

# The weakest links



## Executive summary

- Focusing on the supply chain has been seen as a way to derive value for companies in recent years. But along with the benefits there are a variety of risks which companies have to be aware of as they search for greater efficiencies and bigger profits.

Supply chains are increasingly international and complex. As a result, the risks involved, which once consisted mainly of safely moving goods from A to B and optimising inventory levels, have grown more numerous and complex. European and US consumers have developed a taste for foreign goods and companies have outsourced more production to cut costs. But as supply chains have become more intricate and effective, so have the associated risks. Companies can reduce input costs, but it will often be at the price of increasing their exposure to possible disruption.

Supply chain risk was not only a main feature on the schedule at this year's ACT conference, but very much in focus when insurance and risk managers met in Edinburgh this summer for the annual gathering of their representative body, AIRMIC.

**UNPREDICTABLE EVENTS** Extended supply chains offer the potential for a range of unpredictable events to affect any of the parties involved, from buyer to intermediary to supplier. This has created demand from companies for insurance to cover the risks.

Among those to have responded with products is insurance industry giant AIG. Steve McKay, senior vice president for global loss prevention practices at AIG UK, says the insurer's geographical exposures have changed significantly in the past decade while the transportation risks have increased.

As he observes, international supply chains produce more difficult logistics. This creates a tougher job for companies that seek to track risk throughout a supply chain that frequently will include second-tier and third-tier suppliers. The trend towards more outsourcing means that many companies are sacrificing the intimate relationship they previously enjoyed with a direct supplier.

**AN EXTENSION OF THE ENTERPRISE** "The supply chain is an extension of your enterprise and must be treated accordingly," says McKay. Extended chains present a range of considerations for treasurers. What are the main issues for their colleagues in risk

management? Although supply chain complexity has grown, the process still basically consists of three stages: production, transportation and receipt. During this process, there are several interfaces with potential for the company to lose control of the chain.

The advent of the just-in-time supply chain, designed to improve investment returns by reducing in-process inventory and the associated carrying costs, has added to the issues to be considered. The list includes lead times, buffer stocks, alternative suppliers, transportation, warehousing, and customer delivery.

McKay offers an example of how access to an alternative supplier can be a crucial safety net for a business. Among those hit by last summer's floods was a steel forging company based in Sheffield, which was the sole supplier to a Canadian engineering group of turbine blades for aircraft engines. The flood damage included corrosion of the dies and moulds, which delayed the release of a new engine and triggered a claim for compensation.


At the same time, the use of alternative suppliers goes against the aim of cutting costs. There is a delicate balance between securing continuity of supply and incurring unnecessary additional expense.

So companies need to do a risk assessment of their suppliers. Nick Tilley, an AIG corporate manager, suggests including the following:

- reviewing the supplier's manufacturing processes and procedures;
- whether the supplier operates from a single location or from multiple premises;
- whether benchmark resilience and protection measures are in operation at the supplier's premises;
- reviewing the supplier's business continuity plan;
- reviewing alternative suppliers and their availability; and
- maintaining an ongoing review and compliance audit.

McKay cites Adidas as a company that routinely undertakes an audit of any potential supplier before entering into any relationship. It also requires them to sign a business agreement to confirm their compliance with its standards of engagement. Adidas expects its suppliers to operate a regime of self-governance, but offers training to help them meet its standards.

However, he concedes that a comprehensive review isn't always easy. "Your supplier may show off a brand-new shiny factory, but it could be that production actually takes place elsewhere in a sweatshop."



SUPPLY CHAIN CONCERNS HAVE MOVED UP THE AGENDA FOR TREASURERS AND RISK MANAGERS ALIKE, AS WAS CLEAR FROM THIS SUMMER'S AIRMIC CONFERENCE IN EDINBURGH. **GRAHAM BUCK** EXAMINES THE POTENTIAL EXPOSURES CREATED BY OUTSOURCING AND EXTENDED CHAINS.

