

Catastrophe risk management

Preparing for potential storms ahead



**An Economist Intelligence Unit white paper
sponsored by ACE, IBM and KPMG**



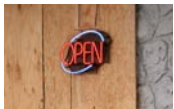
About the survey

The Economist Intelligence Unit surveyed 225 executives around the world in June 2006 about their attitudes to, and experiences of, building preparations for catastrophe into their risk management processes. The survey was sponsored by ACE, IBM and KPMG.

Respondents represent a wide range of industries and regions, with roughly one-third each from Asia and Australasia, North America and Western Europe. Approximately 50% of respondents represent businesses with annual revenue of more than US\$500m. All respondents have influence over, or responsibility for, strategic decisions on risk management at their companies.

The Economist Intelligence Unit's editorial team conducted the survey and wrote the paper. The findings expressed in this summary do not necessarily reflect the views of the sponsors. Our thanks are due to the survey respondents for their time and insight.

September 2006



Introduction

For most senior executives, there is barely enough time to manage the crises they face on a day-to-day basis, let alone a set of events that may never happen. It can be tempting, therefore, to consign preparation for catastrophes such as pandemics, terrorist attacks or seismic activity to the bottom of the corporate agenda. But as the devastating 2005 hurricane season, the continuing threat of a global avian influenza (bird flu) pandemic and the recent terrorist attacks in Mumbai, London, Madrid and elsewhere have shown, the capacity for low-probability, high-impact events to cause death or injury, disrupt operations and damage reputation is something that cannot be ignored. As a result, preparation for catastrophe is becoming an increasingly important component of many companies' risk management strategies.

The objectives of this survey and report are to assess levels of preparedness for catastrophe among companies around the world and to find out what executives at these organisations see as the most significant threats they face. We report on the tools and techniques that companies are using to manage catastrophe risk, the frequency with which they update their plans and the level of confidence that they possess with regard to specific aspects of their catastrophe risk management.

New threats on the horizon

Companies have always faced threats from catastrophic events, such as earthquakes, hurricanes or major social unrest, but some of the most pressing concerns now facing the global business community are relatively recent phenomena. For example, terrorism, although by no means a new tactic, first received significant corporate attention following the

attacks of September 11th 2001, and H5N1, the strain of bird flu that is currently causing concern around the world, evolved only in the late 1990s.

The recent foiling of a major plot to cause multiple explosions on transatlantic jets demonstrates that the threat of terrorism remains very much in our midst. And as the United States enters a new hurricane season, which many meteorologists have predicted will be as severe as last year's, the damage caused by extreme weather events remains a pressing concern for businesses with operations along the eastern and southern coasts of the US. However, in terms of economic damage and loss of life, a global bird flu pandemic threatens to dwarf both these threats. According to Risk Management Solutions, a company that specialises in the development of risk models, there is a one-in-five probability of an H5N1 flu pandemic being more severe than the influenza outbreak of 1918, which is estimated to have killed between 50 and 100 million people worldwide.

When asked about how serious they consider a range of threats to be to their business, respondents to our survey cite power outage as being the most significant, perhaps reflecting what they see as the relatively high probability of such an event occurring. Next on their list comes bird flu, which is cited by 43% as being either significant or very significant, and then terrorism, which is seen as a significant or very significant threat by 35% of respondents. Perhaps not surprisingly, given that bird flu has so far had a greater impact in Asia than elsewhere, respondents from that region are more likely than those from the US or Europe to see the threat as significant. Likewise, US respondents are more likely than those from other regions to see extreme weather events as a significant threat, which reflects concerns about intensifying hurricanes along



How significant does your organisation consider the following threats to be to your business?
(% of respondents)

	1 Very significant	2	3	4	5 Not significant	Don't know
Bird flu	16	27	19	13	23	3
Terrorism	12	23	27	19	18	1
Extreme weather events	12	21	23	20	24	1
Seismic activity	6	15	18	23	37	2
Power outage	17	28	26	17	11	1
War/major social unrest	10	16	24	20	28	1

Source: Economist Intelligence Unit survey, September 2006

the country's southern and eastern coasts.

A fairly high proportion of respondents have looked at these most significant threats as part of their risk management processes, with 69% having considered power outage, 60% terrorism, 55% bird flu and 54% extreme weather events. Levels of planning vary considerably from region to region, however, with companies in the US generally showing slightly higher levels of preparedness than those in Asia and significantly higher levels than those in Europe. For example, 71% of US respondents say that their organisation has considered the threat from terrorism, compared with 62% of Asian respondents and 50% of European respondents. The greater attention afforded to catastrophe risk management in the US is not necessarily based on a higher perception of risk—across Asia, Europe and the US, terrorism is seen as a significant threat by broadly similar percentages of respondents.

The gap between awareness and action

Given the variety of threats they face, it is perhaps not surprising that 67% of the respondents to our survey say that, over the past three years, they have increased the time and resources they devote to catastrophe risk management. Among respondents from the US this figure rises to 86%. Large companies are also more likely to have increased their focus

Which of the following threats has your organisation considered as part of its risk management processes?
(% of respondents)

Bird flu	55
Terrorism	60
Extreme weather events	54
Seismic activity	31
Power outage	69
War/major social unrest	35
None of the above	7
Other	11

Source: Economist Intelligence Unit survey, September 2006

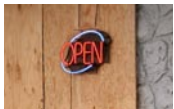
In the past three years, has the amount of time and resources devoted to catastrophe risk management in your organisation increased or decreased?
(% of respondents)

Increased substantially	23
Increased slightly	44
Stayed the same	29
Decreased slightly	1
Decreased substantially	1
Don't know	1

Source: Economist Intelligence Unit survey, September 2006

on catastrophe risk management, with 83% of companies that have annual revenue in excess of US\$5bn reporting an increase, compared with 60% of companies with revenue of less than US\$500m.

Despite this evidence that catastrophe risk management is rising up the corporate agenda, there remains a sense among our respondents that they do not devote as much time to preparing for



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Which of the following statements best describes your company's current position on catastrophe risk management?

(% of respondents)

Preparing for high-impact, low-probability events is seen as important and is something to which we devote significant time and resources	32
We see preparation for high-impact, low-probability events as important, but we lack time or resources to give it our full attention	50
We do not consider preparation for high-impact, low-probability events as a priority, and devote little or no attention to it	18

Source: Economist Intelligence Unit survey, September 2006

potential catastrophes as they should. Fifty percent of respondents to our survey say that they see preparation for high-impact, low-probability events as important, but lack the time or resources to give it their full attention. Only 32% say that preparation for such events is seen as important and is something to which they devote significant time and resources. Among companies with revenue of less than US\$500m, this figure falls to 24%.

