



India Risk Survey 2012



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Foreword



With the advent of the new age, risks have assumed a completely different shape and proportion. Sometimes risks are alarming to the extent of derailing a country's economy or lead to extinction of a company. With the financial crisis lingering beyond the cautious expectations of economic gurus, these risks have become even more destructive. The financial crisis has revealed the vulnerability of both the developed and developing world, and has drained the world's capacity to deal with risks. The strategic ability of a country to productively prepare itself for the risks of future dictates the success story it will achieve.

The FICCI-Pinkerton Report on the Risks in India aims to measure and quantify prevailing risk levels as faced by the actual users. The first thing is to categorise these potential risks in their scale of importance for different sectors of the economy. The report hierarchically scales the ongoing risks in terms of their importance for different kinds of economic operations and for different sectors. The survey, in order to be broad-based, tries to cover all levels of management from top to bottom, every type of industry from manufacturing to IT to infrastructure to an NGO, and covers all four regions of the country. The report is expected to provide a blueprint of prevailing risks in India to different stakeholders including policymakers, corporate and members of the civil society.

Gulpawan Singh
Managing Director
Pinkerton Consulting & Investigations India (P) Ltd.

Foreword



The Indian economy has shown remarkable resilience in the face of severe global financial crisis. The global economy seems to be headed for another slowdown and period of tepid growth. In spite of global economic slowdown the Indian economy grew by 8 per cent in 2010–11 and is estimated to grow by 7 per cent in 2011–12. There is significant foreign investor interest as shown by a 50 per cent increase in FDI this year. However, in order to maintain this robust economic growth we need an environment free from major risks. India needs to identify and assess factors that may jeopardise its economic achievements in the past decade. With terrorism going digital, we are at the threshold of New Emerging Risks. It is thus imperative for all the stakeholders, the corporate sector, government and civil society, to understand, analyse and address these risks.

The FICCI-Pinkerton Report is an attempt to analyse and quantify ‘potentially destructive’ risks to the business enterprises of the country. This joint report is expected to provide a blueprint pertaining to the security needs of India’s corporate sector. The report is a unique and timely analysis of the risks affecting the Indian economy. It provides a referral to understand the complexity of these new risks across the spectrum of stakeholders, i.e. policymakers, corporate and members of the civil society. It also aims to prioritise risks which will enable many industries, public and private, to allocate resources required for the mitigation of these new risks. Overall, it is an attempt to sensitise Government about emerging risks and dangers they pose, so that well planned strategic policy decisions can be made and implemented.

I am confident that this report will prove to be an important document for policymakers, senior executives and civil society.

Dr. Rajiv Kumar
Secretary General
FICCI

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Executive Summary

Information and Cyber Insecurity is number one Risk

The risk of information and cyber insecurity has been rated as the highest risk to business establishments by almost all the respondents across sectors and regions. This concern has also been put forward by respondents from outside India. While IT and financial sectors count cyber insecurity as their apex risk, even the government, manufacturing and telecom sectors have rated it as their top three risks, they face.

Overall Risk Ranking

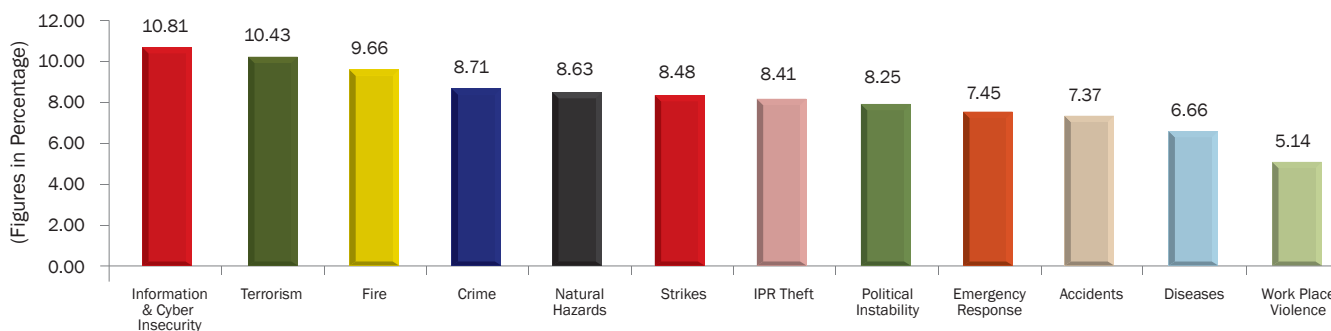


Figure 1: Overall Risk Ranking

Terrorism – Part of Persistent Risk Environment

The perils of terrorism have primed to be a part of risks occupying minds at all times. The northern and eastern regions of India indicated terrorism as their prime risks where as the western and southern regions placed it at number two and six respectively. It is to be noted that respondents from outside of India rated terrorism at number four, quite different from the popular conviction and foreign media reports that indicate terrorism to be their prime risk.

