasters and supply-chain risk management

Natural disasters, such as the recent earthquake in China's Chengdu province, wildfires in southern California, hurricanes in the Gulf of Mexico, and cyclones in southeast Asia, capture the rapt attention of media, communities, and businesses when they occur. Their effect on local communities is often devastating. Although natural events often make the front page, the relatively low probability of these occurrences can leave companies insufficiently prepared for the business consequences that flow from these catastrophic events when do they strike. When natural disasters catch companies by surprise, they can cause widespread business disruptions: damaging facilities, upending shipping schedules, interfering with production, and impairing the ability to meet customers' expectations for high quality and timely service.

As part of CFO Research's study on supply-chain risk management, we surveyed 169 senior finance executives, focusing on physical risks to the supply chain. Forty-five percent of respondents say that their company's financial performance has been somewhat or substantially affected by natural disasters over the last five years. In an open-ended question, survey respondents report that, over the past several years, tornados have shut down their operations, floods have delayed delivery times, hurricanes have caused factory downtime, and wildfires have closed offices. Our conversations with senior finance executives for this research program confirm that natural disasters are a serious item of concern on the risk management agenda.

Counseling against complacency

Hindsight is 20/20 when it comes to disaster prevention. Several finance executives in our interview program say that past disruptions provide guidance for improving risk management efforts in order to prevent future events from catching their companies and

ABOUT THIS REPORT

In the fall of 2008, CFO Research Services launched a study to examine finance executives' views on risks to the supply chain, with a particular focus on the physical hazards (including natural and man-made disasters) that can affect companies' supply chains and disrupt their businesses.

We conducted a series of eight in-depth interviews with senior finance executives at leading U.S. companies for this research program; this piece is one in a series of three essays that report the results of these conversations. We also conducted a survey for this study, gathering 169 responses from senior finance executives at large U.S. companies. Complete survey results are available in *Physical Risks to the Supply Chain: The View from Finance*, available at www.cforesearch.com.

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supply-chain partners off guard. A serious fire disabled a supply-chain partner's fabrication plant, pushing out delivery dates at Curtiss-Wright Flow Control, a division of industrial/defense manufacturer Curtiss-Wright. Due to the diversity of its supply chain, the company made a nimble recovery, switching over to another supplier that was waiting in the wings and losing just three weeks instead of eight, according to former CFO Rob BonGiovanni. "As a result of that experience, that action just flowed down through all of our companies that had similar kinds of suppliers and we said, 'Pay attention to this. While it hasn't happened to you, it could because it happened to us once.' Once is enough," Mr. BonGiovanni says. "Make sure they're aware of it." Other finance executives we interviewed allude to similar experiences. While such events are certainly undesirable, disaster-related disruptions in one business unit or region can create an opportunity to raise awareness and improve risk management across the company.

A company's heightened awareness of risk need not result from a direct brush with disaster; instead, risk awareness can stem organically from an industry's broader regulatory environment and its sensitivity to weather-related and other natural disruptions. Regulatory requirements for inventory management among airlines help insulate ExpressJet Airlines from disruptions, even though their jet manufacturer, Brazil-based Embraer, is located in a region particularly prone to floods and landslides. FAA regulations require ExpressJet to keep a set inventory of repair components, according to CFO Phung Ngo-Burns. "So, in those [natural disaster] situations, we ourselves are the ones who are minimizing that risk because we keep a certain ratio of spare parts on hand in our engineering requirements program," says Ms. Ngo-Burns. "Natural disasters can occur, but we have fine tuned that with all of our suppliers."

Preparing for the worst

While risks to the supply chain differ due to company-specific variables such as industry and the geographic distribution of suppliers, participants in our interview program express a shared interest in improving their risk management practices to insulate themselves, as well as vendors, from disaster-related disruptions to the supply chain. Supplier contracts are an integral part of their supply-chain risk management strategies. "CB&I Lummus tries to build strong *force majeure* clauses into contracts. If it's an act of God, like a hurricane washing out roads, railroads and things like that, or an earthquake like in China, the company's got a mechanism to protect itself," says Mike Ford, former vice president and controller at engineering services and building company CB&I Lummus.

"The other thing that the company does, especially for movement by ship, is obtain insurance so that if the ship goes down, the company can at least file a claim with the insurance company and replace the goods without it having a double whammy to the financials," he continues. The company also pays close attention to supplier scheduling to circumvent weather-related disruptions. "Sometimes if you're building something in Russia, you've got to schedule everything to be shipped between May and October," according to Mr. Ford. "After that, a lot of this material comes in the barge and the rivers start to freeze. You need to get it there while the transportation facilities are available to you."

Disruptions can cause more than just delivery delays. Referring to the fire experienced by one of their suppliers, Mr. BonGiovanni notes, "That's where you better write a darn good contract. If that's not mentioned, you could be in trouble contractually as well."

Renewing attention to risk management

As the economy continues to weaken, the threat of business disruption caused by natural disasters is finding its way onto companies' broader supply-chain risk management agendas, alongside financial risk. Throughout our interview program, senior finance executives say they're taking notice of risk management failures in the financial services industry. "I think everybody is looking at risk management right now. For people who are in the finance area, it's really paramount [to look at risk management] in times like this when many companies don't have a lot of resources to use to recover that they might have in better times," notes Donald Williams, executive director of finance/special projects at educational assessment company ETS.

In an increasingly competitive business climate, companies are likely to continue to rely on lean and efficient manufacturing and logistics practices that will require close management of the supply chain. These practices boost productivity and help companies do more with less. But lean operations have very narrow supply-chain tolerances: even small disruptions can have serious consequences. Finance executives are giving careful consideration to the risks that beset their companies' supply chains—and they recognize a resilient supply chain as a major source of strength.

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