The problem for many companies, it seems, is that they are constantly prevented from addressing catastrophe risk management by what they perceive as more pressing and immediate concerns. Almost one-half of those surveyed agree that a focus on

catastrophe risk management means that they risk losing sight of more immediate concerns—a finding that suggests that, for these respondents, preparing for catastrophe is seen as a distraction from “business as usual” priorities.

A possible barrier to the adoption of comprehensive catastrophe risk management is that it is seen as a sunk cost and as being of no immediate benefit to the bottom line. But while there may be no immediate bottom-line benefit from adopting catastrophe risk management, a high proportion of the respondents to our survey—81%—believe that good catastrophe risk management can still be a strong source of competitive advantage. Jeroen Meijer, associate director of crisis management at Control Risks Group, a risk consultancy, agrees and cites the example of supply chain interdependencies, whereby organisations rely on their partners to maintain a consistent and timely flow of goods and will seek assurances from suppliers that disruptions will quickly be resolved. “You can therefore create a competitive advantage within your supply chain if your customers know that you are very well prepared [for catastrophe],” he explains.

Please indicate whether you agree or disagree with the following statements

(% of respondents)

	Agree strongly	Agree slightly	Disagree slightly	Disagree strongly	Don't know
Our insurers will be likely to reduce premiums if we demonstrate good catastrophe risk management	12	38	20	17	14
Good catastrophe risk management can be a source of competitive advantage	33	48	13	3	3
By devoting time and resources to preparing for the big one, we risk losing sight of more immediate concerns	11	38	33	18	1
Preparing for bird flu requires a very different set of business continuity capabilities than we have developed for other threats	29	39	16	8	8
Catastrophe risk management is something that requires discussion at board level	55	34	9	1	1
We regularly test our scenario plans and disaster recovery plans	17	34	25	19	5

Source: Economist Intelligence Unit survey, September 2006



Case study: Northgate Information Solutions

The widespread use of outsourcing arrangements to cut costs and maximise efficiency has highlighted the need for companies to feel confident that their partners have robust catastrophe risk management plans in place. With many companies contracting out business-critical information technology functions, such as payment processing or applications maintenance, to external providers, the risks to reputation and potential for damage to the business should these services be disrupted by a major incident are considerable.

One information technology (IT) outsourcing provider that has demonstrated its ability to respond to catastrophe is Northgate Information Solutions, a UK company that supplies payroll services to a range of public- and private-sector clients. In the early hours of Sunday, December 11th 2005, an explosion at Buncefield oil depot in the UK caused the largest fire the country had seen since the second world war. The blast partly destroyed Northgate's headquarters, which was in the nearby Maylands industrial estate, and devastated the servers on which company data were held, causing massive disruption to

operations. "We had 212 customer systems running from the data centre, and we lost all of them," explains Chris Stone, chief executive of the company.

"We also had about 450 employees who usually worked from that building, although fortunately, because the explosion happened very early on a Sunday morning, none of them was there at the time."

The company responded quickly, and within an hour of the explosion had set in motion a disaster recovery plan. At 7.30 am Mr Stone had his first conference call with his executive committee, during which he allocated specific responsibilities for each of the different tasks around communication, planning, and contacting suppliers and customers.

With e-mail taken out by the explosion, employees were contacted on company mobile phones by a text message, which pointed them to a website that had been set up to answer essential questions they might have, such as the location of temporary facilities. For many this meant travelling to alternative premises operated by Sungard, the company's disaster recovery provider, and beginning the arduous job of restoring customer systems. "Having a disaster recovery contract is just like a building block—all it does is tell you that there is a facility that will be ready for you to build all your systems," explains Mr Stone. "Actually

rebuilding all those systems is a major undertaking. We had about 150 people working constantly in 12-hour shifts over the next two weeks, rebuilding all the systems and making sure that we got all the essential customer systems up and running."

Customers were kept abreast of the situation by individual account managers, who in turn were briefed by and communicated with sales directors and divisional managing directors. "We worked closely with our customers, trying to prioritise their needs and make sure that we didn't miss a single payroll," explains Mr Stone. "And in the end, this is something that we managed to achieve."

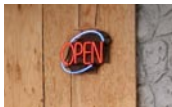
Mr Stone believes that if the company had not had robust business continuity and crisis management plans in place, it would not have survived the Buncefield explosion. "If a disaster like that happens and you are not prepared," he says, "you are never going to be taken seriously by anyone ever again." As it is, the company has since gone from strength to strength, and in June this year announced that, despite the blast, annual pre-tax profits had doubled to £30.6m. "We lost one contract following the explosion but, in the following ten weeks, we won 60 new ones," explains Mr Stone. "It's pretty clear that when we talk about commitment to customers, it's something that we really mean."

The role of insurance companies

Aside from the business imperative to consider catastrophe risk management, respondents to our survey also note that they face pressure from a number of external stakeholders to put such plans in place. Governments and regulatory bodies are seen as exerting the greatest pressure, cited by 45% of respondents, followed by insurance companies, and

shareholders and other investors, which were both cited by 32% of respondents.

For executives, the pressure from insurance companies means a careful assessment of insurance policies and close co-operation with providers to ensure that adequate coverage is in place. In general, the respondents to our survey are confident that their insurance policies will provide adequate cover in the event of a catastrophe, with 63% expressing a high or very high degree of confidence. A smaller proportion—



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Have any of the following stakeholders exerted pressure on your organisation to improve its catastrophe risk management?

(% of respondents)

Shareholders and other investors	32
Ratings agencies	17
Insurance companies	32
Customers	28
Suppliers	8
Employees	23
Governments or regulatory bodies	45
Don't know	12

Source: Economist Intelligence Unit survey, September 2006

What degree of confidence do you have that your company's insurance policies will provide adequate cover in the event of a major event or catastrophe?

(% of respondents)

Very high	11
Fairly high	52
Fairly low	23
Very low	8
Don't know	7

Source: Economist Intelligence Unit survey, September 2006

In the past three years, which of the following external bodies has your company consulted as part of its catastrophe risk planning?

(% of respondents)

Risk consultants	46
Insurance companies	41
Emergency services	19
Security consultants	31
Lawyers/litigation experts	28
Government agencies	33
Suppliers	17
None of the above	18
Don't know	3
Other	5

Source: Economist Intelligence Unit survey, September 2006

41%—involve insurers in their catastrophe risk planning, although 50% of all respondents agree that their insurers will be likely to reduce premiums if they can demonstrate good catastrophe risk management.