Strikes – An Intensifying Distress

Strikes have been graded as the sixth most critical risk to business establishments. Respondents from outside India have rated strikes higher than terrorism. This is predominantly because Indian business units of multinational companies are not able to operate conveniently due to strikes and closures.

Fire – It Continues to be around Us

Fire has been one of the oldest risks around us and much has been done to control it. However, it still continues to be the most destructive threat to life and property. In addition, awareness towards fire safety has not been

quite forthcoming. During many incidents, in recent times, establishments such as hospitals, commercial houses and high rise buildings have been found flouting fire safety norms.

Rating 1	<ul style="list-style-type: none"> • Manufacturing • Telecom • Respondents from Outside India
Rating 2	<ul style="list-style-type: none"> • South Zone • Infrastructure
Rating 3	<ul style="list-style-type: none"> • Overall • IT • West Zone • North Zone

Figure 2: Risk from Fire according to Industries/Regions



IPR Thefts – Trepidation of Researchers

The sectors relying upon Intellectual Property Rights (IPR) Thefts have rated larceny of intellectual capital theft as their top six risks. While IPR Theft has been ranked seventh on the overall risk scale, the northern and southern regions of India, foreign companies, and IT/ITES and financial sector companies have categorised IPR Theft as the sixth largest risk they face.

Each Sector – Respective Concern

Notwithstanding the above scaling of various kinds of risk, each sector has its own respective concerns, depending on the nature of their operation. Below is a sector-wise categorisation of two major risks.

Sector	Top Ranked Risk	Second Ranked Risk
IT/ITES	Information and Cyber Insecurity	Terrorism
Manufacturing	Fire	Political Instability
Financial Services	Information and Cyber Insecurity	Crime
Government/PSU	Terrorism	Information and Cyber Insecurity
Infrastructure	Natural Hazards	Fire
Telecom	Fire	Terrorism

Figure 3: Risks according to Sectors

Internal Risk - Rated Low

Internal risks such as workplace violence or industrial accidents have been rated low across the board. Workplace violence is consistently among the bottom three risks.

“Technology... is a queer thing. It brings you great gifts on one side and it stabs you in the back on the other. As the technology advances, risk too advances. We the current generation, need to create a balance between technology and man power in order to mitigate the risk from Technology.”

Mr. Sanjay Kaushik
COO

Pinkerton Consulting & Investigations India (P) Ltd.



Introduction

The prowess of the Indian economy is based on impetus, resilience and sustainability which is well-acknowledged the world over. This economic sustainability leads to further investments and growth. As John Maxwell said, “If we are growing, we are always going to be out of our comfort zone”. This is very true in the context of Indian economic growth. Outside this comfort zone awaits a plethora of risks that have to be mitigated well in time. The prevailing globalisation and risk environment

are forcing some of the countries to create a strategic shift in their policies. Some of the country’s acclaimed zealots of globalisation, have made efforts to modify their stand. For example, the USA is working to create laws to impact outsourcing so that maximum jobs can stay within the borders. This is in conflict with what they advocate to other have provided to many countries to de-regularise their economies.

FICCI and Pinkerton joined hands to collate and analyse the apprehensions of diverse industry segments regarding risks and attempt to translate these into tangible data for further research and analysis. This report is an effort to accumulate and organise opinion of business leaders and managers regarding new age risks. On a macro level the strategic ability of a country to productively prepare itself for future risks dictates its success.

“The FICCI Pinkerton survey on risk is a novel initiative. I am confident that the findings of the survey will help us articulate the concerns of industry and present them to the Government so that appropriate policies can be formulated and adequate resources allocated.”

