StrategicRISK

Supply chain risk report

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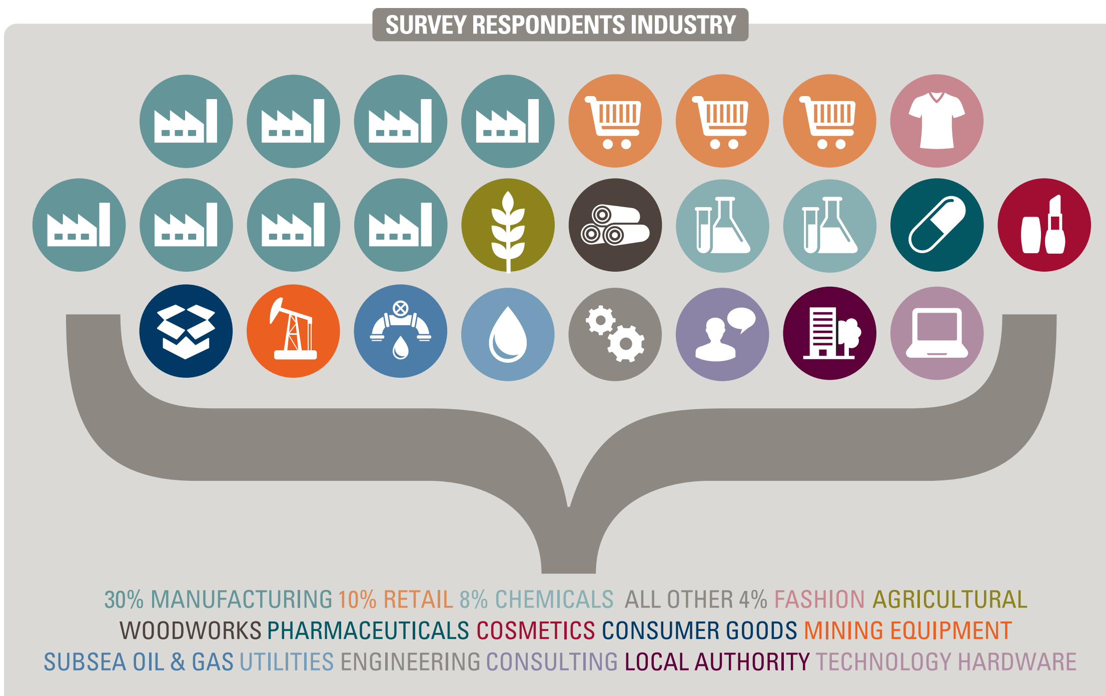
SPONSORED BY FM Global

Background

Supply chains are becoming increasingly complex. Extended chains for global corporations can involve hundreds of thousands of suppliers across multiple tiers, and managing these complex, globalised supply chains is regularly cited as one of the top challenges for risk managers.

Several high-profile supply chain incidents and events – the horsemeat scandal, the collapse of the Rana Plaza building in Bangladesh and, in 2011, the Japanese tsunami and the Thai floods – have illustrated just how complex the production line is.

Survey respondents



In order to further understand how the industry perceives and responds to supply chain risks, *StrategicRISK* conducted an online survey of its European risk manager and corporate insurer readers, between April and July 2013. The survey, sponsored by FM Global, identifies key concerns among risk managers and corporate insurance buyers and the main risk mitigation solutions currently employed.

Introduction

'Many global supply chains are not equipped to cope with the world we are entering'
McKinsey

When the subject of disruption to the supply chain comes up, most people think of natural disasters as the prime cause. In fact, the survey reveals that the integrity of the product lifeline – another way of describing the supply chain – is prey to many and varying influences other than earthquakes, fires and floods. Indeed, supply-chain managers rank the depredations of nature far behind several other threats, including the simple but devastating prospect of the collapse of a key supplier.

Conducted against a highly dynamic backdrop, the survey reveals that supply chains are in constant flux – and need to be. Other consultants such as McKinsey back this up. "Many global supply chains are not equipped to cope with the world we are entering," it noted presciently in the wake of the Fukushima nuclear disaster. "Most were engineered, some brilliantly, to manage stable, high-volume production by capitalising on labour-arbitrage opportunities available in China and other low-cost countries."

But, as McKinsey points out, the world is changing mainly because of economic forces. For example, wage costs – "labour arbitrage" – in supplier nations are moving all the time. The result? More traditional supply chains are "dangerously exposed".

