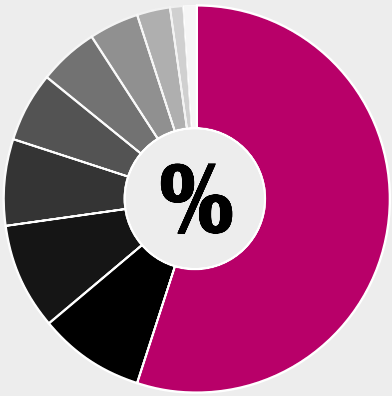
LLOYD'S

# LLOYD'S RISK INDEX 2013

Ipsos

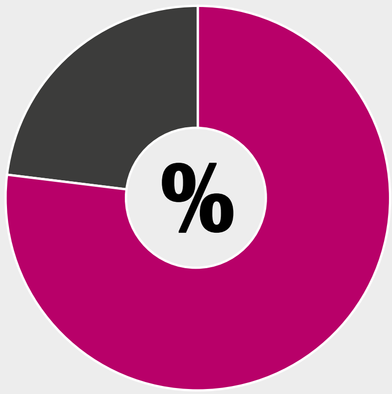
# RESPONDENT PROFILES

### WHICH OF THE FOLLOWING DESCRIBES YOUR JOB TITLE?




| | |
|---|---|
| CEO/President/Managing Director | 55% |
| Board Member | 9% |
| Head of Department | 9% |
| CIO/Technology Director | 7% |
| Head of Business Unit | 6% |
| CFO/Treasurer/Comptroller | 5% |
| SVP/VP/Director | 4% |
| Other C-level Executive | 3% |
| Chief Risk Officer | 1% |
| Chief Compliance Officer | 1% |

### WHAT IS YOUR COMPANY'S ANNUAL GLOBAL REVENUE IN US DOLLARS?

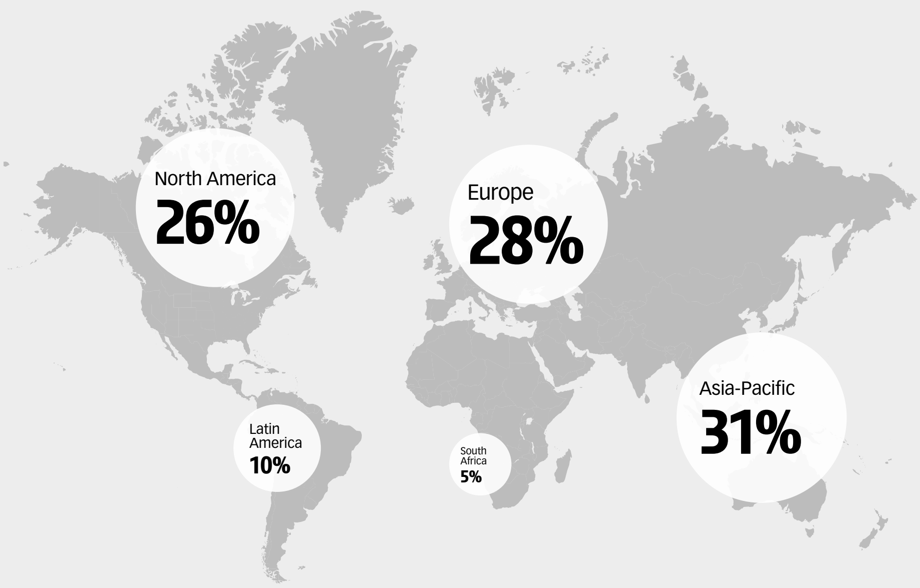



| | |
|---|---|
| $499m or less | 77% |
| Over $500m | 23% |

### WHAT IS YOUR PRIMARY INDUSTRY?

| | |
|---|---|
| Aerospace/Defence | 1% |
| Agriculture and agribusiness | 3% |
| Automotive | 3% |
| Chemicals | 1% |
| Construction and real estate | 10% |
| Consumer goods | 4% |
| Education | 4% |
| Energy and natural resources | 3% |
| Entertainment, media and publishing | 5% |
| Financial services | 7% |
| Government/Public sector | 2% |
| Healthcare, pharmaceuticals and biotechnology | 4% |
| IT and technology | 8% |
| Logistics and distribution | 2% |
| Manufacturing | 10% |
| Professional services | 20% |
| Retailing | 8% |
| Telecommunications | 1% |
| Transportation, travel and tourism | 4% |

### IN WHAT REGION ARE YOU PERSONALLY BASED?



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## INTRODUCTION



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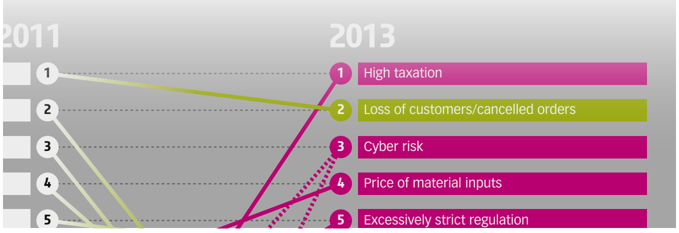


## 02 THE EVOLUTION OF THE RISK RACE



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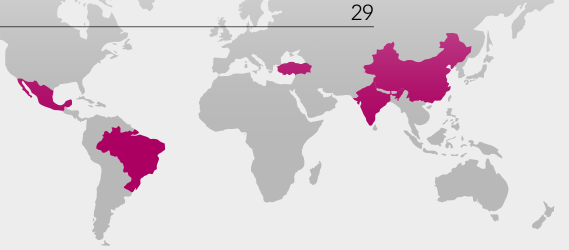


## CONCLUSION

# FOREWORD

> The slowdown in growth has made the world a newly challenging place for the more recently developing nations.

## FOREWORD BY DR RICHARD WARD

When the first Lloyd's Risk Index was published in 2009, few thought that the world would not yet be emerging from the economic crisis that gripped it at the time.

Four years on, not only is much of Europe still at a very low economic ebb, previously buoyant growth projections for economies including China and India have been revised downwards.

A global recovery remains stalled, customer demand is in the doldrums and we have had glimpses of social unrest on the streets of the worst hit nations. The 'state of flux' affecting the global economy described in our 2011 Risk Index now appears to have become more entrenched than anyone anticipated.

It is against this backdrop that we asked Ipsos MORI to carry out the third Lloyd's Risk Index, a survey of global business leaders' perceptions of the greatest risks to their businesses and the level to which they believe they feel prepared to deal with them.

The 2013 Lloyd's Risk Index reveals a great deal, but three key themes have emerged:

## CORPORATE TAXATION – A NEW GLOBAL PRIORITY

The public scrutiny given to corporate taxation has become increasingly intense over the last two years, with governments and the taxpayer alike demanding greater transparency and changes to legislation. Since 2011, this pressure has clearly been felt by respondents, who now rank the risk of high taxation as their highest overall risk, up from number 13 in 2011. In the US, the priority scores given to this risk are particularly high.

## THE TWO-SPEED RECOVERY STALLS

The division between the 'West and the rest' has become far less clear cut than it was when we published the last Lloyd's Risk Index in 2011. Instead of accelerating demand from high growth markets lifting Western economies from stagnation, the impact of decreased demand from Europe and the US has clearly affected developing markets. Particularly striking is the loss of business confidence in Latin American countries, given their relatively recent GDP revisions downwards.

## THE EVOLUTION OF RISK MANAGEMENT

The findings from the three Lloyd's Risk Indices show an interesting pattern in terms of risk management. Larger companies are putting a greater priority on strategic and economic risks, as risk management climbs further up their agendas. These corporations have the resources to support dedicated risk management functions and managers. Risk managers at this level often come from an insurance background and belong to risk management membership bodies, such as AIRMIC and FERMA, both of whom Lloyd's works closely with to support professional development of risk managers.

Smaller companies declare themselves to be less prepared with regards to virtually all the risks in the Lloyd's Risk Index, and those in established markets clearly feel better prepared than their counterparts in fast growing economies. Yet smaller balance sheets are more vulnerable to sudden loss than larger ones.

Here is a clear role for the insurance industry; to help smaller companies better understand the risks they face so they can prepare and mitigate against the potential downsides. The industry is at its best as an extra pair of eyes to help businesses protect themselves.

The slowdown in growth has made the world a newly challenging place for the more recently developing nations. It will take expert risk management to help them insulate against the risks from which they are not immune. The timetable for global economic recovery is likely to be much longer than we hoped in the immediate aftermath of the economic crash. In such circumstances, sustainability, rather than growth, will be a priority for many. While consumer demand for many services may remain low for several years to come, the demand for effective risk management and mitigation seems likely to continue to grow.

**DR RICHARD WARD**
Chief Executive
Lloyd's

# EXECUTIVE SUMMARY

> Businesses appear to have become much more realistic about the degree to which they can mitigate the risks inherent in the wider economic, regulatory and natural environment.

## EXECUTIVE SUMMARY

This is the third biennial Risk Index, commissioned by Lloyd's to assess corporate risk priorities and attitudes among business leaders across the world. The findings are based on a global survey of 588 C-suite and board level executives conducted by Ipsos MORI for Lloyd's during April and May 2013.

Survey respondents were distributed across Asia-Pacific (31%), Europe (28%), North America (26%), Latin America (10%) and South Africa (5%).

77% of respondents represent smaller businesses with an annual turnover of US$499 million or less, and 23% are from larger companies with an annual turnover of US$500 million or more.

We would like to thank all those business leaders who took the time to complete the survey and give us their views. This executive summary looks at some of the overarching themes from the 2013 survey and pinpoints larger shifts from the 2011 Lloyd's Risk Index.

## METHODOLOGY

The survey asked respondents about their attitudes to 50 risks across five categories:

- Business and strategic risk.
- Economic, regulatory and market risk.
- Political, crime and security risk.
- Environmental and health risk.
- Natural hazard risk.

Respondents were asked to rate both the overall risk category and a number of specific risks within each of the overall categories for both their corporate risk priorities and for the degree of their business preparedness to manage those risks. A score was calculated for each, with zero being the lowest level of priority or preparedness and ten being the highest.

Some changes have been made to the list of 50 specific risks since the 2011 survey. Full details of these changes can be found at Appendix 1.

This executive summary identifies the priority risk areas in 2013 as well as the biggest changes since 2011. It also summarises regional variations and the different experiences of risk priority and preparedness between smaller and larger businesses.

## A REALITY CHECK FOR BUSINESS

As the global economic crisis enters its sixth year, more businesses appear to have become much more realistic about the degree to which they can mitigate the risks inherent in the wider economic, regulatory and natural environment.

In 2011, 70% of respondents claimed they were better prepared to manage risks to their business and operations compared to two years before, 27% felt their preparedness was about the same and just 3% felt they were not as well prepared.

By 2013, only 45% of respondents feel better prepared than they did two years ago, 49% say their preparedness is about the same, while the number of those who feel less well prepared has increased to 6%.

## FASTER GROWING ECONOMIES FAST TRACK THEIR PREPAREDNESS

While the overall global findings are that companies have not increased their preparedness at the levels reported between 2009 and 2011, there are significant regional differences in these scores.

While 47% of European respondents and 30% of North American respondents believe they are better prepared to manage their business risks than they were in 2011, businesses in fast growing economies have been much busier when it comes to risk mitigation. 49% of Asia-Pacific respondents and 62% of Latin American respondents feel better prepared than two years ago.

Interestingly, and as seen in 2011, businesses in faster growing regions also give risks in general a higher priority score than those in Europe and the US. In particular, the potential impact of economic, regulatory and market risk has increased the most in Asia-Pacific countries, with the price of material inputs now seen as the number one risk to businesses in this region. Given that businesses in this part of the world are still showing strong growth despite recent slowdown, the priority given to the costs of raw materials reflects this major business overhead. Input costs are particularly critical for fast growing economies – passing on increases in these costs to consumers runs the risk of fuelling inflation, dampening demand or both.

# EXECUTIVE SUMMARY
## CONTINUED

### A GAME OF TWO HALVES

A clear divide is emerging in the evolution of risk management between smaller and larger companies, with further variation determined by whether they operate in an established (North America and Europe) or faster growing market.

Larger companies in faster growing markets are following the evolution of their peers in established markets, recognising the heightened priority of business risks and their relative lack of preparedness to deal with them. Larger companies in established markets are moving increasingly towards a 'more prepared than prioritised' position. They have recognised their vulnerability to risk, made it a greater priority and invested in more comprehensive risk transfer (insurance) and risk management (mitigation) measures.

Chart 1

**COMPARED TO TWO YEARS AGO, HOW ARE YOU PREPARED FOR RISKS TO YOUR BUSINESS AND OPERATIONS?**

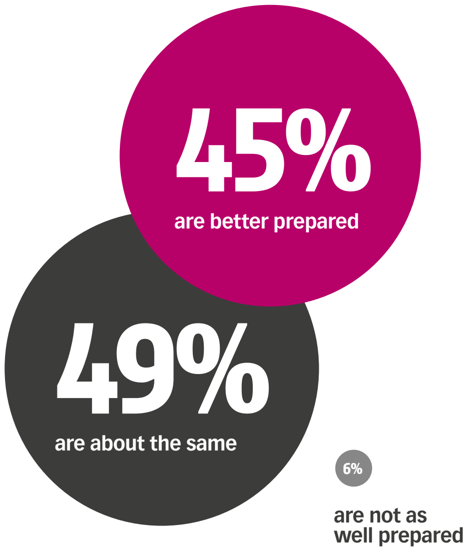


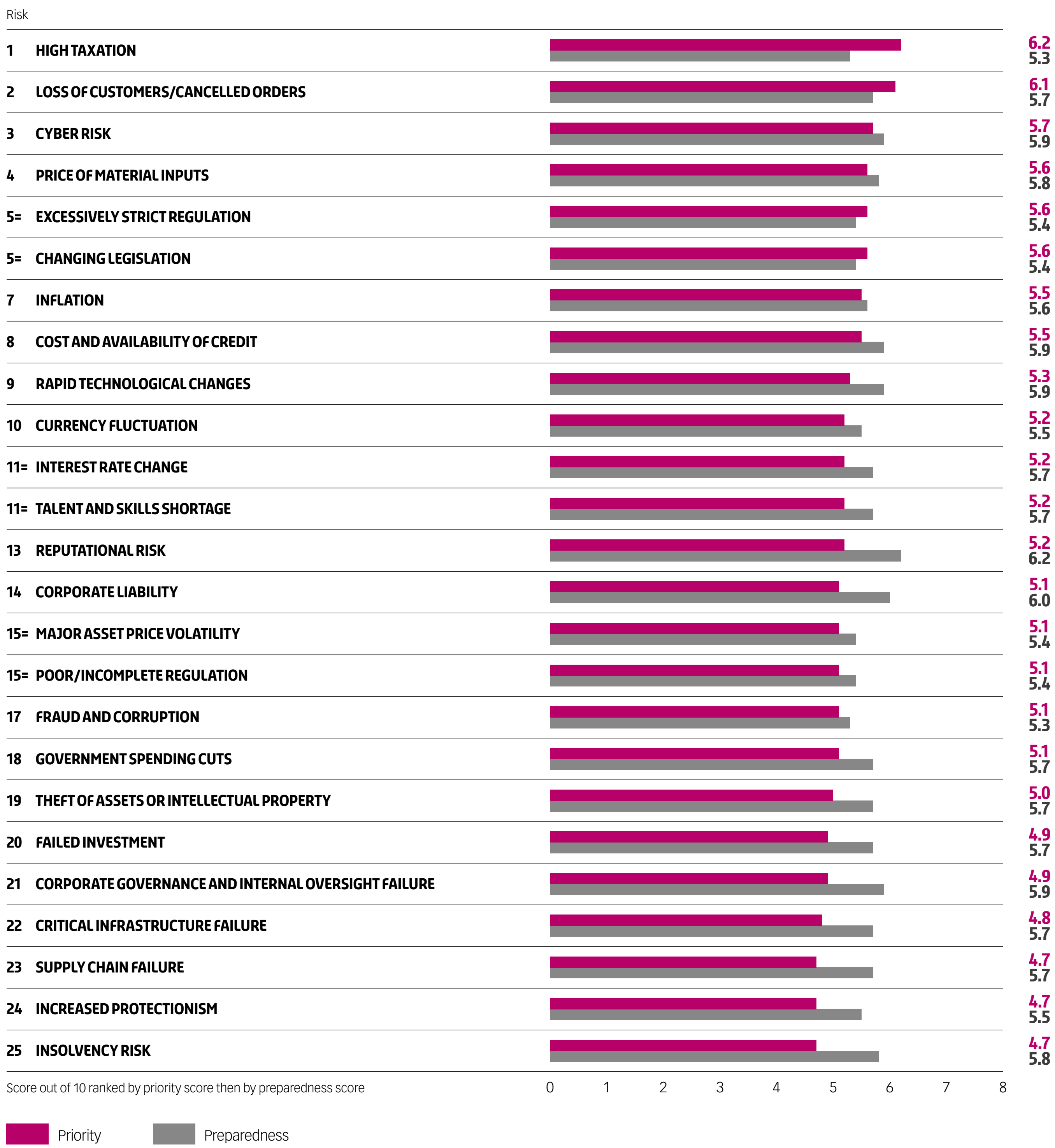

Table 1

**OVERALL RISK CATEGORIES – 2013 VERSUS 2011**

| 2013 PRIORITY RANK | OVERALL RISK CATEGORIES – 2013 VERSUS 2011 | 2013 PRIORITY SCORE | 2013 PREPAREDNESS SCORE | 2011 Priority Score | 2011 Preparedness Score |
|---|---|---|---|---|---|
| 1 | BUSINESS AND STRATEGIC RISK | 6.5 | 6.3 | 7.3 | 7.1 |
| 2 | ECONOMIC, REGULATORY AND MARKET RISK | 6.3 | 6.5 | 7.2 | 6.5 |
| 3 | POLITICAL, CRIME AND SECURITY RISK | 5.2 | 6.0 | 5.4 | 6.5 |
| 4 | ENVIRONMENTAL AND HEALTH RISK | 4.8 | 5.8 | 5.0 | 6.1 |
| 5 | NATURAL HAZARD RISK | 4.1 | 5.5 | 4.2 | 5.5 |

