StrategicRISK

RISK REPORT 2012

THE TOP CONCERNS OF EUROPEAN RISK MANAGERS

ECONOMIC
GEOPOLITICAL
ENVIRONMENTAL
SOCIETAL
TECHNOLOGICAL

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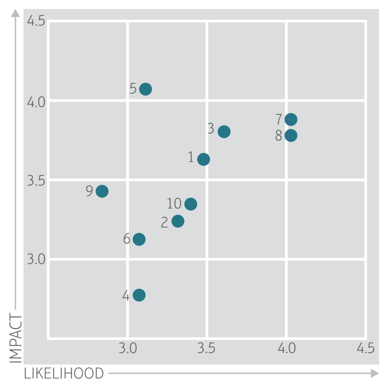
MARSH

“THE WORLD WILL NOT EVOLVE PAST ITS CURRENT STATE OF CRISIS BY USING THE SAME THINKING THAT CREATED THE SITUATION.”

ALBERT EINSTEIN

ECONOMIC RISK p06



1 Recurring liquidity crises
2 Prolonged infrastructure neglect
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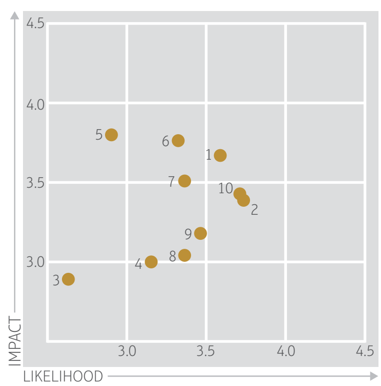
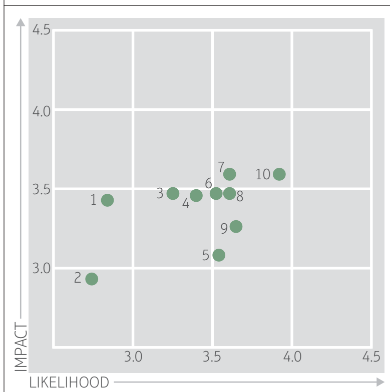
GEOPOLITICAL RISK p16



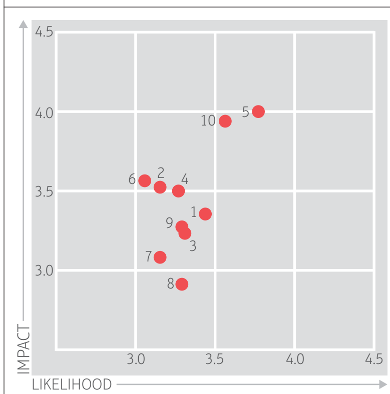
1 Terrorism
2 Pervasive entrenched corruption
3 Militarisation of space
4 Unilateral resource nationalisation
5 Diffusion of weapons of mass destruction
6 Global governance failure
7 Failure of diplomatic conflict resolution
8 Widespread illicit trade
9 Entrenched organised crime
10 Critical fragile states

ENVIRONMENTAL RISK p22



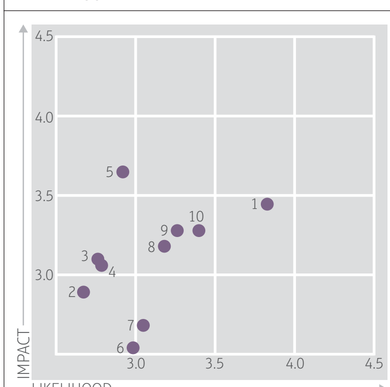
1 Unprecedented geophysical destruction
2 Vulnerability to geomagnetic storms
3 Irremediable pollution
4 Persistent extreme weather
5 Species overexploitation
6 Antibiotic-resistant bacteria
7 Failure to adapt to climate change
8 Land and waterway use mismanagement
9 Mismanaged urbanisation
10 Rising greenhouse gas emissions

SOCIETAL RISK p26



1 Mismanagement of population ageing
2 Vulnerability to pandemics
3 Rising rates of chronic disease
4 Rising religious fanaticism
5 Water supply crises
6 Unsustainable population growth
7 Backlash against globalisation
8 Ineffective drug policies
9 Unmanaged migration
10 Food shortage crises

TECHNOLOGICAL RISK p32

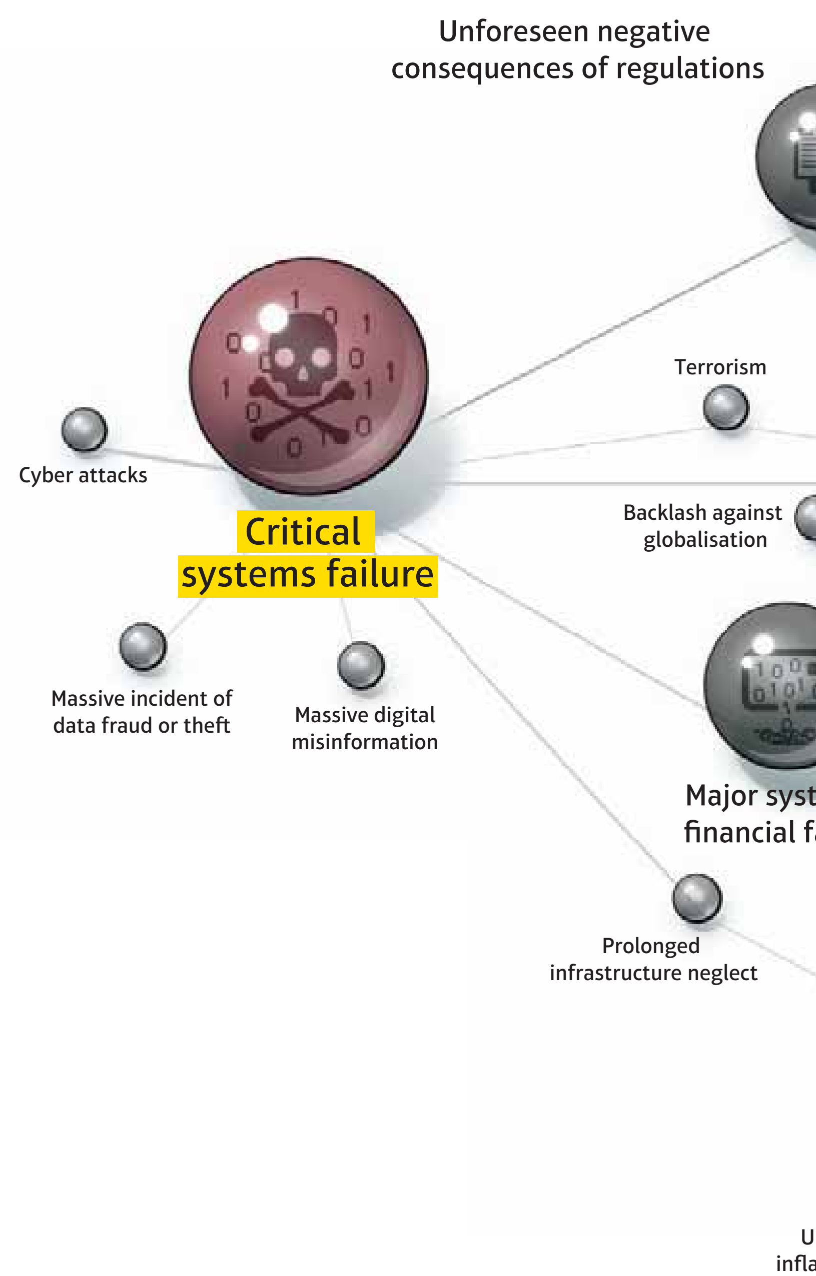


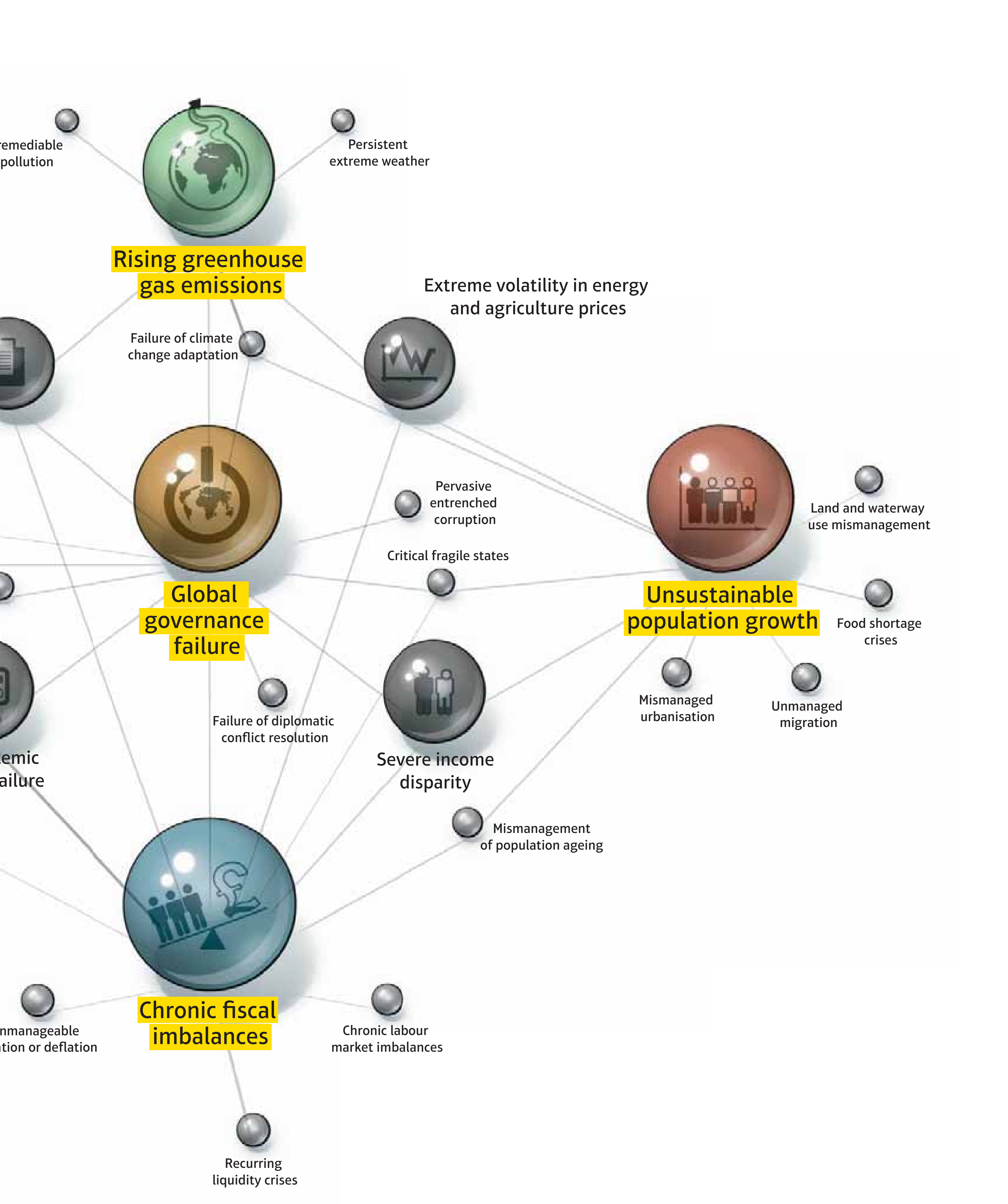
1 Cyber attacks
2 Unintended consequences of nanotechnolgy
3 Unintended consequences of new life science technologies
4 Unintended consequences of climate change mitigation
5 Critical systems failure
6 Proliferation of orbital debris
7 Failure of intellectual property regulation
8 Massive digital misinformation
9 Mineral resource supply vulnerability
10 Massive incident of data fraud or theft

Source: World Economic Forum *Global Risks 2012* (top 10 not in order of importance)

THE RISK LANDSCAPE

The WEF's *Global Risks 2012* says social inequality, unsafe regulations and cyber neo-tribalism are the top risk management concerns. Chronic fiscal imbalances and severe income disparity are the top long-term risks. This graphic shows the five main 'risk constellations' and the interconnections between each.




remediable
pollution
Persistent
extreme weather
Rising greenhouse
gas emissions
Extreme volatility in energy
and agriculture prices
Failure of climate
change adaptation
Pervasive
entrenched
corruption
Land and waterway
use mismanagement
Critical fragile states
Global
governance
failure
Unsustainable
population growth
Food shortage
crises
Mismanaged
urbanisation
Unmanaged
migration
Failure of diplomatic
conflict resolution
emic
ailure
Severe income
disparity
Mismanagement
of population ageing
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tion or deflation
Chronic fiscal
imbalances
Chronic labour
market imbalances
Recurring
liquidity crises

OPINION

IT'S MORE IMPORTANT THAN EVER FOR THE RISK DEPARTMENT TO PLAY A MAJOR ROLE IN STRATEGIC THINKING AND DECISION MAKING

Nathan Skinner,
editor, *StrategicRISK*

The RISK REPORT from StrategicRISK, in association with Marsh Risk Consulting, is intended to add to the discourse around global risk challenges.

We are living in an increasingly interdependent world and, while the threat landscape may be no more alarming than it was in the past, the potential impact of risks has almost certainly increased.

One way of looking at this is through the lens of supply chain risk. The number of catastrophic events that could potentially disrupt corporate supply chains hasn't necessarily increased in the last 10 years. But because of the interconnected (and tightly stretched) nature of manufacturing supply chains, the impact that the world experiences when an earthquake or tsunami knocks out a facility is magnified greatly. The widely quoted example is the Japanese earthquake last year, which cost many companies in the electronics and automotive sectors huge sums.