However the causes are many and varied. There are pricing pressures as the changing costs of client producers affect the price of the finished product. Shipping charges move all the time, presenting challenges in distribution. As lenders rebuild their loan books after the financial crisis, the security of suppliers' financing arrangements indirectly presents risk to the parent group, especially in Europe.

By no means least, a wave of global regulation is descending on suppliers wherever they may be located, with ultimate implications for the retailers or manufacturers of the final product. As the horse-meat scandal earlier this year showed, a failure by one eastern European company to observe simple health standards can put at risk many of the world's biggest food brands. Similarly, it was just one dirty pipe in a processing plant for whey protein concentrate that contaminated tonnes of infant formula produced by New Zealand dairy giant Fonterra from March – and caused headaches for customers across the globe, particularly in China and Russia.

Shrink, splinter or restore?

Increasingly, when a company engages a supplier, it is seen by the public and media as almost a subsidiary for which the parent is accountable. When a garment factory in Bangladesh collapsed in April, killing more than 1,100 people, the contravention of local building standards raised questions about humane working conditions that went all the way to big-name clothing retailers in the US and the European Union.

Against this background it is hardly surprising that respondents are growing increasingly nervous as the chain grows longer, more complex, politically charged and prone to breakdown. Some managers are shrinking the chain in response, for instance by producing higher-margin product closer to home. Others are "splintering" it by giving themselves alternatives in the event of failures along the line. Others still are working on "restoration" policies for reviving the chain quickly in the event of a breakdown.

Whatever strategy they are adopting, the best managers are using all the skills they have to make their supply chains as bullet-proof as possible. **SR**

Executive summary

Supply chains have become increasingly difficult to manage since the financial crisis – and will almost certainly become more so for many reasons, according to the survey. Respondents paint a picture of mounting volatility, rising costs and more frequent disruption as they struggle to keep pace with the rapid change in supply-chain linkages across borders. Looking to the future, a significant number of supply-chain managers expect things to get worse across most fronts.

Among numerous thought-provoking findings revealed by the survey, these main points stand out:

- Only 8% of respondents report that supply chain costs have fallen over the past 12 months, while 42% have experienced an increase. Although exactly half report no change in their costs, the percentage facing increases is on the rise.
- Looking ahead, 68% of respondents are bracing themselves for more interruptions to the supply chain in the near future while 32% simply don't know and none of the respondents expect things to improve.
- Another revealing finding is the variety of situations that, it is feared, could trigger a supply-chain problem. They range from the closure of a tier-one supplier (especially in the case of one who provides vital components), natural catastrophes, hostile political and economic events, contamination such as toxic products and the consequent reputational damage, failure of an IT system that runs the supply chain, over-reliance on one or two key suppliers, and inconsistent quality control.
- In combating risk, the most popular tactic by far is closer collaboration with suppliers. An overwhelming 89% are doing just that while just 11% are turning to insurers to provide cover.
- Worryingly, nearly three quarters of respondents (73%) leave it up to their suppliers to draw up and observe a defined set of resilience and risk mitigation standards. And in a related issue, nearly two-thirds of companies conduct audits on their tier-one suppliers just once a year or less.

Analysis

Businesses are highly exposed to the integrity of their supply chains but do surprisingly little to protect themselves against the damage that would be caused by its disruption