Chart 2

## INDIVIDUAL RISKS, PRIORITY AND PREPAREDNESS SCORES 2013



# EXECUTIVE SUMMARY
## CONTINUED

Chart 2 continued

### INDIVIDUAL RISKS, PRIORITY AND PREPAREDNESS SCORES 2013

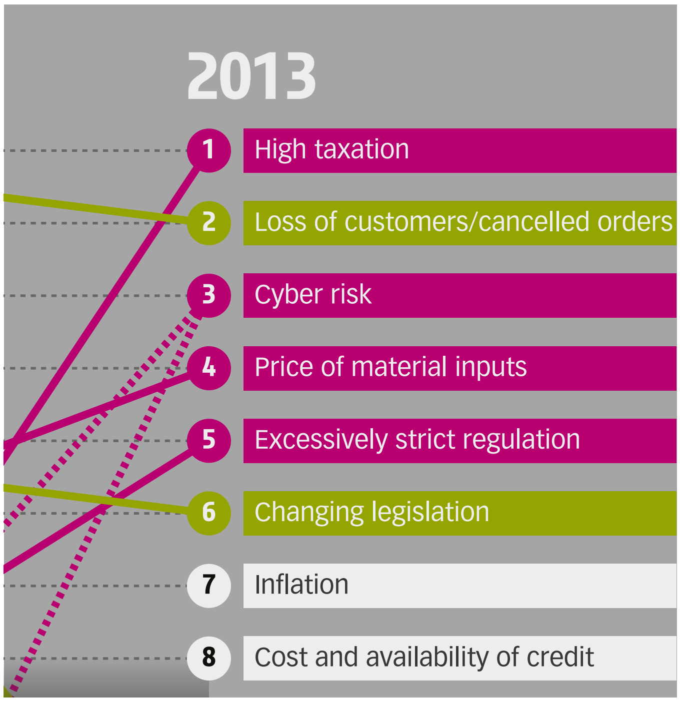
| Risk | | Priority | Preparedness |
|---|---|---|---|
| 26 | ENERGY SECURITY | 4.7 | 5.5 |
| 27 | DEMOGRAPHIC SHIFT | 4.5 | 5.2 |
| 28 | INDUSTRIAL/WORKPLACE ACCIDENT | 4.5 | 5.8 |
| 29 | POLLUTION AND ENVIRONMENTAL LIABILITY | 4.4 | 5.4 |
| 30 | SOVEREIGN DEBT | 4.4 | 5.3 |
| 31 | PIRACY | 4.2 | 5.4 |
| 32 | CLIMATE CHANGE | 4.2 | 4.9 |
| 33 | WATER SCARCITY | 4.2 | 4.8 |
| 34 | STRIKES AND INDUSTRIAL ACTION | 4.2 | 5.5 |
| 35 | POPULATION GROWTH | 4.1 | 5.3 |
| 36 | EXPROPRIATION OF ASSETS | 4.1 | 5.2 |
| 37 | URBANISATION | 4.1 | 5.1 |
| 38 | FOOD SECURITY | 4.0 | 5.0 |
| 39 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 3.9 | 4.8 |
| 40 | PANDEMIC | 3.8 | 4.4 |
| 41= | ABRUPT REGIME CHANGE | 3.6 | 4.9 |
| 41= | RIOTS AND CIVIL COMMOTION | 3.6 | 4.9 |
| 41= | FLOODING | 3.6 | 4.9 |
| 44 | TERRORISM | 3.6 | 4.5 |
| 45 | WINDSTORM | 3.5 | 4.6 |
| 46 | DROUGHT | 3.4 | 4.6 |
| 47 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 3.2 | 4.5 |
| 48 | EARTHQUAKE | 3.0 | 4.4 |
| 49 | IMPACT OF SPACE WEATHER | 2.9 | 4.2 |
| 50 | VOLCANIC ERUPTION | 2.2 | 4.0 |

Score out of 10 ranked by priority score then by preparedness score

0 1 2 3 4 5 6 7 8

Priority Preparedness

01




# THE TOP FIVE RISKS

# THE TOP FIVE RISKS

## 1. HIGH TAXATION – WHERE ETHICS AND ECONOMICS MEET

Since 2011, the perception of how – and where – global corporations pay their taxes has become an issue of corporate ethics as much as economics.

From the US Senate's investigations into Microsoft and Apple to the grilling given to Google, Starbucks and Amazon by the UK's Public Accounts Committee, the past two years have seen perceptions of corporate tax avoidance become reputational poison.

In the past two years, perception of the issue has changed from that of a domestic problem to one requiring global action. One outcome of the G20 finance ministers' meeting in Moscow in February 2013 was a joint communiqué pledging joined-up action to crack down on tax avoidance by multinationals. More recently, David Cameron issued a letter to all of the UK's overseas territories urging greater transparency on company ownership for tax purposes.

In 2011, the risk of high taxation was one which respondents ranked reasonably highly at 13 out of 50. However, it was also one for which they ranked their preparedness to deal with the risk (5.5) as slightly higher than its priority (5.2). In 2013, this has changed. The risk of high taxation is now the overall biggest risk facing businesses, nudging 'loss of customers/cancelled orders' off the top spot it held in 2011.

High taxation as a major risk proves consistent across all business types, whether they are in established or fast growing markets and above or below the $500 million threshold. Indeed, the greatest movement in this risk is seen in smaller companies in fast growing markets which in 2013 put this risk at number two, up 16 places since 2011. Interestingly, US businesses feel even more unprepared to deal with this risk than their counterparts in Europe. While both regions put high taxation as their number one risk, US respondents rank their preparedness at number 37= out of 50, compared to European respondents at 21=.

While large multinationals can, in theory, domicile themselves for tax purposes wherever international tax jurisdictions are most favourable, this is likely to be less of an option for smaller businesses. For them, the sooner any moves towards harmonising global tax regulation bear fruit, the more swiftly they can start operating from a level playing field.

The mood music for corporate taxation has clearly got louder since 2011, but does the increase in volume reflect the reality? KPMG's corporate tax rate table[1] shows that, in fact, not only have corporate income taxes not risen in the past few years, they have actually been either downward or static – despite the financial problems of most major economies. Global corporate tax rates in Asia have declined from an average of 23.1% in 2011 to 22.4% in 2013, in Europe from 20.9% to 20.7% and in North America from 34% to 33%. Globally, the average has fallen from 24.5% in 2011 to 24.1% today.

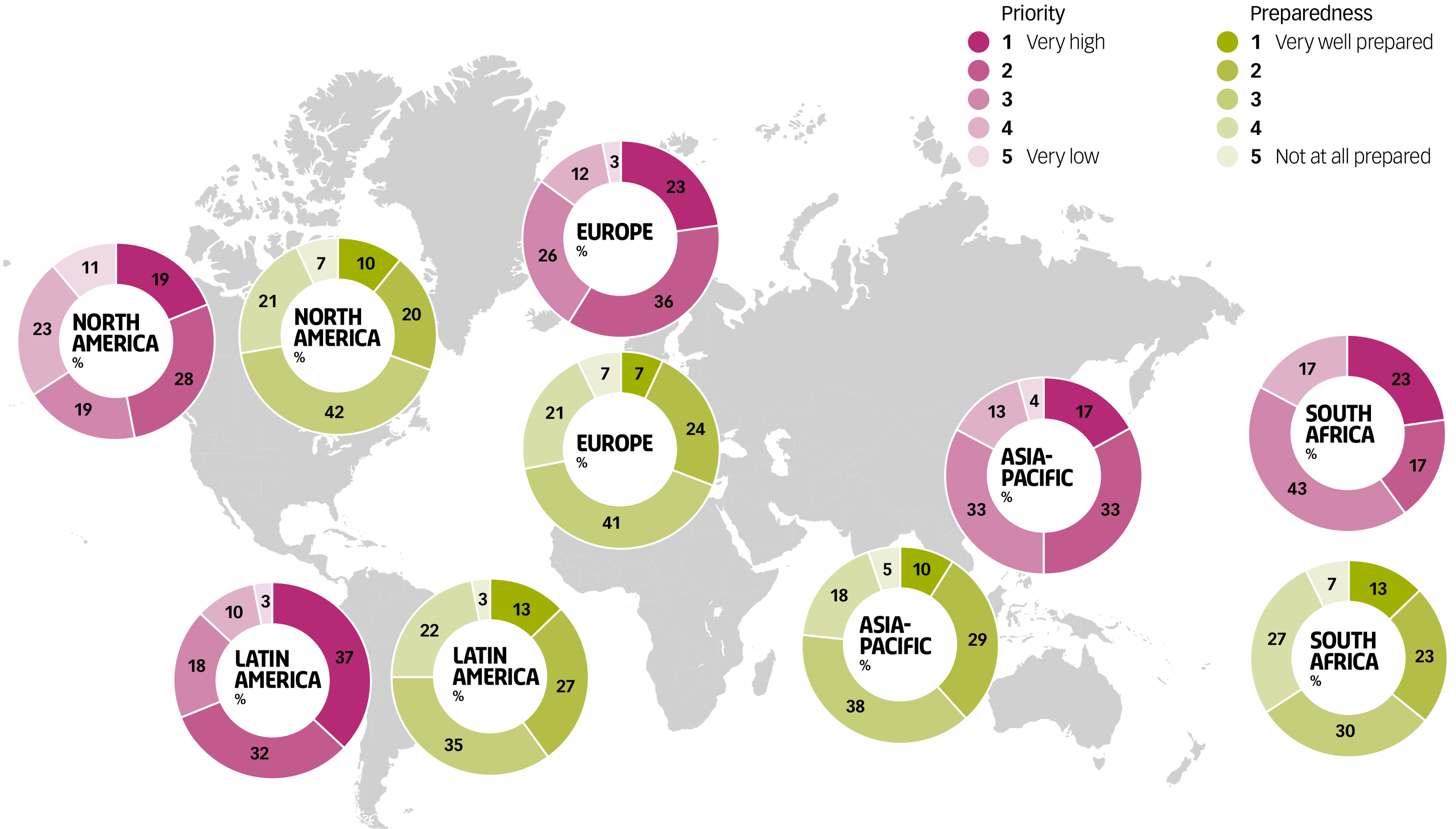
But while corporate tax rates may have been falling, personal tax rates in some economies, including France, Spain, Israel and Egypt, have shown an upward trend during this period. These particularly affect global businesses competing for international talent, adding another layer to tax considerations when assessing the potential attractiveness of locations and employee costs.

On the increase, too, are indirect taxes. As governments try to ensure their corporate tax regimes remain competitive they tend to shift towards consumption taxes in an effort to maintain revenues. These, in turn, may depress demand in economies struggling with consumer confidence.

The reality for businesses appears to be that government ambiguity about business taxes, whether about extending jurisdictions, amending legislation or changing rates, may actually be more damaging for business confidence than the reality. With the public spotlight increasingly on corporate taxes, the sooner governments provide clarity of intent, the better it may be for business.

Chart 3

**HIGH TAXATION – PRIORITY AND PREPAREDNESS BY REGION**



# THE TOP FIVE RISKS CONTINUED

## 2. LOSS OF CUSTOMERS – BELT-TIGHTENING BECOMES A GLOBAL PHENOMENON

Apart from the small number of the super-rich in the market for a Mayfair apartment or a Maserati, entrenched global austerity has fundamentally changed the pattern of consumption – and not only in developed economies.

In virtually every region of the world, business leaders feel they are underprepared to deal with the fundamental risk that too few consumers are willing or able to buy their products. Latin America, perhaps reflecting the suddenness of its GDP downgrades, shows the highest gap between priority at 7.7 and preparedness at 6.3, followed closely by Europe with a priority score of 6.4 and a preparedness score of 5.4. Asia-Pacific business leaders show a rough equivalence between priority and preparedness at 6.0 and 5.9 respectively.

Interestingly, only the US entirely bucks the trend, feeling marginally more prepared for the risk than the priority given to the risk itself. It may be that the hat trick of the recent avoidance of the 'fiscal cliff', massive state stimulus and steadily improving employment figures are starting to influence consumer confidence.

Overall, however, belief in a two-speed recovery has been put to the test and found wanting. In 2011, when the risk of losing customers and having orders cancelled took the number one priority slot, many Western pundits were putting their faith in the growing levels of demand for goods and services from the accelerating economies of China, India and Latin America.

Two years ago, GDP forecasts largely bore out this optimism. The International Monetary Fund's (IMF) World Economic Outlook[2] in April 2011 predicted GDP growth for the year at 9.6% for China, 8.2% for India, 4.6% for Mexico and 4.5% for Brazil.

The reality proved somewhat different. While China had a strong 2011 with 9.2% GDP growth, India managed 7.2%, Mexico 4% and Brazil just 2.7%. The predicted 'two-speed recovery' was stalling. 2012 saw this downward trajectory continue, as the impact of the West's lack of demand was finally felt by fast growing economies.

Projections for these economies in 2013 are much less buoyant. The IMF estimates that China will grow by 8%, India by 5.7%, Mexico by 3.4% and Brazil by 3%. In April 2013, the World Trade Organisation followed suit, revising its estimate for global trade growth in 2013 downwards to 3.3% from its earlier forecast of 4.5%. The findings for Latin America, in particular, show a significant drop in confidence about continued consumer spending.

It seems clear that global economic recovery will be a much more gradual process than was envisaged in 2011. In a globalised world, market insecurity about the sustainability of the Eurozone or the latest US employment figures will eventually make their way to high-growth economies, as these results have started to reflect.

However, it is still in these fast growing economies that the impetus for global recovery remains. Businesses need to seek out the niche markets, research the relevance of their products for hard-pressed consumers and – more than ever – actively manage the risks under their control to make sure they are well placed to meet the renaissance in consumer demand when it finally arrives. As challenging economic times look set to continue, sustainability is proving more important than ever to survival.

# 3. THE WORLD CATCHES UP WITH CYBER RISK

Given the well-documented frequency of cyber breaches, the relatively low weighting given to cyber risk in both the 2009 and the 2011 Risk Indices suggested too many businesses were underestimating its impact.

Not any more. Cyber risk has moved from position 12 (malicious) and 19 (non-malicious) in 2011 to the world's number three risk overall. What has effected this change? One development may be that the perception of what motivates cyber attacks is evolving: from financial crime to political and ideological attacks. 2012 saw the takedown of the Interpol, CIA and Boeing websites, the suspension of alternative currency Bitcoin's trading floor, the mass theft of passwords from professional networking site LinkedIn, the outage of the websites of six major US banks and many more.

The number of incidents attributed to state-sponsored hacking and revenge attacks by 'hacktivist' networks is growing. So, too, are the costs of cyber breaches. A 2012 study by the Ponemon Institute[3] found that the average annualised cost for 56 benchmarked organisations was US$8.9 million a year, up from US$8.4 million in 2011, with a range from US$1.4 million to a staggering US$46 million per year, per company. The most costly cybercrimes involved malicious code, denial of service and web-based attacks.

It appears that businesses across the world have encountered a partial reality check about the degree of cyber risk. Their sense of preparedness to deal with the level of risk, however, still appears remarkably complacent. Against all the evidence of the past two years, businesses believe they are slightly more able to deal with the risk, with an overall preparedness score of 5.9, against the priority given to the risk itself at 5.7. In 2011, the US was the only world region where the cyber threat made it into the top five; by 2013, this is now the region's number two risk. And yet US businesses still score their preparedness (at 5.4) at a higher rate than the risk itself (at 5.1).