Given that insurance companies are still reeling from the devastating 2005 hurricane season, there is also real pressure on the industry itself to respond to the increased threat from catastrophes. As a result, insurance companies are making greater use of innovative financing solutions, such as catastrophe bonds, which transfer the risk of a catastrophe to the investors in the bond. They are also continuing their use of sophisticated risk models, which can be used to predict losses arising from incidents such as extreme weather events, pandemics or terrorist attacks and thereby guide them in their underwriting and portfolio management decisions. Many of these models have been revised since the 2005 hurricane season following analysis of how buildings were affected by the storms, says Josh Darr, senior manager of model management at Risk Management Solutions, which provides risk models to the insurance industry. "The models being used at the time did not underestimate the potential strength and intensity of the hurricanes, but they did underestimate the volume of losses that would ensue," he explains.

Although models such as those produced by Risk Management Solutions are primarily a tool for the insurance industry, Mr Darr points out that the company also has a consulting arm, which uses the models to provide risk assessments and impact analyses to corporate clients. "We're seeing significant uptake from very large corporations who are looking for one-off studies to understand their portfolio of risks from a corporate risk management perspective," he explains. In the longer term, Mr Darr expects that the regular use of risk models to assess and quantify risks will spread from the insurance industry to the broader corporate arena.



The gap between large and small businesses

According to our survey, the use of risk consultants for services such as assessing a company's loss exposure and conducting impact analyses is something that remains predominantly confined to large corporations. Seventy-one percent of respondents from companies with revenue in excess of US\$5bn say that they use risk consultants, compared with just 28% of those from companies with revenue of US\$500m or less. Although the use of external risk consultants is by no means a benchmark of how successfully companies prepare for catastrophe, this difference in results does point to a broader issue—namely that small and medium-sized companies simply do not have the time or resources to put in place thorough catastrophe risk management plans.

In the wake of the London terrorist bombings of July 7th 2005, the president of the London Chamber of Commerce, Michael Cassidy, expressed his concerns about “a chronic lack of preparedness” among small and medium-sized companies to address future threats. The findings from our survey also suggest that small companies lag considerably behind their larger peers in the adoption of catastrophe risk management. Seventeen percent of companies with revenue of US\$500m or less said that they had no catastrophe plans at all, while a further 11% saw planning for catastrophe as a one-off exercise. By contrast, only 2% of companies with revenue in excess of US\$5bn said that they had no plans in place.

This disparity can in part be attributed to the greater regulatory burden placed on larger businesses, which often requires them to adopt business continuity plans, but it nevertheless reflects the large gap in preparedness between large and small businesses. When our survey respondents were asked how successfully their organisation conducted aspects of catastrophe risk management, such as risk assessment, impact analysis and communication

How often does your company revise its catastrophe risk plans? (Companies with annual revenue of US\$500m or less)

(% of respondents)

More than once a year	9
Once every year	39
Once every 2-3 years	20
We see it as a one-off exercise	11
We do not have any catastrophe plans	17
Don't know	4
Other	1

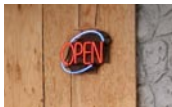
Source: Economist Intelligence Unit survey, September 2006

of plans to employees, smaller businesses gave themselves lower ratings than their larger peers in every category.

Scenario planning and simulations

Although the more sophisticated risk tools may be out of reach of smaller businesses, there are others that are both inexpensive and effective. For example, scenario planning, which was first used by the military and then commercialised by Royal Dutch/Shell in the 1970s, has become a widely used way of helping a range of companies to think through the impact of major changes in the business environment, including catastrophes. It is used by 57% of the companies in our survey, and by 52% of companies with revenue under US\$500m. “Scenario planning is very scalable,” explains Doug Randall, co-leader of the scenario practice at Global Business Network, a consultancy that specialises in helping organisations to prepare for possible futures. “For a small business, you can spend a day with a team looking at a few different scenarios imagining what you would do, whereas in a large business, you could spend six months doing a series of major studies.”

Mr Randall attributes the growing interest in tools such as scenario planning to the recognition among companies that they are no longer necessarily in



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Which of the following tools does your organisation currently use to manage catastrophe risk?

(% of respondents)

Catastrophe modelling	11
Scenario planning	57
Specialist training of employees (e.g. crisis management)	47
Simulations	31
Active testing of disaster recovery plans	46
None of the above	16
Don't know	2

Source: Economist Intelligence Unit survey, September 2006

control of their own destinies. "Faced with a whole host of extreme weather events, geopolitical changes and technology innovations, companies started to say 'We don't understand the world around us and we'd better be prepared for different futures,'" he explains.

The objective of scenario planning is not to predict the future but to describe a range of possible scenarios and consider their impact on the business, its operations and strategy. A scenario planning exercise will typically require executives to spend time "brainstorming" potential events that could strike the business, and to think through how these would affect their strategy and operations. "Scenario planning is a platform for thinking about the challenges an organisation faces," explains Mr Randall. "It serves two main functions: first, it helps to identify emerging issues or threats that your organisation may not

Which of the following tools does your organisation currently use to manage catastrophe risk?

(Companies with annual revenue of \$500m or less)

(% of respondents)

Catastrophe modelling	9
Scenario planning	52
Specialist training of employees (e.g. crisis management)	29
Simulations	17
Active testing of disaster recovery plans	36
None of the above	25
Don't know	1

Source: Economist Intelligence Unit survey, September 2006

have considered. Second, it helps prepare your organisation and make it more resilient for dealing with threats."

By taking executives out of their comfort zone and forcing them to challenge the assumptions they hold about the business, scenario planning can be a valuable educational tool. But more importantly, it encourages them to test the resilience of their strategies against different potential scenarios. "You can start to look at how certain strategies only make sense in certain scenarios," explains Mr Randall. "If that's the case, you want to know, because you are effectively making a bet with that strategy that a certain scenario will come true."

Real-life simulations of specific catastrophes can also be a valuable tool to help companies test their preparedness and provide individual executives with the skills they would need to face the media, investors and relatives of employees in the wake of a catastrophe. Simulations are less widely used among the respondents to our survey than scenario planning, however, with 31% of the overall sample and only 17% of companies with revenue of US\$500m or under indicating that they currently use them.

Leadership and communication

As with many aspects of risk management, the leadership of the company plays a vital role in ensuring that effective plans are in place and that roles and responsibilities are understood by everyone in the organisation. Mr Meijer of Control Risks Group stresses that catastrophe risk management is something that must be initiated and supported from the very top of the organisation. "Very well-communicated board commitment is crucial for a successful process," he explains. "If there is no board sponsorship for these issues, people are not stimulated to address them." This is a statement that finds strong support among our survey respondents, 89% of whom agree that catastrophe risk management is something that requires discussion at board level.



Case study: The market-wide exercise

In the UK, the Tripartite Authorities, which consists of the Financial Services Authority, the Bank of England and HM Treasury, have instituted an annual simulation, called the market-wide exercise, to test responses to sector-wide disruption of the financial services industry and highlight issues of interdependency that could not be examined using stand-alone simulations. In the past few years, the market-wide exercise has grown from a round-table discussion involving approximately 130 people in 2003, to a full-scale, realistic simulation in 2005, which brought together 7,000 participants from 70 organisations, including the major banks, the City of London Police, the Corporation of London and seven overseas regulators.