*Mr. R. V. Kanoria
President FICCI*



Survey Results

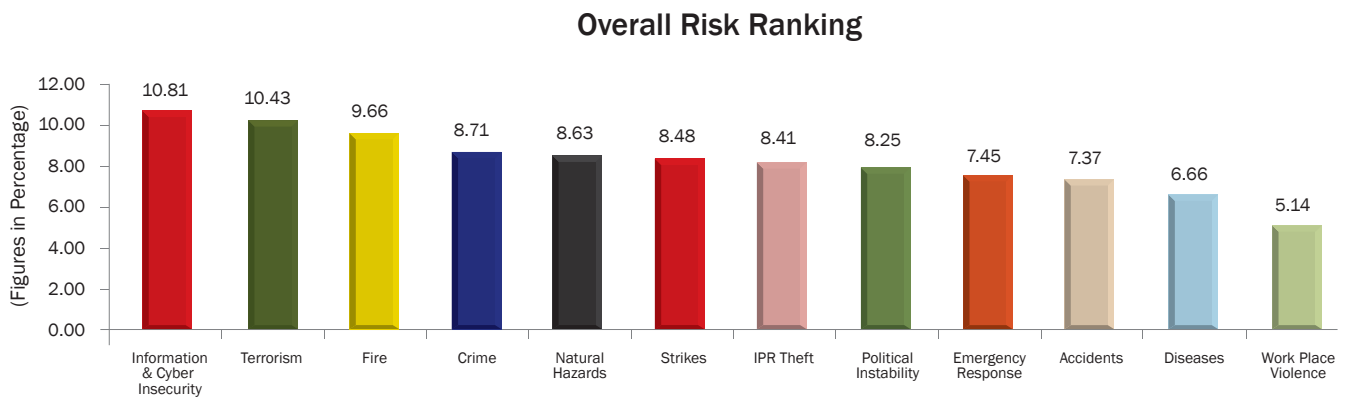
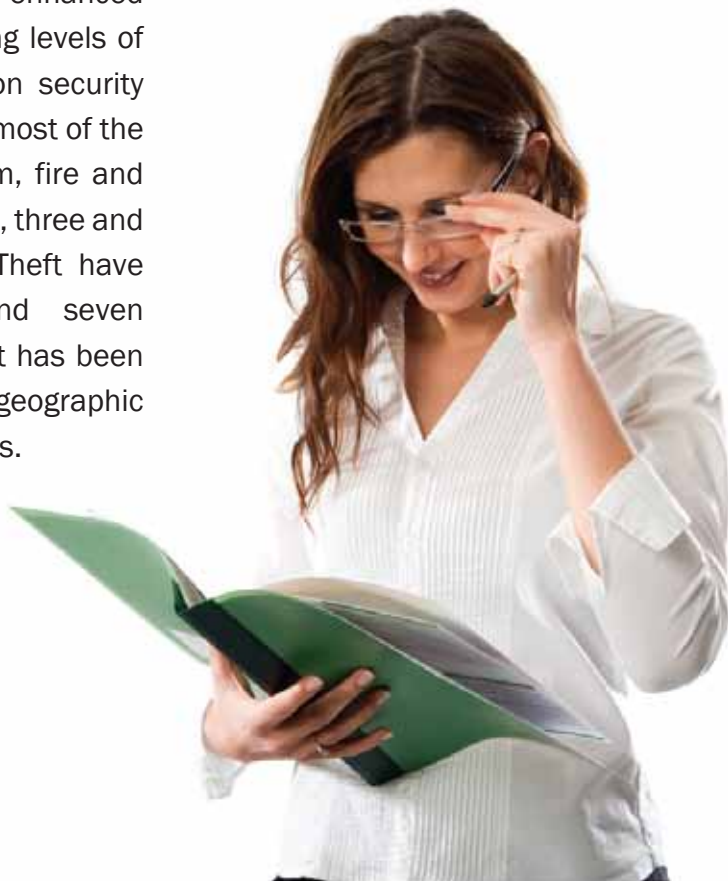


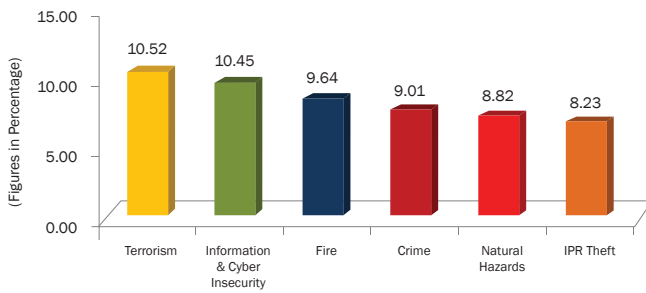
Figure 4: Overall Risk Ranking

Information and cyber insecurity (information insecurity) has been identified as the most critical risk. The rationale lies in the enhanced use of computing and the burgeoning levels of digital crime. The risk of information security has figured in the top three risks for most of the sectors. Traditional risks of terrorism, fire and crime have been rated at number two, three and four respectively. Strikes and IPR Theft have been rated at number six and seven respectively. A very appealing verdict has been the rating of specific risks as per geographic regions and types of industrial sectors.