The EU's Digital Agenda Commissioner, Neelie Kroes, has pointed out: "Cyber security is too important to leave to chance, to the goodwill of individual companies", and many governments have been progressing the issue over the past two years. In May 2013, Republican and Democrat senators came together in a rare agreement to propose the Deter Cyber Theft Act[4] to halt the theft of valuable commercial data from US companies by foreign firms and governments. The European Commission, meanwhile, is considering proposals to ensure companies that store data on the internet report the loss or theft of personal information or face sanctions.

And yet in terms of event frequency, most businesses would be wise to look closer to home for solutions. According to a report published in April 2013 by the Insurance Information Institute,[5] employee negligence is responsible for 39% of data breaches, system glitches for 24% and malicious or criminal attacks for only 37%. That leaves nearly two-thirds of incidents caused by issues which should reasonably be within a business' control.

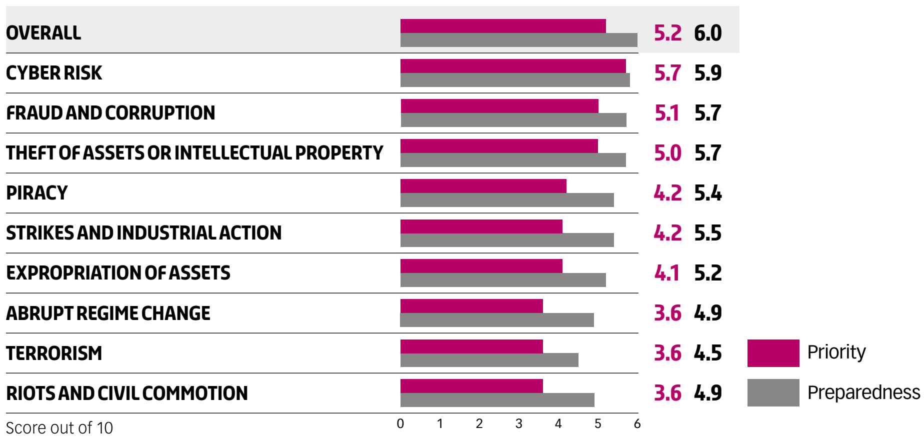
As in 2011, we must ask again if, despite their escalating spend on cyber security, businesses are actually spending money on the right things? Cyber insurance specialists are offering increasingly integrated cyber products, including those that provide cover for data breach costs, forensic analysis and crisis public relations services in one package. While these products are highly effective in an emergency, spending money upfront on risk management – and ensuring recommendations are implemented throughout a company – might go a long way to preventing a cyber disaster before it starts.

# THE TOP FIVE RISKS
## CONTINUED

### CYBER RISK IS TOP OF THE AGENDA FOR OVERALL POLITICAL, CRIME AND SECURITY RISK

Chart 4

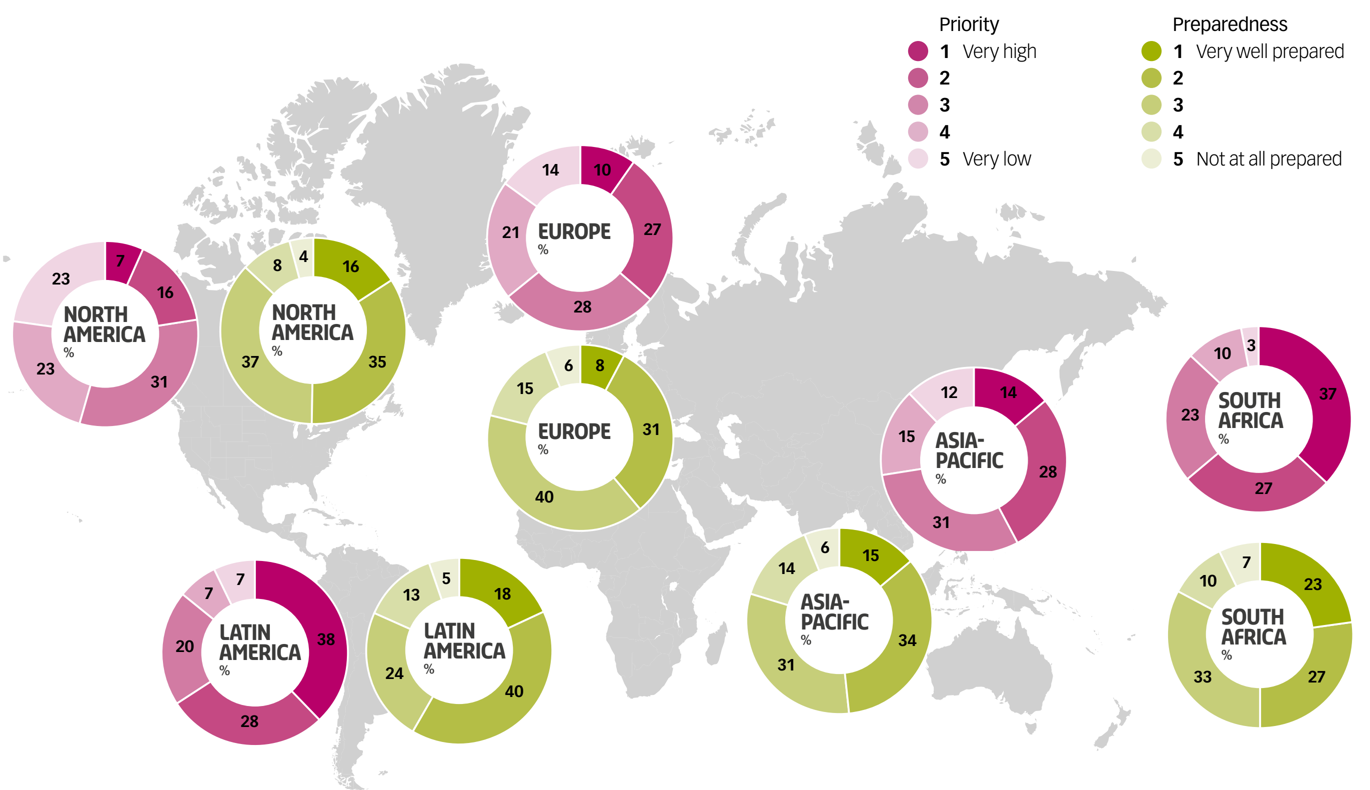
**POLITICAL, CRIME AND SECURITY RISK – PRIORITY AND PREPAREDNESS SCORES**




> "The perception of what motivates cyber attacks is evolving: from financial crime to political and ideological attacks."

Chart 5

**POLITICAL, CRIME AND SECURITY RISK – PRIORITY AND PREPAREDNESS BY REGION**



# 4. PRICE OF MATERIAL INPUTS

From agriculture to manufacturing, pharmaceuticals to clothing, the cost of many raw materials is hitting companies' bottom lines across the world. As a result, the cost of material inputs as a risk to businesses has climbed from the number seven overall priority risk in 2011 to number four today.

With uncertainty over taxation and the impacts of economic slowdown outside the control of companies, finding ways to reduce input costs has become even more important. While some industry advisers advocate the shortened supply chain and cost benefits achievable with a vertical integration model[6] – akin to that adopted by the Carnegie Steel Company in the late 19th century – for most companies, taking control of everything from supply of raw material to final manufacture and distribution isn't an option.

Some inputs, of course, are costly because of their scarcity or concentration in one region. The stranglehold by some countries on geographically specific commodities, such as China's rare earth metals, is being challenged as more recently emerging economies start investigating their own resources. In May 2013, for example, Malawi announced the start of a US$20 million exploration project for gas and rare earth metals, and the Indian Government is responding to growing domestic pressure to increase extraction of its own natural resources.

It is in the field of energy, however, that the ownership of resources will likely have the highest impact on countries' economies and domestic businesses. The International Energy Agency's (IEA) 2012 World Energy Outlook[7] demonstrated how oil prices, at an all-time high, were contributing to the brake on the already-depressed global economy. The 2011 Fukushima nuclear disaster caused a retreat from nuclear power by some states, including Germany and Japan, and a resurgence in oil and gas production and imports in others. Natural gas prices in Europe were five times those in the US, while in Asia they were over eight times as high.

The IEA's outlook also shows how fast growing economies will steer energy markets over the next 20 years as the global demand for energy accelerates. In 2010, worldwide energy usage reached 12,380 Mtoe (Megatonne of oil equivalent). By 2035 the IEA estimates this will have risen by more than a third to 16,730 Mtoe. By then, Organisation for Economic Co-operation and Development (OECD) countries' share of demand will have fallen from around 45% to around 35%, with demand from India, China and the other non-OECD countries all rising. The IEA estimates that, by 2035, almost 90% of Middle Eastern oil will go to Asia.

Imminent concerns about 'peak oil' have been mitigated by the emergence of 'unconventional' gas and oil sources (eg tar sands and shale gas), particularly in the US and Canada. Critics of these methods argue this is making it easier for governments and businesses to stall investment in renewable energy sources, such as offshore, wind and solar.

In the West, calls for investment to develop future energy supplies are being stifled by the reluctance of cash-strapped governments and businesses alike to invest, a position helped by the current depressed business demand.

While timescales for global economic recovery grow more distant, the potential for a global energy crisis, with all its geopolitical and economic implications, is likely to only have been postponed.

## CASE STUDY: INDIA'S RESOURCES REVOLUTION MOVES NEARER

India is facing a perfect storm in terms of its natural resources, with infrastructure projects, economic acceleration and the growth of its middle classes all fuelling demand.

India's resource reserves, including bauxite, coal, chromium, diamonds and manganese, are in the global top ten and an important source of national income. Yet the pace of economic and infrastructure growth has left demand outstripping supply, resulting in a significant gap between the value of exports and imports – a gap of over US$85 billion in the most recently available figures.[8]

Red tape, inadequate infrastructure, state-wide bans on mining activity and the domination of the industry by the state have so far proved major barriers to realising the economic potential of natural resources. With around 90% of India's land still unexplored, major investment is needed to tap into these resources.

In the face of the import/export gap, the Indian Government is taking steps to encourage international investment in mining. In May 2013, the Mines and Mineral Development and Regulation Bill[9] was approved by Cabinet. Including provisions for reducing red tape, introducing competitive bidding for licences and a requirement for contributions towards a compensation fund for local people, the eventual Act should make untapping India's natural resources a significantly more attractive option for foreign investors and their local partners.

# THE TOP FIVE RISKS CONTINUED

## 5. EXCESSIVELY STRICT REGULATION

UK-domiciled financial services have been among the most vocal in warning about the impact of regulation proposed in the wake of the financial crash, but it's an anxiety shared by business leaders across the world. The risk of excessively strict regulation has moved from number ten position overall in 2011 to number five in 2013.

Yet the discrepancy in what has been proposed and what has actually been implemented is significant. In the US, for example, the 'Volcker rule' – at the time of announcement a hugely controversial ban on proprietary trading – was supposed to take effect in July 2012, but is still being drafted by the five separate US agencies responsible for it.[10] At the start of 2013, the US Government Accountability Office announced that fewer than half of the new rules called for by the 2010 Dodd-Frank Act had even been written. In Europe, the deadline for implementation of the Solvency II capital regime for insurers, originally scheduled for October 2012, continues to be extended. At the time of writing, no definite dates for its introduction have been agreed, despite the millions of euros spent by insurance companies and the Lloyd's market in preparing for its implementation.

The EU, led by Germany and France, continues to make the case for a European-wide 'Tobin tax' on financial transactions, while the UK Government remains bitterly opposed to such a move, arguing it would significantly disadvantage London markets. Regulatory protectionism is as much on the agenda today as it was in 2011.

While the media focus in Europe is largely on financial regulation, in other world regions regulatory pressure is increasingly targeting environmental risks. In March 2013, in a fairly damning report into Shell's activities in Alaska, the US Department of the Interior[11] required the company to submit a 'comprehensive and integrated operational plan' for all its future activities in the region. Among them are lessons for any company that relies on contractors for critical aspects of its operations. As the 2012 Lloyd's report, *Arctic Opening: Opportunity and Risk in the High North,*[12] explained, the Arctic region poses unique risks and challenges that sectors from energy to tourism need to manage if they are to make the most of the opportunities the region presents.

The focus on environmental protection is no longer primarily a 'Western' one. In China, public concerns about pollution are increasing. In February, the Ministry of Environmental Protection (MEP) and the China Insurance Regulatory Commission issued joint guidelines for a pilot of compulsory environmental pollution liability insurance for heavily polluting industries.[13] These include heavy metal producers and petrochemical companies. State approval for operations will increasingly become dependent on such insurance being in place.

Inadequate environmental regulation is challenging China's international operations. Faced with mounting criticism of its environmental record in Africa, where the Sino-African volume of trade reached nearly US$200 billion in 2012, China has produced *Guidelines for Environmental Protection in Foreign Investment and Co-operation* to hold Chinese companies responsible for their impacts overseas.[14] However, adoption remains voluntary and has so far met with limited success. More recently, China's Shuanghui International's move to buy US pork producer Smithfield Foods led to criticism that the potential fall in food safety standards would affect US consumers.[15]

Increasingly, however, the most pressing issue in many large developing markets is not a dearth of regulation but a lack of enforcement. The history and experience of traditional markets indicates that once public pressure and commercial growth reaches a critical mass, enforcement follows. Both domestic businesses and international companies operating in fast growing economies should not assume they will be able to continue to pollute with impunity in the years ahead.

Interestingly, businesses are also worried about the flip side of regulation; 'poor/incomplete regulation' has risen up the Risk Index from 20 in 2011 to 15= today. The consequences of those taking advantage of lax regulation over the last two years are well documented: from the European horsemeat scandal to Chinese melamine-laced baby milk to the Bangladesh Rana Plaza collapse which killed more than 1,000 people. It may be that companies are increasingly recognising that weak regulation can, in practice, be significantly worse for business than no regulation at all.

02

# THE EVOLUTION OF THE RISK RACE

# THE EVOLUTION OF THE RISK RACE

## SIZE – AND GEOGRAPHY – MATTERS

Just as economies evolve, so too do the risk management functions of their businesses. By 2013, a clear pattern is emerging from the findings of our Risk Indices over the past five years, as shown by the scatter charts opposite.

In 2009, with established 'Western' regions reeling from the immediate aftermath of the 2008 financial crash, the distribution of priority and preparedness scores was fairly evenly spread between companies regardless of their size or location.

By 2011, a pattern is emerging. Many of the strategic and economic risks facing larger companies, particularly in established markets, are starting to move higher up as businesses recognise they are a priority and put systems in place to mitigate them. The gap between the priority and preparedness scores against, for example, overall business and strategic risk (priority score: 7.3, preparedness score: 7.1) and overall economic, regulatory and market risks (priority score: 7.2, preparedness score: 6.5) shows that, despite widespread complacency about risks including cyber and cost and availability of credit, awareness of the 'preparedness gap' against key business risks is becoming keener in larger companies.

It is also in 2011 that the link between company size and company location becomes more explicit. The priorities given to risks by smaller companies in faster growing regions are on the rise, while their confidence about their preparedness is waning. This trend towards placing a higher priority score on risks is also shown by their larger peers. Additionally, a pattern is developing with companies in fast growing markets scoring both their business risks higher, and their preparedness to deal with them lower.

By 2013, this demarcation is even clearer. Companies under US$500 million in faster growing regions are moving towards the bottom right of the graph, where their priority scores are increasingly greater than their preparedness scores, while smaller companies in traditional markets are moving towards the bottom left, believing their preparedness is greater than the priority they give key risks.

Larger companies in fast growing regions are emulating the evolution of their counterparts in established markets, increasingly recognising the heightened priority of business risks and their relative lack of preparedness to deal with them. Larger companies in established markets, however, are moving increasingly towards a 'more prepared than prioritised' position. Having recognised their vulnerability to risk, it appears they have made it a priority and invested in more comprehensive risk transfer (insurance) and risk management (mitigation) measures. For example, both the status and influence of risk managers in larger companies in established markets have risen over the past five years.