KEY FINDINGS

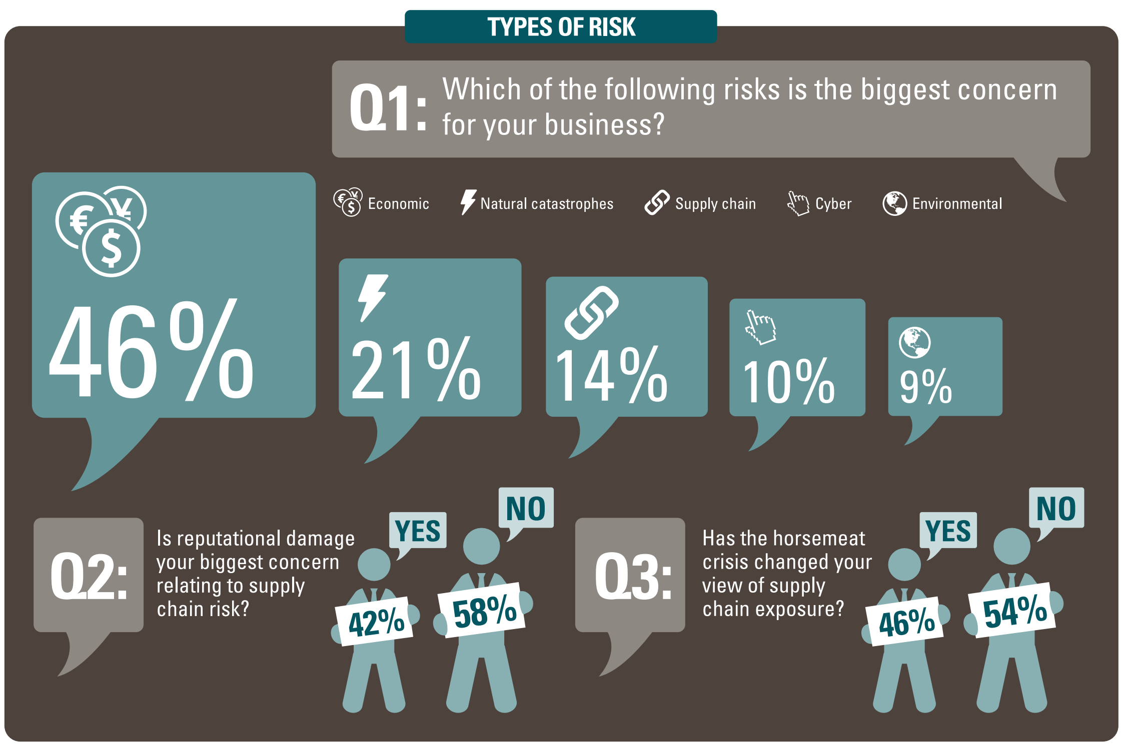
General perception of supply chain risk

- StrategicRISK's poll indicates that supply chain risk itself is not a top concern for risk managers.
- About 14% of respondents listed supply chain risk as the top concern, behind natural catastrophes (21%) and economic risk (46%), but ahead of cyber risk (10%) and environmental risk (9%).
- When asked specifically about supply chain risk, however, the interconnected nature of risks was highlighted.
- More than half of those surveyed indicated that economic shifts were their biggest supply chain concern, with the risk of a key supplier going out of business listed as the biggest threat.

Types of risk

Compared with other threats such as economic risk and natural catastrophes, the importance of the supply chain to the continuity of the business could be greatly underrated. As the survey revealed, many companies rely pretty much entirely on a handful of producers – some respondents said they relied on just one or two – for the supply of vital components. Yet only 14% of risk managers rated the secure operation of the supply chain as their biggest threat, well behind economic risk at 46% and natural catastrophes at 21%.

> *'When looking at supply chain risk, natural catastrophes and economic risks are often strongly interlinked.'*
>
> **Cedric Lenoire**



"The main reason for this is when looking at supply chain risk, natural catastrophes and economic risks are often strongly interlinked," explains FM Global manager of business risk consulting for Europe, the Middle East and Africa Cedric Lenoire.

"If you look at recent examples of supply chain risk, you will see that most are related to a natural catastrophe or economic event where a key supplier either goes bankrupt or is physically unable to supply because of a disaster.

"But in our experience, multinationals do not often consider physical risk or the threat of a natural catastrophe affecting a supplier as serious as it would be in their »

KEY FINDINGS

Insurance coverage of supply chain risk

- 12% identified natural catastrophes as the biggest macro-environmental cause for concern related to their supply chain. This may reflect the sense that insurance coverage for natural catastrophes is good, relative to other potential supply chain risks.
- This contrasts with the perception of insurance coverage for reputational damage, which was highlighted by the survey.
- 42% of those surveyed indicated that reputational damage was the biggest concern related to supply chain interruption, in part because it is perceived as uninsurable.
- On average, respondents estimated that only 60% of their supply chain exposure was covered by their current insurance policy.
- Despite this, 62% of respondents agreed that insurers were doing enough to provide sufficient cover and assistance for supply chain risks. Areas with room for improvement include reputation, insufficient coverage for the financial failure of suppliers and a lack of understanding of the interconnectivity of risks.

» own location. As production is outsourced, many companies believe the risk is outsourced too – and this is simply not the case."

