Global supply chains can increase efficiency, but they can also increase risk. Recent events—including the Japanese earthquake and tsunami, the floods in Thailand and the ash clouds caused by the Icelandic volcano—have demonstrated how far the consequences of such risks can extend. The Japanese earthquake, for example, severely affected global electronics production and led to extended business disruptions for the automotive industry.

The Thai flooding created significant shortages in the hard disk drive market that generated millions of dollars of losses for well-known electronics manufacturers. In addition to these headline events, however, the nature of supply chain risk is constantly changing. New risks and new vulnerabilities can often be better addressed if given close attention from management.
The fragility of global supply chains is related to emerging risks, but is also related to supply and network design strategies. The integration of risk management into supply chain management has often been limited, especially for organizations that have focused on reducing costs and limiting working capital levels as a response to difficult market conditions. Increasingly however, many companies are re-establishing the balance between risk and cost focus as they manage their global supply chain.

To address these risks, companies should consider their operating models, in an effort designed to define an optimum balance between financial efficiency and assuredness of a stable supply chain. Companies that once maintained backup inventory and manufacturing facilities may have exposed themselves to risk as they concentrated on working with fewer redundancies, using the “Kaizen” model calling for “just in time” or even “just in sequence” production with minimal in-process inventories; geographic and operational concentration of assembly and parts production; and a high level of subcontracting.

Many companies have switched from “local” suppliers to “low cost” (and often distant) suppliers on the basis of cost, without considering the full cost of risks associated with these changes. As a result, the extended supply chain now has many additional points of potential failure, suggesting that new approaches to risk management can be beneficial. Many companies face increased exposures and potentially costly logistics lead times for critical products if unforeseen events emerge – as they seemingly will.

We see six key steps that should be given consideration in assessing and managing supply chain risk:

1. **Look at the whole, not just the parts.** Some companies tend to look at risk in individual parts such as procurement, logistics, distribution or manufacturing. Many risks, however, can be managed across the supply chain network. Because of the systemic nature of supply chain risks, a problem in one area can easily affect the entire supply chain and the entire organization.

2. **Review the governance of the organization’s risks.** The risk function is too often focused on reporting risks that are well known within operating units, with less ability to ensure that the scope of risks under consideration is adequate and includes less obvious risks that could have a much higher impact. These risks can encompass the entire supply chain and include business continuity, creditworthiness of suppliers, currency risk, commodity volatility, supply chain integrity, political risks and a number of other operational risks.

3. **Review current operating models.** This
entails an in-depth analysis of the risks embedded into a company’s operating model, along with a review of all procedures and controls intended to manage those risks. Typical steps include a systematic review of the supply chain risk inventory, the identification of critical single points of failure in the organization, and the quantification of the financial impact those key risks can generate.

4. **Integrate risk management into operations planning and management, both in terms of functions and workflow.** The risk function is typically “headquarters-centric” and does not provide input into the daily decision-making process for operations. Changes in the organizational set-up may be needed to foster an environment in which risk management flows into key supply chain decisions.

5. **Use a financial modeling capability for the supply chain.** Using advanced supply chain modeling tools can help gauge the financial impact of supply volatility on supply chain economics; can analyze the impact of product and service demand volatility; and can measure the impact that launching a new product or entering a new market can have on long-term production capacity. Such tools can also quantify the cost of operational disruptions and balance the distribution of risk between the company and its customers, suppliers and joint venture partners.

6. **Improve risk reporting and monitoring.** Performance management systems such as dashboards and scoring models are in greater use for areas such as supplier solvency or supplier quality management.

Volatility and uncertainty are not going away anytime soon. Risk (http://www.forbes.com/risk/) -based, cost-effective supply chain management can be an essential element of success. This capability can not only help prevent losses but also can prove, for many companies, to be a lasting source of competitive advantage.