

Strategic risk: another link in the supply chain





Extended supply chains are more vulnerable to weather events and other risks.

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Strategic risk: another link in the supply chain

What kills an organization? In a recent board risk oversight project, one board member stated, "The risk that kills most companies and why they only last 20 years... and why 60 percent are gone after 40 years, is business risk. You need to understand your market and your competitive dynamics... There's only a few things that go wrong, right? You were asleep and the market changed. You didn't have the right people. You weren't challenging the people to anticipate around the corner. You weren't bringing in objective information that was contrary to management's viewpoints so that you had a check and balance on how they see the world. It's very simple. It's just hard to do."¹

But how do organizations mismanage business risk? How do organizations assess their strategy and competitive dynamics, and where are organizations asleep? Recent events suggest one answer is that organizations have become exponentially more complex and interrelated. The strategy of a business can no longer fail to take into account critical enterprise issues such as supply chain and business resiliency. Often, this vital link between strategy and supply chain is sadly proven through the significant impact when there is a disruption.

Supply chain disruptions increasingly impact financial performance

Extensive research looked at thousands of company results, whereby comments in SEC reports were tied back to the stock performance of these companies. As seen in the following graph, the study shows an average 25 percent reduction in share price and an impact which commonly lasts over two years, as a result of supply chain disruptions.² Companies can be simultaneously impacted by decreased sales and brand damage, while incurring significant extra expenses during recovery times following a business interruption. Historically, supply chain disruptions can lead to an average of 9 percent lower sales and 11 percent higher costs, and many companies with extended interruptions never recover.³

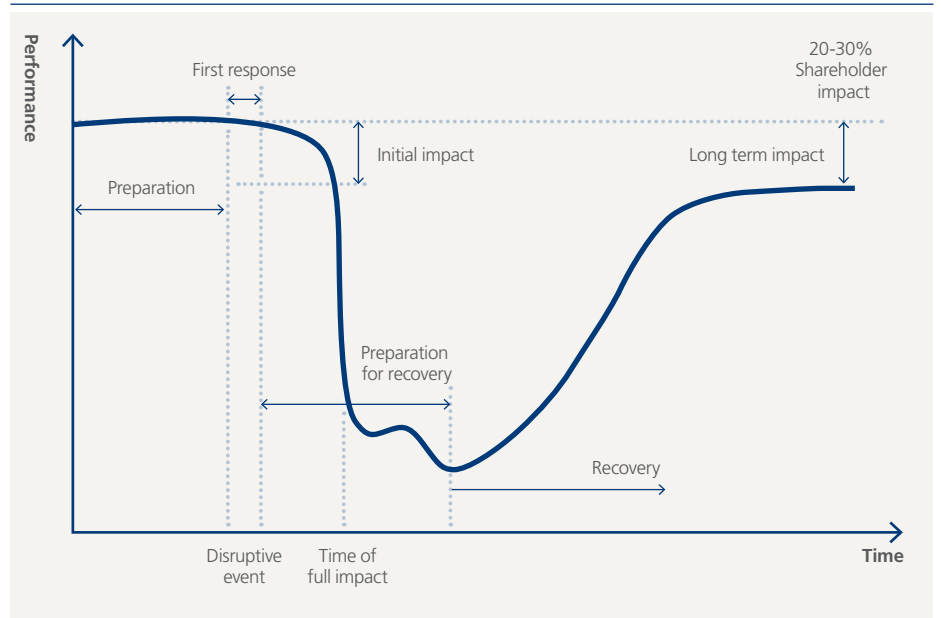
These alarming impacts should be of great concern to a firm's Directors and Officers, who are directly responsible for both results and for setting the necessary 'tone at the top' around actively addressing risks to strategy and execution. It is often said that CEOs should be heard talking about risk management as much as they do markets and customers, because both can have a major effect on performance. Turning risk into a competitive advantage requires risk accountability, so you do not inadvertently expose your organization to the 'blindside' of risk, potentially costing you money and preventing you from taking advantage of growth opportunities that build shareholder value.

¹ Improving Board Risk Oversight through Best Practices. Walker, Shenkir, and Barton. Institute of Internal Auditors. 2011.