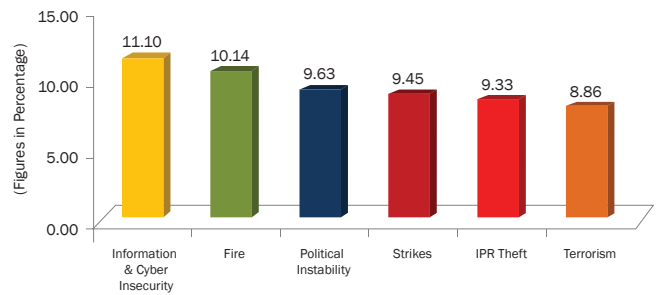


Major Risks according to Regions

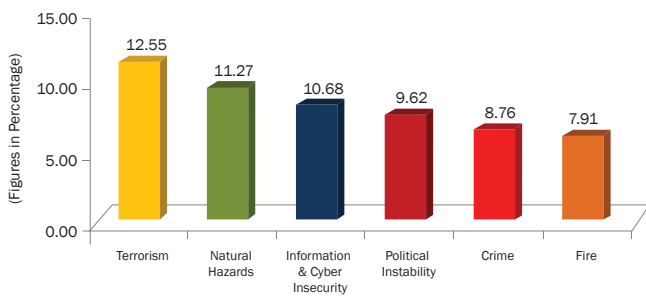
Risks in the Northern Region



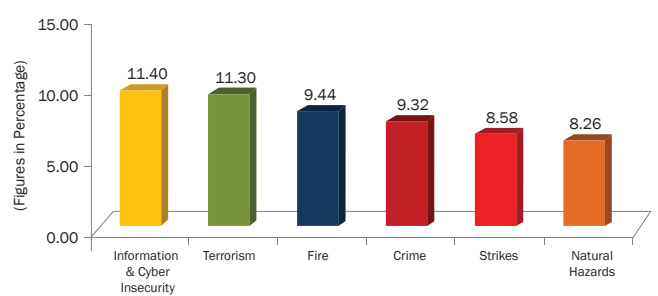
Risks in the Southern Region



Risks in the Eastern Region



Risks in the Western Region



Risks as Percieved from Outside India

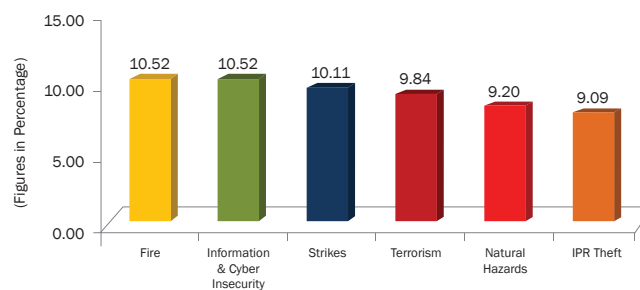


Figure 5: Major Risks according to Regions

While examining top six risks as per the geographic locations the most remarkable result noticed when respondents from outside India placed terrorism as their fourth critical risk and have placed fire, information and cyber insecurity and strikes as major risks affecting their businesses.

The northern region did indicate terrorism as the top risk and also included crime and IPR theft in the list of top six risks. The frequent jolts from earthquakes and floods have made natural hazards as the number five risk in this region.

among the top six risks.

It is also interesting to note the eastern region of India preferred to nominate terrorism as their biggest risk but haven't mentioned strikes in the top six risks, though this region witnesses maximum number of strikes. The risk of natural hazards has been rated at number two due to losses suffered in the hands of cyclones and floods. With limited number of IT companies operating in the eastern region, the risk of information and cyber insecurity has been rated at number three.

“The new economic order connects people, goods, money and information globally but this interconnectedness has led to new risks. The FICCI-Pinkerton “India Risk Survey” analyses risks and helps the industry make informed decisions.”

*Dr. Rajiv Kumar
Secretary General, FICCI*

The southern region with intense IT industry rated information and cyber insecurity as their prime concern. In the year 2010, the second largest number of cyber crime cases is reported from Andhra Pradesh. Recently, a large number of state government websites in Bangalore have also been attacked. The region rated political instability at the third rank among top risks. The focus on political instability may be because of movements such as Telangana and instability in some of the southern states. South India is the only region that has not categorized crime

The western region, in spite of being immensely affected by terrorism have placed the risk of terrorism at number two and have kept information & cyber insecurity at number one. Though this region is known for higher degree of organised crime, the western region has rated crime at number four after the risk of fire.