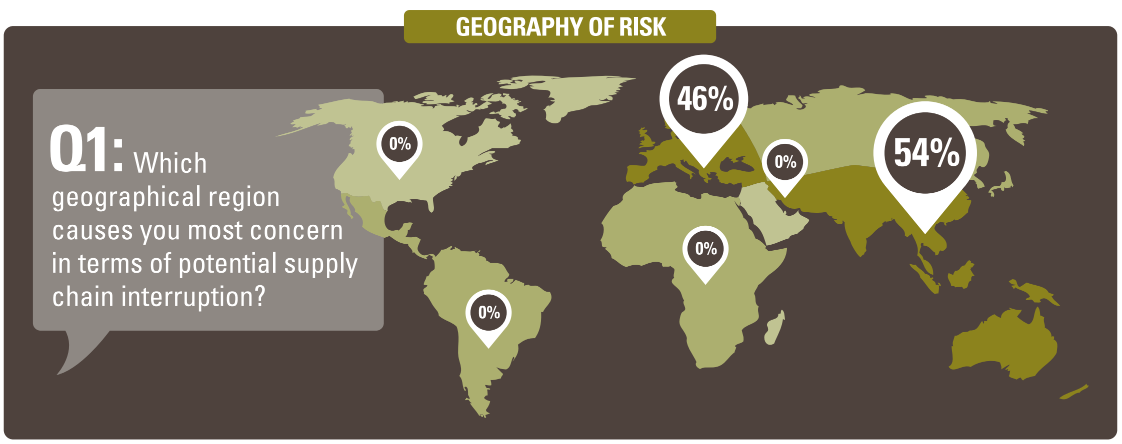
Furthermore, most risk managers put much of their faith in insurance, rather than in more active engagement with their suppliers to ensure the chain doesn't snap with consequent financial and reputational damage to the contracting company. Even so, respondents reported that only 60% of their supply chains were covered by insurance, leaving these businesses highly exposed to disruption from whatever cause.

In a year that has seen serious disruption to supply chains in Europe from the late winter floods of 2013, notably in Germany; the horsemeat scandal that seriously affected some of the world's biggest food brands; and Boeing's difficulties with malfunctioning lithium-ion batteries in its Dreamliner, the survey suggests that risk managers may be forced to take a more comprehensive view of what is a vital system for increasingly far-flung businesses that rely on remote providers.

Inevitably, suppliers are increasingly becoming hostage to a variety of influences including weather, transport, changing local regulations, labour strikes, inadequate financing or economic issues, quality control and availability of raw materials and corruption.

Geography of risk

Lenoire points out that it is difficult to conduct audits of the entire supply chain, as the number of suppliers used by multinationals has grown significantly. "What we have seen over the past 30 to 40 years is that the number of suppliers used by multinationals has increased exponentially," he says.



"The reason for this is economic – so that companies get cheaper components. They see outsourcing as the best way to do this, but in some cases they fail to realise that this strategy will also increase their risk profile and they will not be able to have that much control. Today, many companies have to manage thousands of suppliers and it is almost impossible to have a full understanding of all the risks associated with that.

"If you are looking at the profile of some clients – such as major manufacturing companies – a lot of them have created a network of suppliers in emerging regions, such as Asia and Latin America, which are often prone to events such as natural catastrophes – for example, Thailand and China." »

KEY FINDINGS

Other approaches to risk mitigation

- Insurance is only one mechanism that is used to mitigate against supply chain risk.
- 89% of respondents collaborate with suppliers to mitigate risk, although only 15% conduct risk assessments for all suppliers and consider it essential to supplier selection.
- 73% conduct risk assessments either on a case-by-case basis or only for strategic suppliers when considering new suppliers.
- 38% conduct audits of tier-one suppliers at least once a year, but only 27% demand that suppliers meet a defined set of resilience and risk mitigation standards.
- Although 92% of respondents are either implementing or considering increasing capacity and/or using additional suppliers, only 19% are also considering carrying additional inventory to mitigate supply chain risk.