² Vinod Singhal, Professor at Georgia Institute of Technology, and Professor Yossi Sheffi, at the MIT Centre for Transportation and Logistics, MIT Sloan Management Review, 2005

³ Business Continuity Institute, BCI.org

Supply chain disruptions impact financial performance



Source: Ycssi Sheffi & James B. Rice JR., MIT SLOAN MANAGEMENT REVIEW, 2005

A strong enterprise risk culture can correlate to improved profitability

Financial results studies provide evidence that a robust risk culture and enterprise process can be the basis for improved profitability and business resilience. Some organizations have implemented an integrated Enterprise Risk Management (or ERM) approach to managing risk, aggressively identifying the biggest risks so they can be proactively addressed in their strategy. A 2012 study by FERMA⁴ found that firms with 'advanced' risk management practices exhibited stronger EBITDA and revenue results over the past five years than did those with 'emerging' risk practices. This review of over 800 firms in 20 countries concluded that:

- 75 percent more firms with 'advanced' risk management practices had EBITDA growth of over 10 percent
- 62 percent more firms with 'advanced' risk management practices showed revenue growth of 10 percent.

The study validates that an active risk practice and culture can directly correlate to stronger financial results, as the entire firm becomes more aware and accountable for the significant obstacles standing in the way of success. This enterprise approach helps management see the connections between the risks, in essence, linking risk management with strategy in their decision-making. Perhaps nowhere is this more important than in supply chain risk management.

⁴ FERMA article, Risk Management Professional magazine, The Institute of Risk Management, December 2012

Eyes wide open

A company's supply chain is the life blood running through its veins and must be seen through a wider, more strategic lens. The de rigueur aim in supply chains is to lower costs. But many companies have not considered the risks associated with that approach, and have failed to realize that any action taken to drive cost out can inadvertently drive risk into the business. For example, many organizations fail to identify the increased risks associated with procurement moving to using a single source or a change in sources, often without the knowledge of the risk manager who is tasked with optimizing enterprise exposures.

Think about a company that wants to build its product in a different country. This is a potentially good move from a profitability perspective, but what risks are involved with that decision and how does it impact the overall strategy and vision for the future? Without an integrated process supported by top management, companies can fail to anticipate and connect risks on a regular basis. One NYSE-listed manufacturing company had excessive inventory concentration with a primary customer. The company chose to hedge against the likely default of that party; so they managed the financial risk. This is a good approach, but also a siloed approach. In a heated board meeting, the CEO was challenged by a board member to think beyond inventory and consider how the company would survive a loss of that supplier or customer and relationship. What would they do with the employees and the factory? Where would they sell their product? It was not a pleasant conversation. The conclusion is that risks, including supply chain risks, must be seen from an integrated perspective.

Consider other recent headlines and the next risk lesson comes into focus – supply chain problems are frequently strategic problems. The headlines and stories surrounding an airline's battery issues stated that the problems "couldn't be higher." Although one executive stated there was no risk to passengers, another executive correctly saw the issue as strategic when he argued that the issue was safety and confidence in the product, and that it cannot occur again. For boards, executives, and risk professionals, what cannot happen again is failing to understand how the supply chain and its associated risks relate to the business model and strategy of the company. To really create, protect, and enhance shareholder value, this understanding needs to take place up front – not *after* a mistake occurs.

One executive recently stated: "There are no black swans. All risks are identifiable." Although saying there are no black swans may be a bit optimistic, do not tell that to one high tech executive who last year blamed God for profit drops of 44 percent related to supply chain problems. Roll forward one year and that company's board is taking a more active role. Perhaps frustrated by those supply chain losses and the loss related to a recent acquisition (which was written off), the board has formed an ad hoc committee for 'directional strategy.' Organizations should take ERM more seriously so they can see how strategy and supply chain risk can work in tandem or even move exponentially to create huge losses.

For example, a major manufacturer managed supply chain risks in silos and recently suffered a \$1 billion write-off partly because of that silo approach. While some in management began to manage specific supply chain price increases through long-term contracts, others managed the risk through hedging. Still others in the company were managing the risks by increasing research and development and finding different manufacturing models (resulting in less use of certain high-priced inputs). An integrated approach to ERM and better communication may have saved a billion.

It might be said that: "What is chance (or God) to the non-intelligent risk company is not chance to the risk-intelligent company." Companies need to figure that out. Apparently some have. There is one supply company that did not suffer major damages from the earthquake and tsunami in Japan. Credit their ERM process and their ability to shift production and maintain extra inventory in other locations. Still, the firm is updating the potential outcomes in their scenario analysis related to their supply chain. The company appears to be on a never-ending effort to improve their risk management efforts. As noted previously, research confirms that companies further along in their ERM processes show higher levels of performance. 2012 research by Gates, Nicolas, and Walker confirms the reason – more advanced ERM companies are usually able to make better decisions, which should lead to enhanced performance.⁵

⁵ ERM: A Process for Enhanced Management and Improved Performance. Gates, Nicolas, and Walker. Management Accounting Quarterly. 2012.