The starting point for our research was the World Economic Forum's (WEF) *Global Risk Report 2012*. So thanks go to the WEF for its diligent research, which lays the foundations for this publication.

Evidence and material for our Risk Report is drawn from interviews with a group of leading risk managers from Europe's biggest companies (see box, opposite). Thanks also to all those risk managers who wished to play a part in this important research.
No quotes will be attributed directly to the individual who gave them.

> ***'The potential impact of risks has almost certainly increased'***

A cynic once said: "There is no such thing as a successful risk manager because the good ones get out in time." But judging by the intelligent and well-informed input into this report, from a broad swathe of the European risk management profession, that statement couldn't be further from the truth.

In this environment of greater volatility and uncertainty, risk management has a major role to play. It's more important than ever for the risk department to play a major role in strategic thinking and decision making.

Equipped with the right knowledge and expertise, risk managers can outline to senior executives the kind of threats that they should be anticipating (and hopefully side-stepping). But risk managers can't do that without an understanding of long-term risk trends and their implications.

That's what this report seeks to do: equip risk managers with some of the information and tools to ask the right questions of their business and propose innovative solutions to the challenges they face.

'WE ARE IN A NEW EPOCH – THE AGE OF MANKIND'

RISK IN AN INTER-CONNECTED PLANET

Last year presented major and largely unexpected problems for European companies, including political and civil unrest as well as the impact on supply chains of natural catastrophes. Will the next year be easier?

In developed countries, technological advance coupled with globalisation has been a double-edged sword. On the one hand, they have provided those companies quick to adapt with huge opportunities. Technology means that businesses need fewer employees, while outsourcing services and production to cheaper markets cuts outlay. As populations in these less developed markets become more wealthy, in turn they provide a growing outlet.

Balanced against this is reliance on businesses whose cultures and regulatory standards often do not match those of their Western customers and whose geographical locations may make them vulnerable to natural catastrophe. Further, in some European countries outsourcing jobs is creating a discontented and potentially disruptive 'underworld' of unemployed youth.

Technology also exposes businesses more to what the World Economic Forum's *Global Risk Report* describes as "the dark side of connectivity". Skilled individuals are increasingly able to cause geopolitical and business damage anonymously through computer networks. More of the consequent data breaches can be expected.

'Outsourcing is creating an "underworld" of unemployed'

Perhaps the greatest threat – for businesses and the planet – is over-population combined with growing wealth, putting pressure on resources and biodiversity. Scientists say that the Holocene epoch, which began after the last Ice Age, is over. We are in a new geological time zone – the Anthropocene – the Age of Mankind. Undoubtedly, this will be an age of greater risk.

Sue Copeman, editor-in-chief, *StrategicRISK*

'UNCERTAINTY HEIGHTENS RISK AND THREATENS BUSINESS GOALS'

A VIEW FROM OUR SPONSOR

Global interconnectivity is placing an increasing strain on the systems that we have relied upon for many years, highlighting their inadequacies at best, or at worst, resulting in their systematic failure. Existing systems provide us with clarity on accountability but when the systems are not interconnected, this accountability is missing. The current challenges being faced by the euro fiscal system is a prime example.

Uncertainty heightens risk for organisations and threatens their ability to achieve their business objectives. Although governance systems are still useful for issues we can control, external risks are best dealt with by assessing the threats that they pose. Scenario planning, a technique traditionally used in business to support optimal decision making, can now be used for defensive pessimism, 'or preparing for the worst'.

'Corporate preparedness as a concept is fast becoming a viable alternative to bring control and accountability'

The new crisis management standard (PAS 200:2011) provides organisations with guidance and good practice in dealing with these risks. It helps organisations take practical steps to improve their ability to deal with crises and create tools to prepare and survive.

Corporate preparedness as a concept is fast becoming a viable alternative to introduce control and accountability where this is lacking. It allows organisations to respond faster, so they can outperform their competition. It also gives them the opportunity to communicate proactively, both internally and externally, as the perception of being unable to deal with a crisis professionally is now a significant risk to a company's reputation.

Rob de Jonge, EMEA leader, Marsh Risk Consulting

CONTRIBUTORS

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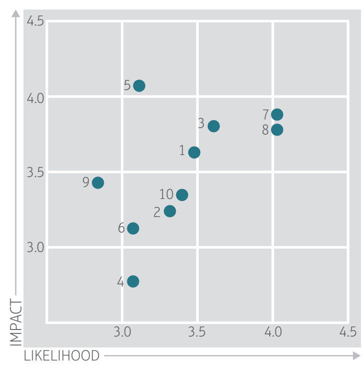
ECONOMIC

With a eurozone crisis looming large, the outlook couldn't be more uncertain for businesses. Macroeconomic concerns range from the strength of financial systems and price volatility to a Chinese 'hard landing' and the cost of increasing regulation

TOP 10 RISKS



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Source: World Economic Forum *Global Risks 2012* (top 10 not in order of importance)

1 RECURRING LIQUIDITY CRISES

The financial crisis has led many companies to review the currencies they use to buy and sell, the supply chains they are linked to, and their general exposure to the more troubled economies in the eurozone.

According to one UK-based risk manager: "Companies are also looking to see what their customers are doing and whether they have made any adjustments to their supply chains in response to these issues."

Another risk manager adds: "There are always uncertainties surrounding who you're dealing with and the currency you're dealing in. If our suppliers are experiencing problems, either in getting access to credit or securing credit insurance, it creates difficulties in our sourcing supply chain and drives up our costs.

"We are also exposed to fiscal crises as our customer base includes many public authorities, governments and institutions, such as hospitals and schools."

Corbis

Occupy in Venice: the international protest movement speaks out over social and fiscal imbalance and income disparity

> 'The economy is the biggest threat: whether it's the eurozone or the global economy, both of them have a very significant impact on us'

2 PROLONGED INFRASTRUCTURE NEGLECT

Businesses fear a chronic failure to adequately invest in, upgrade and secure infrastructure networks.

3

RISK: EXTREME VOLATILITY IN ENERGY AND AGRICULTURE PRICES

The World Economic Forum states that the situation will become critical if "severe price fluctuations make critical commodities unaffordable, slow down growth, provoke public protest and increase geopolitical tension". It is a pretty safe assumption that the price of oil and gas will continue to steadily increase over the years ahead. As one risk manager puts it: "Recent developments in the Middle East and North Africa have added an element of political risk. For example, Libya's shutdown of a refinery or Iran cutting off supplies causes a spike in the price. But there are also long-term concerns over steadily growing demand, particularly from China and other emerging economies, and limited supply."

IMPACT

High fuel prices will affect companies to different degrees depending on their reliance on the black stuff. One sector that has been struck extremely hard is the airline industry, where oil price volatility is a major issue. Fuel price rises have wreaked havoc in the airline industry, causing the collapse recently of Spain's Spanair and India's Kingfisher airlines. With fuel prices only going in one direction, the European air transport industry faces very difficult conditions in the future, as the development of alternative fuels is still only at the research and development phase.

ACTION

Because of the nature of this risk, companies simply have to develop a response. But price fluctuation is something that is quite difficult to make provision for. As a result, new solutions to make both residential and commercial buildings more economical in their energy consumption are vital. One risk manager explains: "Hopefully there will be some balance achieved between new demands for energy and savings in existing demands, particularly if economic growth remains depressed. Although not all companies have developed a position, those with an established policy have attempted to be more flexible and react quickly, diversifying their sources of supply to limit potential losses."

4 UNFORESEEN NEGATIVE CONSEQUENCES OF REGULATIONS

Companies know more regulation usually means more cost for them. As one risk manager says: “States are keen to raise more revenue and are looking to companies as the source, so we can expect more regulatory risk. Companies face a balancing act between retaining revenue and staying on the right side of public opinion.”

Corbis

5 MAJOR SYSTEMIC FINANCIAL FAILURE

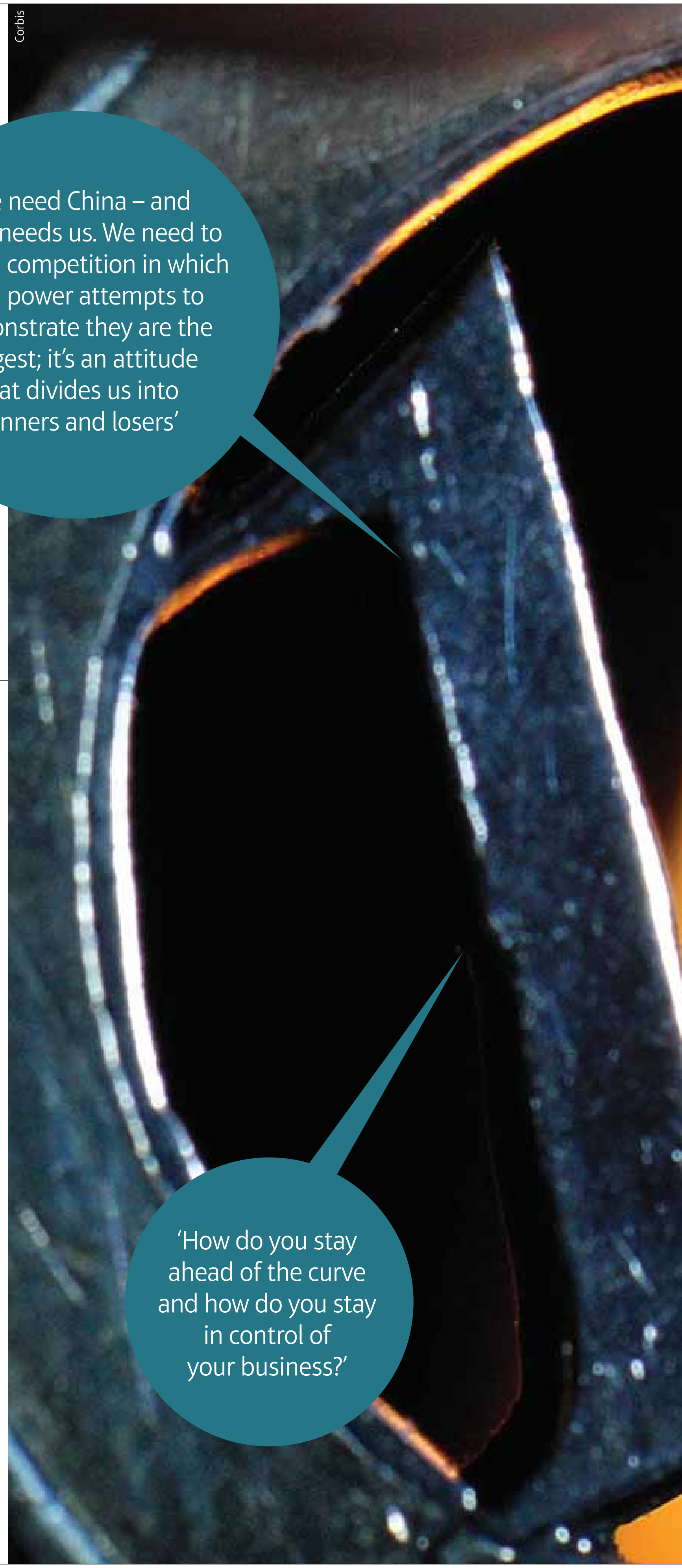
In *Global Risks 2012* the World Economic Forum highlighted the threat posed by a financial institution of systemic importance collapsing and spreading contagion through the global financial system. As a result of these fears, many companies are choosing to hoard cash to increase their resilience to financial shocks, but there are doubts about where they can safely keep those funds when banks no longer look sufficiently robust. Uncertainty over the strength of some banks and the question of which ones companies should be using is diverting attention from their main business.

6 HARD LANDING OF AN EMERGING ECONOMY

The abrupt slowdown of a critical emerging economy could have a devastating effect on a global level, but there may also be positives.

THE DOWNSIDE: Asia, and in particular China, is a key part of the world economy, which international businesses seek to capitalise on. Because of the huge role that China plays in the world economy, a slowdown here could have a catastrophic effect elsewhere. China, for example, imports lots of raw materials from Latin America. If these imports took a plunge, Latin American export economies would be struck.

THE UPSIDE: One positive effect of slowing growth in China would be on the environment, and this could ease pressure elsewhere for business. If China’s huge demand for oil eases, it could have a positive effect on greenhouse gas emissions and therefore climate change. Businesses might, indirectly, feel less of a dramatic impact from sea level rises, for example.



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> ‘We need China – and China needs us. We need to avoid a competition in which each power attempts to demonstrate they are the biggest; it’s an attitude that divides us into winners and losers’

> ‘How do you stay ahead of the curve and how do you stay in control of your business?’

The financial crisis has led many companies to review their exposure to troubled economies in the eurozone

'I don't like China's political system, but the fact that it isn't a Western democracy could actually help it avert a hard landing'

7 CHRONIC FISCAL IMBALANCES

"Global macroeconomic imbalances pull together a number of diverse risks," one risk manager explains. "We currently have a large number of highly indebted economies in the developed world, where countries have to pay the cost of bailing out failed banks. This is accompanied by a downturn in economic conditions, with the resulting reductions in tax and other revenues, and less available to pay off debts.

"Highly unpopular spending cuts and policy changes to social structures such as state pensions and social services, especially in Europe but also in North America, are the consequence.

"In contrast, areas of the world such as Asia and Latin America are characterised by booming economies and an influx of foreign investment. Rising expectations for pay are creating inflationary pressures."