Major Risks According to Industry

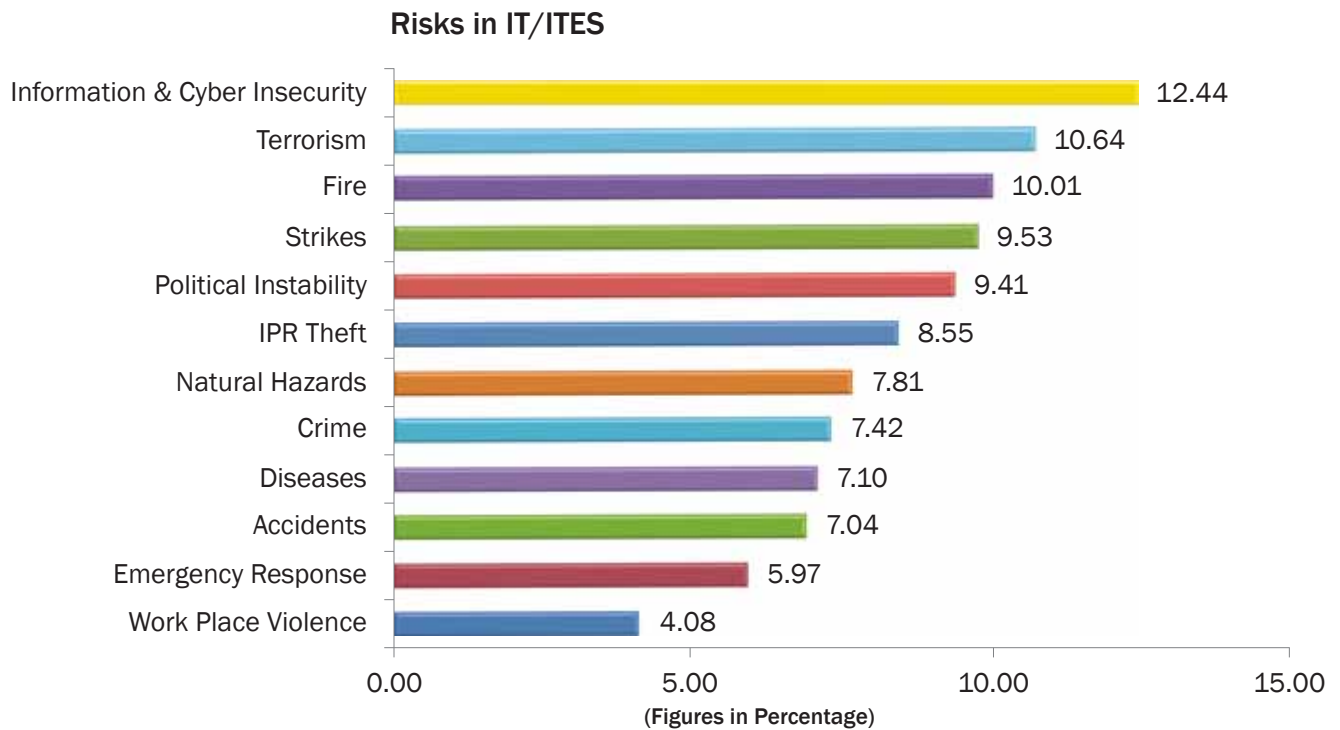


Figure 6: Risks as per IT/ITES

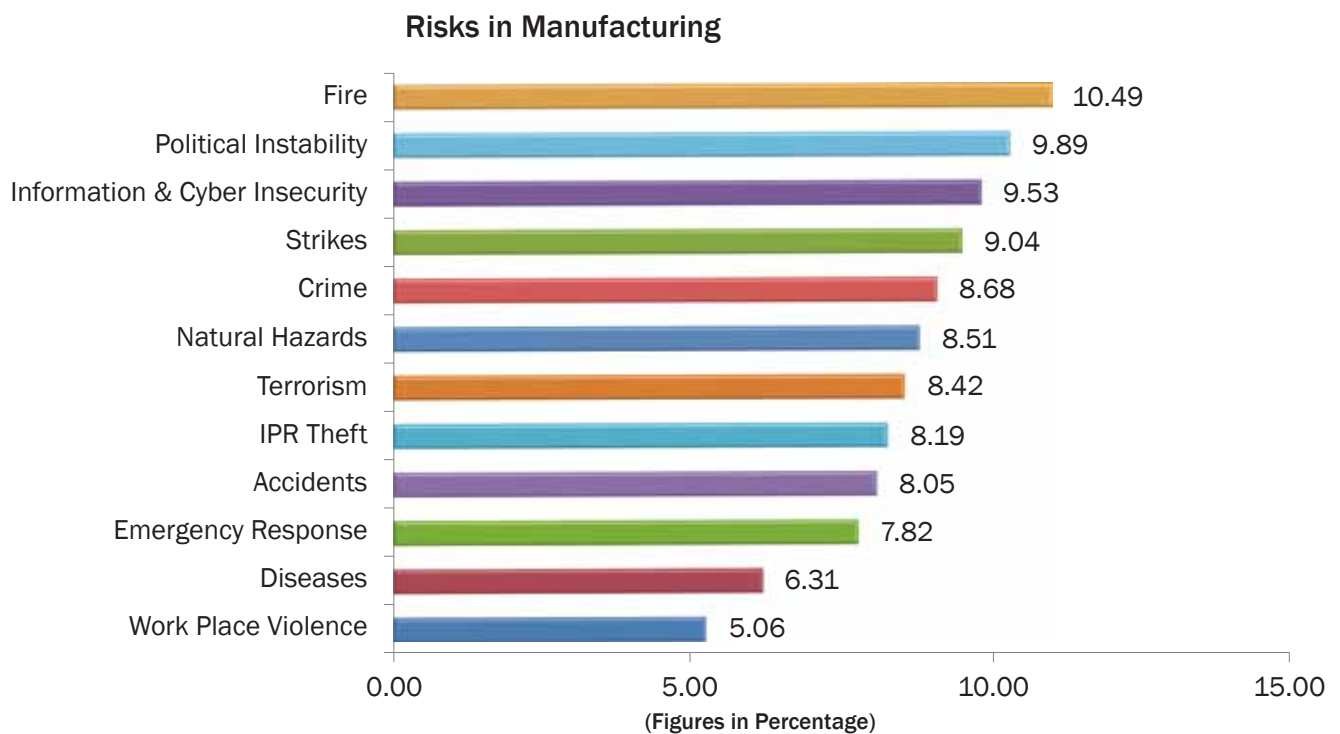


Figure 7: Risks as per Manufacturing

IT/ITES Sector

With increasing incidents of cyber crime and terror attacks on websites, the information and technology sector has rated information and cyber insecurity and terrorism as risk number one and number two respectively. There have been a strategic shift in terrorist's target selection over the last decade and there has been intelligence alerts related to a possible attack on IT companies. In fact investigations did reveal that terrorists had carried out reconnaissance of three IT companies in Bangalore before carrying an attack on Indian Institute of Science(IISc), Bangalore in 2005. The risk of fire being detrimental to life and business has been rated at number three.

Manufacturing Sector

Companies falling under the manufacturing sector, like engineering goods, automobiles, cement, garment, tyres, paints have rated fire followed by political instability as top two risks. The number of fire incidents and losses suffered are quite high in India. This sector has placed risk of information and cyber insecurity at number three, higher than the risk of strikes, which is placed at number four.