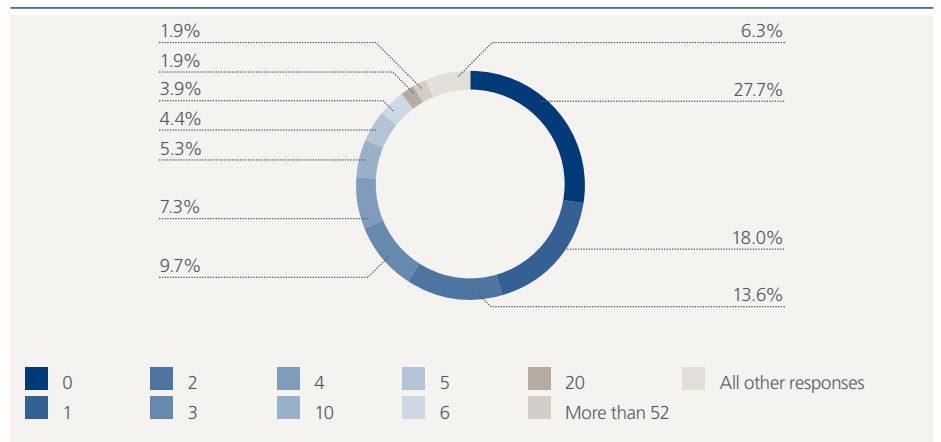
Opportunities for improvement

When the supply chain function works together with risk management and corporate strategy, the synergy can create a competitive advantage and build resiliency. This can offer an expanded and cooperative role for procurement and risk management as they both seek to improve the successful execution of strategy. There are many tools available that risk managers and procurement can use to better understand the exposures their supply chain strategy can bring to the company. A firm can model its value chain to follow the profit flow to find the greatest pinch points. They can also perform a supply chain risk assessment of key suppliers to determine possible weak links. Learnings can be used to build more robust business continuity plans. There are supply chain risk management best practices available that can help a company in this area. (For more information, please visit the website of the Supply Chain Risk Leadership Council at www.sclrc.com).

Surprisingly, only about 8 percent of companies reported having BCP plans with their suppliers. Many companies are running Just in Sequence or Just in Time, but have not planned for what they would do 'just in case' a supplier does not deliver. The answer could be found in a collaborative effort between purchasing and risk financing, producing a more effective balance of risk and reward which is validated through scenario testing. Ideally, companies can establish a combined approach to managing certain exposures and insuring those risks which remain out of control of the procurement team, such as the approximately 40 percent of disruptions which occur below Tier One direct suppliers.

Opportunities for improvement in this area abound because negative supply chain disruptions are growing. Figure 1 (below) shows that the number of disruptions is growing. Nearly 85 percent of those surveyed reported suffering from a supplier disruption, and more than 50 percent reported more than one interruption. As seen in Figure 2 (see page 6), some of these disruptions can last for an extended period of time. An analysis of 2500 disruptions shows that almost 500 lasted more than a week, several hundred lasted more than six months, and some lasted over five years. Additional analysis revealed that approximately 20 percent of these disruptions had financial consequences in excess of \$500 million. That's a big number to any organization.