EXPERT VIEW

Marc Paasch, leader of Marsh Risk Consulting in France

Economic risks have changed since the start of the financial crisis four years ago. Asset price collapse, which has been considered the most likely risk with the most severe impacts, is no longer identified as the main threat.

The Chinese slowdown has been predicted for many years, but is now closer to reality. During the first few months of 2012, we have seen prices drop in the real estate sector. February recorded the worst monthly trade deficit since at least 2000, Chinese manufacturing companies recorded the biggest loss of profit in three years. And the growth forecast was revised downwards to 7.5%.

These signals of a slowdown have had a significant impact on the currency and commodity markets, with a fall in prices and an increase in volatility.

In the energy sector, investors fear another oil shock and a sharp rise in energy prices. This echoes conditions in the commodities market, which is facing increasing demand from emerging countries.

Today, the main issue is the volatility of these markets, which can be more dangerous than stable high prices. Markets are not prepared for the consequences of significant geopolitical events, such as continuing unrest in the Middle East. In 2008, World Trade Institute's crude oil price went from $145 per barrel in July to only $30.28 in December.

The global financial stability is threatened by fiscal vulnerabilities and current account deficits in the eurozone. The imbalances that appeared in 2010 are enduring, despite the massive interventions of central banks.

Eurozone GDP is expected to decline by 0.4%, with eight countries hit by recession. The absorption of the budget deficit and public debt against a background of recession and demographic pressures associated with ageing populations is at the heart of the problem.

And risks are exacerbated by uncertainty.

Rex Features

Potential changes to the political 'hue' of some countries this year make it even harder to plan ahead

KEY POINTS

- Possible changes to countries' political administrations create more uncertainty
- Even the tried- and-tested emerging markets route is not safe, as some fear a 'hard landing' for China
- One potential upside to the euro crisis could be a lessening of the effects of climate change

THE SANDS KEEP SHIFTING

How can businesses plan for growth, and risk managers plan for problems, when the eurozone crisis is creating so much uncertainty?

Business is all about making money, so it's no surprise that the economy ranks as the top global risk concern for most risk managers. "The extreme volatility of the economic situation is the most difficult issue for risk managers to contend with," is the view expressed by one risk manager. But it is reflective of many more.

Overwhelmingly, the main problem that the economic situation throws up for companies is uncertainty.

In the words of one risk manager: "Currently the outcome of the eurozone crisis, with the many political and economic difficulties that it poses, is creating uncertainty, and it is difficult to assess just how great an impact it is having on the performance of companies. We don't even know for sure if, or when, it will be resolved. The scale of the crisis suggests a return to normal conditions will be a slow and lengthy process."

Risk managers in large multinational companies are monitoring the possibility of a partial break-up of the eurozone and ensuring they don't have too many receivables or loans in vulnerable countries.

As uncertainty clouds the economic horizon, a number of risk managers interviewed for this report say that their organisations are concerned where growth is going to come from. As one respondent puts it: "The biggest risk is failure to grow."

Another major concern is the effect that government reaction and indecision will have on the business community. Uncertainty surrounding the political hues of individual countries was another problem cited. In 2012 several large economies will experience elections and could see their administrations change.

One French risk manager expresses his concerns. "In France we face uncertainty from the forthcoming presidential elections, which could see a change in the regime from conservative to socialist. This is on top of major risks posed by the situation in Greece," was a concern expressed by one French risk manager.

Another UK risk manager adds: "What everyone is worrying about at the moment is what's going to happen with the eurozone crisis? This could have all sorts of economic and political ramifications that are so huge you can't even quite comprehend how it will affect you as a company. It probably depends a little on how dependent you are as a business on Europe. We are, but we have a broad geographical footprint so that will help us in some ways."

All of this ambiguity makes the risk manager's job much harder. As one respondent explains "Uncertainty makes planning and accurate forecasting extremely difficult."

Considering and covering clients

On a day-to-day level, these economic problems translate into some serious operational challenges. Assessing counterparty risk is very difficult and problematic.

Considering the impact the crisis is having on your clients can be very tricky, explains one risk manager. "We have a large number of clients in both the engineering and energy sectors, so we consider how events could influence clients in both those sectors – this requires a complex piece of analysis."

For this reason, ever since the economic problems first started to manifest in 2008-09, major credit insurers have restricted the amount of cover that they offer and to whom they offer it. This is creating a serious headache for treasury departments and risk managers alike, several of whom rated it as their top economic risk concern.

Companies are finding it hard to find insurance to cover the credit lines that they offer their customers, which means they're having to take the risk onto their own balance sheets. "Credit risk is an area where we are starting to be very exposed," said one respondent.

'Emerging' markets?

As the economic crisis cripples businesses in Europe, many large organisations are switching their emphasis to the new markets in an effort to diversify their portfolios (the most tried-and-tested risk management strategy).

Risk managers questioned whether or not these so-called 'emerging markets' should now be called 'emerged', since they account for a significant (and more importantly, growing) share of global economic muscle.

While the BRICs (Brazil, Russia, India and China) and beyond are taking more of a centre stage in global economic affairs, large organisations are looking for ways to capitalise on this.

In the words of one risk manager: "China and Asia have been really developing in value in terms of GDP over the last few years, and most Western businesses are looking at how we can capitalise upon the developments and the huge population out there."

But it is dangerous to pin all your hopes on these new markets, warns another risk manager. "We can't be guaranteed that China's strong economic growth can be maintained. Similar hopes were pinned on Argentina and Brazil in the 20th century and while, ultimately, Brazil now appears to be realising many of those hopes, Argentina nearly collapsed at the start of the 21st century and investors in the country suffered heavy losses."

As businesses move beyond their traditional markets, they are exposed to new risks, such as foreign regulatory and legal environments. Some emerging markets do not look all that favourably on multinational businesses, who are perceived to be exploiting these countries, and this can lead to restrictive measures being taken against them. These threats should not be ignored, say risk managers.

Risk managers recognise the high degree of interconnectivity inherent in the economic risk arena. The downturn in Europe, for example, could also have a negative effect on China, which supplies Europe with manufactured goods and raw materials. In the eyes of one risk manager: "It's clear that a downturn in Europe will impinge on China's economic growth, as the world's primary manufacturing centre."

Says one UK-based risk manager: "We are somewhat agonising over the whole situation with China and how we as a Western organisation can exploit that – and I know for sure there are plenty of other organisations out there that are also agonising about how to capitalise on the developments there."

Every cloud ...

With every risk, there's an upside. One risk manager highlights the positive effect that the economic slowdown could have on climate change. This could actually benefit companies in the long run by, in theory at least, dampening the negative effects of climate change, such as, for example, sea level rise or desertification.

"In an ideal world, China would be seeking 'quality growth' that offers more long-term durability and is more environmentally friendly," says one risk manager. "But it's difficult to calculate exactly what rate of growth offers 'the best of both worlds' in terms of economic prosperity and not harming the environment."

A sudden slowdown in the Chinese economy (a so-called 'hard landing') could be disastrous for the global economy. "The 'hard landing' outcome is looking more likely if Europe doesn't quickly get its act together," says one risk manager. "As we live

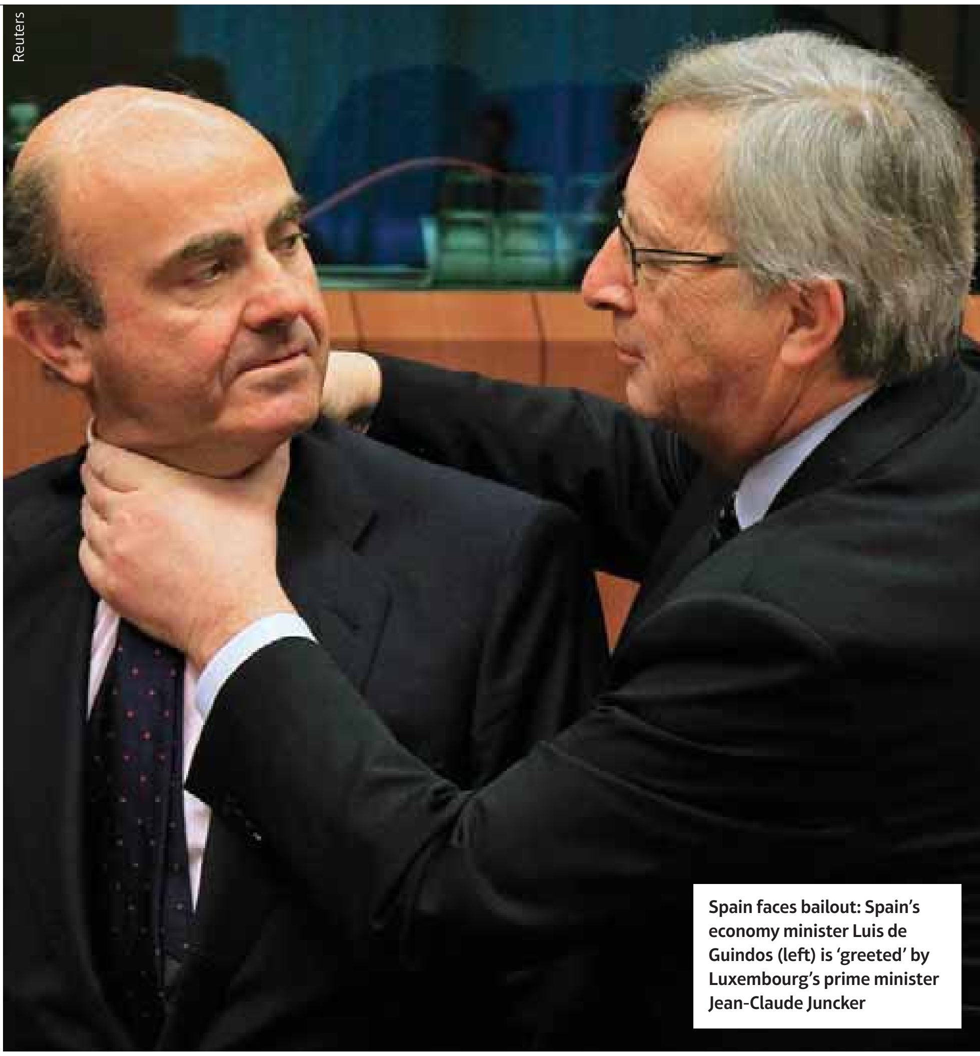
'The eurozone crisis could have all sorts of economic and political ramifications that are so huge you can't even quite comprehend how it will affect you as a company'

FOCUS ON

THRIVING IN THE TOUGH TIMES

The toy maker LEGO Group more than doubled in size between 2006 and 2011. Senior director of strategic risk management Hans Læssøe gives three ways his company has been able to realise the upside of the economic crisis.

1. **When family budgets are stretched, families cannot afford high-priced electronics or gadgets as gifts. So at Christmas and birthdays, children are more likely to receive a toy, like LEGO, which is more affordable.**
2. **Our competitors are all publicly listed and have seen restrictions/limitations on their risk appetite and their ability to execute massive product development and launches. Being privately held and profitable, we can afford to (and do) run massive new launches in an industry that is completely dominated by novelties.**
3. **The retail trade then wants to 'go with the winners' and hence we are offered more and more shelf space and attention from the retailers.**



Reuters

Spain faces bailout: Spain's economy minister Luis de Guindos (left) is 'greeted' by Luxembourg's prime minister Jean-Claude Juncker

in a global economy, US and European companies busy developing production facilities in China will also feel the effects."

But this scenario could have some positive effects for certain businesses. It could ease the pressure on costs of some raw materials, such as coal, which have been pushed very high as a result of higher demand from China.

Another respondent adds: "I don't have serious concerns about a hard landing for China's economy, as the development of the country's infrastructure and the rising middle class, which is demanding new products and services, should be enough to maintain growth."

But, as China moves onto the next stage of its development, which requires a domestic middle class to emerge and therefore higher salaries to be paid, companies could decide to move their production back to Europe. This could assist some European nations to 'rebalance' their economies.

Efforts by risk managers are focused on limiting their exposure to some of the negative effects cited above. As one respondent puts it: "A frustration for both industrial companies and those in the private sector is that we're suffering the direct impact of the crisis, but it's difficult for us to achieve much influence on political affairs. The only way to manage or mitigate risk is to follow risk policies that restrict the possibility of defaults on payments. So companies are attempting to build up their cash reserves as much as possible."

What can we do?

Given the scale and complexity of these challenges, it was questioned whether actions by individual risk managers could actually have much of an effect. "We have to accept that for any risk that affects the entire industry, the degree of influence we can bring to bear is probably only low."

While this is a pessimistic view, it's also probably a realistic one. Ultimately, business leaders will be responsible for ensuring that production capacity moves in line with the level of demand.

More encouragingly, one risk manager explains that now is the time for companies to invest in people, technology and market intelligence, if they want to get ahead. "During a crisis, companies tend to not spend as much time in those areas. But a crisis really shows you the value of investing in people, investing in technology, investing in your brand," he says.

"The winners in this cut-throat environment will be the ones that don't stop investing in their business and use the crisis as an opportunity to leap ahead. The risk for some is they become inwardly focused and retrenched. But I think the best companies will come out stronger."

Panos

8 SEVERE INCOME DISPARITY

"In some parts of the world we have seen income disparity reduce," says a risk manager with operations in Latin America. "For example, in Brazil under Lula da Silva the disparity was sharply reduced during his 2003-10 term of office and there was a massive increase in the ranks of the middle classes, with a corresponding benefit to economic growth.