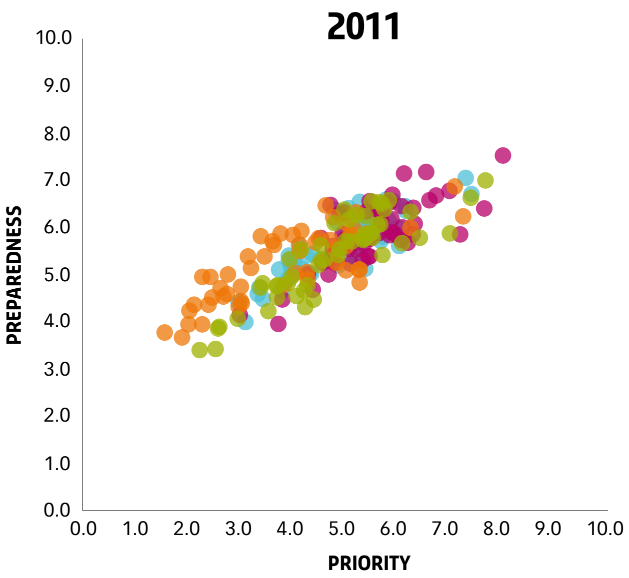
These companies appear to be the current leaders in the risk race – it will be interesting to see if larger companies in fast growing economies make the same journey in the next few years.

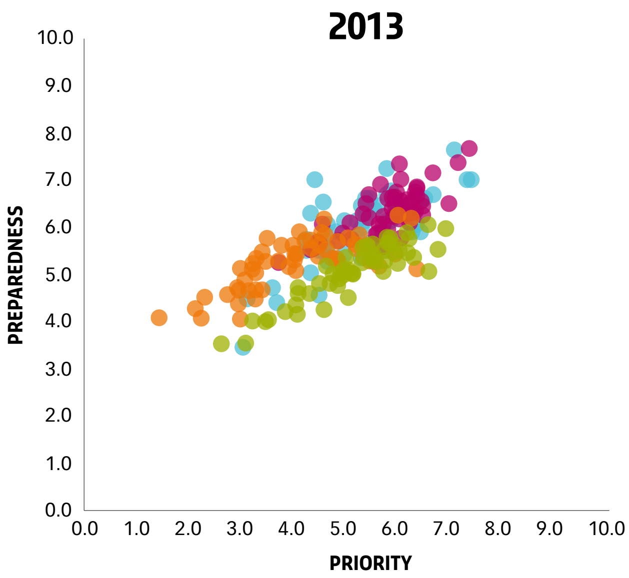
Chart 6

**THE LINK BETWEEN COMPANY SIZE AND COMPANY LOCATION**


The scatter charts visualise the relationship of preparedness against priority for the years 2009, 2011 and 2013. The individual bubbles represent the aggregated answers of interviewees grouped into four categories for all 50 risks. Over the years a clustering of these groups is emerging and a more proportioned preparedness towards risks.

- **OVER $500M IN ESTABLISHED MARKETS**
- **OVER $500M IN FASTER GROWING MARKETS**
- **$499M OR LESS IN ESTABLISHED MARKETS**
- **$499M OR LESS IN FASTER GROWING MARKETS**



# THE EVOLUTION OF THE RISK RACE CONTINUED

## REGULATION, RISK AND REPUTATION – CREATING A VIRTUOUS CYCLE

If the 2008 crash proved one thing about regulation, it was that it isn't always ideally the sole preserve of regulators, who may not always have the required depth of understanding of the sectors they regulate.

Systemic risk was finally recognised as an inherent part of financial services – and a wave of regulatory proposals followed. The Dodd-Frank Wall Street Reform and Consumer Protection Act in the US was followed by similar proposals in the EU, while the UK abolished the Financial Services Authority, giving the Bank of England much greater responsibility for prudential regulatory oversight.

Inherent risk has not, of course, been confined only to the financial services sector. Events from the Deepwater Horizon explosion to the well-publicised slew of cyber breaches affecting governments and companies alike highlighted the crucial role that identifying and managing risk needs to play in organisations today.

Deloitte's seventh Global Risk Management Survey,[16], updated towards the end of 2012, reveals the rise and rise of the Chief Risk Officer (CRO). In 2002, just 65% of institutions surveyed had CROs or their equivalent. By 2012 this had risen to 86%, 86% of whom reported to the board or CEO. In 2008, only 59% of companies surveyed had an enterprise risk management framework in place; in 2012 this figure was 79%.

The Deloitte survey also highlights how the culture of risk management at a senior level can influence the culture of an organisation as a whole. In the final analysis it points out: "An institution's risk profile can be defined by the sum total of business decisions taken every day by employees throughout the organisation."

Any organisation is only as strong as its weakest link, and those who support their CROs to deliver a business-wide risk management culture will find they have created a virtue out of necessity.

## THE REGIONALISATION OF THE TALENT CRUNCH

One of the most interesting findings from this year's Risk Index is the reduction in the overall priority given to the talent and skills shortage identified two years ago. In 2011, this risk suddenly rose from its 2009 mid-ranking of 22 to become the number two risk identified by global business leaders. In 2013, it has dropped ten places to number 11= overall. In Germany, for example, a traditional market that is weathering the economic slump much more successfully than its Eurozone partners, the risk has dropped from being business leaders' number 10 priority in 2011 to number 18 in 2013. But, as pointed out in the 2011 Risk Index, Germany is several years into its programme to support succession planning and transfers of businesses, as well as drawing in talent from southern European countries with high levels of unemployed graduates.

It may also be that in the intervening two years since the last Risk Index larger international companies have marshalled their resources to train and upskill key staff, or that an increasingly mobile stratum of senior executives are helping to fill gaps wherever they exist. The appointment of a Canadian as Governor of the Bank of England may, for example, be a reflection of the times. Alternatively, the rise of a talented pool of young specialists in hubs from India to Poland may have matured sufficiently to plug many of the technological and strategic gaps encountered by expanding global businesses.

For the highest-growth economies such as China, however, the lack of suitably skilled staff remains a serious threat to business. As the number one risk for Chinese business leaders in 2011, it has dropped just one place to joint-second in 2013. In Brazil, the risk was placed 13 by companies in 2011; it is now fourth. And yet for faster growing regions as a whole, the risk has dropped from its number one position in 2011 to number seven today – a possible reflection of the way in which the long tail of the global downturn has now reached previously booming economies, reducing the demand for skilled staff.

As swiftly as the talent and skills risk arrived in the Risk Index's Top Five, it has left it. It will be interesting to see where this key strategic risk appears in two years' time, as the forecasted change in economic growth from traditional to high-growth economies becomes further embedded.

## CASE STUDY: THE RISE OF SECOND-TIER CITIES

California's Silicon Valley, London's imitator 'Silicon Roundabout' and Kerala's Technopark all boast extremely high profiles as global centres for IT development. Yet, over the last few years, less-publicised 'second-tier' hubs have emerged as fledging contenders to these skilled software hothouses.

Katowice in Poland and Brno in the Czech Republic are two examples of smaller cities attracting investment due to their good universities, low costs and proximity to Europe's largest trade centres. Brno's population of just 400,000 includes 90,000 students in 13 universities and highly-skilled labour that is as much as 25% cheaper than in nearby Warsaw. Both IBM and Infosys have recently built office complexes in the city.

Today's global tech companies don't need to be based in one specific location, allowing them the freedom to invest wherever they can find a good source of software engineers. While first-tier cities may still be the preferred location for sales and service centres, when companies look for places to locate their production, setting up where the talent already exists can make sound recruitment sense.[17]

# 03

# THE RISKS LESS TRAVELLED

# THE RISKS LESS TRAVELLED

## CLIMATE CHANGE – FATIGUE OR FATALISM?

The priority scores respondents give to climate change as a risk have, like those for virtually all other risks, gone up fractionally since 2011, from 4.1 to 4.2. Overall this risk has moved up one place to 32.

According to the World Meteorological Organisation's (WMO) Statement on the Status of the Global Climate,[18] 2012 was the ninth warmest year since records began in 1850, continuing the warming trend begun in 2001. Europe experienced its warmest spring on record, followed by the wettest summer in the UK for 100 years. Drought characterised many regions: Northern Brazil experienced its worst drought in 50 years, while severe drought hit Russia and Siberia and two-thirds of the continental US was in drought by September. In September, Arctic sea ice shrank to its lowest ever recorded level and subsequently contracted 500,000 square kilometres.

Yet, with the sole exception of Latin America, business leaders from all other three major regions of the world continue to score their ability to deal with the risk of climate change more highly than the score they give the risk itself. This difference is most striking for North America, where businesses scored themselves at 5.2 for preparedness, against 3.0 for priority. Only in Latin America do business leaders appear to believe they are underprepared for the threat climate change poses.

In the face of more immediate economic and political risks, the public profile of climate change has declined; it does not dominate the front pages as it once did. Yet the problem itself remains and is likely to be getting worse.

The role of man-made carbon emissions in contributing to climate change is now widely accepted, with an increasing body of evidence that climate change is leading to more extreme weather events. The tensions between high polluting growth economies and low polluting nations which are disproportionately affected by the effects of climate change are unlikely to be resolved any time soon. In the face of a lack of coordinated action by global governments, companies may have to accept they are, for the time being, largely on their own when it comes to taking action to mitigate the ongoing effects of climate change on their businesses – looking at ways to manage its impact on their supply chains may well be a productive place to start.

The role of insurers in helping businesses and communities to mitigate and adapt to the effects of climate change is fundamental and the industry has a crucial role to play in helping customers to manage climate change risks.

At the launch of the Principles for Sustainable Insurance in 2012, Ban Ki-moon underlined the importance of this role: "For years, insurers have been at the forefront of the corporate world in alerting society to the risks of climate change and, more recently, threats such as the loss of biological diversity and the growing pressures on forests, freshwater and other essential ecosystems. Insurers are also increasingly recognizing the need to develop products and services that address the needs of a rapidly changing world, including inclusive insurance that caters to low-income communities, people with HIV/AIDS or disabilities, and ageing populations."[19]

Table 2

**ENVIRONMENTAL RISKS – 2013 VERSES 2011 RANKING**

| ENVIRONMENTAL RISKS | RANKING SHIFT | 2013 RANKING | 2011 Ranking |
|---|---|---|---|
| DEMOGRAPHIC SHIFT | ↑ | 27 | 30 |
| INDUSTRIAL/WORKPLACE ACCIDENT | ↓ | 28 | 27 |
| POLLUTION AND ENVIRONMENTAL LIABILITY | ↓ | 29 | 24 |
| CLIMATE CHANGE | - | 32 | 32 |
| WATER SCARCITY | ↑ | 33 | 35 |
| POPULATION GROWTH | ↑ | 35 | 38 |
| URBANISATION | - | 37 | 37 |
| FOOD SECURITY | ↑ | 38 | 40 |
| HARMFUL EFFECTS OF NEW TECHNOLOGY | ↑ | 39 | 41 |
| PANDEMIC | ↓ | 40 | 33 |

# THE RISKS LESS TRAVELLED
## CONTINUED

### NATURAL HAZARD – 'THE ABNORMAL IS NOW THE NEW NORMAL'

As in 2011, the priority companies give to natural hazard risks such as flooding, windstorms and drought, is low, and yet awareness of the threat they pose to business is growing. In 2013, 25% of respondents felt the potential impact of natural hazards was greater now than it was two years ago. As in 2011, the risk was felt most keenly by Asia-Pacific respondents, yet natural hazard risk still only ranked in the 40s and business leaders in the region still scored themselves as more prepared for the risk than the priority it posed. 2011 may have been the second costliest year for natural catastrophes for the insurance industry (and the costliest ever for Lloyd's), but in terms of human displacement, 2012 exceeded it. Data from the Internal Displacement Monitoring Centre[20] shows over 32 million people were displaced from their homes by disasters in 2012, double the number left homeless in 2011.

98% of 2012's disasters were weather related: 212,000 people were left homeless by monsoon flooding in North Korea, 530,000 displaced by floods in Niger, 3.5 million in China forced to leave their homes by storms and typhoons and more than 340,000 people displaced by floods in South Sudan. Between them, Superstorm Sandy in the US and Cuba and Super Typhoon Bopha in the Philippines displaced at least 1.1 million and killed at least 1,300 people. The UN Secretary General, Ban Ki-moon, summed up these events with the statement: "The danger signs are all around. The abnormal is now the new normal".[21]

Given the impacts of climate change, we are likely to see increasingly volatile weather patterns and more frequent severe weather events. In areas prone to natural catastrophes, risk mitigation, while important, may only go so far. As infrastructure and industry develop further, businesses and governments must give serious thought to ways in which risk transfer can be used to protect economic growth. The insurance industry needs to continue to provide products which mitigate the financial losses caused by natural hazards and help communities to recover.

This is a reality which too many businesses and governments in disasterprone countries are failing to address.

Towards the end of 2012, Lloyd's and the Centre for Economic and Business Research published the first ever *Lloyd's Global Underinsurance Report*[22] (see Table 4), which quantified the gap between the levels of insurance penetration in 42 countries at various stages of economic development and the annualised cost of natural catastrophes experienced by them. The research showed that 17 high-growth economies had, between them, an annualised US$168 billion insurance deficit, leaving them severely exposed to the long-term costs of catastrophes.

These losses, of course, will not remain static. The report revealed how the pace and extent of global economic development have increased the cost of catastrophes by US$870 billion in real terms since 1980. As fast growing economies develop their infrastructure, transport and industry, and increasing numbers of people live in cities, the impact of natural disasters, both in terms of loss of life and business costs, will inevitably increase.

How these countries chose to transfer their risk is significant. China, for example, which insured just 1.4% of losses from natural catastrophes between 2004 and 2011,'self-insured' losses of US$208 billion in that time; a cost effectively borne by taxpayers. Having analysed five major natural catastrophes, the research found that a one percentage point rise in insurance penetration can reduce the burden on the taxpayer by 22%. In areas prone to natural catastrophes, risk mitigation may only go so far; as infrastructure and industry develop further, businesses and governments will have to give serious thought to ways in which risk transfer can be used to protect economic growth.

Table 3

**NATURAL HAZARDS – PRIORITY AND PREPAREDNESS 2013 VERSUS 2011**

| OVERALL RISKS | 2013 PRIORITY SCORE | 2013 PREPAREDNESS SCORE | 2011 Priority Score | 2011 Preparedness Score |
|---|---|---|---|---|
| FLOODING | 3.6 | 4.9 | 3.6 | 5.2 |
| WINDSTORM | 3.5 | 4.6 | 3.2 | 4.5 |
| DROUGHT | 3.4 | 4.6 | 3.0 | 4.4 |
| THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 3.2 | 4.5 | 2.8 | 4.3 |
| EARTHQUAKE | 3.0 | 4.4 | 3.3 | 4.5 |
| IMPACT OF SPACE WEATHER | 2.9 | 4.2 | 2.6 | 3.8 |
| VOLCANIC ERUPTION | 2.2 | 4.0 | 2.4 | 4.0 |

Chart 7

## NATURAL HAZARDS – PRIORITY AND PREPAREDNESS BY REGION

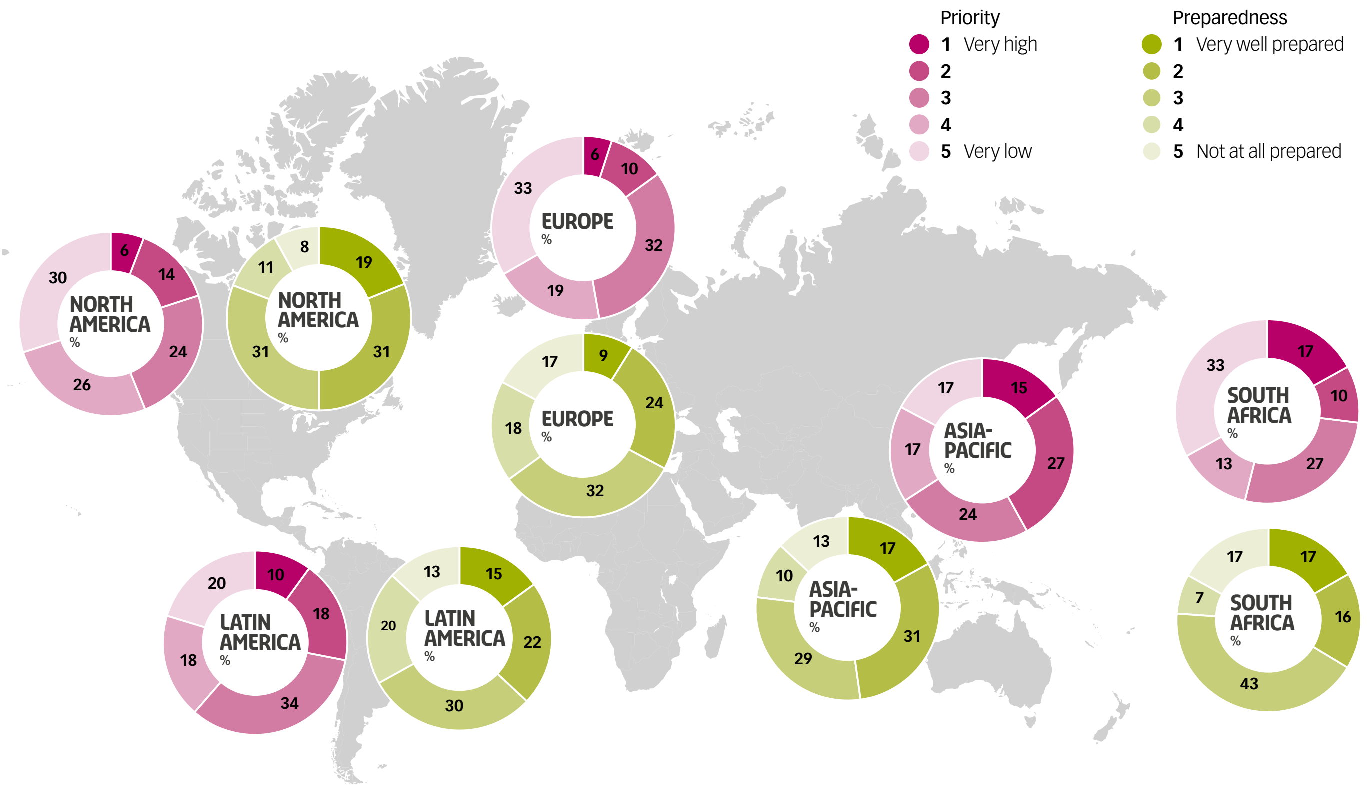
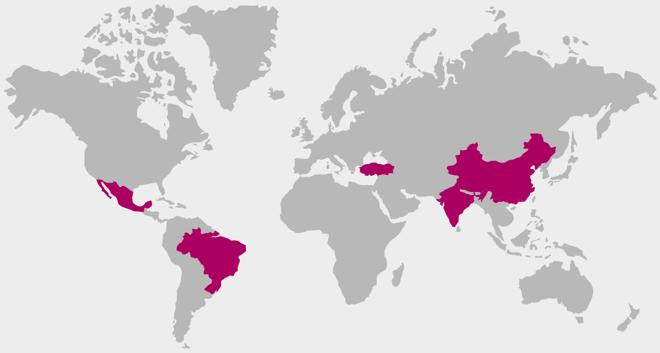