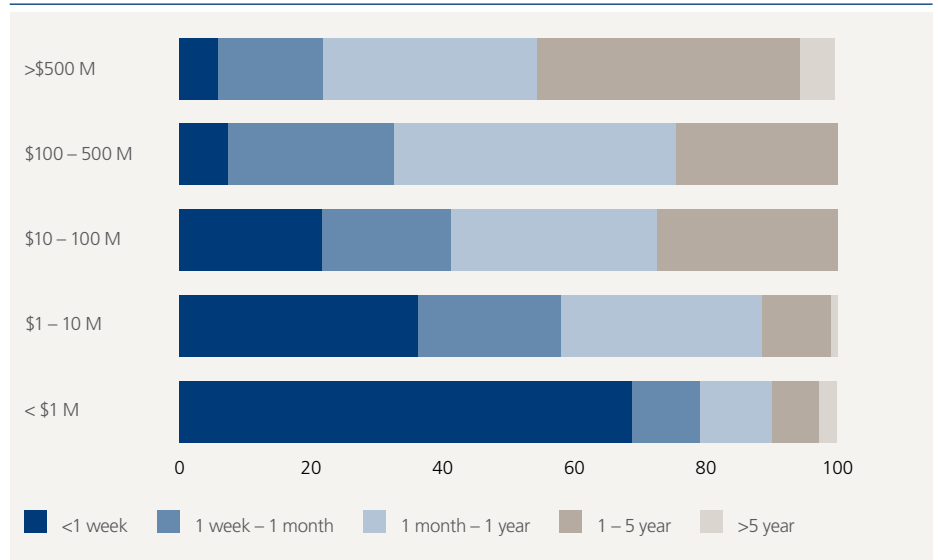
Figure 1:
Supply disruptions per company per year



Source: Zurich's supply chain loss event database

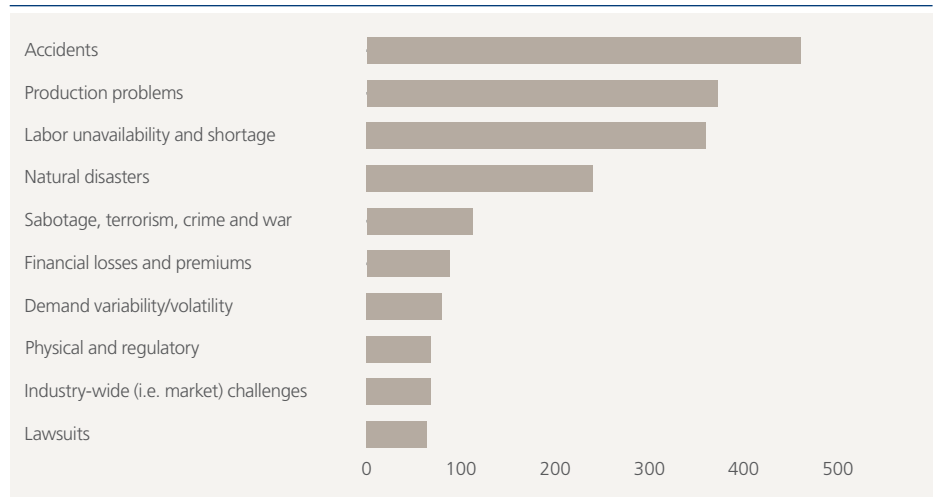
Opportunities for improvement continued

Figure 2: Matching duration and impact



Interestingly, many companies only insure the assets of key suppliers against fire and other physical damages to production sites. However, Zurich Insurance Group’s proprietary database of supply disruptions shown below indicates the many non-physical causes of interruptions over the past 10 plus years. The statistics about actual supply disruption causes show IT and communication issues as the number one challenge in 2012, followed by transportation problems, labor unavailability, regulatory changes, and other reasons. Natural catastrophe was also a key cause of interruption but, as seen following the Japanese tsunami, many of the outages were not directly tied to the physical disruption but to secondary issues like power outages, infrastructure problems, labor and ingress/egress challenges. Given the variety of reasons behind supplier interruption, it may behoove companies to take a more holistic approach to managing value chain risks.

Analysis of over 2500 disruptions



Source: Zurich’s supply chain loss event database

Getting better in this area may also require organizations to tailor the risks to their business model. When a major retailer first got into its ERM process, the supply chain risks were about turn, turn, turn. The retailer built risk metrics around inventory movement and turn. Move a lot of goods and make more money. It was their business model. In contrast, after studying supplier and product supply chain sources, a biotechnology company saw the risk related to inventory and supply chain differently.

Losing a supplier could cost the company considerable revenue and lost profits because some of its suppliers required going through an 18-month regulatory approval process. The solution required sitting on more inventory than it could immediately sell and partially qualifying alternative suppliers (not turn, turn, turn). The company took a net present value approach to evaluating different supply chain problems.

Really knowing your business model can increase your understanding of actual supply chain losses too. One company found supply chain losses in one country meant theft, in another country they meant natural disasters, and yet in another the losses were related to infrastructure problems. It's important to understand the real risks in the supply chain. Additionally, be careful about transferring one country's solution to other countries with a different culture.