"However, many of the Western economies are experiencing a new disparity as youth unemployment steadily increases," he continues. "People's ways of life are changing as more young people are forced to continue living with their parents as they cannot afford to move out and set up on their own. So Spain, for example, has an unemployment rate approaching 23% and nearly half of the five million unemployed are in the 16-24 age group."

Another risk manager, with a business based in the Far East added: "Severe income disparity is an issue for the regions that we operate in. We've responded with a corporate social responsibility, which we take very seriously, especially as there is a general expectation that large companies will provide assistance to developing countries.

"For example, in Jamaica we run a 'Back to School' project, which provides children with free health and dental checks before term gets under way and equips each of them with items such as writing materials.

"We're giving back something to the community, and securing goodwill towards the business at the same time in a region where word of mouth is very influential."

Getty Images

‘We are seeing more Chinese tourists travel to Europe. They have replaced the Japanese as the highest spenders in the duty-free shops’

VIEWS ON…

EMERGING MARKETS

“Our business is fashion retailing and we source at least 50% of our supplies from China as well as manufacturing there. So we have a high dependence on the success of China’s economy and interest in its progress.”

“The prospect of a hard landing is a great concern and we’ve taken steps to reduce our dependency and diversify to some other locations. We also have strategies in place should trading in the country become more difficult, such as new trade barriers becoming imposed.”

“One option open to us if the cost of procuring from the Far East becomes prohibitive is to move our supply base nearer to home [the UK] – which is something we’d like to do as we’d get our goods to market more quickly. We may steadily transfer our sourcing from areas where either barriers to trade are being added or our production costs are rising.”

“Recently we’ve noted a tendency for regulations to be changed literally overnight. One day our representatives and employees are doing business within the law and the next it has become illegal.”

“We have to be very up to date on new developments. Sometimes a change reflects a local issue and isn’t sanctioned by central government. Shanghai is effectively a major local centre and Hong Kong is a state within a state. By contrast, changes to EU regulation are flagged well in advance, although once introduced they often turn out to be very different from what was envisaged.”

'Although the world is not necessarily more risky than before, it is definitely more uncertain'

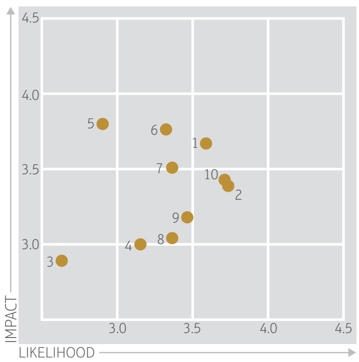
'Make sure you're driving to increase your market share. You don't want to be looking at a reduced market share'

Hub of industry: an elevated view of container terminal 9 at Kwai Chung Port in Hong Kong

GEOPOLITICAL

The threat of terrorism and instability caused by the Arab Spring are among the biggest risks for companies operating internationally. But the failure of global governance and entrenched corruption in some parts of the world are also major concerns

TOP 10 RISKS



1 Terrorism
2 Pervasive entrenched corruption
3 Militarisation of space
4 Unilateral resource nationalisation
5 Diffusion of weapons of mass destruction
6 Global governance failure
7 Failure of diplomatic conflict resolution
8 Widespread illicit trade
9 Entrenched organised crime
10 Critical fragile states

Source: World Economic Forum Global Risks 2012 (top 10 not in order of importance)

1 TERRORISM

‘People are alarmed by isolated attacks in Tunisia or Morocco and ignore the fact that London has actually suffered more terrorist attacks’

Reuters

‘It’s been known for officials to turn up at our door demanding that we hand over documents that are confidential’

EXPERT VIEW

Giampaolo Scarso, head of Marsh Risk Consulting, Italy

Among global risks in 2012, a global governance failure is one of the top ranked. In fact, in the past decade the lack of sound co-ordination between global economies and legislative systems has contributed to rising greenhouse gas emissions, unsustainable population growth, critical systems failure and chronic fiscal imbalances.

As far as the last is concerned, the crisis in the eurozone is having severe social, economic and financial impacts.

Several risk issues have emerged or worsened in recent months:

- lower growth rates due to depressed consumption in internal markets;
- financing and liquidity issues affecting both investments and working capital;
- dependence on exports and greater exposure to financial risk;
- lack of confidence in international markets; and
- a decrease in foreign investment due to growing fears of being forced out of the EMU.

On top of this, other geopolitical risk factors such as widespread illicit trade, pervasive entrenched corruption, the failure of diplomatic conflict resolution, terrorism, and unilateral resource nationalisation could alter fair and regular international trade. The same can be said for the regulatory framework concerning corporate governance, and environmental health and safety, as well as labour market constraints, which can falsify competition among corporations because of the impact on a company’s costs.

Better global governance has to be considered as a stabilising instrument, rather than a constraint, to provide a better and fairer market environment for all participants.

At a company level, the greater uncertainty that we are facing could be seen as an opportunity for innovating and redefining management paradigms. Sound risk management must be seen as an added value management system, which enables a firm to ride out uncertainty.

KEY POINTS

- The risks resulting from geographical tensions is a big issue for multinationals
- Geopolitical threats are affecting more and more organisations as they look to new markets
- Businesses are taking the risks from corruption more seriously
- Protectionism is recognised by many risk managers as a potentially dangerous trend

Reuters

RISKY BUSINESS AS USUAL

Any company that operates overseas has to handle geopolitical risk, but globalisation and a much more interconnected world have made managing it all the more vital

Managing geopolitical risk is nothing new. Instability in the Middle East and North Africa may be in the headlines right now but geopolitical risks have always existed and, for as long as multinational businesses have been around, companies have had to manage them. But geopolitical risks have become increasingly important in recent years because of globalisation and the greater interconnectedness worldwide.

Dealing with the physical and operational risks created by geopolitical tension is a big issue for large companies that have to operate in some pretty scary parts of the world. But it's an issue that large, sophisticated organisations with mature risk management departments are comfortable dealing with. Or at least they accept that it exists and probably always will.

One risk manager says: "History demonstrates that it's still possible to do business in countries undergoing instability or suffering from oppressive regimes. In some cases, the best approach from a social responsibility point of view is to continue so that the local population doesn't suffer."

Another risk manager's view, representative of many, is: "Geopolitical risks are of concern, but instability in various parts of the world has always been a phenomenon. Geopolitical conflict has always existed."

Several risk managers interviewed for this report say that their organisations were forced to evacuate

2

RISK: PERVASIVE ENTRENCHED CORRUPTION

As the World Economic Forum puts it in its *Global Risks 2012*, corruption is: "The widespread and deep-rooted abuse of entrusted power for private gain." And in the words of Transparency International, a leading anti-bribery lobby, corruption "hurts everyone whose life, livelihood or happiness depends on the integrity of people in a position of authority". The US Foreign Corrupt Practices Act is one of the most stringent compliance regimes and, with the UK's Bribery Act in place, more and more companies are sitting up and taking notice of the legal, reputational and financial risks that bribery poses.

IMPACT

Corruption distorts international markets by undermining the rule of law and jeopardising sound governance and ethics in the private sector, according to Transparency International. In business terms, a prosperous international company could secure a contract by buying an unfair advantage in a competitive market through illegal kickbacks to corrupt government officials. This is at the expense of the honest companies that don't do this. More tangibly, faulty buildings, for example, could be built to a lower safety standard because a bribe was passed under the table during the construction process. And the building could then be more likely to collapse in the event of an earthquake or hurricane.

ACTION

Prior to 1996, the World Bank did not explicitly discuss corruption. Today, the bank considers it the single greatest obstacle to economic and social development. This underlines the increased emphasis that regulatory authorities now place on anti-bribery compliance. In just one recent example of enforcement, US authorities charged Paris-based telecoms company Alcatel-Lucent with bribing foreign government officials to win contracts in Latin America and Asia. In January last year, Alcatel-Lucent paid $137m (€104m) to settle the charges. As a result, many leading global organisations are implementing stringent anti-bribery compliance programmes and trying to embed a culture of 'zero-tolerance'.

3 MILITARISATION OF SPACE

This involves targeting of commercial, civil and military space assets and related ground systems as core to defence strategy.

4 UNILATERAL RESOURCE NATIONALISATION

"Resource nationalism has become the number one risk for mining and metals companies as governments globally continue to make demands to increase their slice of the profit pie," says an Ernst & Young business risk survey. Mining companies reportedly face a much bigger threat from resource nationalism (meaning a nation state seizing corporate assets) compared with 12 months ago.

staff from the Middle East or Africa when the Arab Spring revolutions broke out.

One continental European risk manager says: "Instability in the Middle East is a current issue for the group as we had to evacuate workers from Egypt last year. We have contingency plans for such an event, with the logistics outsourced to specialists. The safety of employees is always the top priority. We nonetheless still plan to operate in countries at risk of instability and have plans to develop a new plant in Iraq."

Another risk manager adds: "The Arab Spring was an unexpected event and we had to evacuate staff from both Egypt and Libya. The unpredictability of such events is difficult to deal with; currently we don't know what will happen next in Iran and Syria, and the unrest in Nigeria has the potential to develop into civil war. Unfortunately, the United Nations appears to have a steadily dwindling influence in such situations – for example, it is powerless in Syria as Russia won't support the proposed measures."

Harbinger of instability?

One risk manager says: "It's hard to say whether the Arab Spring is the harbinger of a prolonged period of instability, but companies are continuing to do business in countries such as Tunisia and Egypt."

While the geopolitical threat itself may not be that different, it is affecting more and more organisations as they increasingly look to the 'new markets', which have very different operating environments to their home markets.

A risk manager based in the Mediterranean region says her company is increasingly focused on exploiting opportunities in the emerging markets. "Our own group has been exploring potential new markets, despite the obstacles that confront

Reuters

new entrants. The rising level of competition that companies face in their traditional countries makes it essential to seek out these new markets."

Another risk manager described his company's strategy when it comes to dealing with "tricky" markets: "Our policy is to maintain good relationships with local governments, but we can't rule out the possibility of an incoming political party or even a corrupt regime pursuing a programme of renationalisation. There is also the potential for any of our licences to be revoked."

Corruption is another risk that has been around for a long time. While in the past the issue might have been ignored, businesses are taking the threat much more seriously. That's mainly down to an increased regulatory emphasis, with strict regimes in the USA and Europe enforced more rigorously. As one risk manager puts it: "Companies have developed a much greater awareness of corruption and corrupt practices, helped by regulation such as the UK Bribery Act."

Another risk manager says: "We have a well-developed corporate attitude and training in

'The rising level of competition that companies face in their traditional countries makes it essential to seek out these new markets'

'Staff and assets of energy companies are targets'

Source: Maplecroft

[corruption and anti-bribery], so employees involved in negotiations with governments or suppliers are aware that it's a zero tolerance policy.

"We also have compliance officers with whom any concerns can be raised. These people are highly efficient and screen all new regulations as well as keeping abreast of any changes. Although the group has a relatively limited presence in the UK, we are fully conversant with the UK Bribery Act and its requirements are observed in our worldwide operations."

Another risk manager, who works in the aviation industry, says: "Corruption is not as high on the agenda for our industry. It's more a concern for companies that export or aim to set up operations in a new country. But it does distort competition between countries and companies.

"French oil and gas producers operating in Nigeria have observed the rules on new concessions to avoid any allegations of corruption. However, Chinese companies are also moving into Africa and offered to build a new hospital in the area – raising the issue of where the dividing line lies between an incentive and a bribe. At present, European and US companies aren't fighting with the same weapons."

Just as bad in Europe

But some risk managers believe corruption is still just as bad in Europe as in other, more 'lawless', parts of the world; it's just less visible. As one risk manager says: "I do not detect much improvement in the levels and incidence of corruption. It is still bad in Europe, but just more sophisticated and less visible than somewhere such as India. Penalties only make much difference when they are severe; real change has to come from within an organisation. Companies will comply with rules imposed by the government or regulator, but only because they have to and not because they regard it as the right thing to do. So I'm sceptical on the suggestion that we may be seeing some improvement – it seems to me corruption is merely becoming more sophisticated."

Nevertheless, companies face an incredibly challenging environment in some markets. As one risk manager says: "It's been known for officials to turn up at our door demanding that we hand over documents that are confidential."

At an operational level, as well as threatening assets and people in far-flung parts of the world, geopolitical issues threaten corporate supply chains, which are stretched tightly and thinly around the globe. Yet some companies recognise an opportunity to distinguish themselves and get ahead of their competitors if they can get their supply chain risk management right.

In the midst of the global economic downturn, protectionism is recognised by many risk managers as a potentially dangerous trend that could disrupt free trade. But most also believe that there is no threat of a complete retrenchment from globalisation as the World Economic Forum (WEF) warned in last year's *Global Risks 2011*. "It's an issue that the group monitors, but not a priority," is the view of one risk manager.

No retreat from globalisation

He adds: "Threats of protectionism regularly emerge, mainly in very liberal countries and particularly around election time. But it's not a major concern due to our global presence. In this case, being multinational is a distinct advantage."

Another risk manager says: "Retrenchment from globalisation is a risk and could disturb free trade, but it seems to me unlikely that we will see the trend of greater globalisation reversed. Visit Italy, Bulgaria or China and you can see for yourself the increasing similarity between their societies. There is a whole new generation that would oppose any retreat from globalisation."

Some risk managers think that the crisis provides an opportunity to promote the global governance agenda and that global business would benefit from this in the form of a more level playing field. One risk manager heralded the development of international bodies such as the G20 and the International Monetary Fund.