Table 4

## INSURANCE CLASSIFICATION OF COUNTRIES (2011) – LLOYD'S GLOBAL UNDERINSURANCE REPORT

| TIER 1 (BETTER INSURED) | | TIER 2 (MODERATELY INSURED) | | TIER 3 (UNDERINSURED) | |
|---|---|---|---|---|---|
| **COUNTRY** | **BENCHMARKED INSURANCE LEVEL** | **COUNTRY** | **BENCHMARKED INSURANCE LEVEL** | **COUNTRY** | **BENCHMARKED INSURANCE LEVEL** |
| NETHERLANDS | **8.01** | DENMARK | **1.36** | HONG KONG | **-0.03** |
| NEW ZEALAND | **3.05** | SPAIN | **1.05** | POLAND | **-0.15** |
| SOUTH KOREA | **2.55** | SOUTH AFRICA | **1.02** | COLOMBIA | **-0.17** |
| UNITED STATES | **2.53** | TAIWAN | **0.97** | THAILAND | **-0.41** |
| CANADA | **2.47** | IRELAND | **0.75** | BRAZIL | **-0.51** |
| GERMANY | **2.11** | ITALY | **0.62** | MEXICO | **-0.67** |
| AUSTRIA | **1.67** | ARGENTINA | **0.44** | SAUDI ARABIA | **-0.93** |
| UNITED KINGDOM | **1.60** | ISRAEL | **0.44** | CHILE | **-0.97** |
| AUSTRALIA | **1.39** | SWEDEN | **0.44** | CHINA | **-1.09** |
| | | JAPAN | **0.43** | NIGERIA | **-1.11** |
| | | FRANCE | **0.39** | INDIA | **-1.18** |
| | | RUSSIA | **0.34** | TURKEY | **-1.31** |
| | | NORWAY | **0.25** | EGYPT | **-1.36** |
| | | MALAYSIA | **0.15** | PHILIPPINES | **-1.36** |
| | | SINGAPORE | **0.08** | VIETNAM | **-1.38** |
| | | UAE | **0.08** | INDONESIA | **-1.67** |
| | | | | BANGLADESH | **-2.64** |

# 04



# THE VISION 2025 COUNTRIES – THEN AND NOW

# THE VISION 2025 COUNTRIES – THEN AND NOW

In May 2012, Lloyd's launched its new strategy to help the Lloyd's market take advantage of the opportunities presented by the world's fast growing economies – Vision 2025.[23] A detailed analysis of potential opportunities suggested that China, Brazil, Mexico, India and Turkey should be Lloyd's first priorities. In this section, we highlight the top five risk priorities identified by the business leaders surveyed in these countries and summarise the relevant findings from the Lloyd's Global Underinsurance Report for them.

## CHINA

### THEN

In 2011, China's economy grew by 9.2%. While this was enviable from the viewpoint of the beleaguered Eurozone and US economies, the figure already revealed the start of a slowdown – in 2010 the figure had been 10.4%. During this period of exceptionally high growth, the number one priority risk of Chinese business leaders was the talent and skills shortage. This was followed by currency fluctuation, as China was facing US-led global criticism for what was seen as its manipulation of the value of the renminbi,[24] which was likely to have informed its number three priority, major asset price volatility.

### NOW

In 2013, as the effects of China's relative economic slowdown take hold, the number one priority has become the price of material inputs. The risk to business posed by talent and skills shortages is still a major concern at number two, but one of the most significant changes in the entire 2013 Risk Index is found at number three – supply chain failure. This has moved an extraordinary 31 places up the list since 2011.

As exports have slowed, Chinese businesses have focused more on domestic markets for growth. Inconsistent regional distribution facilities, infrastructure and logistics have long posed problems for the internal Chinese market. Additionally, scandals – particularly food scandals – have heightened Chinese business awareness of the risks of weak or poorly controlled supply chains.

Finally, the impacts of natural catastrophes over the intervening two years have become even more explicit. In 2012, the extensive flooding between April and August and the impact of Typhoon Haikui between them affected over 27 million people in 2012, while so far 2013 has been characterised by further flooding, landslides and another earthquake in Sichuan Province.

The Lloyd's Global Underinsurance Report shows that China is severely underinsured against the costs of natural catastrophes, coming 34th out of the 42 countries analysed. Non-life insurance penetration in China as a percentage of GDP stands at 1.2%. While the average uninsured cost of catastrophe in China is US$18.91 billion, the gap for China in 2011 was a staggering US$79.57 billion. The implications of these figures indicate the scale of the challenges and opportunities facing domestic and international insurers alike (see Table 4).

# THE VISION 2025 COUNTRIES – THEN AND NOW CONTINUED

## BRAZIL

### THEN

The US was not the only country concerned with currency manipulation in 2011. It was also the number one risk identified by Brazilian business leaders. In September 2011, Brazil presented the World Trade Organisation (WTO) with proposals for WTO members to protect their industries from trade imbalances caused by currency fluctuations. This move came almost immediately after the Brazilian Government raised a tax on cars with a large ratio of imported parts following a surge in Chinese-made car imports.

The number two risk for Brazilian companies in 2011 was fraud and corruption. In the 2011 Transparency International Perception Index 2011, Brazil was ranked 73 out of 182 countries,[25] with the Federation of Industries of São Paulo estimating corruption costs Brazil between 1.4% and 2.3% of its GDP every year.[26]

The number three risk for Brazilian business leaders in 2011 was high taxation. Following the inflationary crises of the 1980s and the 1990s, Brazil prioritised the importance of fiscal stability and inflation control. Despite a reform agenda for personal and corporate tax, much remains unimplemented. As a result, Brazil has corporate tax rates which exceed those of the US, Japan and Canada.

### NOW

By 2013, with preparation for the forthcoming 2014 World Cup and 2016 Olympics offering global platforms to attract investment, the impact of high taxation has become the number one priority for Brazilian business leaders. With regional competition for exports and FDI heightened by the recent slowdown in Latin American growth, Brazil's GDP projections have suddenly slowed. Uncompetitive corporate tax rates have become the number one priority for Brazilian business leaders, just as they have for their peers in Europe.

As Brazil's growth story slows, the same fear which took first place overall in the 2011 Risk Index, is now being played out in Brazil – the risk of loss of customers and cancelled orders. In 2012, the Brazilian economy grew at its slowest in three years: by just 0.6%. Consumer spending, the driver of growth for many years, slowed right down and, just as in Europe, when consumers started prioritising debt repayment, which for Brazilian households takes around 20% of their income, the impact on consumption was inevitable.

The number three risk to Brazil's businesses in 2013 is critical infrastructure failure, up from 28= in 2011. This is clearly a fixed-time risk for Brazil; with more than US$60 billion of investment in rail, road and airport infrastructure to support the forthcoming World Cup and Olympics, Brazilian business has a lot riding on its successful completion. Given the recent concerns about the preparedness of the Maracana stadium and other facilities under construction, the risk of failing to capitalise on this dual opportunity clearly looms large for Brazilian businesses.

The Lloyd's Global Underinsurance Report shows that Brazil is significantly underinsured against the costs of natural catastrophes, coming 30th out of the 42 countries analysed. Non-life insurance penetration in Brazil as a percentage of GDP stands at 1.5% while the underinsurance gap for Brazil in 2011 was US$12.68 billion (see Table 4).

# MEXICO

## THEN

Mexico's 1995 financial crisis forced its government to first take over many of its national banks, and then sell them to foreign finance groups. In 2011, foreign ownership of the biggest banks, combined with Mexico's tortuous bankruptcy procedure, starved Mexican businesses of investment capital. At the same time, by witnessing the shrinking of their traditional US export market, business leaders were led to rank the cost and availability of credit as their joint-first priority, alongside currency fluctuation and excessively strict regulation.

In placing currency fluctuation so high, Mexican companies shared Brazilian anxiety about an uneven global playing field, but there were also domestic concerns. After the 1995 crisis, the government replaced its fixed exchange rate policy with a floating exchange rate regime, leading to a 50% devaluation of the peso. In 2011, the impact of quantitative easing in other parts of the world led to a fall in the value of the peso, reviving memories of this earlier plunge and fuelling concerns of inflation and rising consumer prices.

Excessively strict regulation was also a top priority. While successive governments since the 1980s have attempted to deliver political and economic structural reforms, particularly to reduce monopolies and encourage competition – much greater reform will be needed to encourage both domestic growth and FDI.

## NOW

GDP growth of 4% in 2012, growth slowed sharply in early 2013 and predictions for annual growth are around 3.4%. Yet the country's two-tier economy is becoming more entrenched, and the split between the relatively wealthy industrialised north and centre and the much poorer south is growing. This, combined with the slowdown in consumption from the US, is leading to concerns about the sustainability of Mexico's growth story – leading business leaders to put the risk of loss of customers and cancelled orders as their number one risk.

Mexican business leaders place cyber risk as their number two priority. A 2012 report from McAfee and the Security & Defence Agenda ranked Mexico at the bottom of the league table of those able to defend themselves against cyber attacks,[27] which many blame on the authorities prioritising the country's regional gang and drug problems and the absence of a specific legal framework for dealing with cyber crime.

However, it is the Mexican business community's third priority risk which is perhaps most unusual, as it brings an environmental risk into a regional top three – water scarcity. New solutions are being explored to enable Mexico to alleviate its water crisis, including rainwater harvesting and further changes to water permit laws. However, given the increasing demands for water from industry, agriculture and densely-packed and growing urban populations, this is a risk with serious implications for one of the world's highest-growth economies.

The Lloyd's Global Underinsurance Report shows that Mexico is significantly underinsured against the costs of natural catastrophes, coming 31st out of the 42 countries analysed. Non-life insurance penetration in Mexico as a percentage of GDP stands at 1.1%, while the underinsurance gap for Brazil in 2011 was US$7.78 billion (see Table 4).

## CASE STUDY: MEXICO'S WATER CRISIS – WHEN INFRASTRUCTURE ISN'T ENOUGH

Mexico has been battling its water scarcity problem for nearly a century. Work began in the 1930s to develop effective water storage and extend the reach of irrigation as the urban population boomed. Despite the lack of investment immediately following the economic crisis of the 1980s, by the early 1990s large volumes of water were being successfully extracted from aquifers to meet around 70% of industrial and agricultural needs.

Mexico's current water scarcity crisis is the result of a number of factors. While water is relatively plentiful in the south of the country, over three-quarters of the population live in the centre and north. Climate change has led to increasingly frequent droughts, while the complex infrastructure for transporting water from, for example, the Cutzamala dam system, is becoming redundant as surface water sources dry up and aquifers become depleted.

Water scarcity has the potential to exacerbate geo-political tensions in the region. The Treaty of Washington 1944 specifies the water quotas between Mexico and the US from the Colorado River Basin and the Bravo. In the early 1990s, drought left Mexico in 'water debt' to the US by 1.5 million acre-feet, a situation that only ended when unusually heavy rains arrived to fill the Rio Grande reservoirs.

# THE VISION 2025 COUNTRIES – THEN AND NOW
CONTINUED

## INDIA

### THEN

By November 2011, India's inflation rate had exceeded 9% for the 11th successive month, restricting the central bank's ability to keep interest rates on hold to protect India's economy from the global economic crisis. Given that other Asian nations were able to hold or cut interest rates, it's no surprise that the implications for India's global – and regional – competitiveness were reflected in Indian business leaders putting inflationary fears as their number one priority risk. This also explains their number two risk, loss of customers and cancelled orders, as inflation and high interest rates combined to depress demand, both domestically and internationally.

Despite India's young, increasingly educated population, business leaders in 2011 reported the lack of availability of talent and skills was their number three priority. Manpower's 2011 Talent Shortage Results disclosed that 67% of Indian employers reported difficulty in filling roles due to a lack of talent, up sharply from only 16% in 2010.[28] This may have been because, notwithstanding India's inflationary and interest rate woes, India's economy was still growing strongly at around 6%, and the scarcity of skilled employees in sectors such as tourism and construction was proving a visible brake on expansion.

### NOW

In 2013, as with other high-growth economies with strong manufacturing industries, such as China and Brazil, India's business leaders are feeling the pinch caused by the escalating cost of energy and many raw materials and the ongoing impact of currency devaluation – the cost of material inputs is their number one business risk.

2012 was a year of exceptional volatility for the rupee, a volatility which has continued into 2013 – reflected in currency fluctuation being the number two risk for Indian business leaders. During 2012 it fluctuated by over 18% to become one of the year's poorest performing currencies. While China has benefited from a devalued currency, India is a net importer, with products for export heavily reliant on imports of raw materials.

India's current insecurity about cyber risk is reflected in its number three position. In July 2012, northern India experienced its worst blackout ever. While the report into its cause, published just two weeks later, exonerated cyber breaches, some industry experts remained unconvinced. India's defence sites also came under attack from 'hacktivist' groups Anonymous and Hackers in Algeria in 2012 and, according to CERT-In, well over 14,000 Indian websites were hacked during the year. March 2013 saw the site of the military Defence Research and Development Organisation breached by suspected foreign state-sponsored hackers. The changing trend in hacking motivation in the last few years from publicity to financial gain and political attack has raised its priority both politically and commercially.

In response, in May 2013, India's Cabinet Committee on Security approved a National Cyber Security Policy to strengthen India's cyber security.[29] The policy is aimed at building domestic capacity for a secure computing infrastructure. It also acknowledges the need to create a skilled domestic cyber security workforce, rather than relying on externally sourced solutions. India has pledged to train tens of thousands of students as the future frontline against the commercial and political cyber threats the country faces.

The Lloyd's Global Underinsurance Report shows that India is severely underinsured against the costs of natural catastrophes, coming 36th out of the 42 countries analysed. Non-life insurance penetration in India as a percentage of GDP stands at 0.7%, while the underinsurance gap for India in 2011 was US$19.72 billion (see Table 4).

# TURKEY

*The 2013 Turkish data involved a low number of respondents, predominantly from the Istanbul area. The top three priority findings should not therefore automatically be assumed to be an accurate reflection of the risk priorities of Turkish business leaders as a whole. As the sample for the 2011 Risk Index was even lower, we have decided not to compare the 2013 findings with those from 2011. Fieldwork for Turkey was completed in May 2013, before the protests against the government began.*

Istanbul sits 20 kilometres north of the North Anatolian fault line. In 1999, an earthquake hit the Marmara region, 45 miles from Istanbul. It killed 17,000 people and injured a further 27,000. In the aftermath, Turkey's GDP dropped by 6.1%.

Seismologists state that earthquakes have historically moved west along the fault line, slowly moving closer to Istanbul. The question being asked about the next major earthquake is not if, but when? Around 93% of Turkey, 70% of its population and 75% of its industrial facilities are exposed to large-scale earthquakes – moving to a less-earthquake prone area is not an option. It is these exceptional natural circumstances which have led to earthquakes being identified as the number one business risk in our sample of respondents.