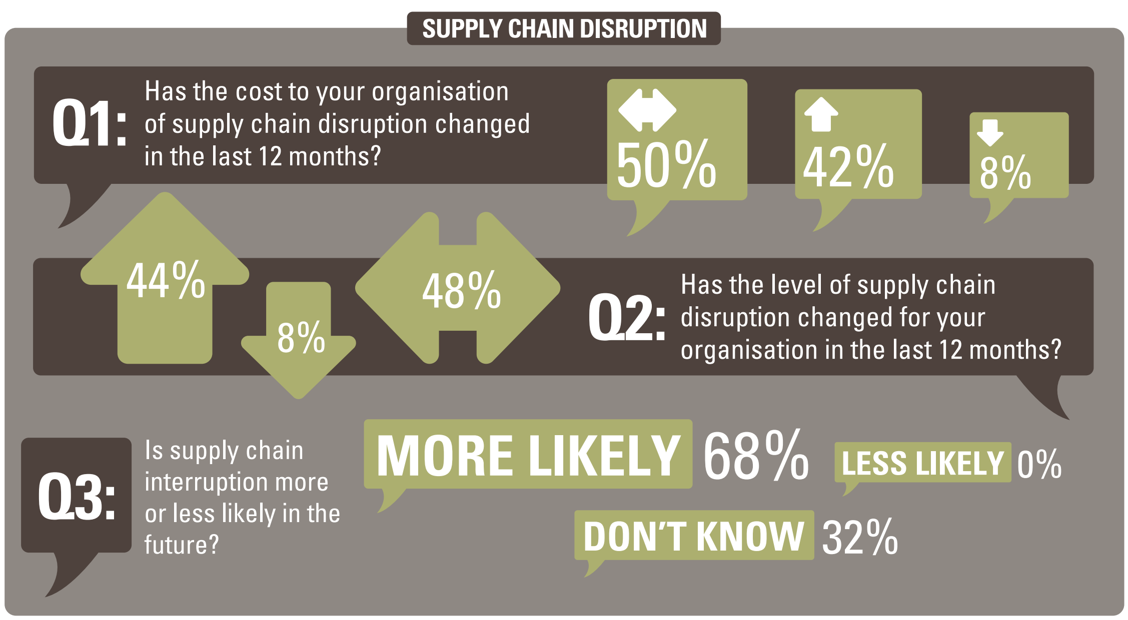
Changing nature of supply chain risk

- The horsemeat scandal earlier this year demonstrated the dangers of complex supply chains, and 46% of those polled agreed that the crisis had changed their view of supply chain risk.
- One in three respondents believed that large corporations could not effectively manage supply chain risk.

» But it is emerging regions such as Asia that concerns risk managers most. The survey indicates that Asia narrowly beats Europe as the region which worries risk managers most in terms of supply chain location – however, the fact that Europe scored so highly indicates how financial collapse is as much a danger as natural catastrophes.

Supply chain disruption

But high-profile events, such as the horsemeat scandal may prove to be a wake-up call. Nearly half of respondents said the revelations made them more aware of the risk to similarly complex supply chains. The scandal originated in Poland, spread through France and affected the consumer food chain just about everywhere. One in three respondents said that large corporations could not effectively manage supply chain risk. Supporting this view, 44% have experienced more disruption in the supply chain and 42% have had to foot higher bills to combat that disruption. All respondents expect similar levels of disruption in the future. »