As he put it: "The creation of the IMF has been a positive development in providing global governance and supporting failing states, but the increasing demands on it and its fairly limited resources are obstacles against its effectiveness."

As the BRIC (Brazil, Russia, India and China) economies grow in importance, they will play an increasing role on the international stage – this is inevitable. As one risk manager says: "The rise of the BRIC economies, together with other emerging markets, has created new global centres of consumer demand that are steadily growing in importance.

"But many companies seeking to establish a presence in these new markets are experiencing operational difficulties, partly because they aren't actively monitoring the opportunities. Relatively few of them have developed products and processes specifically tailored to the requirements of these new markets, so they are finding it difficult to profit."

Terrorism is always in the back of risk managers' minds. But there seems to be a mismatch between the public's perception of the risk and reality, says a risk manager directly affected by this issue. "People are alarmed by isolated attacks in Tunisia or Morocco and overlook the fact that London and Paris have actually suffered more terrorist attacks."

FOCUS ON

POLITICAL RISKS: THE ARAB SPRING

Continuing instability in Arab Spring countries and the threat of forced regime change in other nations are two of 2012's biggest political risks, according to Maplecroft's political risk atlas.

Of 10 states with increasing risk profiles, nine are in the Arab world – Algeria, Bahrain, Egypt, Kuwait, Libya, Morocco, Oman, Syria and Tunisia. Businesses here are exposed to high security risks.

"The risk posed to businesses by militants in countries severely affected by the Arab Spring should not be ignored," says Maplecroft director Anthony Skinner.

"There are particular concerns over al-Qaeda in the Islamic Maghreb, which has sought to exploit the turmoil in North Africa, while al-Qaeda in the Arabian Peninsula has sought to take advantage of extreme instability in Yemen. Staff and assets of energy companies are considered legitimate targets by both groups."

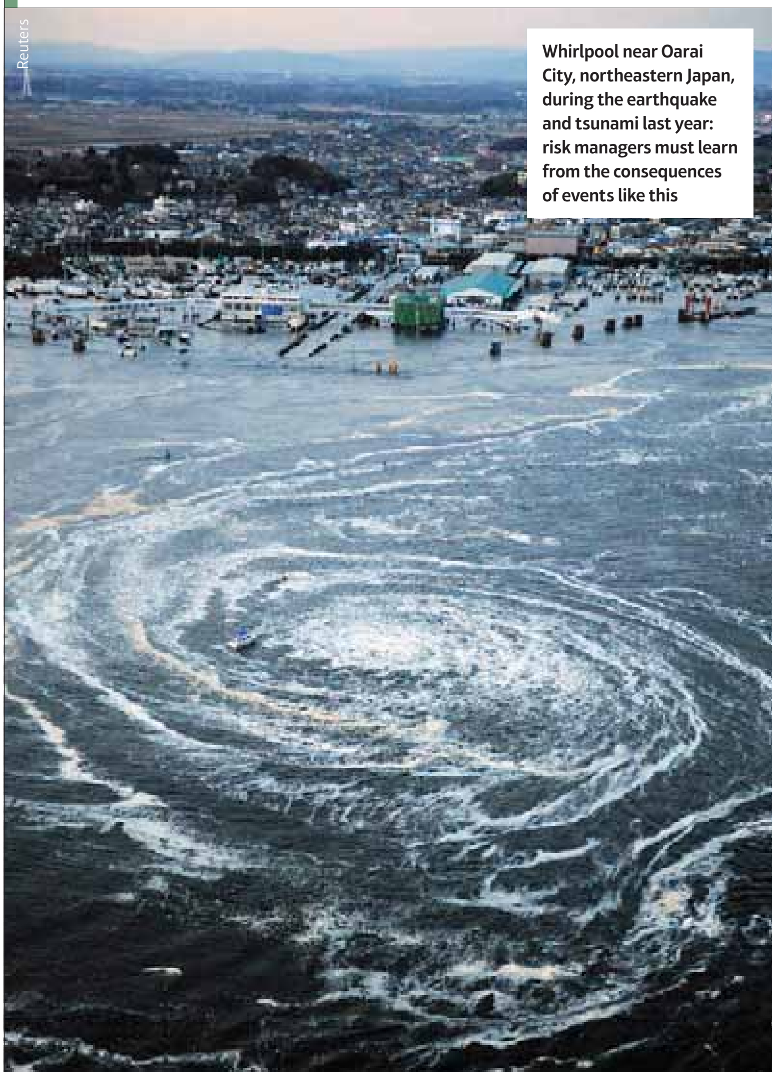
Maplecroft says Bangladesh, Belarus, Equatorial Guinea, Guinea Bissau, Iran, Madagascar, Turkmenistan and Vietnam have characteristics similar to those found in the Arab Spring countries, marking them as vulnerable to regime change.

On the other hand, Maplecroft says Indonesia, Mexico and the Philippines represent investment opportunities thanks to a reduction in political risk. Strong growth in these countries helps provide the conditions for greater human security and socio-economic development, say the analysts.

Goldman Sachs asset management chairman and Maplecroft investor Jim O'Neill says: "In a time of unprecedented geopolitical turmoil, political risk analysis has become essential for investors."

ENVIRONMENTAL

Last year's earthquake in Japan and floods in Thailand showed just how interconnected the risk to supply chains can be. But environmental risks go much further than that, from species overexploitation to reputational damage and government regulation



Reuters

Whirlpool near Oarai City, northeastern Japan, during the earthquake and tsunami last year: risk managers must learn from the consequences of events like this

1 UNPRECEDENTED GEOPHYSICAL DESTRUCTION

The Japan earthquake and tsunami demonstrated that economies are increasingly interconnected. French carmakers, for example, which rely on 'just in time' supply deliveries, had to halt production as key components became unavailable. So events far away increasingly have knock-on effects.

LESSONS OF THE TOHOKU EARTHQUAKE

There are five lessons to be learned from last year's earthquake and tsunami in Japan, according to property insurer FM Global. These are:

1

CONSIDER MARKET SHARE AND REPUTATION AS WELL AS LOSS OF REVENUE
Risk management challenges are becoming more of a boardroom issue, since management understands the grim consequences they can have. Because those businesses that are prepared to deal with natural catastrophes are the quickest to return to normal operations, resilience is increasingly seen as a competitive advantage.

2

PREVENTIVE MEASURES ARE CRUCIAL
Most loss is preventable. Even in extreme cases, preventive action can limit the extent to which businesses face interruption.

3

COMPLACENCY CAN KILL
Companies need to consider the worst-case scenario when planning for supply chain risk. Part of the problem when the earthquake struck was that no one had considered the impact of a disaster of that size, so they didn't have the right procedures in place to deal with the fall-out.

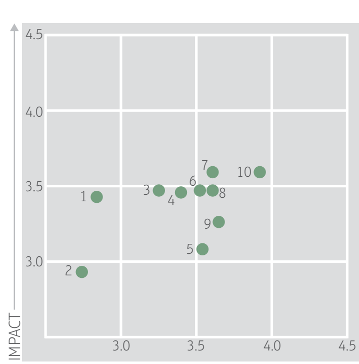
4

CHANGE THE WAY YOU VIEW SUPPLY CHAINS
The problems in Japan were made even worse by the clustering of similar industries. When there is a high concentration of manufacturers of a specific product in one area, companies will lack a supply chain alternative when a natural disaster strikes. Businesses need to make sure that they have a plan B in place.

5

HAVE A PLAN C (IN CASE PLAN B FAILS)
Even when companies have understood the importance of having an alternative supply source in place in the event of a natural catastrophe, the Thai floods following shortly after the Japan disaster meant that a lot of businesses were caught out twice. One solution is to increase and diversify the number of suppliers. Relying on several suppliers across different areas rather than just one will reduce the levels of business interruption in case of a disaster.

TOP 10 RISKS



1 Unprecedented geophysical destruction
2 Vulnerability to geomagnetic storms
3 Irremediable pollution
4 Persistent extreme weather
5 Species overexploitation
6 Antibiotic-resistant bacteria
7 Failure to adapt to climate change
8 Land and waterway use mismanagement
9 Mismanaged urbanisation
10 Rising greenhouse gas emissions

Source: World Economic Forum Global Risks 2012 (top 10 not in order of importance)

FOCUS ON

RISK INTERCONNECTIVITY

For the second year in a row, the World Economic Forum (WEF) has highlighted the importance of risk interconnectedness in its *Global Risks* report.

New concentrations of risk are arising all the time, and spotting these accumulations is extremely difficult. Major natural disasters, for example, have always led to severe accumulations of risk, but these losses mainly involved property in the affected area and did not spread to other regions. Today, with big businesses operating global supply chains, the situation is different.

The earthquake in Japan in March 2011 showed the true scale of loss potential arising from disrupted global supply chains, especially in the automotive and technological industries. Motor manufacturers worldwide had to reduce or suspend some plant operations as a result of lack of parts. Meanwhile, technology companies issued profit warnings.

The disaster in Japan was exacerbated by the concentration of suppliers to these industries. This is not unusual. Specialist industry suppliers are often located in a single country (for example, semiconductor production is focused in Taiwan, China and South Korea). Where the countries concerned are in natural catastrophe zones, a major incident, as in Japan, can limit availability of components for an entire global industry.

Many of these problems are the result of today's increasingly globalised, interconnected and complex world. But this reality only heightens the necessity for early recognition of the interactions between risks. It is necessary for risk managers to work with business partners (including insurers) to understand risk accumulations and interconnectivity.

Furthermore, working with research institutes and universities, some insurers have begun to develop new software and solutions to support the qualitative and quantitative analysis of complex risk accumulations. Risk managers entering into partnerships may be able to access some of this expertise and know how to decipher and reveal the interdependencies within their own operations.


Reuters

The disaster in Japan exposed manufacturers' vulnerability to supply chain interruption

CLIMATE CHANGE: TOP 10 AT-RISK COUNTRIES

BANGLADESH
INDIA
MADAGASCAR
NEPAL
MOZAMBIQUE
PHILIPPINES
HAITI
AFGHANISTAN
ZIMBABWE
MYANMAR

Source: Maplecroft

EXPERT VIEW

Cliff Warman, EMEA head of environmental practice, Marsh

The way that businesses manage, measure and report on their environmental performance, and the direct link that this has with a company's brand and reputation, has become a significant corporate risk. With the teeth of the environmental regulator strengthening and the public taking a dim view of those companies that damage the environment, issues such as climate change, environmental degradation and the potential to cause a loss of biodiversity have become high profile.

As with all things, where there is risk there is opportunity, and in the case of environmental risk the potential to reduce energy costs and improve operational efficiency as a result of implementing a strategy to reduce greenhouse gas emissions can deliver financial benefit to many companies. Taking steps to enhance the resilience of the business and its supply chain to catastrophic weather events will also benefit the business. Companies are increasingly looking to predict and pre-empt the potential for environmental damage events, and implement plans to mitigate the impacts should the damage event occur.

The way a company assesses and manages environmental risks can bring rewards in the form of sustainability. Companies that show they are proactively improving on and reporting their environmental performance will ultimately prosper. The world has changed, both in terms of the climate, and also in terms of the level of scrutiny being paid to companies that continue to cause damage to the environment. As such, improving environmental performance should not be seen as an end in itself, but rather must be visualised as a continuous programme of business improvement.


Reuters

READY FOR THE WORST

Many companies were caught out by last year's high level of natural catastrophe losses. More insurance is not the only answer, however

Last year was the most expensive on record in terms of losses caused by natural catastrophes. Environmental risks are therefore front and centre in risk managers' minds.

At about $380bn (€290bn), global economic losses were nearly two-thirds higher than 2005's previous record of $220bn, says insurer Munich Re. Huge earthquakes in Japan and New Zealand caused almost two-thirds of these losses.

Give the huge scale of losses last year, risk managers are concerned whether the insurance industry will be able to maintain sufficient levels of cover.

One risk manager says: "Meteorological and climate catastrophe have been brought to the fore after the events of 2010 and 2011. Climate change can only continue to increase the frequency and severity of such events. This has potential consequences for both the company's activities and its insurance programme. It's uncertain whether the insurance market will continue to maintain the same level of natural catastrophe coverage. We're likely to see higher deductibles and/or increased premiums applied."

With more assets insured and more extreme weather events, the insurance industry is taking a battering. As a result, risk managers are being called on to better protect their assets. Another risk manager says: "Global warming, increasing flood risk and the greater violence of natural catastrophes such as storms, drought and earthquakes are all increasing. At the same time, insurance is being extended to more assets and a greater number of zones than before, so greater calls are being made on the industry. The question is: can we better protect our assets, such as property, and make them more robust against natural catastrophes?"

Risk managers have two options: either build more resiliently or upgrade old assets (which is costly). In some earthquake-prone areas, for example, insurance is so expensive that it can be easier to make a case for prevention.

There's little doubt that natural catastrophes are bearing a heavier toll than they used to. Whether or not this is the result of climate change or simply because of a growing number of people living in disaster-prone areas is the subject of heated debate. Nevertheless, most risk managers concede that climate change is a fact rather than a threat. As major greenhouse gas emitters, large companies have a moral responsibility to reduce their carbon footprint and minimise their impact on the environment. Plus, reducing carbon emissions and saving energy makes economic sense.

Biodiversity loss is another huge concern and companies have to work with the community and regulators to protect the natural environment.