**INTENSIFYING DEMANDS** Outsourcing of manufacturing by western companies to lower-cost locations has been particularly beneficial to China. It was, until quite recently, instrumental in keeping inflation subdued. "We've been asking them to do more for less in order to hold down costs," says McKay, and demands have intensified as the Chinese renminbi has appreciated against the US dollar.

As a result, product quality has become a major issue. "China's view of what constitutes a quality product can differ considerably from our own," says McKay. Mass product recalls have become more commonplace. AIG reports that more than 90% of the liability claims it receives resulting from product recalls arise from poor design or inadequate labelling.

In May, a total of 177 recalls were instigated worldwide, with children's toys and electrical appliances the main culprits. One much publicised case, where lead paint had been used in toys, revealed a particularly elongated supply chain, where it was difficult for the supplier to maintain control over its subcontractors.

As a result, new legislation is set to address supply chains and require manufacturers to be more directly involved in the supply chain process. Standards will increasingly be imposed as part of a licence to trade, such as the international benchmark ISO 22399, which covers incident preparedness and operational continuity management. Published last November, ISO 22399 is based on best practice from the national standards of five countries: Australia, Israel, Japan, the UK and the US (see *Box 2*).

**FOR THOSE IN PERIL** Outsourcing to China and other lower-cost locations means that transportation risks constitute a further significant supply chain disruption. Companies are particularly vulnerable to cargo theft. AIG says that 85% of business security losses are attributable to the loss of products while in transit, and a similar percentage of cargo thefts involve inside information.

Other perils for goods shipped by overseas suppliers include the stranding or grounding of vessels and collisions. There have been some spectacular marine losses in recent years, such as the loss of 3,885 motor vehicles on board the Bahamian-registered freighter Hual Europe, which ran aground off the Japanese island of Izu-Oshima in October 2002, and the capsizing of the *Stellamare* at the

### Box 1: Supply chain number crunching

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- UK total imports in 2007: £308.7bn.
  - Although the European Union still accounts for the bulk of UK imports at £167.2bn, China represents the UK's third-biggest trading partner at £18.6bn, after the US at £25.6bn.
  - Since 2002, the incidence of product recalls in Europe has risen by 700%.
  - In 2007 only 46% of cargo ships arrived on time in port – the worst annual figure ever recorded.
  - US retailer Wal-Mart has 21,000 suppliers, 6,000 of which are located outside the US. Five out of six of its non-US suppliers are based in China.
  - In August and September 2007, the US instigated a product recall of more than 15 million items produced in China.

### Box 2: Other standards being imposed

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- **ISO 28000** Supply chain security, demonstrating that members of the supply chain are confirmed secure traders
  - **ISO 27001** Information security
  - **ISO 14001** Environmental management systems
  - **ISO 9001** Quality management system
  - **OHSAS 18001** Health and safety management
  - **ISO 26000** Social responsibility standard

All of these standards have been accompanied by a paradigm shift in the information that must be declared about the manufacturing process. In addition to details on the materials used in the product, full disclosure is now required on what substances it contains.

port of Albany, New York, in December 2003 when two heavy generators were being loaded.

Companies dependent on overseas suppliers are exposed to factors such as an ageing fleet of vessels worldwide, the fact that vessel crews typically consist of no more than eight to 10 individuals today (against 50 as recently as the 1970s) and the increasing global problem of piracy. The latter is most frequent off the west coast of Africa, with Somalia notorious for armed robbery and hijackings.

Road haulage can also be hazardous. Poor infrastructure is still a risk in countries from Bolivia to Russia, with narrow or swampy roads slowing or holding up transportation.

Given the formidable list of potential threats to their supply chain, what can companies do to mitigate the risk? McKay and Tilley suggest the following basic measures:

- Carry out risk assessment and prioritise resources in developing an effective supply chain management programme;
- Share information on business continuity measures and best practice with your suppliers;
- Ensure that your contingency plans address all credible supply chain disruptions, and help your critical suppliers in developing their own; and
- study alternative suppliers that are not vulnerable to a common failure mode – diversification of supply can represent good risk management. Also consider alternative modes of transport for your critical suppliers.

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