The November 2005 market-wide exercise

simulated a series of terrorist incidents in London and other cities that affected people, buildings and infrastructure. Information was relayed as realistically as possible using news broadcasts and websites and participants were encouraged to contact the civil contingencies agencies and authorities that were also taking part in the exercise. Coming just a few months after the July 7 bombings in London, the market-wide exercise was also an opportunity for participants to test the new measures they had put in place in response to the attacks.

“The underlying purpose of the market-wide exercise is to make the financial sector as resilient as possible against any kind of operational disruption and to promote good practice,” explains Richard Maddison, deputy head of the business continuity management team at the Financial Services Authority. “It is an opportunity for participants to test their own plans, but because we can get all these people together at the same time, it is also a way of testing in

a realistic fashion the durability of the sector as a whole.”

In 2006, the market-wide exercise will focus on the threat from a pandemic outbreak for the first time. “It’s a threat that hasn’t been thought about so much over the years, so we’re particularly interested in what the cumulative effect is on the sector and how we as regulators need to deal with that,” says Mr Maddison.

With a pandemic outbreak likely to spread in waves over a period of months, the use of real-time, realistic simulations played out over a short timeframe, which has been the model used in the past, is less appropriate. “Because of the nature of the threat, and because we want to get as much out of the exercise as possible, we’re going to run it over a six-week period,” explains Mr Maddison. “We want people to go away and research properly what the answers might be and then come back to give it their considered opinion. It’s a rolling series of discussions against a scenario.” “

How successfully do you feel your organisation conducts the following aspects of catastrophe risk management?

(% of respondents)

	1 Very successfully	2	3	4	5 Not successfully	Don't know
Assessment of threats	13	48	26	6	5	3
Impact analysis	10	37	31	13	5	3
Determining roles & accountability	14	32	30	14	7	3
Setting of clear objectives & priorities	14	32	32	14	6	3
Collaboration between departments	5	30	36	18	8	4
Communication of plans to employees	7	26	35	19	9	4
Communication of plans to customers	3	17	27	32	14	8
Engagement with external agencies (such as emergency services)	7	23	31	17	14	8
Collaboration with suppliers/value chain	4	19	30	23	11	13
Maintaining & updating plans	9	24	36	14	12	5
Actively testing plans & scenarios	10	22	28	18	17	5

Source: Economist Intelligence Unit survey, September 2006



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The communication of plans to employees, customers and suppliers should also be seen as a priority, as it is only by constant, effective dialogue that a company facing a crisis can emerge intact. Mr Stone of Northgate Information Solutions cites communication as being the most essential element of any crisis management situation. "Everyone needs to be given as much information as possible, because lack of information leads to all sorts of panic and doubt," he explains.

Despite the importance of communication as a tool to help an organisation steer its way through a crisis, the respondents to our survey do not rate themselves highly in this area. Only 33% of companies believe that they communicate catastrophe risk management

plans to their employees successfully, and just 20% believe that they communicate plans successfully to customers.

Respondents also do not consider themselves particularly adept at ensuring that catastrophe risk management plans are tested and kept up to date. Just 33% say that maintaining and updating plans is something their company does successfully, and, although 51% say that they regularly test their scenario and disaster recovery plans, only 32% consider their companies to be successful at doing so. These findings suggest that companies are most likely to fall down on the administrative side of catastrophe risk management by failing to renew plans or update them to reflect personnel or organisational changes.



Conclusion

It is impossible for companies to consider every eventuality that they could face in the future, and many of the incidents for which they do prepare may never happen. But despite this, companies would be foolish to ignore catastrophe risk management on the grounds that such incidents are either unforeseeable or too remote. Many of the precautions that companies need to put in place to deal with catastrophe are generic and would apply in the case of any major incident. For example, employees and assets must be protected, IT infrastructure and other operations must be restored, and reputation must be maintained using open, constant communication with customers, investors and the media. As such, companies should not necessarily focus on specific threats but rather on the general decision-making structures, roles and responsibilities, and priorities that they would need to set for any major incident.

The extent to which companies need to prepare effectively for catastrophe will depend on their resources, size, industry and the level of risk that they face. Heavily regulated industries, such as financial

services, or those that operate in regions of high seismic activity or terrorist threat, will undoubtedly need to put in place more sophisticated plans. But even very small businesses, which may not consider themselves to face significant risks, should give some consideration to catastrophe risk management. Such preparations need not be expensive or time-consuming—even straightforward precautions, such as backing up all data to a remote site on a daily basis and putting in place policies for employees in the event of a catastrophe, could make the difference between survival and extinction.

As the level and variety of threats that companies face increases, they are likely to face greater pressure from external sources, such as regulators, customers and shareholders, to put in place good catastrophe risk management. Executives who have ensured that their company has robust plans in place will not only be well prepared for a range of eventualities, but will also demonstrate to the broader stakeholder community that they take seriously their responsibility for protecting the organisation over the long term.

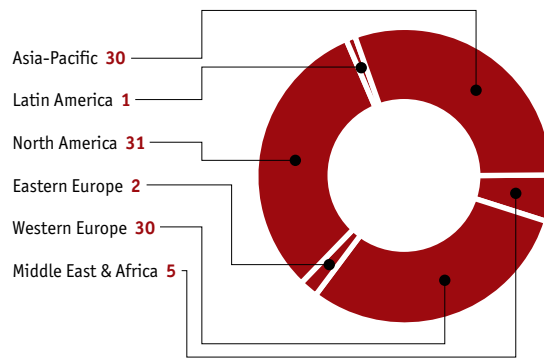
Appendix

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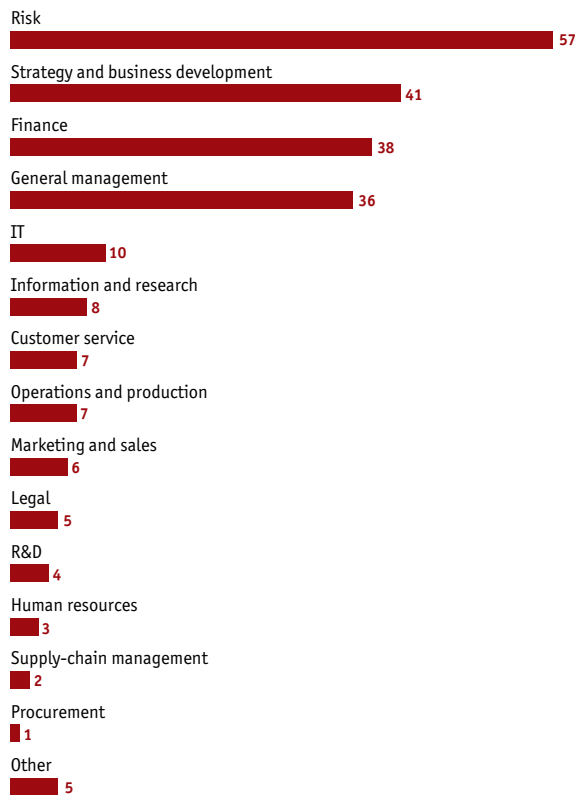
Appendix

In June 2006, the Economist Intelligence Unit conducted a survey of 225 executives from across Europe, Asia-Pacific and the Americas. Please note that not all answers add up to 100%, because of rounding or because respondents were able to provide multiple answers to some questions.