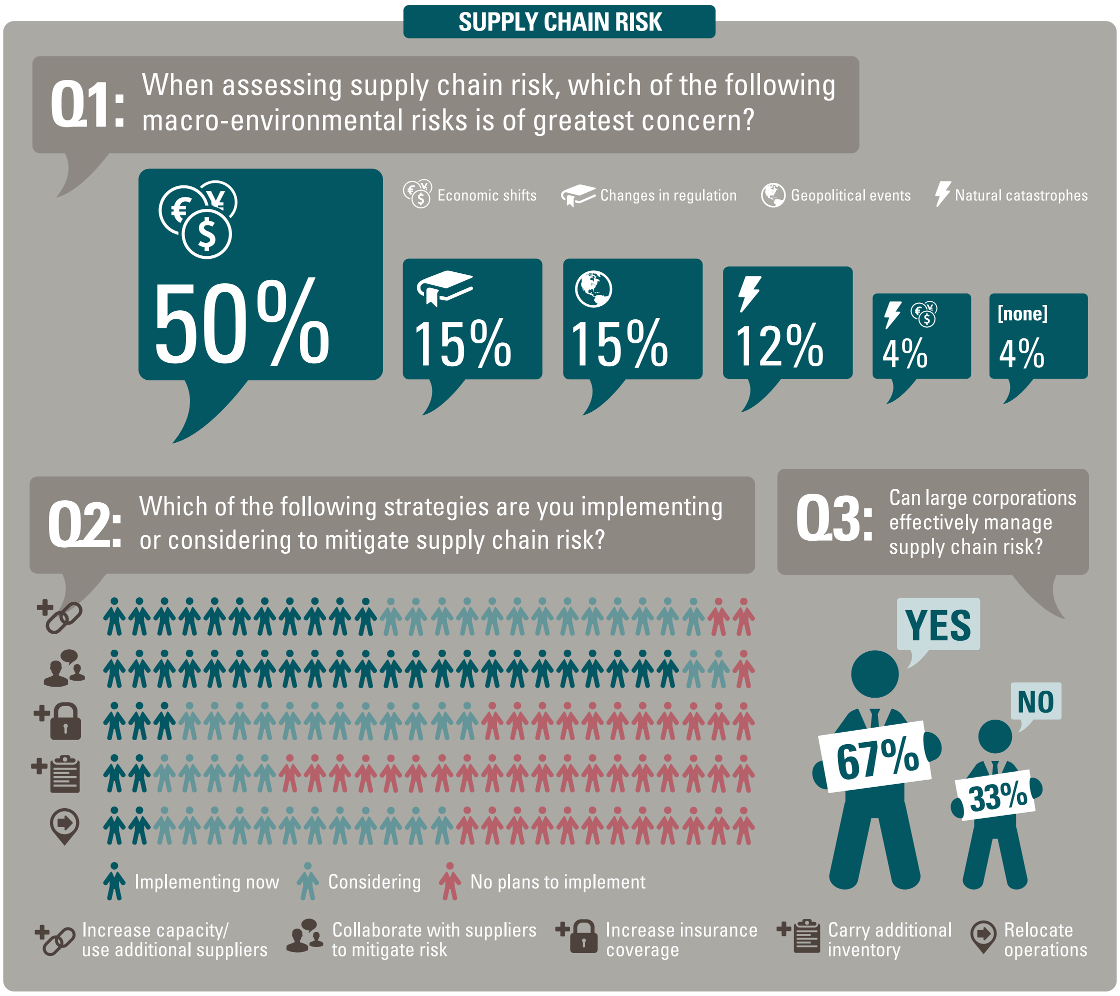
KEY FINDINGS

Changing nature of supply chain risk

- 44% have seen an increase in level of supply chain disruption [over what period of time?] and 42% have seen an increase in cost caused by that disruption.
- None of those polled believed supply chain interruption was less likely in the future.

» Supply chain risk: macro-environmental risks

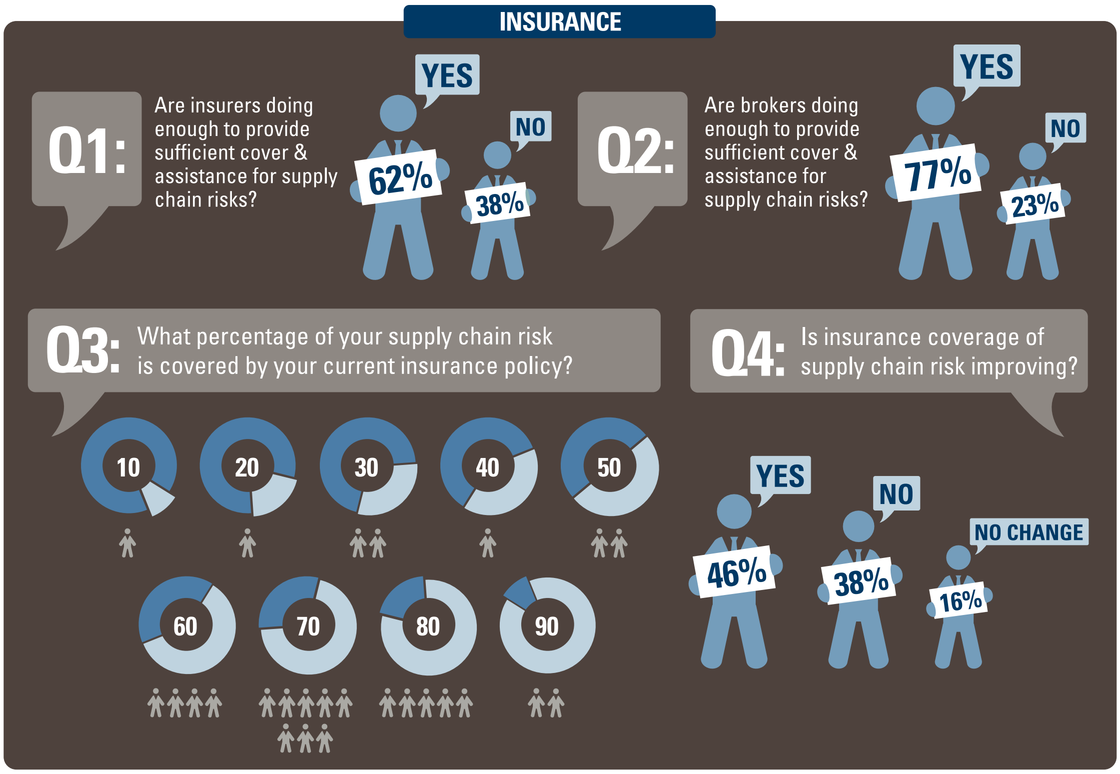
Interpreted in terms of insurance cover, however, supply chain threat assumes a slightly different and more interconnected picture. For instance, only 12% of risk managers see natural catastrophes as the biggest macro-environmental cause for concern, which may reflect the high quality of cover for such events.