Excessive regulation

Some risk managers are concerned that strict environmental regulations in Europe risk making business there unprofitable as well as potentially putting Europe at a competitive disadvantage to less environmentally conscious jurisdictions.

As one respondent says: "Concerns over biodiversity loss traditionally centred on Europe, but are also growing in the USA, Canada and Brazil.

Environmental regulation in some instance is "excessive" according to some risk managers. One, based in continental Europe, says: "Regulations imposed by the new European environmental directive are now in place, and further regulations on waste disposal are being added. These are critical for our group and others in the food and drink industry. Much of this new regulation is excessive, however, and also it is not being fully co-ordinated between the EU's members. The resulting lack of alignment has created great uncertainty for business, as legal frameworks and national laws within the Eurozone may differ from one member state to another."

Another respondent adds: "We are represented across the world – in China and India through joint ventures with local partners – so are affected

The wreck of the container ship *Rena* led to New Zealand's worst environmental disaster

'It is nonsense to prepare for a disaster that will strike an entire country or an entire market'

'It is impossible to eliminate the risk [to supply chains], but we have managed to mitigate it'

KEY POINTS

- Last year was the costliest on record for natural catastrophes
- Risk managers are concerned whether insurers will be able to maintain adequate cover
- Environmental regulations in Europe risk making business there unprofitable
- The best defence, risk managers say, is to spread your assets around the world

by the variations in regulation between different regions, which are reflected in our production costs. The stricter requirements of European regulation could make some of our plants there unprofitable."

Insurers are addressing this issue by providing products to cover the costs associated with remedial work. But some risk managers question the robustness of this relatively new market in environmental insurance.

Extreme natural catastrophes affect risk managers to varying degrees, depending on the location of their people and assets.

One risk manager, for example, says that in the last few years her company has been hit by floods in Thailand, the Icelandic ash cloud, earthquakes in New Zealand and the tsunami in Japan, more floods in Queensland and heavy snowfall in the UK.

"In each case our business continuity plans were invoked," she says. "The firm has a presence in around 34 countries, including areas where there is a significant risk of man-made or natural catastrophe. Our work may also involve going into a high-risk environment – unless sanctions make it impossible, we prefer to take measures to ensure the safety of employees, rather than decline to take on work."

Another risk manager adds: "Europe is definitely feeling the effects of more regular and costly extreme weather events, with windstorms and severe winters in recent years. This has affected our business, as storms and floods have disrupted electricity supplies and transport."

At the other end of the spectrum, another risk manager, also with a large global organisation, says it was hardly touched last year by natural catastrophes. "We have been fortunate so far in that many of our operations did not bear the impact of recent catastrophes, although we do operate in Texas and New Caledonia, which were hit by tornadoes. We were able to avoid losses in both cases."

Faced with these threats, companies have to decide how to balance their investment in risk management.

Natural catastrophe response

Some companies are comfortable that their risk management efforts provide sufficient protection against one of the principal operational risks, supply chain disruption.

As one risk manager says: "I think we have a very good response in place that, when things like natural catastrophes happen, our company has a very efficient way to deal with such a crisis. To map how it will actually affect us, for example, we use Google Maps so that we can very quickly identify where our suppliers are and how they might be affected."

Another risk manager adds: "All natural hazards, including earthquakes and storms, are monitored as part of our asset risk management process. All the plans and tools that the group has in place are regularly reviewed, to assess how vulnerable they are to fire, explosion and various natural hazards. In northern France, for example, our risk management plan has seen us reinforce the plant's defences against severe storms. In Mexico, our plants are exposed to earthquake and tsunami – those near the coast went on alert last March, as it was feared that the tsunami that struck Japan would extend further."

The best defence, according to most risk managers, is to spread your assets around the world so you don't have a huge exposure in one particular zone. "You need a very well-spread supply chain, so that you aren't dependent on one single supplier and you actually have various suppliers in different parts of the world," says one respondent. "After the earthquake in Japan, many companies moved their suppliers to Thailand and then a few months later they were hit by the floods in Thailand."

Others question whether you can ever really remove the risk completely. In the words of one risk manager: "It is impossible to eliminate the risk, but we have managed to mitigate it."

However well prepared a company is, there are plenty of examples of catastrophes so monstrous that they affect everyone: customers, suppliers and competitors. Faced with this scale of risk – can you ever really be fully prepared? "We are as well prepared as we want to be," says one risk manager. "It is nonsense to prepare for a disaster that will strike an entire country or an entire market."

SOCIETAL

Population dynamics, social stability and human survival – these are the really big issues, and are often felt to be far beyond the influence of companies. But risk managers are still able to develop contingency plans and coping strategies

EXPERT VIEW

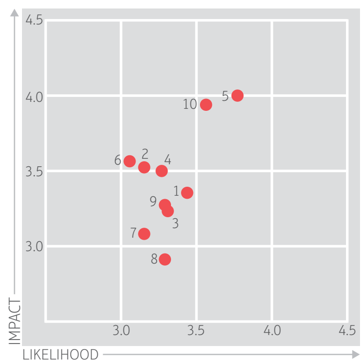
Eddie McLaughlin, managing director of Marsh Risk Consulting EMEA's strategic risk group

Societal risk conjures up a number of different issues in people's minds. By societal risks, we are referring to those issues that could have a fundamental impact on large groups in society. Clearly, with such a myriad of risks, it is vital for organisations to explicitly consider these issues and build prevention, mitigation and coping strategies around them.

What can be done to manage societal risk?
Develop and test contingency plans that can be executed in the event of a incident. This should provide a degree of assurance regarding resiliency. For example, contingency plans that address the potential closing of land borders and/or the restriction in the movement of people should reduce vulnerability to disruption. Testing is vital, as evidenced in February 2011 when the Canadian government found that the plane it had chartered as part of its contingency plans to repatriate over 100 Canadian nationals from Libya had in fact already been given to a private company.

Utilise leading key risk indicators (KRIs) to provide businesses with metrics for assessing societal emerging risks and allow for the measurement of these exposures. Leading KRIs can, for example, allow alert levels to be raised to the board regarding operations in a specific territory (or region) and, if aligned to a risk management framework, provide important foresight in changes to business conditions.

TOP 10 RISKS



1 Mismanagement of population ageing
2 Vulnerability to pandemics
3 Rising rates of chronic disease
4 Rising religious fanaticism
5 Water supply crises
6 Unsustainable population growth
7 Backlash against globalisation
8 Ineffective drug policies
9 Unmanaged migration
10 Food shortage crises

Source: World Economic Forum *Global Risks 2012* (top 10 not in order of importance)

Rex Features

'Population growth is obviously a major concern, with the world's population passing through the seven billion level in 2011'

As people live longer in Europe, the cost of healthcare and pensions is rising

> 'Water supply crises aren't high on the group's risk register; chronic disease and food shortage crises we regard as more distinct possibilities, and the threat of pandemics is particularly high'

3 RISING RATES OF CHRONIC DISEASES

One risk manager says: "There is a dividing line between developing countries, where infectious diseases still keep the mortality rate high in the young, and the developed countries where the chronic diseases of old age are more prevalent. In areas like Asia Pacific there is a divide between countries such as Japan, Australia and China, where chronic disease is more common, and other areas where infectious disease is still prevalent."

2 RISK: VULNERABILITY TO PANDEMICS

The risk of another major pandemic is growing. Fortunately, there has been nothing on the scale of Spanish Flu, which killed between 50 and 100 million people from 1918-1920, for almost a century. In recent years, outbreaks of Avian Flu and Swine Flu caused pandemic scares (and much media attention) but the death tolls were significantly lower.

IMPACT

Spanish Flu killed many people when de-mobilised troops after the First World War returned home and spread the disease. Similarly, recent pandemics have spread very quickly courtesy of air transport networks. As a result, a likely impact of a pandemic is travel restrictions, although these may not be that effective at containing the disease. Travel restrictions, nevertheless, create disruption for global business.

ACTION

The recent Swine Flu pandemic may have bred a level of complacency since it achieved a serious rating of six on the World Health Organisation's scale and yet mass casualties were averted. "We can only take limited precautions in advance," says one risk manager. "Stockpiling Tamiflu is one policy but the options are fairly limited."

1 MISMANAGEMENT OF POPULATION AGEING

"China has an ageing population, in part due to its 'one child per family' policy," one risk manager says, "whereas other areas of the world such as the Middle East have a high proportion of young people. Brazil has the twin benefits of a high youth population and a favourable macroeconomic situation, so there are ample jobs and the country is a real growth story. By contrast, Europe faces an increasing financial burden as the cost of healthcare and pensions for the elderly rises."


Panos

KEY POINTS

- Society's biggest risks may seem inevitable but risk managers must not bury their heads in the sand
- Many risk managers fear that water shortages could make water as precious as oil
- Pandemics have been the subject of false alarms in the past but must still be prepared for
- Businesses must aim to maintain market share, even in a recession

A MATTER OF LIFE AND DEATH

Companies may feel unable to influence societal concerns – from population growth to water shortages – but that doesn't mean they shouldn't be high on the risk register

The overriding concern when it comes to social risks – issues that affect population dynamics, social stability and living standards – is that these problems are way out of the hands of individual companies.

Companies may be able to contribute to social progress, by being good corporate citizens or promoting equality and human rights, for example. But for a risk manager to try to battle against social trends like ageing populations or migration would be like trying to singlehandedly hold back a glacier.

Although at an individual level these issues can seem distant and hard to bring into focus, there are some definite concerns that companies have to come to terms with. As one risk manager put it: "These issues are on the risk radar but they haven't yet moved onto the risk register."

There may not be much you can do to stop the inevitable. But at the same time it's no good shutting your eyes and hoping the problems just go away.

Water, water, everywhere

Several companies recognise the threat posed by severe food and water shortages. Risk managers are concerned that water could become a commodity as precious as oil. If water prices rise, it would also push up the cost of several other important raw materials. With these risks in mind, companies are investing in strategies to reduce water consumption.

"The number of countries where less than 40% of the population has regular access to drinking water is steadily growing," says one risk manager. "As a commodity traded on the global market, water is likely to achieve the same status that oil and gas already have. It is a potential source of tension and conflict between countries."

Another risk manager adds: "A water supply crisis is our main social risk and our company has invested – and will continue to invest – to reduce its consumption of water; as much to improve efficiency as conserve supplies."

"Water supply shortage is a risk that hasn't been taken seriously enough so far, but it is already a major concern in some regions. It also carries the potential for political crises," comments another respondent.

"We'd possibly consider water shortage as part of the more general risk of raw materials shortages, which is certainly a problem if it pushes up costs," is the view of another risk manager. "Water shortages would certainly push

Barangay, Manila: Water supply shortages are already a major concern in many areas up cotton prices. It is likely to register more significantly in the coming years."

The scarcity of a water supply also makes some markets unappealing from an investment point of view. As one risk manager noted: "Certain territories are very unattractive owing to the scarcity of food and water."

Risk managers also recognise that their organisations could potentially provide new services to help the world cope with some of these problems, such as water and waste management. "Risks such as water shortages create opportunities for water and waste management groups such as Veolia or Suez Environnement to apply their expertise in devising solutions," explains one respondent.

Closely tied to the risk of resource shortages is the threat posed by unsustainable population growth. In the words of one risk manager: "For me, unsustainable population growth is the most urgent social risk issue." Again, risk managers concede that having an effective response to this is difficult. "Long-term vision is vital in addressing this problem."

"Unmanaged migration is also a serious risk," explains another risk manager. "And we are limited in our ability to manage it."

Another European risk manager adds: "Unmanaged migration has been triggered by poor conditions and lack of opportunity in many parts of the world. Many of these people are drawn to Europe, but Europe hasn't handled the issue of migration very effectively or even properly addressed the issue. The eurozone lacks proper co-ordination; so individual countries act on a standalone basis and a co-ordinated response is lacking."

When, not if, pandemics hit

The societal risk that ranks highest on most corporate risk registers is that of pandemics. "Pandemic risk is the only [social risk] that currently ranks highly on our risk register," says one respondent. Several risk managers say that this is a key threat and one that they need to develop effective response plans for, which they can put into action quickly.

"Pandemic risk is not a question of 'if' but rather of 'when'," says one respondent. "Our response still relies too much on the triggers set out by the World Health Organisation, whereas Australia has a well-rehearsed and better plan for responding to pandemics such as influenza. By comparison, WHO's alerts are not sufficiently time sensitive and we need to develop a swifter response given the speed with which a pandemic can spread."

"There are limits to how far businesses can respond to pandemics," added a risk manager. "You can stockpile vaccines, but distribution is problematic, issues arise as to which groups get priority and there is the question of how soon you renew it. Top of our firm's list is observing best hygiene practices, maintaining regular communication with governments, and having contingency plans in place that are realistic and proportionate. Being able to count on a robust response from the government and good infrastructure are also important."

Another risk manager expresses his fears over the knock-on impact that a pandemic could have on other risks, such as a retrenchment from globalisation (see the Economic risks section, page 6). "Globalisation increases the risk for pandemics and, strangely enough, a major pandemic is also very likely to trigger retrenchment and put a brake on free trade," he said.

It can be hard for companies to assess the scale of pandemics. Faced with the media furore surrounding swine flu in 2010, it was hard for some companies to avoid overreacting – lots of large companies (and governments) purchased a large volume of vaccines that were never used.

One risk manager in the aviation industry says: "[My company] had to cope with the H5N1 pandemic threat at substantial cost. We bought millions of masks and vaccines, which ultimately had to be discarded. Pandemics obviously represent a huge risk for the transport industry. The Asian flu crisis had a huge impact on passenger figures to Asia. Economies there are so independent that they are heavily affected by pandemics – if you depend on an Asian supplier, any outbreak in that area will affect your European operations."