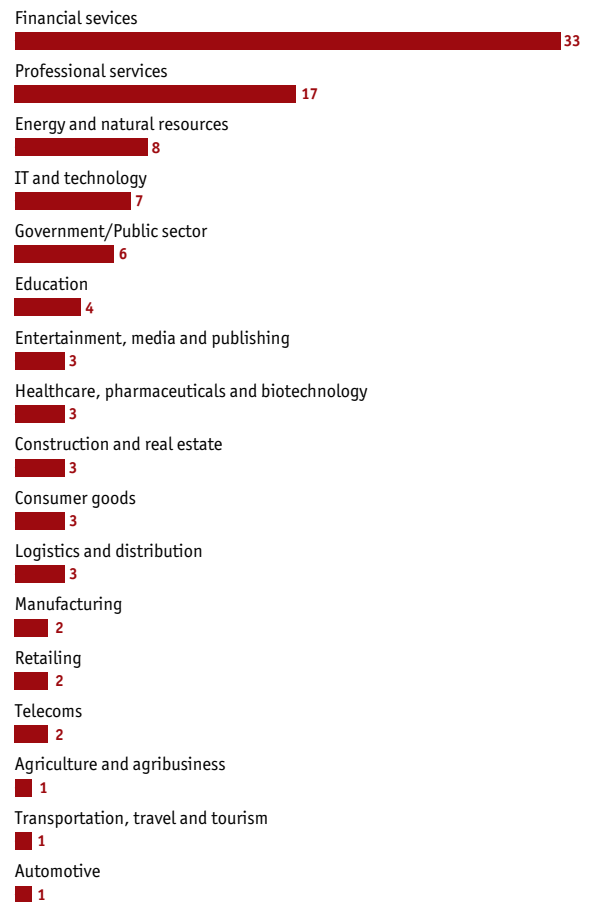
In which region are you personally located? (% respondents)



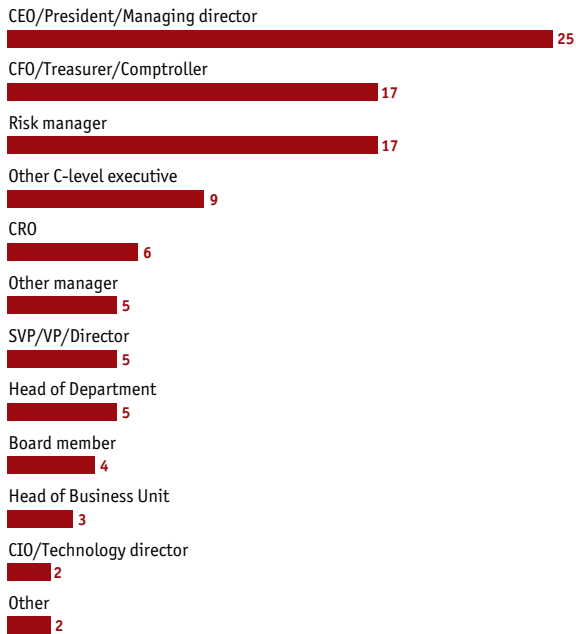
What are your main functional roles? (% respondents)



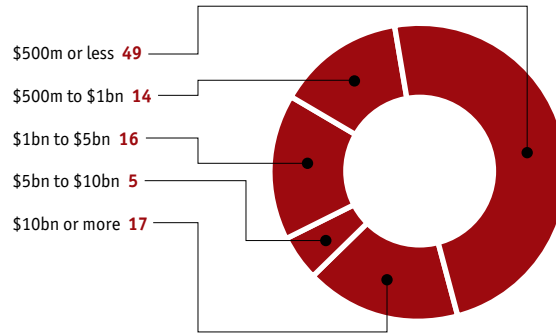
What is your primary industry? (% respondents)



What is your title?
(% respondents)

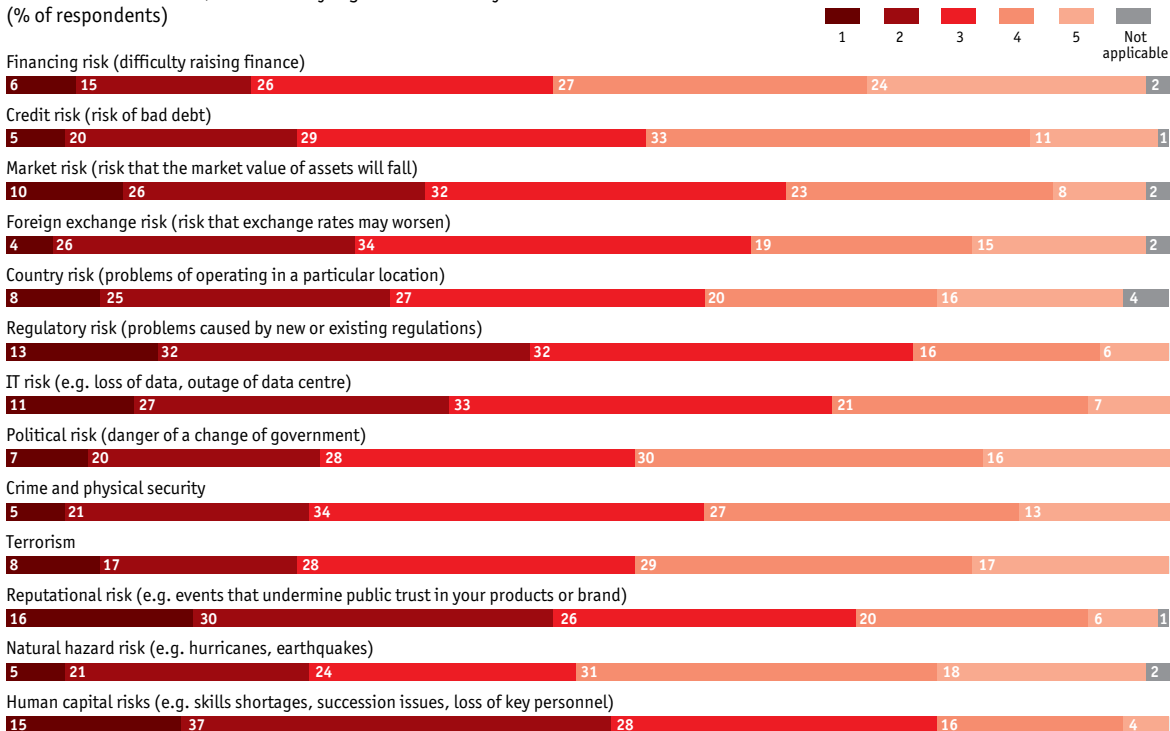


What are your company's global annual revenues in US dollars?
(% respondents)



How significant a threat do the following risks pose to your company's global business operation today?