Before the Marmara earthquake, take-up of residential earthquake insurance was relatively low: around 3% of residential buildings. In the aftermath of Marmara, the Turkish Government, with assistance from the World Bank, introduced a compulsory earthquake insurance for all registered buildings on registered land in urban areas via the Turkish Catastrophe Insurance Pool (TCIP). The TCIP private-public partnership has enabled the growth of Turkey's catastrophe insurance market: in 1999, 600,000 earthquake policies were sold; by 2010 that number had risen to 3.5 million. While this take-up is encouraging, it is likely to take time before deeper insurance penetration is achieved. The aftermath of the earthquake that struck in October 2011 revealed that only 9% of building owners were insured, despite the mandatory requirement.

The Turkish Government is now investing heavily in disaster risk reduction, without which both insurance and reinsurance are unaffordable for most. A Natural Disaster Law has been enacted, allowing the government to survey, draft and implement renovation of any area under threat of natural disaster.[30] For Turkey, achieving adequate risk mitigation and transfer is effectively a race against time until the next major quake strikes (see Table 4).

The number two priority, rapid technological change, is understandable given the very high number of Turkish internet companies and the significant potential for growth as Turkey's young population take to the internet and social networking. Failing to spot the 'next big thing' has serious commercial consequences. Around 44% of Turks currently use the internet, up from 35% in 2000, and they make up Facebook's seventh biggest national users.[31] There is huge potential for growth and also a high level of competition, from domestic start-ups, smaller foreign companies and the major international players.

While Turkey has so far had relatively few entrepreneurs willing to put money into start-ups and new technologies, the first generation of founders are now starting to invest. The government, too, is starting to respond to the challenge, making grants available to new companies investing in research and marketing, and announcing tax breaks for 'angel investors'.

It's interesting that despite the prioritisation of rapid technological change as a business risk, the same respondents put cyber risk halfway down the entire list of threats, at 25. Given how swiftly cyber threats are evolving to exploit rapidly changing technology, Turkish respondents will find that the latter rarely escape the predations of the former.

More widely, Turkey is still playing catch-up in terms of domestic technological expertise. While it ranks first in the world in terms of the highest growth rate in wind energy plants, for example, only 15% of its potential has so far been realised. Developments in transportation, telecommunications and energy are accelerating and proving attractive to international companies. Keeping up with the pace of technological change is an inevitable challenge for domestic businesses.

# THE VISION 2025 COUNTRIES – THEN AND NOW
CONTINUED

## TURKEY
CONTINUED

While Turkey's young population may be the envy of ageing European countries such as Germany, the implications of demographic change are clearly being felt by our sample who ranked it as their number three business risk. The high birth rate, which has declined only since 2005, has created a young and growing population which is placing pressure on state finances and urban infrastructure and presents a challenge to the state in terms of providing adequate jobs. Low wages and underdeveloped rural areas, where nearly a quarter of the population work in agriculture, are driving more young people to the cities, adding to pressure on housing and education provision. While Turkey's overall unemployment rate stood at just over 9% at the start of 2013, its youth unemployment rate reached over 20% in May. According to the OECD's May 2013 list, Turkey came fourth in the list of the ten most unproductive countries in Western Europe.[32]

Countries all over Europe are recognising the dangers a 'lost generation' of young unemployed present to social stability and future economic prosperity. For a country with the largest youth demographic in Europe, these dangers can only be amplified.

# CONCLUSION – A GAME OF TWO HALVES

> The sophistication of companies' risk management function is evolving over time depending on their size, location and stage of economic development.

The past two years have not only failed to provide the 'two-speed' recovery predicted by many economists in 2011, they have also put a brake on the expansion of the higher growth economies which were supposed to save the day.

The findings show a clear effect on the attitude of business leaders to these events. There is now a sense that their companies may have come to the limit of organisational preparedness in the face of what is now a global slowdown, rather than a tale of the 'West and the rest' which was being told in 2011. Yet while there has been a drop of more than a quarter in those reporting that they feel better prepared than they did two years ago, the preparedness scores for many risks still show a questionable level of realism. Despite the significant overall rise in the priority given to cyber risk, for example, the fact that business' overall preparedness score is higher than the priority implies a level of complacency unmatched by the acts.

In the longer term, however, perhaps the most fascinating reflection in this year's Risk Index is how the sophistication of companies' risk management function is evolving over time depending on their size, location and stage of economic development. If larger companies in faster growing economies follow the pattern of their peers in established markets in seeking risk management and risk transfer solutions, the market for those providing them is set to grow significantly. For smaller companies in these markets, even less prepared, the next few years may prove critical.

Businesses providing the expertise, capacity and products to support companies in higher growth economies, including international insurance markets, need to recognise the opportunities available and plan accordingly. The future of global economic power is shifting before their eyes. If they fail to capitalise on these expanding markets now, they will miss the opportunities – the urgency of risk management in fast growing countries cannot be postponed. Given how swiftly the risk management landscape has changed for businesses in traditional markets in the five years since the first Risk Index was published in 2009, these are challenges which the insurance industry needs to meet now.

# APPENDIX 1

## RISKS CHANGED FROM 2011 SURVEY AND RISKS INCLUDED IN 2013 SURVEY

The 2011 risk definitions 'cyber attacks (malicious)' and 'cyber attacks (non malicious)' combined and became 'cyber risk' in the 2013 survey. The risk 'Corporate governance and internal oversight failure' was added to the 2013 survey.

## ESTABLISHED AND FAST-GROWING TERMINOLOGY

'Established' markets refer to those markets in North America and Europe:

> USA
> Canada
> UK
> France
> Germany
> Italy
> Spain
> Turkey

Faster growing markets refer to all other regions:

> China
> India
> Australia
> Singapore
> Japan
> Mexico
> Brazil
> South Africa

## RESULTS FROM EARLIER RISK INDICES RANKED IN ORDER OF THEIR PRIORITY AT THAT TIME.

### 2013 RISKS

1 High taxation
2 Loss of customers/cancelled orders
3 Cyber risk
4 Price of material inputs
5 Excessively strict regulation
6 Changing legislation
7 Inflation
8 Cost and availability of credit
9 Rapid technological changes
10 Currency fluctuation
11 Interest rate change
12 Talent and skills shortage
13 Reputational risk
14 Corporate liability
15 Major asset price volatility
16 Poor/incomplete regulation
17 Government spending cuts
18 Fraud and corruption
19 Theft of assets/Intellectual Property
20 Failed investment
21 Corporate governance and internal oversight failure
22 Critical infrastructure failure
23 Supply chain failure
24 Increased protectionism
25 Insolvency risk
26 Energy security
27 Demographic shift
28 Industrial/workplace accident
29 Pollution and environmental liability
30 Sovereign debt
31 Piracy
32 Climate change
33 Water scarcity
34 Strikes and industrial action
35 Population growth
36 Expropriation of assets
37 Urbanisation
38 Food security
39 Harmful effects of new technology
40 Pandemic
41 Abrupt regime change
42 Terrorism
43 Riots and civil commotion
44 Flooding
45 Windstorm
46 Drought
47 Threats to biodiversity and conservation affecting our operations
48 Earthquake
49 Impact of space weather
50 Volcanic eruption

### 2011 RISKS

1 Loss of customers/Cancelled orders
2 Talent and skills shortages (including succession risk)
3 Reputational risk
4 Currency fluctuation
5 Changing legislation
6 Cost and availability of credit
7 Price of material inputs
8 Inflation
9 Corporate liability
10 Excessively strict regulation
11 Rapid technological changes
12 Cyber attacks (malicious)
13 High taxation
14 Failed investment
15 Major asset price volatility
16 Theft of assets/Intellectual Property
17 Fraud and corruption
18 Interest rate change
19 Cyber risks (non-malicious)
20 Poor/Incomplete regulation
21 Critical infrastructure failure
22 Government spending cuts
23 Supply chain failure
24 Pollution and environmental liability
25 Sovereign debt
26 Increased protectionism
27 Industrial/workplace accident
28 Energy security
29 Insolvency risk
30 Demographic shift (eg ageing population, youth emigration)
31 Strikes and industrial action
32 Climate change
33 Pandemic
34 Piracy
35 Water scarcity
36 Terrorism
37 Urbanisation
38 Population growth
39 Riots and civil commotion
40 Food security
41 Harmful effects of new technology
42 Flooding
43 Expropriation of assets
44 Earthquake (including tsunami)
45 Abrupt regime change
46 Windstorm (eg hurricane, cyclone, typhoon)
47 Drought
48 Threats to biodiversity
49 Impact of space weather (eg solar flares)
50 Volcanic eruption (including ash)

### 2009 RISKS

1 Cost and availability of credit
2 Currency fluctuation
3 Insolvency risk
4 Loss of customers
5 Major asset price volatility
6 Cancelled orders
7 Risk of excessively strict regulation
8 Corporate liability
9 Reputational risk
10 Project delivery risk
11 Abrupt interest rate change
12 Risk of poor/Incomplete regulation
13 Increasing protectionism
14 Failed investment
15 Fraud and corruption
16 Information security breach
17 Price of material inputs
18 Theft of assets/Intellectual property
19 Rapid technological change
20 Cyber attacks
21 Workforce health
22 Talent and skills shortages
23 Supply chain failure
24 Succession risk
25 Industrial/workplace accident
26 Energy security
27 Piracy
28 Strikes
29 Pollution (caused by business)
30 Flooding
31 Terrorism
32 Currency inconvertibility
33 Climate change (impact on business)
34 Pandemic
35 Expropriation of assets
36 Earthquake
37 Drought
38 Riots and civil commotion
39 Windstorm (eg hurricane or typhoon)
40 Abrupt regime change
41 Wildlife

# APPENDIX 2

## TOP 50 PRIORITY RISK SCORES IN 2013 BY REGION

Chart 8

### TOP 50 PRIORITY RISK SCORES IN 2013 – ASIA-PACIFIC

| | Risk | Score out of 10 |
|---|---|---|
| 1 | PRICE OF MATERIAL INPUTS | 6.60 |
| 2 | HIGH TAXATION | 6.13 |
| 3= | CURRENCY FLUCTUATION | 6.05 |
| 3= | INFLATION | 6.05 |
| 5 | LOSS OF CUSTOMERS/CANCELLED ORDERS | 6.01 |
| 6= | MAJOR ASSET PRICE VOLATILITY | 5.91 |
| 6= | TALENT AND SKILLS SHORTAGE | 5.91 |
| 8 | CYBER RISK | 5.90 |
| 9 | EXCESSIVELY STRICT REGULATION | 5.76 |
| 10 | INTEREST RATE CHANGE | 5.75 |
| 11 | COST AND AVAILABILITY OF CREDIT | 5.72 |
| 12 | RAPID TECHNOLOGICAL CHANGES | 5.70 |
| 13= | SUPPLY CHAIN FAILURE | 5.61 |
| 13= | CHANGING LEGISLATION | 5.61 |
| 15 | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 5.59 |
| 16 | CRITICAL INFRASTRUCTURE FAILURE | 5.58 |
| 17 | CORPORATE LIABILITY | 5.55 |
| 18= | FAILED INVESTMENT | 5.52 |
| 18= | REPUTATIONAL RISK | 5.52 |
| 20 | INCREASED PROTECTIONISM | 5.47 |
| 21 | INDUSTRIAL/WORKPLACE ACCIDENT | 5.46 |
| 22= | FRAUD AND CORRUPTION | 5.40 |
| 22= | POOR/INCOMPLETE REGULATION | 5.40 |
| 24 | GOVERNMENT SPENDING CUTS | 5.39 |
| 25 | ENERGY SECURITY | 5.36 |
| 26 | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 5.32 |
| 27 | POPULATION GROWTH | 5.30 |
| 28 | DEMOGRAPHIC SHIFT | 5.28 |
| 29 | POLLUTION AND ENVIRONMENTAL LIABILITY | 5.25 |
| 30= | INSOLVENCY RISK | 5.19 |
| 30= | FOOD SECURITY | 5.19 |
| 32 | CLIMATE CHANGE | 5.18 |
| 33 | SOVEREIGN DEBT | 5.14 |
| 34 | PANDEMIC | 5.11 |
| 35 | URBANISATION | 5.08 |
| 36 | WATER SCARCITY | 5.07 |
| 37= | PIRACY | 5.00 |
| 37= | EXPROPRIATION OF ASSETS | 5.00 |
| 39 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 4.96 |
| 40 | STRIKES AND INDUSTRIAL ACTION | 4.54 |
| 41 | DROUGHT | 4.28 |
| 42 | FLOODING | 4.23 |
| 43 | ABRUPT REGIME CHANGE | 4.21 |
| 44 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 4.19 |
| 45 | EARTHQUAKE | 4.16 |
| 46 | TERRORISM | 4.09 |
| 47 | RIOTS AND CIVIL COMMOTION | 3.99 |
| 48 | WINDSTORM | 3.94 |
| 49 | IMPACT OF SPACE WEATHER | 3.85 |
| 50 | VOLCANIC ERUPTION | 3.48 |

Score out of 10: 0 1 2 3 4 5 6 7 8

Chart 9

## TOP 50 PRIORITY RISK SCORES IN 2013 – EUROPE

| Risk | | Score out of 10 |
|---|---|---|
| 1 | HIGH TAXATION | 6.59 |
| 2 | LOSS OF CUSTOMERS/CANCELLED ORDERS | 6.44 |
| 3 | CHANGING LEGISLATION | 5.94 |
| 4 | COST AND AVAILABILITY OF CREDIT | 5.86 |
| 5 | EXCESSIVELY STRICT REGULATION | 5.80 |
| 6 | CYBER RISK | 5.56 |
| 7 | PRICE OF MATERIAL INPUTS | 5.42 |
| 8 | RAPID TECHNOLOGICAL CHANGES | 5.41 |
| 9 | REPUTATIONAL RISK | 5.38 |
| 10 | CORPORATE LIABILITY | 5.29 |
| 11 | POOR/INCOMPLETE REGULATION | 5.24 |
| 12 | GOVERNMENT SPENDING CUTS | 5.21 |
| 13 | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 5.20 |
| 14 | FRAUD AND CORRUPTION | 5.11 |
| 15 | INFLATION | 5.05 |
| 16 | TALENT AND SKILLS SHORTAGE | 5.03 |
| 17 | FAILED INVESTMENT | 5.02 |
| 18 | INTEREST RATE CHANGE | 4.98 |
| 19 | INSOLVENCY RISK | 4.97 |
| 20= | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 4.89 |
| 20= | CURRENCY FLUCTUATION | 4.89 |
| 22 | CRITICAL INFRASTRUCTURE FAILURE | 4.83 |
| 23 | MAJOR ASSET PRICE VOLATILITY | 4.82 |
| 24 | SOVEREIGN DEBT | 4.68 |
| 25 | INCREASED PROTECTIONISM | 4.62 |
| 26 | SUPPLY CHAIN FAILURE | 4.52 |
| 27 | ENERGY SECURITY | 4.44 |
| 28 | DEMOGRAPHIC SHIFT | 4.36 |
| 29 | INDUSTRIAL/WORKPLACE ACCIDENT | 4.27 |
| 30= | POLLUTION AND ENVIRONMENTAL LIABILITY | 4.24 |
| 30= | STRIKES AND INDUSTRIAL ACTION | 4.24 |
| 32 | PIRACY | 4.02 |
| 33= | EXPROPRIATION OF ASSETS | 3.80 |
| 33= | HARMFUL EFFECTS OF NEW TECHNOLOGY | 3.80 |
| 35 | RIOTS AND CIVIL COMMOTION | 3.76 |
| 36 | URBANISATION | 3.67 |
| 37 | CLIMATE CHANGE | 3.64 |
| 38 | ABRUPT REGIME CHANGE | 3.59 |
| 39 | TERRORISM | 3.56 |
| 40 | FOOD SECURITY | 3.52 |
| 41 | WATER SCARCITY | 3.48 |
| 42 | FLOODING | 3.38 |
| 43 | POPULATION GROWTH | 3.33 |
| 44 | PANDEMIC | 3.30 |
| 45 | WINDSTORM | 2.88 |
| 46 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 2.79 |
| 47 | EARTHQUAKE | 2.64 |
| 48 | IMPACT OF SPACE WEATHER | 2.50 |
| 49 | DROUGHT | 2.47 |
| 50 | VOLCANIC ERUPTION | 1.97 |

Score out of 10 (axis: 0 1 2 3 4 5 6 7 8)