The haves and have-nots

The widening gap between the rich and poor in society is a key factor driving the global risk agenda, claims the World Economic Forum's *Global Risks 2012* report. Bulging populations of young people with few prospects, growing numbers of retirees depending on debt-saddled states, and the expanding gap between the rich and poor, are all fuelling resentment worldwide, according to the report.

A risk manager based in the Mediterranean region says: "You have a widening divide not only between the rich and the poor, but between those that have employment and those that do not. So there's going to be some friction. With the austerity measures in Greece there's a lot of social friction. It's not just about living standards not being met, it's about living standards being eroded."

These social problems are out of the reach of risk managers to influence. Risk managers claim that the only thing they can do is to help their companies to retain (or grow) market share, in the hope that when things do turn around, they'll be in a better position to capitalise. Having a resilient and established brand helps too.

"From a business perspective, all you can hope is to be in a better position when things start to turn around and get better," explains a risk manager. "That's why it's so important as a business to maintain market share during these times. Although revenue may have decreased, market share has increased; you're taking a larger slice of a smaller pie. Hopefully when things turn around, we'll be there in a much stronger and better position, and that's a strategy we've adopted across the globe."

'You have a widening divide not just between the rich and the poor, but between those that have employment and those that do not'

TOP THREE RISKS

Selected risk manager views

1

PANDEMICS
"A pandemic across several countries would prevent us from operating normally. We derive a significant amount of business in South Africa, so the country's high incidence of AIDS is of concern."

2

WATER SHORTAGES
"Water and food distribution is a source of threat and conflict, as we have also experienced in history with oil, gas and other valuable commodities. Addressing the risk is not only a question of technology, but also requires global political initiatives with both current and new institutions uniting in joint efforts."

3

WIDENING GAP BETWEEN RICH AND POOR
"You have a widening divide not only between the rich and the poor, but between those that have employment and those that do not. So there's going to be some friction between those two groups. With the austerity measures in Greece there's a lot of social friction. It's not just about living standards not being met, it's about living standards being eroded."

❹ RISING RELIGIOUS FANATICISM

In September 2005, a Danish newspaper ran cartoons of the Islamic prophet Muhammad that many Muslims found offensive. In response, the Danish embassy in Pakistan was bombed and fires were started at the Danish embassies in Syria, Lebanon and Iran. In addition, some Muslim countries boycotted Danish goods.

"It was certainly a demonstration of how a small, unexpected incident can hurt a company," a Danish risk manager interviewed for this report says. "Danish companies faced a boycott of their goods as a result and it hit a number quite hard, including a leading food producer. We reviewed the potential impact on [our company] and concluded it couldn't really hurt us as we weren't immediately identified as Danish in Arab countries."

Bahrain: the growing gap between those that have and those that have not is causing civil unrest around the world

Reuters

'Social issues are on the risk radar, but they haven't yet moved onto the risk register'

❺ WATER SUPPLY CRISIS

THE DOWNSIDE

Extreme stress on clean water supplies can lead to food crises, for example, or the spread of disease. Or it can contribute to political instability. If sufficient water is not available, oil production will also decrease, which could significantly affect global prices.

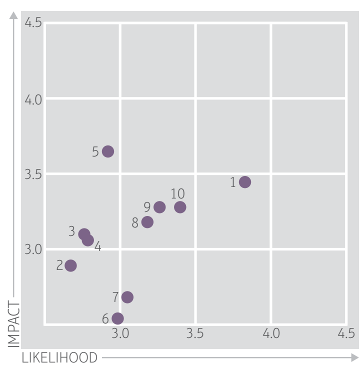
THE UPSIDE

But these challenges can stimulate innovative business ideas. General Electric has been quick to use its engineering expertise to help the oil industry reduce water use. Saudi Arabia mandated that 11% of its water supplies should come from treated waste supplies so GE is turning its attention to this.

TECHNOLOGICAL

Advances in technology bring new risks. The widespread use of social media and mobile electronic devices can leave organisations vulnerable, whether from loose talk, reputational damage or cyber attack. How can they protect themselves?

TOP 10 RISKS



1. Cyber attacks
2. Unintended consequences of nanotechnology
3. Unintended consequences of new life science technologies
4. Unintended consequences of climate change mitigation
5. Critical systems failure
6. Proliferation of orbital debris
7. Failure of intellectual property regulation
8. Massive digital misinformation
9. Mineral resource supply vulnerability
10. Massive incident of data fraud or theft

Source: World Economic Forum Global Risks 2012 (top 10 not in order of importance)

FIVE OF THE BIGGEST CYBER ATTACKS

1

IRAN
In October 2010, a computer virus called Stuxnet disrupted nuclear facilities in Iran. Stuxnet represented a significant leap forward in malware, in that it specifically attacked software used in industrial infrastructure. There are rumours that Stuxnet may have also caused the failure of India's INSAT-4B satellite in July 2010.

2

BELGIUM
In May 2008, Belgium accused the Chinese government of cyber espionage, claiming that hacking attacks against the Belgian government had originated in China. Separately, Belgian minister of foreign affairs Steven Vanackere said that his ministry had been the subject of cyber espionage by Chinese agents.

3

GEORGIA
As tensions rose over South Ossetia in August 2008, Russian and Georgian hackers launched attacks against each other. This included distributed denial of service attacks and the defacement of the Georgian Ministry of Foreign Affairs website using pictures of Georgian president Mikheil Saakashvili and Adolf Hitler.

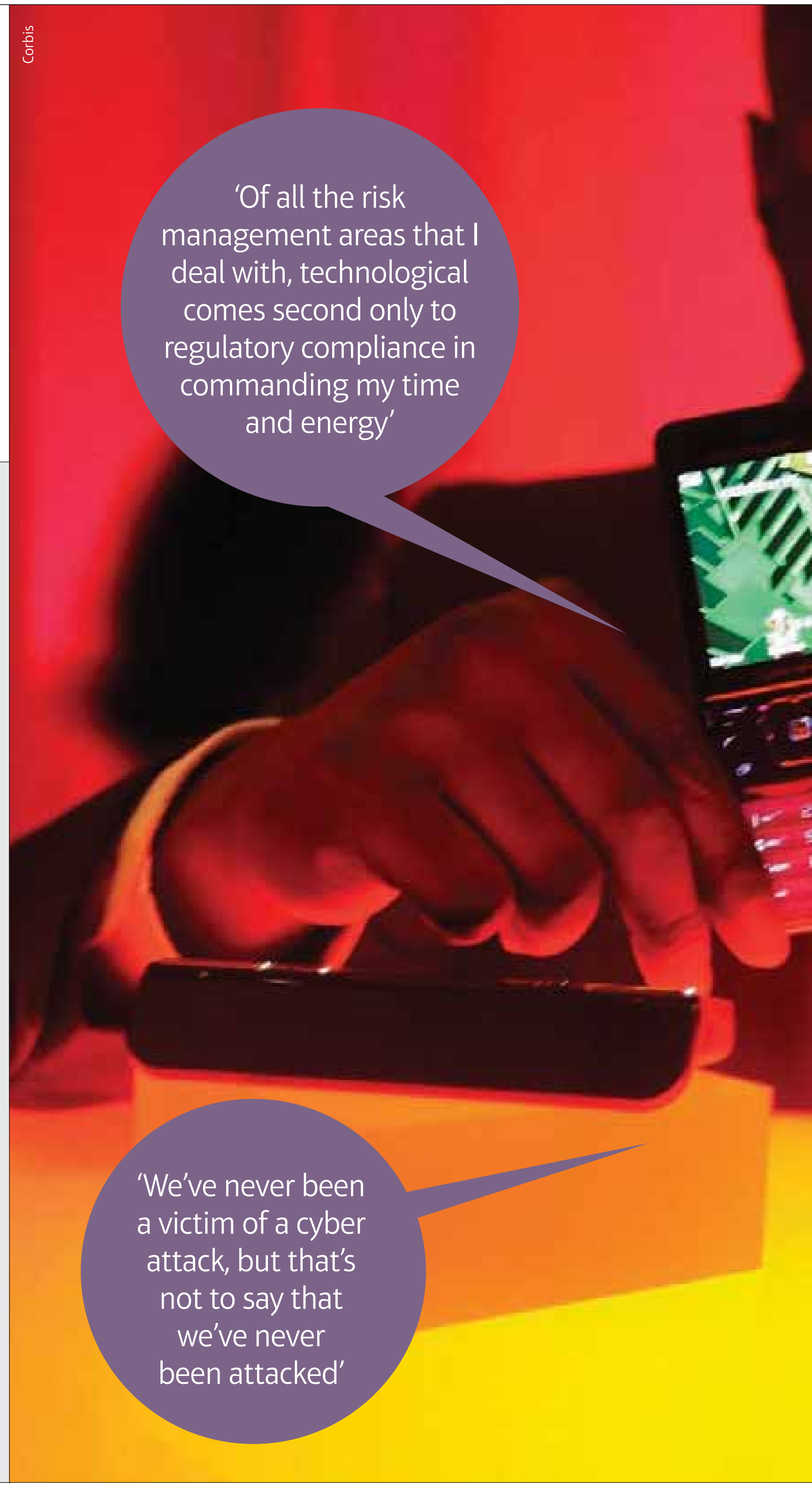
4

SOUTH KOREA
In September 2008, Seoul accused adversaries North Korea of stealing documents from military officers using spyware and a female agent. The spyware attack saw malicious email attachments designed to steal documents from infected computers.

5

INDIA
Government officials were said to have confirmed that Chinese hackers targeted the Ministry of External Affairs and the National Informatics Centre, the central and state government network.

Source: Various media and Sophos 2009 Security Threat Report



Phone home: developments in mobile technology bring new risks

1 RISK: CYBER ATTACKS

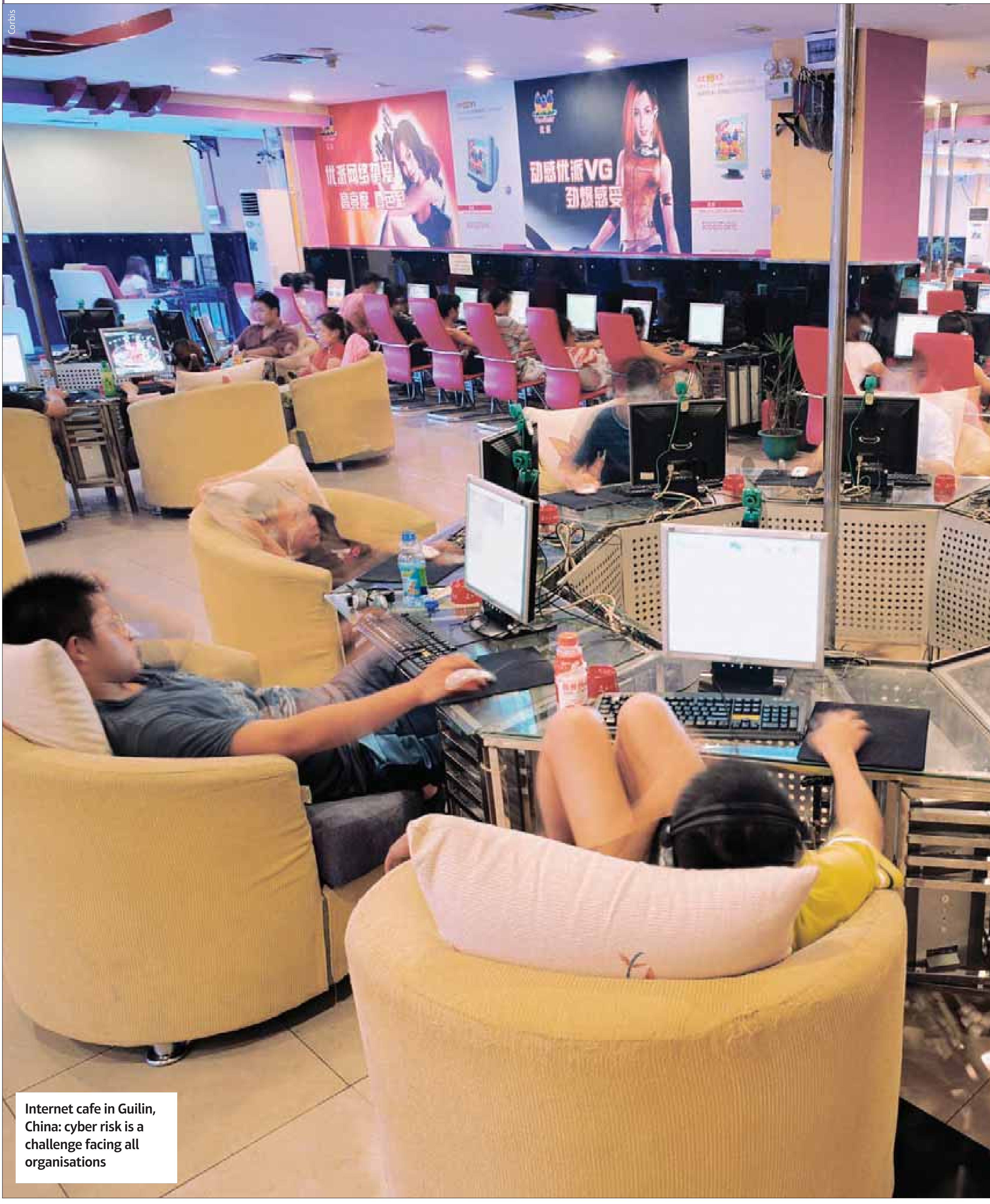
Cyber attacks come in many forms. They include malicious hacks to bring down networks or steal private information, such as credit card details. But one of the biggest fears is theft of corporate secrets. As one risk manager puts it: "My industry is very driven by new product launches, and the worst thing that could happen would be for someone to steal our new product range right in front of our eyes." Another respondent says: "Cyber attacks are a growing danger, but it's encouraging that defences have been developed in response. Companies are highly vulnerable and an attack can put them out of action for an extended period, but they are getting better at tackling the problem."