Lessons learned

One lesson to keep in mind is that sometimes the risks related to supply chain may be difficult to see at first glance. Consider the classic case of a college professor finding a flaw in math done by a supplier of a well-known brand of computer chip. The producer's management saw the risk as minimal and not affecting normal calculations. The public saw it differently, eventually leading a major computer manufacturer (not the supplier itself) to make a recall, probably souring relations between the two businesses. The cost of this mistake was way more than the product of price times quantity, and the chip manufacturer's stock price drop reflected it. There was vendor relationship risk as well as supplier capacity risks, since the Just-In-Time chip manufacturer was running at near full capacity. Again, the risk was not just about a break in the production supply chain, but about how the supply chain related to reputation risk.

Consider the case of the public company that manufactures and sells its own product along the East Coast. The supply chain was easy enough to manage with trucks running up and down the interstate highway. Even customer returns and warehouses were not that complicated. However, when the company chooses to manufacture in Asia what new risks exist? Perhaps, more importantly, when should that company identify those risks? Years later or beforehand? This is not just an operational change – it's also a supply chain risk linked to strategy. How will this supply chain change impact the company's brand vision and financial goals? While it may not be possible to identify every new risk up front, that is the goal of a risk-intelligent organization. That is also one key way that value is added. This new supply chain resulted in slower turnaround time for new business designs and a slower response time to new consumer desires and changing consumer preferences. It also failed to factor in how consumers might view their product if not made locally, as it had always been. Additionally, this new approach resulted in the inability to return the product to be re-done (it simply was no longer cost feasible).

Lessons learned

continued

Thus, customer returns needed to have a new approach. New risk metrics had to be developed to manage these new risks. Even the basic supply chain risk needed to be addressed. In the first few years, the company experienced supply chain disruptions caused by a Category Five hurricane, a dock strike, and a shortage of talent to manage the new and more complicated supply chain. Even worse, the supply chain disruptions occurred at the riskiest moment – right before the season of the year when this company makes a large percent of their sales. The first year into this new model, word got out that the company was having supply chain problems and it suffered stock price losses of about 12 percent. Unfortunately, one year later, the supply chain disruption occurred again at the worst possible time and resulted in additional stock price drops near 12 percent. Boards of corporations today are not patient with risks that could or should have been identified earlier but were not – the so called ‘grey swan’.

An integrated approach to corporate strategy

A large firm was trying to cut costs by changing its purchasing strategy. The company was considering changing from two suppliers, which each provided 50 percent of its raw material, to one supplier delivering 90 percent of the necessary goods at a better price, with the second supplier providing 10 percent of the material. Prior to making this change, the procurement manager wisely consulted with the firm’s risk manager to assess the increased exposure to the firm and find alternative mitigation strategies. The risk manager obviously recognized that greater reliance on a single supplier may also bring greater business interruption exposure, including the extra expenses that could easily offset any contractual cost savings. The risk manager investigated various options such as securing an ‘all risk’ supply chain insurance policy to provide financial backing that can cover the value of the supplies and any additional recovery costs. The company also looked into arranging standby, make-up capacity for the critical goods which could be built into their supplier business continuity plan. Through open collaboration, the business balanced the cost savings against the higher probability and cost of non-delivery. The cooperative enterprise approach allowed the firm to find the appropriate mix of risk and reward that aligned their sourcing strategy with their risk appetite.

In a significant study on best practice about enterprise risk management, one of the biggest lessons learned from that study was that the number one tool for better addressing enterprise exposures was simply having a conversation. In today’s fast-paced, cloud-based world, that risk conversation is not occurring frequently enough, and there is often not a ‘risk aware’ culture to support that dialogue. Organizations have to think – and discuss – anew about how supply chain risk can be managed and how it impacts their business model, strategy, and vision.

A major retailer used to say that when they saw their risk in a new way or learned something new about the risk or how it impacted others, that it was an ‘aha’ moment. Aggressively identifying and managing supply chain risks and understanding how they are linked to other risks such as strategy can be an ‘aha’ moment for many companies. By working in concert across business and functional areas, executives can help create a more resilient enterprise that is better able to anticipate surprises, recover from disruptions, adapt to changing conditions and leverage strategic growth opportunities.

To learn more about the Center for Excellence in Enterprise Risk Management, visit: www.stjohns.edu/academics/graduate/tobin/srm

To learn more about supply chain risk management solutions and ERM, visit: www.supplychainriskinsights.com and <http://www.ZurichERM.com>

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