# APPENDIX 2
## CONTINUED

Chart 10

**TOP 50 PRIORITY RISK SCORES IN 2013 – SOUTH AFRICA**

| | Risk | Score out of 10 |
|---|---|---|
| 1 | LOSS OF CUSTOMERS/CANCELLED ORDERS | 6.92 |
| 2 | FRAUD AND CORRUPTION | 6.67 |
| 3= | CURRENCY FLUCTUATION | 6.50 |
| 3= | STRIKES AND INDUSTRIAL ACTION | 6.50 |
| 5 | INFLATION | 6.42 |
| 6= | COST AND AVAILABILITY OF CREDIT | 6.33 |
| 6= | CYBER RISK | 6.33 |
| 6= | EXCESSIVELY STRICT REGULATION | 6.33 |
| 9 | INCREASED PROTECTIONISM | 6.25 |
| 10= | HIGH TAXATION | 6.17 |
| 10= | PRICE OF MATERIAL INPUTS | 6.17 |
| 10= | INTEREST RATE CHANGE | 6.17 |
| 10= | REPUTATIONAL RISK | 6.17 |
| 14= | RAPID TECHNOLOGICAL CHANGES | 6.00 |
| 14= | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 6.00 |
| 16 | SUPPLY CHAIN FAILURE | 5.92 |
| 17 | MAJOR ASSET PRICE VOLATILITY | 5.75 |
| 18 | TALENT AND SKILLS SHORTAGE | 5.67 |
| 19= | CORPORATE LIABILITY | 5.58 |
| 19= | CHANGING LEGISLATION | 5.58 |
| 21 | ENERGY SECURITY | 5.50 |
| 22 | FAILED INVESTMENT | 5.33 |
| 23= | INDUSTRIAL/WORKPLACE ACCIDENT | 5.25 |
| 23= | DEMOGRAPHIC SHIFT | 5.25 |
| 23= | GOVERNMENT SPENDING CUTS | 5.25 |
| 23= | RIOTS AND CIVIL COMMOTION | 5.25 |
| 27= | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 5.17 |
| 27= | POOR/INCOMPLETE REGULATION | 5.17 |
| 29 | POLLUTION AND ENVIRONMENTAL LIABILITY | 5.00 |
| 30 | EXPROPRIATION OF ASSETS | 4.92 |
| 31= | CLIMATE CHANGE | 4.75 |
| 31= | POPULATION GROWTH | 4.75 |
| 31= | WATER SCARCITY | 4.75 |
| 34= | INSOLVENCY RISK | 4.67 |
| 34= | CRITICAL INFRASTRUCTURE FAILURE | 4.67 |
| 36 | ABRUPT REGIME CHANGE | 4.58 |
| 37 | PIRACY | 4.50 |
| 38 | FOOD SECURITY | 4.33 |
| 39 | PANDEMIC | 4.17 |
| 40 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 4.08 |
| 41= | SOVEREIGN DEBT | 4.00 |
| 41= | URBANISATION | 4.00 |
| 43 | TERRORISM | 3.83 |
| 44 | FLOODING | 3.50 |
| 45 | DROUGHT | 3.42 |
| 46 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 2.92 |
| 47 | WINDSTORM | 2.50 |
| 48 | IMPACT OF SPACE WEATHER | 2.42 |
| 49 | EARTHQUAKE | 1.92 |
| 50 | VOLCANIC ERUPTION | 1.50 |

Chart 11

## TOP 50 PRIORITY RISK SCORES IN 2013 – NORTH AMERICA

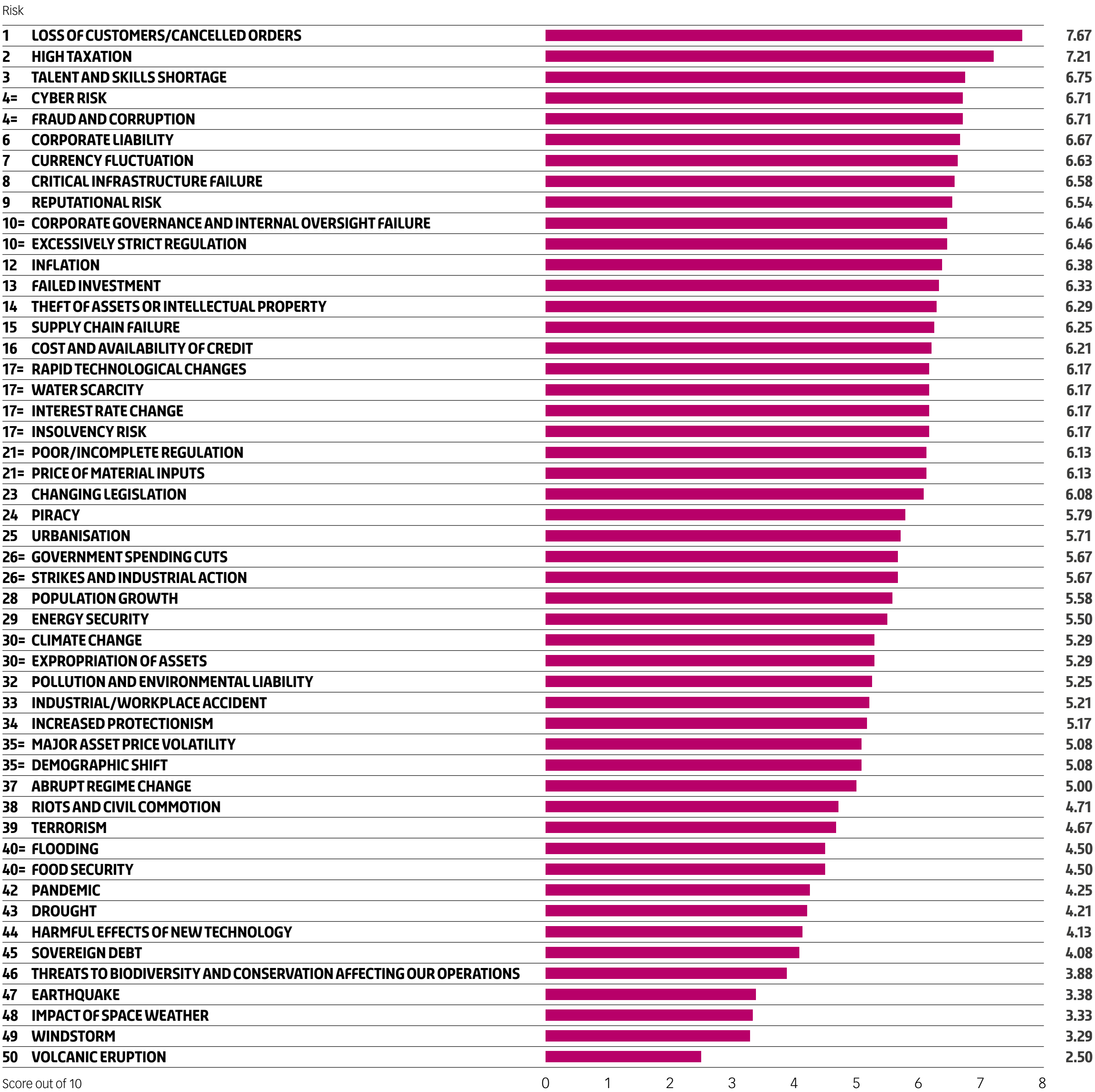
| Risk | | Score out of 10 |
|---|---|---|
| 1 | HIGH TAXATION | 5.56 |
| 2 | CYBER RISK | 5.08 |
| 3 | LOSS OF CUSTOMERS/CANCELLED ORDERS | 5.03 |
| 4 | CHANGING LEGISLATION | 4.90 |
| 5 | INFLATION | 4.80 |
| 6 | EXCESSIVELY STRICT REGULATION | 4.77 |
| 7 | PRICE OF MATERIAL INPUTS | 4.42 |
| 8 | RAPID TECHNOLOGICAL CHANGES | 4.34 |
| 9 | COST AND AVAILABILITY OF CREDIT | 4.33 |
| 10 | MAJOR ASSET PRICE VOLATILITY | 4.24 |
| 11 | INTEREST RATE CHANGE | 4.23 |
| 12 | GOVERNMENT SPENDING CUTS | 4.18 |
| 13 | POOR/INCOMPLETE REGULATION | 4.06 |
| 14 | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 3.85 |
| 15 | CURRENCY FLUCTUATION | 3.80 |
| 15 | TALENT AND SKILLS SHORTAGE | 3.80 |
| 17 | REPUTATIONAL RISK | 3.78 |
| 18= | CORPORATE LIABILITY | 3.75 |
| 18= | WINDSTORM | 3.75 |
| 20= | FRAUD AND CORRUPTION | 3.59 |
| 20= | ENERGY SECURITY | 3.59 |
| 22 | DEMOGRAPHIC SHIFT | 3.50 |
| 23 | FAILED INVESTMENT | 3.42 |
| 24 | INCREASED PROTECTIONISM | 3.32 |
| 25 | SOVEREIGN DEBT | 3.31 |
| 26 | POLLUTION AND ENVIRONMENTAL LIABILITY | 3.24 |
| 27 | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 3.22 |
| 28 | INSOLVENCY RISK | 3.16 |
| 29 | CRITICAL INFRASTRUCTURE FAILURE | 3.08 |
| 30 | CLIMATE CHANGE | 3.04 |
| 31 | INDUSTRIAL/WORKPLACE ACCIDENT | 3.01 |
| 32 | SUPPLY CHAIN FAILURE | 2.99 |
| 33 | DROUGHT | 2.94 |
| 34 | POPULATION GROWTH | 2.93 |
| 35 | WATER SCARCITY | 2.88 |
| 36 | PIRACY | 2.81 |
| 37 | EXPROPRIATION OF ASSETS | 2.80 |
| 38 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 2.76 |
| 39 | FLOODING | 2.68 |
| 40= | FOOD SECURITY | 2.63 |
| 40= | PANDEMIC | 2.63 |
| 42 | TERRORISM | 2.62 |
| 43 | URBANISATION | 2.58 |
| 44 | STRIKES AND INDUSTRIAL ACTION | 2.50 |
| 45 | ABRUPT REGIME CHANGE | 2.29 |
| 46 | RIOTS AND CIVIL COMMOTION | 2.15 |
| 47 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 2.09 |
| 48 | EARTHQUAKE | 1.97 |
| 49 | IMPACT OF SPACE WEATHER | 1.96 |
| 50 | VOLCANIC ERUPTION | 1.02 |

Score out of 10: 0 1 2 3 4 5 6 7 8

# APPENDIX 2 CONTINUED

Chart 12

## TOP 50 PRIORITY RISK SCORES IN 2013 – LATIN AMERICA



## TOP 50 PREPAREDNESS RISK SCORE IN 2013 BY REGION

Chart 13

### TOP 50 PREPAREDNESS SCORES IN 2013 – ASIA-PACIFIC

| Risk | | Score out of 10 |
|---|---|---|
| 1 | REPUTATIONAL RISK | 6.20 |
| 2 | PRICE OF MATERIAL INPUTS | 6.13 |
| 3 | CYBER RISK | 6.06 |
| 4 | FRAUD AND CORRUPTION | 5.94 |
| 5 | INSOLVENCY RISK | 5.93 |
| 6= | CORPORATE LIABILITY | 5.91 |
| 6= | LOSS OF CUSTOMERS/CANCELLED ORDERS | 5.91 |
| 8 | INTEREST RATE CHANGE | 5.88 |
| 9= | COST AND AVAILABILITY OF CREDIT | 5.86 |
| 9= | RAPID TECHNOLOGICAL CHANGES | 5.86 |
| 11 | SUPPLY CHAIN FAILURE | 5.84 |
| 12= | FAILED INVESTMENT | 5.81 |
| 12= | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 5.81 |
| 14= | SOVEREIGN DEBT | 5.80 |
| 14= | MAJOR ASSET PRICE VOLATILITY | 5.80 |
| 16= | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 5.77 |
| 16= | TALENT AND SKILLS SHORTAGE | 5.77 |
| 18= | CRITICAL INFRASTRUCTURE FAILURE | 5.70 |
| 18= | CURRENCY FLUCTUATION | 5.70 |
| 20 | INCREASED PROTECTIONISM | 5.69 |
| 21 | INFLATION | 5.66 |
| 22 | PIRACY | 5.65 |
| 23= | EXCESSIVELY STRICT REGULATION | 5.64 |
| 23= | POOR/INCOMPLETE REGULATION | 5.64 |
| 25 | ENERGY SECURITY | 5.61 |
| 26 | CHANGING LEGISLATION | 5.59 |
| 27 | EXPROPRIATION OF ASSETS | 5.55 |
| 28 | INDUSTRIAL/WORKPLACE ACCIDENT | 5.54 |
| 29 | STRIKES AND INDUSTRIAL ACTION | 5.51 |
| 30 | HIGH TAXATION | 5.50 |
| 31 | POLLUTION AND ENVIRONMENTAL LIABILITY | 5.47 |
| 32= | CLIMATE CHANGE | 5.44 |
| 32= | POPULATION GROWTH | 5.44 |
| 34 | DEMOGRAPHIC SHIFT | 5.43 |
| 35 | GOVERNMENT SPENDING CUTS | 5.37 |
| 36 | ABRUPT REGIME CHANGE | 5.36 |
| 37 | FOOD SECURITY | 5.28 |
| 38 | WATER SCARCITY | 5.21 |
| 39 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 5.15 |
| 40 | URBANISATION | 5.12 |
| 41= | RIOTS AND CIVIL COMMOTION | 5.10 |
| 41= | PANDEMIC | 5.10 |
| 43 | FLOODING | 4.97 |
| 44 | DROUGHT | 4.90 |
| 45 | TERRORISM | 4.88 |
| 46 | WINDSTORM | 4.83 |
| 47 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 4.78 |
| 48 | EARTHQUAKE | 4.74 |
| 49 | IMPACT OF SPACE WEATHER | 4.70 |
| 50 | VOLCANIC ERUPTION | 4.41 |

Score out of 10: 0 1 2 3 4 5 6 7 8

# APPENDIX 2
## CONTINUED

Chart 14

### TOP 50 PREPAREDNESS SCORES IN 2013 – EUROPE

| | Risk | Score out of 10 |
|---|---|---|
| 1 | INDUSTRIAL/WORKPLACE ACCIDENT | 5.94 |
| 2 | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 5.83 |
| 3 | CORPORATE LIABILITY | 5.82 |
| 4 | REPUTATIONAL RISK | 5.79 |
| 5 | CYBER RISK | 5.74 |
| 6 | RAPID TECHNOLOGICAL CHANGES | 5.64 |
| 7 | TALENT AND SKILLS SHORTAGE | 5.53 |
| 8 | COST AND AVAILABILITY OF CREDIT | 5.48 |
| 9 | CRITICAL INFRASTRUCTURE FAILURE | 5.47 |
| 10 | SUPPLY CHAIN FAILURE | 5.41 |
| 11 | LOSS OF CUSTOMERS/CANCELLED ORDERS | 5.39 |
| 12 | INFLATION | 5.36 |
| 13 | FAILED INVESTMENT | 5.33 |
| 14 | INTEREST RATE CHANGE | 5.32 |
| 15 | PIRACY | 5.26 |
| 16= | INSOLVENCY RISK | 5.24 |
| 16= | PRICE OF MATERIAL INPUTS | 5.24 |
| 16= | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 5.24 |
| 19 | FRAUD AND CORRUPTION | 5.21 |
| 20 | GOVERNMENT SPENDING CUTS | 5.17 |
| 21= | HIGH TAXATION | 5.09 |
| 21= | ENERGY SECURITY | 5.09 |
| 21= | CHANGING LEGISLATION | 5.09 |
| 24= | MAJOR ASSET PRICE VOLATILITY | 5.08 |
| 24= | POOR/INCOMPLETE REGULATION | 5.08 |
| 26 | INCREASED PROTECTIONISM | 5.06 |
| 27 | EXCESSIVELY STRICT REGULATION | 5.00 |
| 28 | POLLUTION AND ENVIRONMENTAL LIABILITY | 4.98 |
| 29 | STRIKES AND INDUSTRIAL ACTION | 4.95 |
| 30 | CURRENCY FLUCTUATION | 4.91 |
| 31 | SOVEREIGN DEBT | 4.73 |
| 32 | DEMOGRAPHIC SHIFT | 4.65 |
| 33 | URBANISATION | 4.64 |
| 34 | EXPROPRIATION OF ASSETS | 4.59 |
| 35 | POPULATION GROWTH | 4.56 |
| 36 | FOOD SECURITY | 4.42 |
| 37 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 4.39 |
| 38 | RIOTS AND CIVIL COMMOTION | 4.29 |
| 39 | ABRUPT REGIME CHANGE | 4.21 |
| 40= | FLOODING | 4.20 |
| 40= | TERRORISM | 4.20 |
| 42 | WATER SCARCITY | 4.14 |
| 43 | CLIMATE CHANGE | 4.08 |
| 44 | WINDSTORM | 3.94 |
| 45 | EARTHQUAKE | 3.83 |
| 46 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 3.80 |
| 47 | PANDEMIC | 3.79 |
| 48 | DROUGHT | 3.76 |
| 49 | IMPACT OF SPACE WEATHER | 3.56 |
| 50 | VOLCANIC ERUPTION | 3.52 |