Yet, in sharp contrast, 42% of respondents agreed their business would suffer serious reputational damage from the failure of a supplier. This grim view may be a sign that risk managers see reputational damage as being virtually uninsurable.

"There is another way to describe reputation damage," says Lenoire. "It is the loss of permanent market share. The day a business loses permanent market share is when that company starts to incur financial damage. There are many examples of when businesses have lost permanent market share – and few were in good shape after that. You only have to look back to 2011 and the natural catastrophes and Japan and Thailand to see the impact they had on a number of multinational companies." »

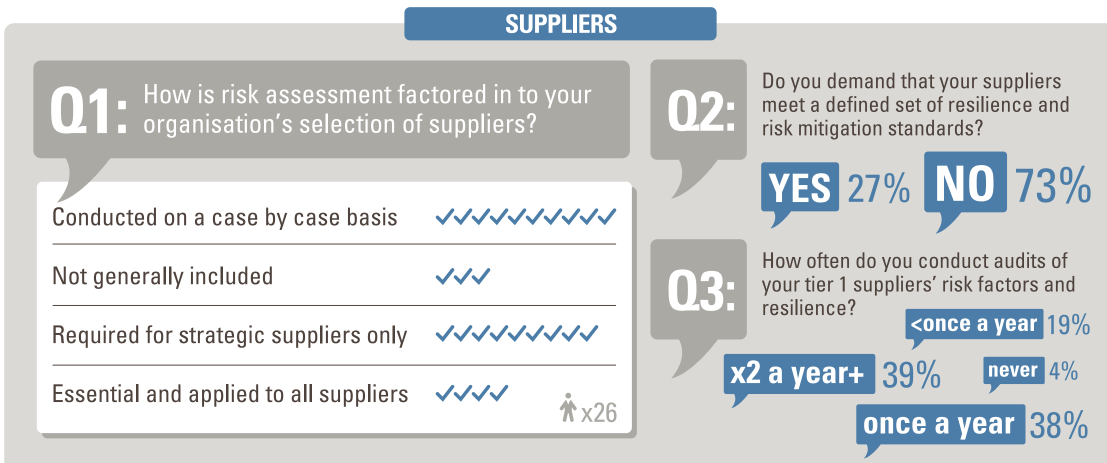
» The limits of insurance



The survey suggests there is a discrepancy between what risk managers think of insurers and the actual situation. Although 62% believe that insurers are doing enough to provide cover and assistance against disruption to the supply chain, they also say, reflecting the importance of a business's reliability and good name, that insurance firms are not in a position to protect them against reputational damage and the financial collapse of a supplier. »

» Suppliers

In the meantime, there's a lot more apart from insurance that contracting companies can do to ensure the integrity of the supply chain. While the survey shows that tier-one suppliers get close attention, second and third-tier providers are often almost neglected.



For example, while 89% of respondents collaborate with suppliers to mitigate risk, a fraction of them – just 15% – actually conducted risk assessments for all their suppliers. In fact, they did not even consider it an essential starting-point before selecting a supplier. And while nearly three quarters of respondents subjected a supplier to a risk-assessment analysis on a case-by-case basis, some only did so for strategic suppliers.

Similarly, audit-processing is patchy. While more than three-quarters of respondents conducted an audit of a key supplier at least once a year, that's all they did. Alarmingly, just over one quarter insisted that suppliers met a clearly defined, mutually beneficial set of risk-mitigating standards.

In seeking alternative supply routes, risk managers are doing much better. A massive 92% of respondents reported that they were either considering contracting back-up suppliers or had already done so.

Overall, this timely survey reveals a dire need to adopt more systematic protection – in terms of insurance and otherwise – against business-threatening disruption. SR

Expert views

Fighting failures

It is interesting that only 14% of respondents saw the supply chain as their top risk – I suppose chief executives have to contend with any number of competing issues at any one time, so it is understandable that supply chain risks are not always at the forefront of their minds. At FM Global we would argue that supply chain risks should be given careful consideration because of the levels of interdependency between businesses today.