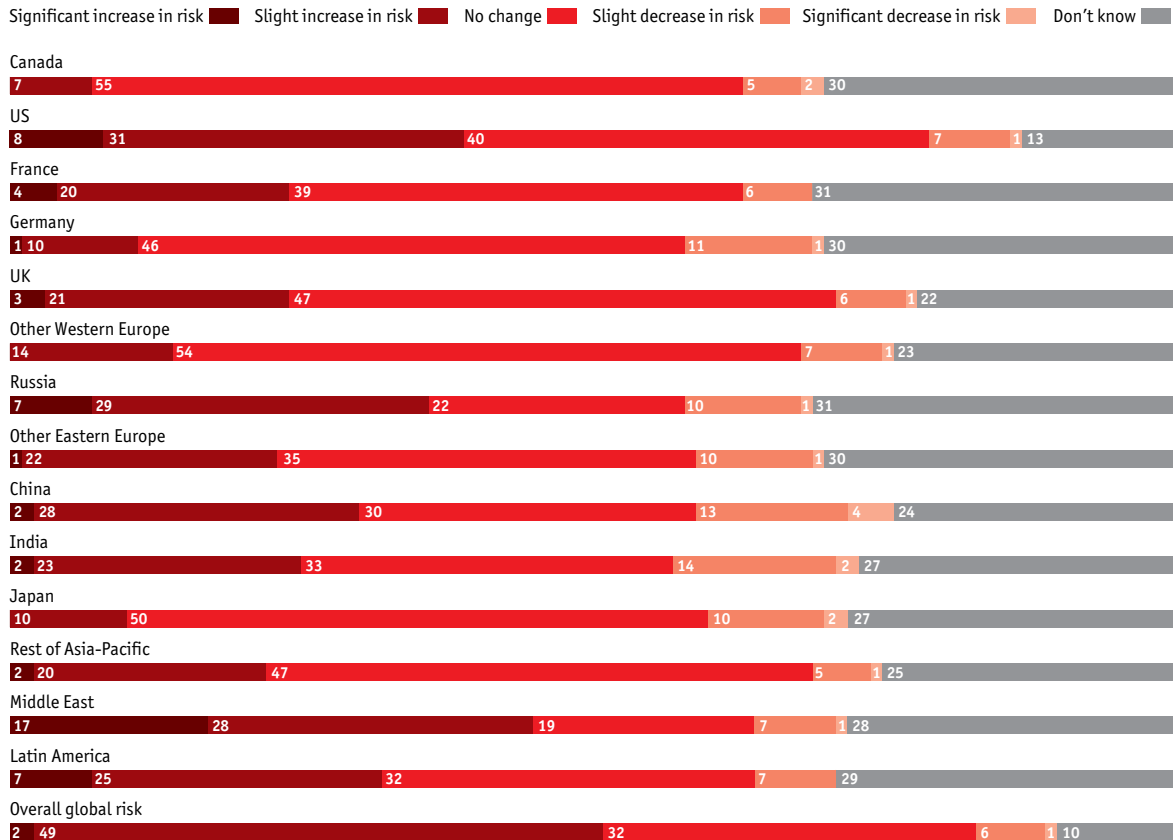
Rate on a scale of 1 to 5, where 1=very high risk and 5=very low risk.
(% of respondents)



Appendix

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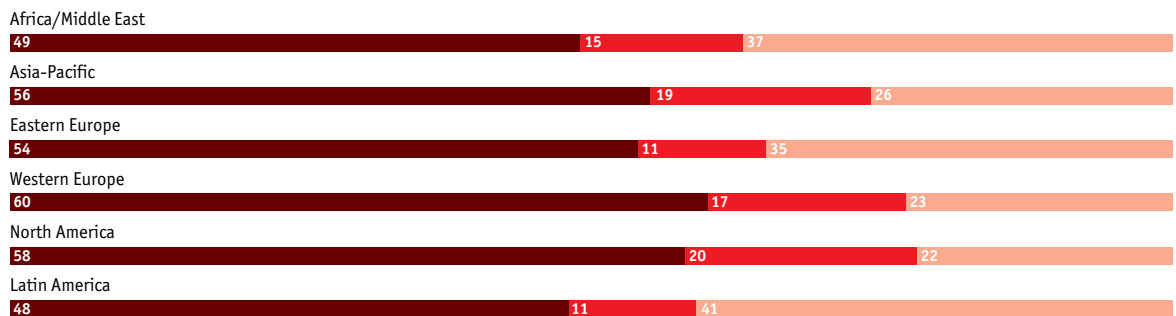
How has your organisation's assessment of risk in each of the following countries and regions changed over the past three months?
(% of respondents)



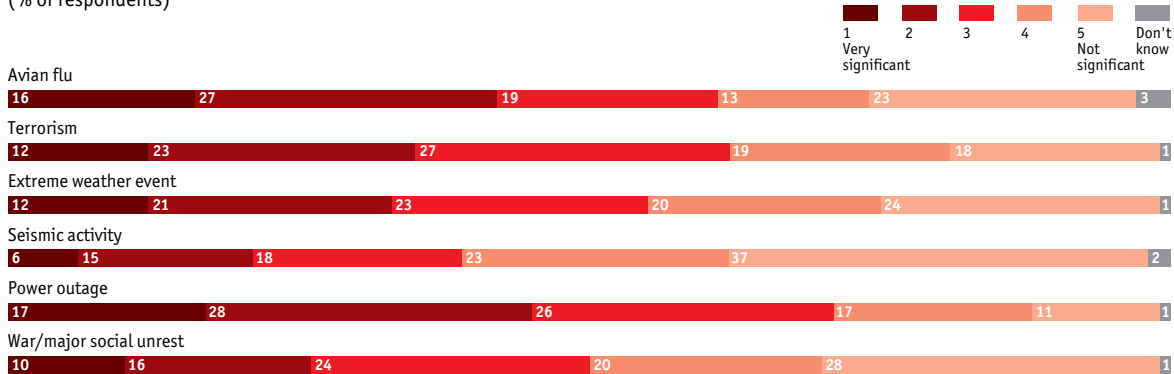
In each of the following regions, are the majority of risks to your business considered to be general (eg, likely to affect many other companies operating in the same location or industry) or specific (eg, relating to your company's internal systems, processes or people)?