Score out of 10: 0 1 2 3 4 5 6 7 8

Chart 15

## TOP 50 PREPAREDNESS SCORES IN 2013 – SOUTH AFRICA

| | Risk | |
|---|---|---|
| 1= | CYBER RISK | 6.92 |
| 1= | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 6.92 |
| 3 | RAPID TECHNOLOGICAL CHANGES | 6.42 |
| 4= | REPUTATIONAL RISK | 6.33 |
| 4= | SUPPLY CHAIN FAILURE | 6.33 |
| 6= | FRAUD AND CORRUPTION | 6.25 |
| 6= | CURRENCY FLUCTUATION | 6.25 |
| 6= | EXPROPRIATION OF ASSETS | 6.25 |
| 9 | CRITICAL INFRASTRUCTURE FAILURE | 6.08 |
| 10= | STRIKES AND INDUSTRIAL ACTION | 6.00 |
| 10= | COST AND AVAILABILITY OF CREDIT | 6.00 |
| 12 | LOSS OF CUSTOMERS/CANCELLED ORDERS | 5.92 |
| 13= | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 5.83 |
| 13= | INDUSTRIAL/WORKPLACE ACCIDENT | 5.83 |
| 13= | CORPORATE LIABILITY | 5.83 |
| 13= | POOR/INCOMPLETE REGULATION | 5.83 |
| 17 | INCREASED PROTECTIONISM | 5.75 |
| 18= | INTEREST RATE CHANGE | 5.67 |
| 18= | EXCESSIVELY STRICT REGULATION | 5.67 |
| 20= | DEMOGRAPHIC SHIFT | 5.58 |
| 20= | TALENT AND SKILLS SHORTAGE | 5.58 |
| 22= | INFLATION | 5.50 |
| 22= | INSOLVENCY RISK | 5.50 |
| 22= | PRICE OF MATERIAL INPUTS | 5.50 |
| 25= | CHANGING LEGISLATION | 5.42 |
| 25= | PIRACY | 5.42 |
| 25= | FAILED INVESTMENT | 5.42 |
| 25= | RIOTS AND CIVIL COMMOTION | 5.42 |
| 29= | FOOD SECURITY | 5.33 |
| 29= | POPULATION GROWTH | 5.33 |
| 31= | ABRUPT REGIME CHANGE | 5.25 |
| 31= | HIGH TAXATION | 5.25 |
| 33 | POLLUTION AND ENVIRONMENTAL LIABILITY | 5.17 |
| 34= | CLIMATE CHANGE | 5.08 |
| 34= | MAJOR ASSET PRICE VOLATILITY | 5.08 |
| 34= | TERRORISM | 5.08 |
| 34= | URBANISATION | 5.08 |
| 34= | ENERGY SECURITY | 5.08 |
| 34= | GOVERNMENT SPENDING CUTS | 5.08 |
| 40 | FLOODING | 4.83 |
| 41 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 4.75 |
| 42= | PANDEMIC | 4.67 |
| 42= | SOVEREIGN DEBT | 4.67 |
| 42= | WATER SCARCITY | 4.67 |
| 45 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 4.58 |
| 46 | DROUGHT | 4.25 |
| 47= | VOLCANIC ERUPTION | 3.92 |
| 47= | WINDSTORM | 3.92 |
| 49 | EARTHQUAKE | 3.58 |
| 50 | IMPACT OF SPACE WEATHER | 3.50 |

Score out of 10 — 0 1 2 3 4 5 6 7 8

# APPENDIX 2
## CONTINUED

Chart 16

### TOP 50 PREPAREDNESS SCORES IN 2013 – NORTH AMERICA

| Risk | | Score out of 10 |
|---|---|---|
| 1 | REPUTATIONAL RISK | 6.32 |
| 2 | INSOLVENCY RISK | 6.07 |
| 3 | COST AND AVAILABILITY OF CREDIT | 6.04 |
| 4 | FRAUD AND CORRUPTION | 6.00 |
| 5 | INTEREST RATE CHANGE | 5.87 |
| 6 | PRICE OF MATERIAL INPUTS | 5.86 |
| 7 | SUPPLY CHAIN FAILURE | 5.84 |
| 8= | CORPORATE LIABILITY | 5.82 |
| 8= | FLOODING | 5.82 |
| 10= | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 5.79 |
| 10= | INDUSTRIAL/WORKPLACE ACCIDENT | 5.79 |
| 12= | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 5.72 |
| 12= | ENERGY SECURITY | 5.72 |
| 14= | STRIKES AND INDUSTRIAL ACTION | 5.71 |
| 14= | POPULATION GROWTH | 5.71 |
| 16 | RAPID TECHNOLOGICAL CHANGES | 5.69 |
| 17 | TALENT AND SKILLS SHORTAGE | 5.66 |
| 18 | FAILED INVESTMENT | 5.64 |
| 19 | POLLUTION AND ENVIRONMENTAL LIABILITY | 5.63 |
| 20 | DEMOGRAPHIC SHIFT | 5.58 |
| 21= | CYBER RISK | 5.49 |
| 21= | URBANISATION | 5.49 |
| 21= | CURRENCY FLUCTUATION | 5.49 |
| 24 | EXCESSIVELY STRICT REGULATION | 5.48 |
| 25 | INCREASED PROTECTIONISM | 5.43 |
| 26= | INFLATION | 5.41 |
| 26= | LOSS OF CUSTOMERS/CANCELLED ORDERS | 5.41 |
| 28 | EXPROPRIATION OF ASSETS | 5.38 |
| 29 | WINDSTORM | 5.36 |
| 30 | POOR/INCOMPLETE REGULATION | 5.33 |
| 31 | CRITICAL INFRASTRUCTURE FAILURE | 5.31 |
| 32 | GOVERNMENT SPENDING CUTS | 5.28 |
| 33 | FOOD SECURITY | 5.26 |
| 34 | MAJOR ASSET PRICE VOLATILITY | 5.25 |
| 35 | CHANGING LEGISLATION | 5.23 |
| 36 | SOVEREIGN DEBT | 5.21 |
| 37= | HIGH TAXATION | 5.16 |
| 37= | CLIMATE CHANGE | 5.16 |
| 39 | DROUGHT | 5.15 |
| 40 | PIRACY | 5.07 |
| 41 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 5.00 |
| 42 | ABRUPT REGIME CHANGE | 4.98 |
| 43= | RIOTS AND CIVIL COMMOTION | 4.95 |
| 43= | WATER SCARCITY | 4.95 |
| 45 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 4.80 |
| 46 | EARTHQUAKE | 4.70 |
| 47 | TERRORISM | 4.54 |
| 48 | IMPACT OF SPACE WEATHER | 4.33 |
| 49 | PANDEMIC | 4.31 |
| 50 | VOLCANIC ERUPTION | 4.29 |

Score out of 10: 0 1 2 3 4 5 6 7 8

Chart 17

## TOP 50 PREPAREDNESS SCORES IN 2013 – LATIN AMERICA

| | Risk | Score out of 10 |
|---|---|---|
| 1= | CORPORATE GOVERNANCE AND INTERNAL OVERSIGHT FAILURE | 7.04 |
| 1= | CORPORATE LIABILITY | 7.04 |
| 3 | REPUTATIONAL RISK | 6.79 |
| 4 | RAPID TECHNOLOGICAL CHANGES | 6.71 |
| 5 | CRITICAL INFRASTRUCTURE FAILURE | 6.58 |
| 6 | INSOLVENCY RISK | 6.50 |
| 7= | COST AND AVAILABILITY OF CREDIT | 6.38 |
| 7= | INFLATION | 6.38 |
| 7= | CURRENCY FLUCTUATION | 6.38 |
| 10= | PRICE OF MATERIAL INPUTS | 6.33 |
| 10= | THEFT OF ASSETS OR INTELLECTUAL PROPERTY | 6.33 |
| 12= | INDUSTRIAL/WORKPLACE ACCIDENT | 6.29 |
| 12= | FAILED INVESTMENT | 6.29 |
| 12= | LOSS OF CUSTOMERS/CANCELLED ORDERS | 6.29 |
| 15 | TALENT AND SKILLS SHORTAGE | 6.13 |
| 16= | INTEREST RATE CHANGE | 6.04 |
| 16= | MAJOR ASSET PRICE VOLATILITY | 6.04 |
| 18 | POOR/INCOMPLETE REGULATION | 5.88 |
| 19= | CYBER RISK | 5.83 |
| 19= | PIRACY | 5.83 |
| 19= | ENERGY SECURITY | 5.83 |
| 22 | GOVERNMENT SPENDING CUTS | 5.79 |
| 23 | URBANISATION | 5.75 |
| 24= | FRAUD AND CORRUPTION | 5.71 |
| 24= | INCREASED PROTECTIONISM | 5.71 |
| 24= | SOVEREIGN DEBT | 5.71 |
| 24= | SUPPLY CHAIN FAILURE | 5.71 |
| 28 | STRIKES AND INDUSTRIAL ACTION | 5.67 |
| 29= | CHANGING LEGISLATION | 5.63 |
| 29= | HIGH TAXATION | 5.63 |
| 29= | EXCESSIVELY STRICT REGULATION | 5.63 |
| 32= | POPULATION GROWTH | 5.58 |
| 32= | POLLUTION AND ENVIRONMENTAL LIABILITY | 5.58 |
| 34= | RIOTS AND CIVIL COMMOTION | 5.25 |
| 34= | WATER SCARCITY | 5.25 |
| 36= | DEMOGRAPHIC SHIFT | 5.08 |
| 36= | FOOD SECURITY | 5.08 |
| 38 | ABRUPT REGIME CHANGE | 5.00 |
| 39 | HARMFUL EFFECTS OF NEW TECHNOLOGY | 4.92 |
| 40= | EXPROPRIATION OF ASSETS | 4.88 |
| 40= | CLIMATE CHANGE | 4.88 |
| 42 | DROUGHT | 4.71 |
| 43 | FLOODING | 4.67 |
| 44 | THREATS TO BIODIVERSITY AND CONSERVATION AFFECTING OUR OPERATIONS | 4.58 |
| 45 | EARTHQUAKE | 4.54 |
| 46 | WINDSTORM | 4.50 |
| 47 | PANDEMIC | 4.29 |
| 48 | IMPACT OF SPACE WEATHER | 3.96 |
| 49 | TERRORISM | 3.92 |
| 50 | VOLCANIC ERUPTION | 3.67 |

Score out of 10 — 0 1 2 3 4 5 6 7 8

# REFERENCES


[1] KPMG Global corporate tax rates. http://www.kpmg.com/global/en/services/tax/tax-tools-and-resources/pages/tax-rates-online.aspx

[2] International Monetary Fund World Economic Outlook April 2011: Tensions from the Two-Speed Recovery: Unemployment, Commodities and Capital Flows. http://www.imf.org/external/pubs/ft/weo/2011/01/index.htm

[3] Ponemon Institute: 2012 Cost of Cyber Crime Study. http://www.ponemon.org/library/2012-cost-of-cyber-crime-study

[4] Reuters. http://uk.reuters.com/article/2013/06/06/uk-usa-cybersecurity-congress-idUKBRE95504H20130606

[5] Insurance Information Institute: Cyber Risks: The Growing Threat, 8 April 2013. http://www.iii.org/assets/docs/pdf/paper_CyberRisk_2013.pdf

[6] Do Prices Determine Vertical Integration? Evidence from Trade Policy, L. Alfaro et al, May 2013. http://www.ecares.org/ecare/personal/conconi$/web/ACFN.pdf

[7] International Energy Agency 2012 World Energy Outlook, November 2012. http://www.worldenergyoutlook.org/publications/weo-2012/#d.en.26099

[8] Trading Economics. http://www.tradingeconomics.com/india/balance-of-trade

[9] PRS Legislative Research. http://www.prsindia.org/billtrack/the-mines-and-minerals-development-and-regulation-bill-2011-2115/

[10] USA Today, *Volcker rule delay shows financial reform's flaws*, 10 April 2013. http://www.usatoday.com/story/money/business/2013/04/10/delamaide-column-volcker-rule/2070951/

[11] U.S Department of the Interior: Review of Shell's 2012 Alaska Offshore Oil and Gas Exploration Program, 8 March 2013. http://www.doi.gov/news/pressreleases/upload/Shell-report-3-8-13-Final.pdf

[12] Lloyd's and Chatham House, *Arctic Opening: Opportunity and Risk in the High North*, 2012. http://www.lloyds.com/~/media/Files/News%20and%20Insight/360%20Risk%20Insight/Arctic_Risk_Report_20120412.pdf

[13] China Council for International Cooperation on Environment and Development, 26 February 2013. http://www.cciced.net/encciced/newscenter/latestnews/201302/t20130226_248516.html

[14] Global Witness, *Chinese Guidelines for Environmental Protection in Foreign Investment and Cooperation*, 4 June 2013. http://www.globalwitness.org/library/chinese-guidelines-environmental-protection-foreign-investment-and-cooperation

[15] Reuters, *US lawmakers air concerns about Smithfield-Shuanghui deal*, 6 June 2013. http://uk.reuters.com/article/2013/06/06/smithfield-shuanghui-congress-idUKL1N0EH18K20130606

[16] Global Risk Management survey, seventh edition, *Navigating in a changed world*, 2012. http://www.lloyds.com/news-and-insight/risk-insight/underinsurance-report

[17] ESPON & European Institute of Urban Affairs, Liverpool John Moores University, 2012, Second Tier Cities and Territorial Development in Europe: Performance, Policies and Prospects, 30 June 2012. http://www.espon.eu/export/sites/default/Documents/Projects/AppliedResearch/SGPTD/SGPTD_Scientific_Report_-_Final_Version_27.09.12.pdf

[18] World Meteorological Organisation statement on the status of the global climate in 2012, https://www.wmo.int/pages/mediacentre/press_releases/documents/WMO_1108_EN_web_000.pdf

[19] United Nations Environment Programme, *UNEP and Insurers Launch Global Insurance Principles to Propel Sustainable Development*, 19 June 2012. http://www.unep.org/newscentre/Default.aspx?DocumentID=2688&ArticleID=9183

[20] Internal Displacement Monitoring Centre, Global Estimates 2012: People displaced by disasters, 13 May 2013. http://www.internal-displacement.org/publications/global-estimates-2012

[21] USA Today, *At Qatar climate talks, UN head rejects warming doubts*, 4 December 2012. http://www.usatoday.com/story/weather/2012/12/04/united-nations-climate-talks-doha-qatar/1745727/

[22] Lloyd's and the Centre for Economics and Business Research, Global Underinsurance Report, 27 November 2012. http://www.lloyds.com/news-and-insight/risk-insight/underinsurance-report

[23] Lloyd's Vision 2025, May 2012. http://www.lloyds.com/lloyds/about-us/what-is-lloyds/the-lloyds-market/vision-2025

[24] Reuters, *Senators renew push against China's currency "manipulation" despite yuan's rise*, 6 June 2012. http://www.reuters.com/article/2013/06/05/usa-china-currency-idUSL1N0EH28Q20130605

[25] Transparency International Perception Index 2011. http://www.transparency.org/cpi2011/results

[26] Ernst & Young, Regional insights: Brazil. http://www.ey.com/GL/en/Services/Assurance/Fraud-Investigation---Dispute-Services/Global-Fraud-Survey---a-place-for-integrity---Brazil

[27] McAfee and the Security & Defence Agenda, *Cyber security: the vexed question of global rules,* 2012. http://www.mcafee.com/uk/resources/reports/rp-sda-cyber-security.pdf

[28] The Economic Times, *Talent is getting harder to find in India: Manpower*, 19 May 2011. http://articles.economictimes.indiatimes.com/2011-05-19/news/29560411_1_talent-shortage-survey-talent-crunch-employers

[29] The Times of India, *Government approves National Cyber Security Policy*, 9 May 2013. http://articles.timesofindia.indiatimes.com/2013-05-09/internet/39142119_1_national-cyber-security-policy-cyber-space-security-posture

[30] European Forum for Disaster Risk Reduction (EFDRR), Presentation: A new disaster management structure in Turkey, October 2010. http://www.preventionweb.net/files/15110_6kuterdemanewdisastermanagementstru.pdf

[31] European Travel Commission, New Media Trend Watch. http://www.newmediatrendwatch.com/markets-by-country/10-europe/87-turkey

[32] Organisation for Economic Co-operation and Development, *Labour productivity levels in the total economy*, May 2013. http://stats.oecd.org/Index.aspx?DatasetCode=LEVEL

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