Risks in Financial Services

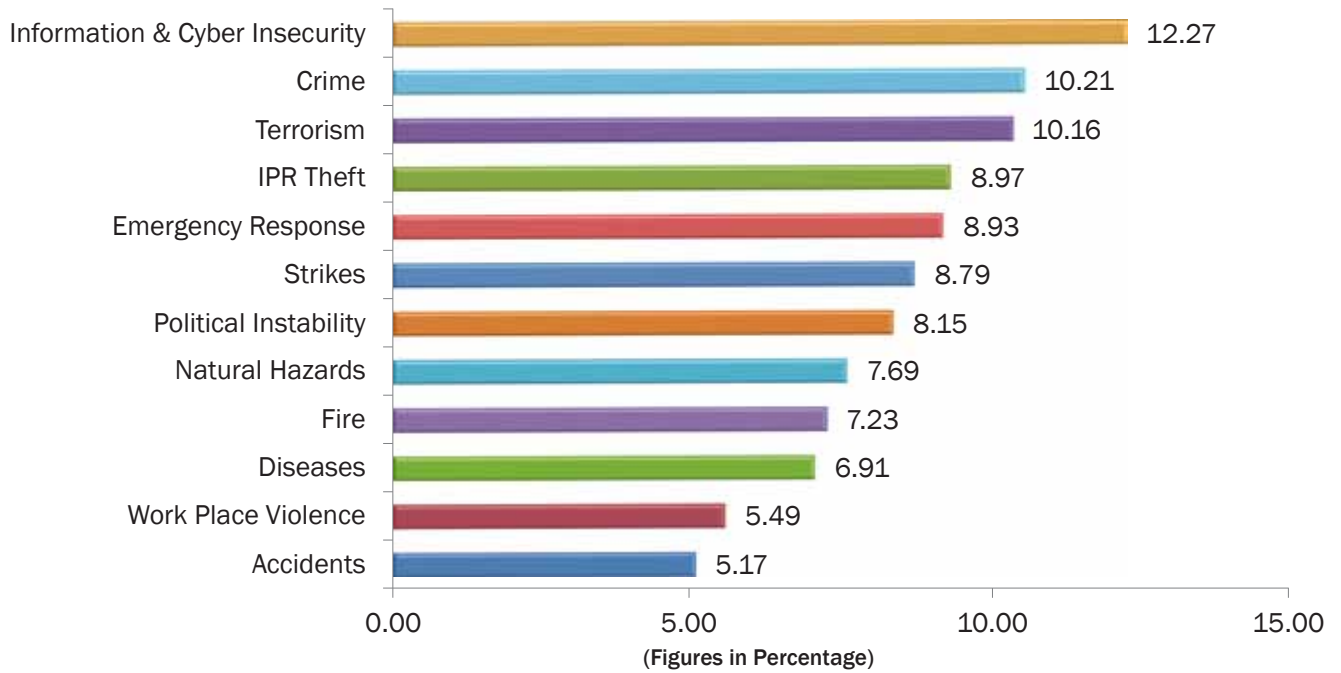


Figure 8: Risks as per Financial Services

Risks in Government/PSU

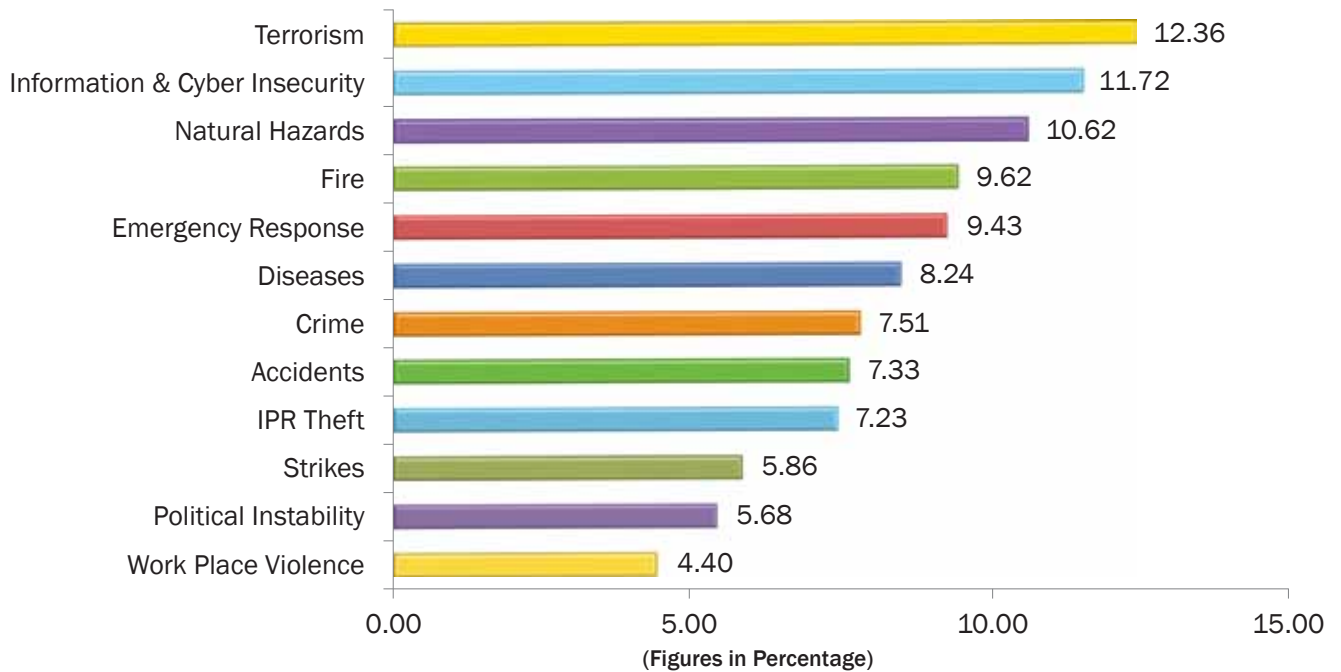


Figure 9: Risks as per Government/PSU

Financial Services Sector

Financial services sector has been the victim of some major cyber financial frauds. This is the main reason why the financial services sector has rated information and cyber insecurity and crime as their top two risks. The number and magnitude of financial frauds have risen in the recent past. Unfortunately the sector is blamed for lacking preventive mechanisms to curb such incidences. There has been an effort to list fraudsters and defaulters in a single database and its implementation is likely to produce results in the near future. The risks of terrorism and IPR theft are rated at number three and four respectively.