(% of respondents)

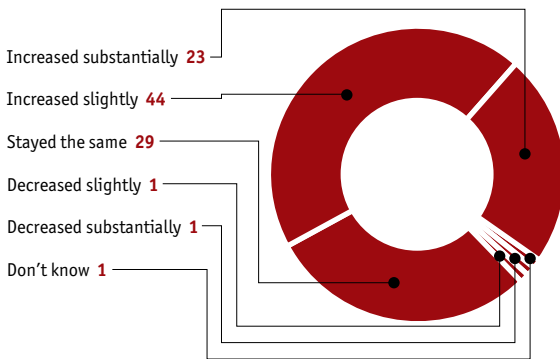
General ■ Specific ■ Not applicable/Don't know ■



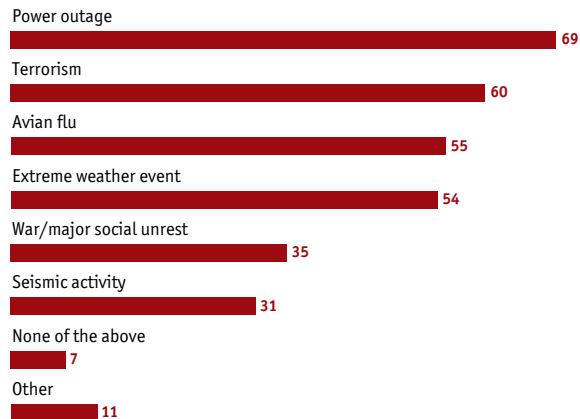
How significant does your organisation consider the following threats to be to your business?
(% of respondents)



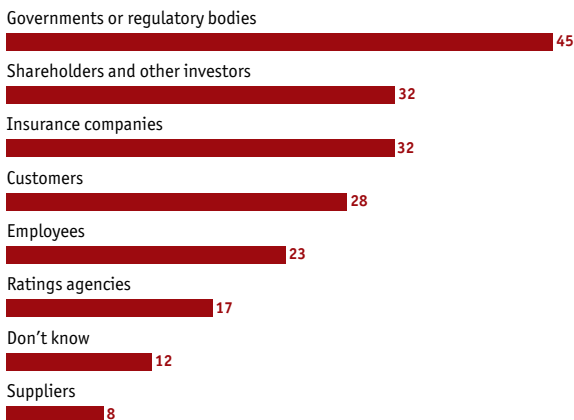
In the past three years, has the amount of time and resources devoted to catastrophe risk management in your organisation increased or decreased?
(% of respondents)



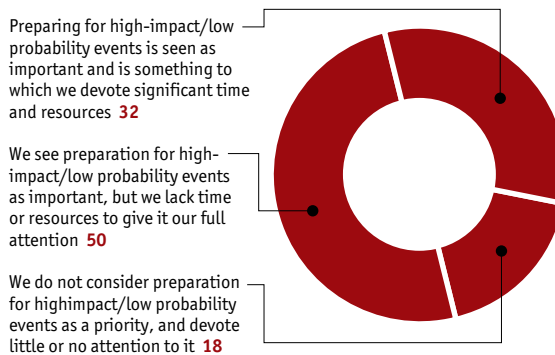
Which of the following threats has your organisation considered as part of its risk management processes?
(% of respondents)



Have any of the following stakeholders exerted pressure on your organisation to improve its catastrophe risk management?
(% of respondents)



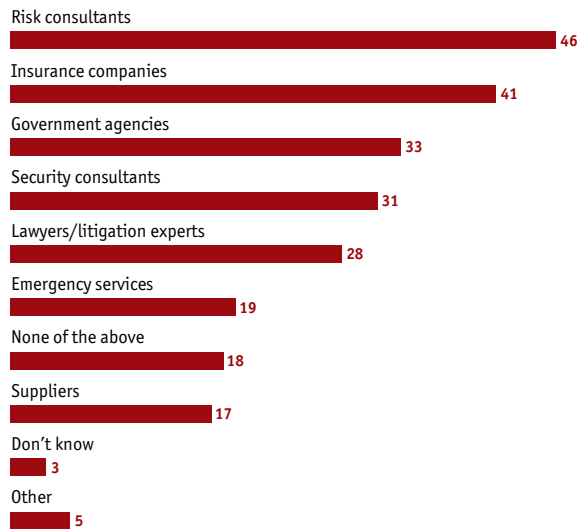
Which of the following statements best describes your company's current position on catastrophe risk management?
(% of respondents)



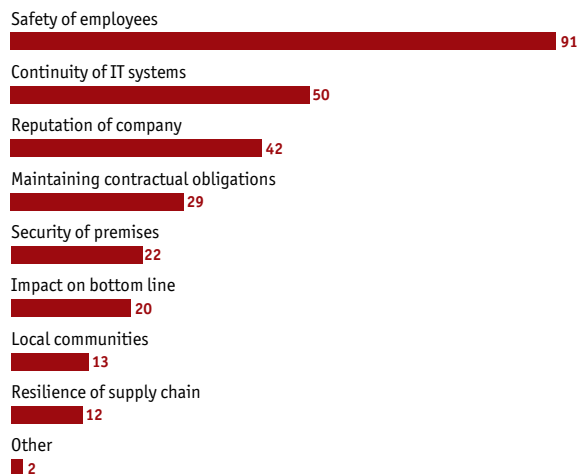
Appendix

Catastrophe risk management Preparing for potential storms ahead

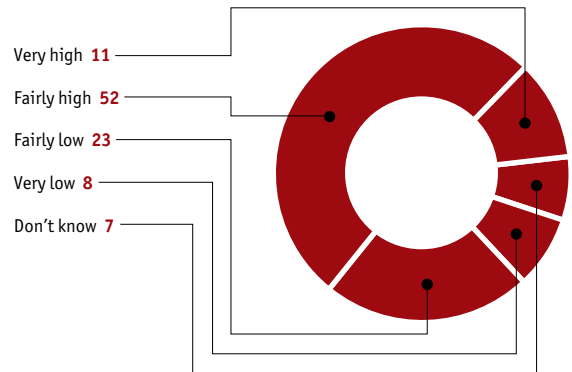
In the past three years, which of the following external bodies has your company consulted as part of its catastrophe risk planning?
(% of respondents)