Perhaps another aspect affecting this statistic is that companies today are focused on making decisions that translate into an immediate return on investments. It is vital, though, that these are informed decisions so that businesses are not unknowingly overexposing their organisations. Here is where risk management can play a vital role. Unfortunately, all too often risk management only really comes to the fore when things go wrong, and by then it is generally too late.

However, over the years, supply chain management has become increasingly important. This is because we now live in a world where immediacy is vital and our global economy is extremely interconnected. These factors conspire to test businesses when events occur thousands of miles away. Events in faraway places that once would have gone unnoticed can now cause problems to businesses that could significantly affect relationships with suppliers and clients, as well as share price.

There are a number of factors that could expose supply chain to vulnerabilities. Complacency and a focus on maximising efficiency in supply chains can prove costly in the long term. Companies often look for cost savings by driving their business into emerging economies. In doing so, they often unknowingly take on additional exposures – an increased likelihood of natural catastrophes, for example, or lower safety standards or different legal or regulatory systems. Companies should be aware of such exposures if they are to protect their business.

There is also an increased focus on improving supply chain efficiency, but this is often at the expense of resilience. In the short term, this approach might make sense, but experience tells us that in the long term, it can leave organisations vulnerable.

Indeed, supply chain failures or interruptions have the potential to harm a company's reputation – and the consequences can be severe in terms of their ability to stay in business. In today's immediate, far-reaching media environment, protecting reputation requires a prompt, practised response.

Overall, supply chain resiliency is about encouraging more joined up thinking within an organisation and between its suppliers. It is about making supply chain decisions that consider all of a company's aspirations rather than just its financial objectives – if done in this way, more robust supply chains are the likely outcome.

Indeed, insurance also has an important role to play in helping companies recover from an event, especially in the immediate aftermath of a loss. However, insurance should be viewed as a last resort. There are many consequences associated with an interruption to supply chains that are not covered by insurance, such as share price volatility, reputation and lost management time.

Nor are all insurance policies created equal. Most insurers, for instance, will only cover first-tier suppliers and customers. We take a different view at FM Global and provide coverage for the entire supply chain: the supplier, the supplier of a supplier, the supplier of that supplier and so on. This is important as when you look at the recent events of significance, it was the secondary and tertiary level suppliers who were affected.

We believe that the majority of loss is preventable if it is managed proactively. It then becomes a question of how to identify those critical exposures and find appropriate solutions to protect against these exposures. Contrary to popular belief, solutions are not necessarily always expensive, but they can spare senior executives huge headaches as they try to manage the consequence of an event – such as loss of business, impact on the share price and so on. By pursuing a risk management strategy, costly interruptions can be avoided and senior executives can get on with running their business rather than having to deal with major distractions.

FM Global northern Europe operations manager **Stefano Tranquillo**

Risk manager view: understanding exposure

It is fair to say that some businesses may not fully understand their supply chain – but they are actively attempting to, and have made some progress.

Some businesses are more sophisticated in their approach to identifying risks than others, but that partially depends on the nature of the business. Risk managers need, first of all, to take a helicopter view of the supply chain and then drop the view right down to understand the detail. Our goal as risk managers is to understand the supply chain process, identify the risks and gaps, then develop a risk mitigation plan, buying insurance if appropriate.

However, this can be difficult because of the fast-paced and complex nature of supply chains. Suppliers are vulnerable to a number of elements – a natural catastrophe in the Far East for instance, as well as the relatively smaller event of a component of a product failing to work. These are all supply chain risks.

There are several factors to consider. A major concern for businesses is reputational damage, which could affect two strands of revenue. A definite supply chain interruption that interferes with the supply of products will have a knock-on effect on customers, potentially changing their perception of the brand. Likewise, stakeholders may also view the company differently.

Indeed, risk managers are best placed to assess these risks and develop mitigation plans, but insurance also has a part to play. There are, however, certain risks that insurers may feel unable to insure, reputation being one. The issue goes right back to the question of whether we fully understand our whole supply chain, where the risks are and what the impact might be.

It's very hard to ask an insurer to take on a risk when businesses do not fully understand where and what their exposures are.

Insurers should work more closely with clients to better understand the risks. This does, of course, come at a cost in terms of the time needed to conduct a full investigation, and resources for this may be lacking. That is why contingency plans should also be in place. Businesses should assess their supply chain risk and conduct business impact analysis so that appropriate business continuity plans can be developed.

Arcadia Group head of risk and compliance **Colin Campbell**