IMPACT

The impact depends on the type of threat, but some cyber attacks can be crippling. As computer and business systems become increasingly complex, it can be hard to measure the potential exposures. In addition, if a company loses corporate secrets, it may not feel any effect until five years later or more, when its competitive edge becomes eroded. Most risk managers consider cyber attacks to be a serious and high-impact threat. One well-prepared risk manager comments: "We have already witnessed successful cyber attacks on what were considered to be secure networks. Hackers are clever, so our security needs to be correspondingly clever in staying one step ahead."

ACTION

Companies are beefing up their IT defences and educating their staff. There are challenges, though, as one risk manager explains: "The IT functions tend to feel that it should be their territory, but a response must really be much broader. This requires us all to speak the same language." Co-ordinating a company's cyber defences across all of its operating units can also be challenging. But some companies have come up with novel ways to test the security of their systems. One risk manager explains: "Our system of resilience includes 'ethical hackers' – trusted individuals who we invite to come in and test our systems."



Corbis

Internet cafe in Guilin, China: cyber risk is a challenge facing all organisations

KEY POINTS

- The effects of some cyber crimes, such as theft of intellectual property or corporate secrets, may not be known for some years
- Social networking has created a raft of new pitfalls and a need to educate senior executives as well as employees
- Risk managers have to press for resources to make companies' systems more resilient

WIRED AGAINST ATTACK

Indiscreet tweets, hacktivists, solar storms: enemies are all around

Cyber attacks and information security are risks that are at the top of our corporate agenda," claims one risk manager for a large industrial company. This was a view shared by most of the respondents in this study.

Cyber risks are either at the top of, or included in, almost every respondent's top three risks list. This was true across the board no matter which sector.

In the words of one risk manager: "Cyber attacks are one of my firm's top three risks. The issues that bother me are those ones that bother my clients. So we take the issue very seriously – particularly the regulatory requirements set out in the US Health Insurance Portability and Accountability Act (HIPAA), which have become a major concern."

Broadly speaking the main cyber risk challenges coalesced around three key issues. These were:

- **Data security:** Securing customer information, which is increasingly captured and stored electronically, is a key risk management concern.
- **Cyber espionage:** The risk of cyber spying is becoming increasingly clear. Whether the aggressors are state sponsored or industry competition, the results, in the form of lost intellectual property or strategic secrets, can be devastating.
- **Social media:** Facebook, YouTube and Twitter, perhaps the most popular social media channels, all played a role in the Arab Spring uprisings, demonstrating the power and influence these new platforms wield. In the hands of disgruntled employees, crusader consumers or 'hacktivist' groups, social media can be a brand-destroying and reputation-destroying weapon.

'Control the IT systems and you control the plant'

'The tendency is to believe only the young are reckless'

One of the most significant cyber threats is to enterprise-held intellectual property. Extremely valuable and vulnerable, intellectual property is easily stolen from electronic systems, often without the theft being noticed.

Despite the scale of the problem, risk managers generally agreed that companies could broadly be split into three main categories; those who know they have been attacked, those who don't know and those who know but don't care.

If a company loses some intellectual property and the story isn't leaked, it's unlikely to have much of an immediate impact on either profits or share price. For that reason it's easy enough for senior managers to ignore it. After all, why should they spend tens of thousands upgrading their security if they have little to show for it? But, as risk managers conceded, this is probably not the best attitude to take. Five years down the line, the victim could lose its competitive edge because a competitor has that information.

Issues like this are exactly why risk managers, acting as the living conscience of their businesses, need to raise awareness about the importance of cyber risks.

Intellectual property thefts are far more prevalent than many organisations think. For example, in 2011 an unprecedented cyber espionage campaign, dubbed Operation Shady RAT, was uncovered by McAfee. For at least five years, this high-level hacking campaign infiltrated computer systems of national governments, global corporations, non-profit bodies and other organisations, with more than 70 victims in 14 countries.

At the same time, lots of risk managers are investing time and effort in dealing with these risks. As one risk manager puts it: "Companies have to devote resources to address these problems although there is no easy solution. We have to accept that a lot of information once considered confidential is now in the public domain, and concentrate on protecting what is critical."

The problem is sometimes business leaders aren't always that engaged with technological issues, either because they think it's too difficult to understand or too boring.

One risk manager says: "A major problem is that the top business leaders and business minds aren't really engaged in the area of technology. A similar comment can be made for 'green' issues, which have also struck a chord with the young that many business leaders have yet to appreciate."

"If a chief executive finds it difficult to get his head around social media and cyber attacks, it's a hard task persuading him that this presents a very real risk and resources must be devoted to warding it off. All risk managers in my sector report that they experience this internal barrier."

Social networks breed recklessness

"The growth of social networks has encouraged users to express themselves freely and many people are oblivious to the hidden dangers," adds another respondent. "There is a tendency to believe only the young are reckless in sharing information online, but many senior executives are equally careless. The problem is how to protect the company's internal network from such behaviour."

One risk manager describes his cyber risk management approach: "Two main elements are being implemented. The first is to make our IT systems more robust, as our website was hacked at the start of 2012. This incident at least enabled our IT team to work on improving resilience. Our IT hardware and software are regularly reviewed, taking similar scenarios into consideration.

"The second is a more long-term project to improve employees' behaviour and attitudes towards protecting company information. This has included classifying the information that can be made public and what must be protected.

"Laptops are now encrypted, but employees travelling to certain countries for meetings have laptops that do not carry any confidential information whatsoever, even in encrypted form. We also emphasise to employees the caution that must be exercised when using social networks, in order to protect both themselves and the company," he continues.

"To sum up – business information protection

FOUR STEPS TO TACKLE CYBER RISK

1

CREATE A 'BUSINESS-BACK' CYBER SECURITY STRATEGY
Align your security strategy, policies and operations with the biggest business risks

2

RUN SIMULATIONS
Conduct cross-functional simulations with senior executives to improve your business's response to attack

3

UNDERSTAND HOW YOU STACK UP
Benchmark your organisation against your peers

4

OPTIMISE YOUR INVESTMENT TO GET THE MAXIMUM BUSINESS IMPACT
Align your security investments and roadmap them with business needs. There may be a trade-off between security and the commercial realities of doing business

has to be more than simply a bullet point in the corporate code of conduct."

It's not an exaggeration to say that every company today stores at least some critical information electronically. Actions to mitigate cyber risks (or electronic threats to this sensitive information) generally involve a two-pronged approach, reinforcing IT security on the one hand while also educating employees to protect sensitive information. Using 'ethical hackers' to test security systems was also recognised as a good response.

The worst scenario for lots of companies is someone breaking into their secure systems, stealing plans for a new product or service and launching it before them.

One risk manager shares his nightmare scenario: "For me, the most serious risk is the increasing vulnerability of the IT linked to industrial systems, which was once self-sustaining but is becoming increasingly interconnected. There are worrying examples of how individuals could take control of a plant's IT systems and there have been attacks on unmanned oil and gas platforms in the North Sea. Get control of the IT systems and you can get control of the plant. The focus has tended to be on other forms of technological risk and this one hasn't been well addressed."

There are a range of other concerns when it comes to the realm of cyber risk. Some risk managers are concerned about their reliance on third party IT suppliers and therefore the security of those third parties.

Cloud computing is also viewed as an extremely pressing emerging cyber risk as companies migrate storage from their own physical servers into the online world, again relying on someone else's security systems in the process.

"Our network has suffered outages, but usually not of enough severity that our customers are aware," explained one risk manager. "A recent exception was one that occurred in an inner system, which we were able to repair within six hours. But generally our resilience kicks in very quickly – we devote significant money and resources to it as we can't afford for any flaws to be exploited by our competitors."

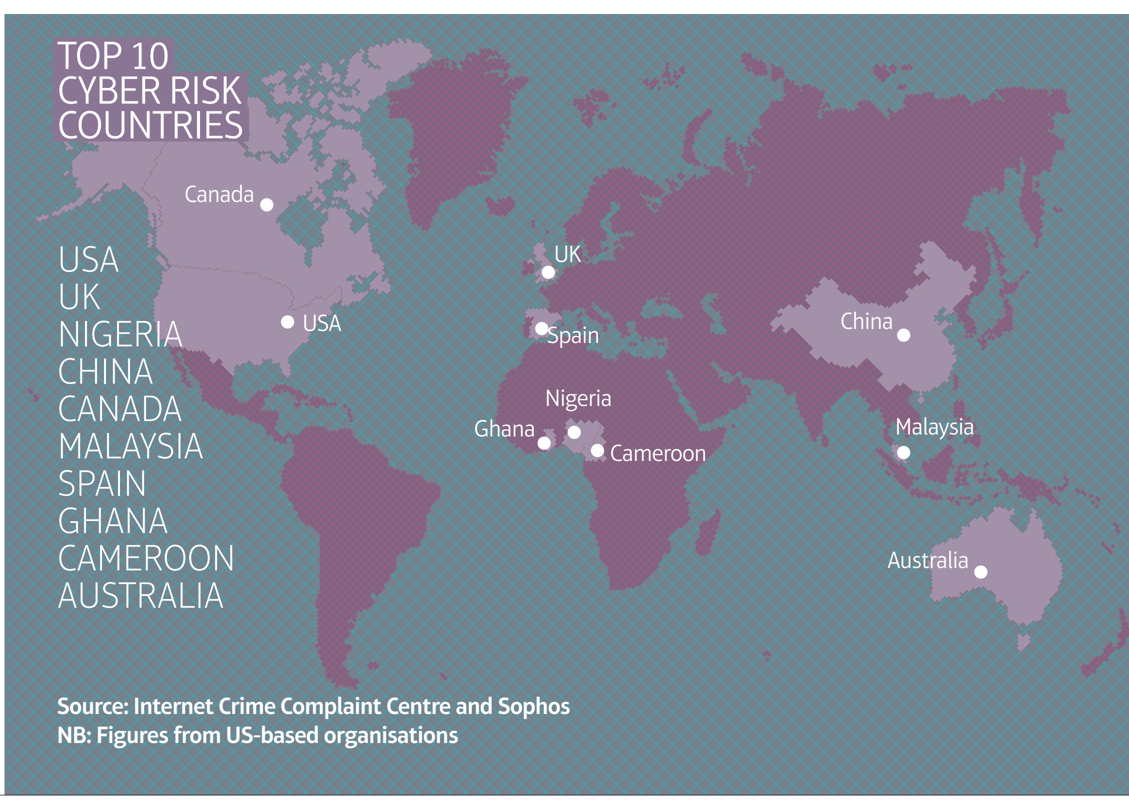
Attack from outer space

Risk managers are also concerned about the threat posed by other physical risks on their IT infrastructure, such as servers. Climate change, for example, could cause more flooding and therefore pose a greater risk to critical IT infrastructure. Alternatively other physical risks, such as solar storms from outer space, have the potential to knock out electronic and communications equipment.

"Cyber attacks are increasing in frequency but a more recent phenomenon has been electromagnetic pulses from outer space that could trigger a complete shutdown of the power network," comments one respondent. "There is very little that risk managers can do in response to this type of risk."

Risk managers conceded that there is no point in looking for an insurance solution to protect against all these cyber risks – because one probably doesn't exist.

As one respondent explains: "Although it's possible to buy a degree of protection against cyber attacks through insurance, it is important to step back and fully consider your company's exposure. Only investigate what is available in the market to address residual risk after you have first gone through a basic risk management exercise."



Source: Internet Crime Complaint Centre and Sophos
NB: Figures from US-based organisations

EXPERT VIEW

Jeroen Spanbroek, liability consulting leader, Marsh Risk Consulting EMEA

The main technological risks are critical systems failure, cyber attacks, failure of an intellectual property regime and massive digital misinformation. Organisations are either faced with the unavailability of data – either accidental or malicious – or with the misuse of data.

Most industries have digitalised their data and sophistication among consumers means that we live and breathe the internet. The volume of digital data is growing tremendously. While local data storage at companies will partially decrease through greater adoption of cloud computing, data volume and its vulnerability will increase in combination with 24/7 connectivity via social media, messaging, e-commerce and e-business applications.

At the same time consumers have less and less hesitation in trusting third parties with their personal data. But often we have little understanding of these organisations' IT security and their use of our data. In most territories, regulation around data protection is in its infancy despite the growth and storage of data.

The European Commission has stepped up and new legislation will be introduced later in 2012. The European Data Protection Regulation will require companies to report and notify if data breaches occur amongst other things.

What are the key focus points? IT security that stores and protects data is vital. Even well organised and large companies have faced 'hacktivism'.

At present, organisations are unprepared to deal with data breaches. A large scale data breach of customer details may result in a crisis and will impact the organisation's reputation. Organisations may not have the resources and the full knowledge of where and how to notify affected consumers and clients. Securing the reputation of an organisation by taking the right actions can be difficult, especially when the data are not bound to a country but flow globally.

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