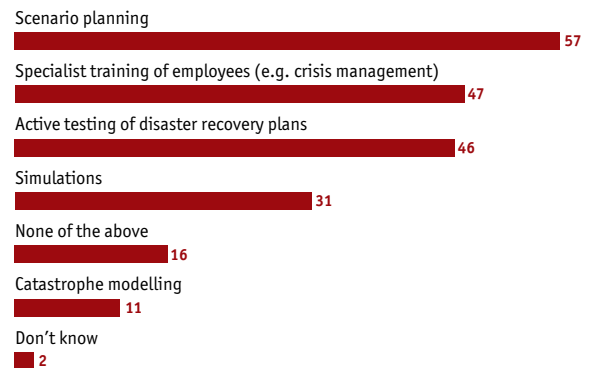
What do you see as being the most important priorities in the event of a catastrophe?
(% of respondents)



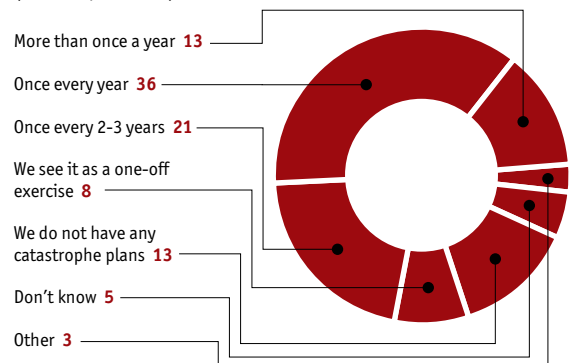
What degree of confidence do you have that your company's insurance policies will provide adequate cover in the event of a major event or catastrophe?
(% of respondents)



Which of the following tools does your organisation currently use to manage catastrophe risk?
(% of respondents)

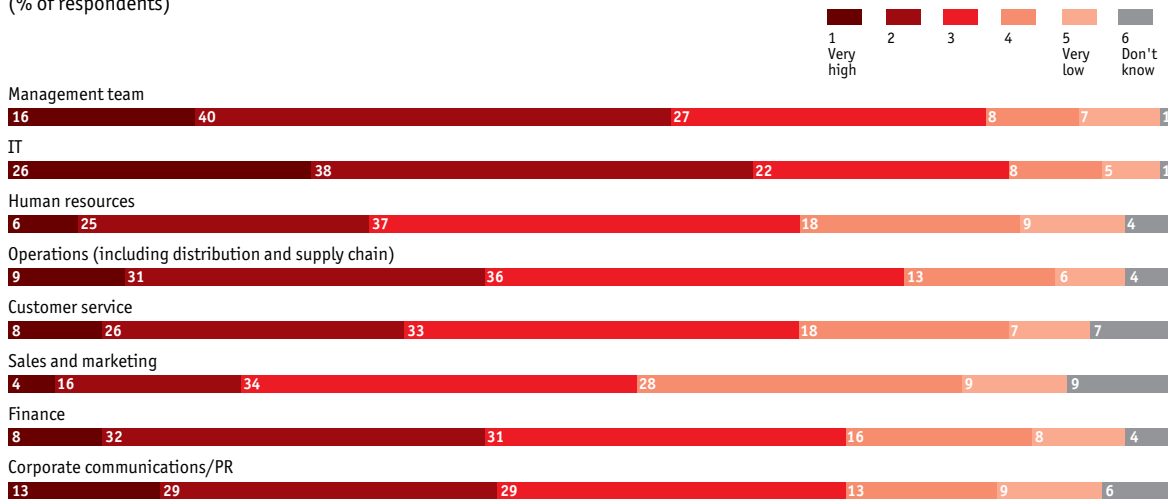


How often does your company revise its catastrophe risk plans?
(% of respondents)



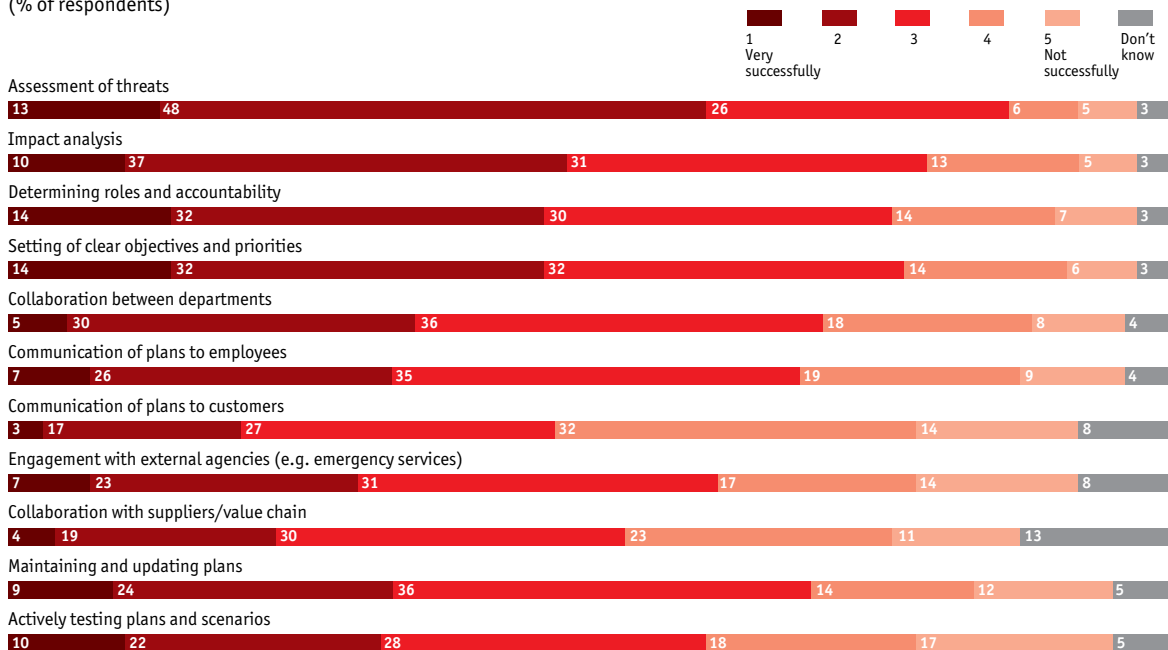
How would you rate your organisation's level of preparedness for catastrophe in the following departments?

(% of respondents)



How successfully do you feel your organisation conducts the following aspects of catastrophe risk management?

(% of respondents)



Appendix

Catastrophe risk management

Preparing for potential storms ahead

Please indicate whether you agree or disagree with the following statements.

(% of respondents)



Whilst every effort has been taken to verify the accuracy of this information, neither The Economist Intelligence Unit Ltd. nor the sponsor of this report can accept any responsibility or liability for reliance by any person on this white paper or any of the information, opinions or conclusions set out in the white paper.

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