Government/PSU Sector

The government/ PSU sector is one of the sectors that have rated terrorism as number one threat. Analysis of past terrorist attacks does reveal that terrorists do prefer to target government installations. Also, government companies play a critical role in the growth of the country and they are also established in terrorist and Naxal prone areas. Private commercial establishments do have a choice to remain in areas of less risk. Information and cyber insecurity has been rated at number two. There are relentless efforts to hack government websites and databases. Apart from terrorism, natural hazards, fire and Emergency Response Mechanism are important risks for the government/PSU sector.

“Every business in today’s environment is fraught with risks which need to be averted for continuity and growth. An analysis of risk perception and mitigation such as the one done by the FICCI-Pinkerton survey can be a useful tool in decision making.”

*Ms. Naina Lal Kidwai
Senior Vice President, FICCI*

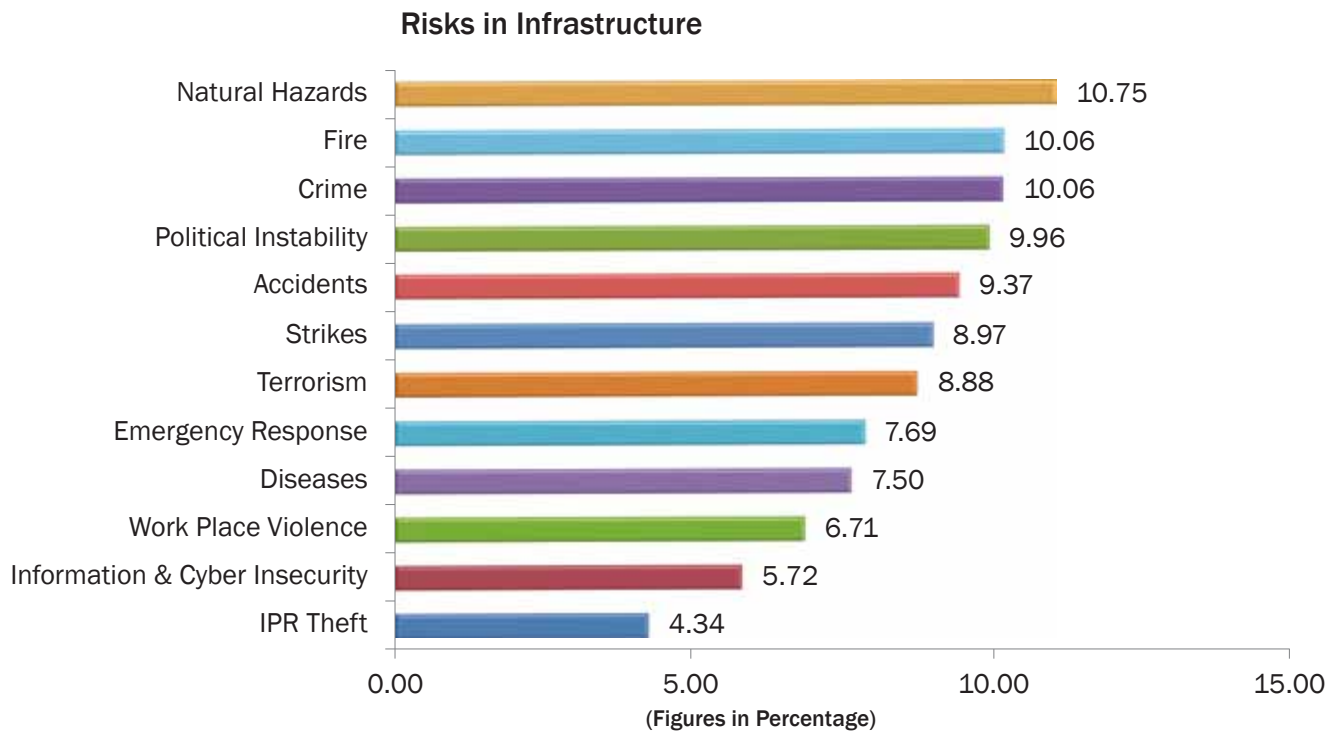


Figure 10: Risks as per Infrastructure

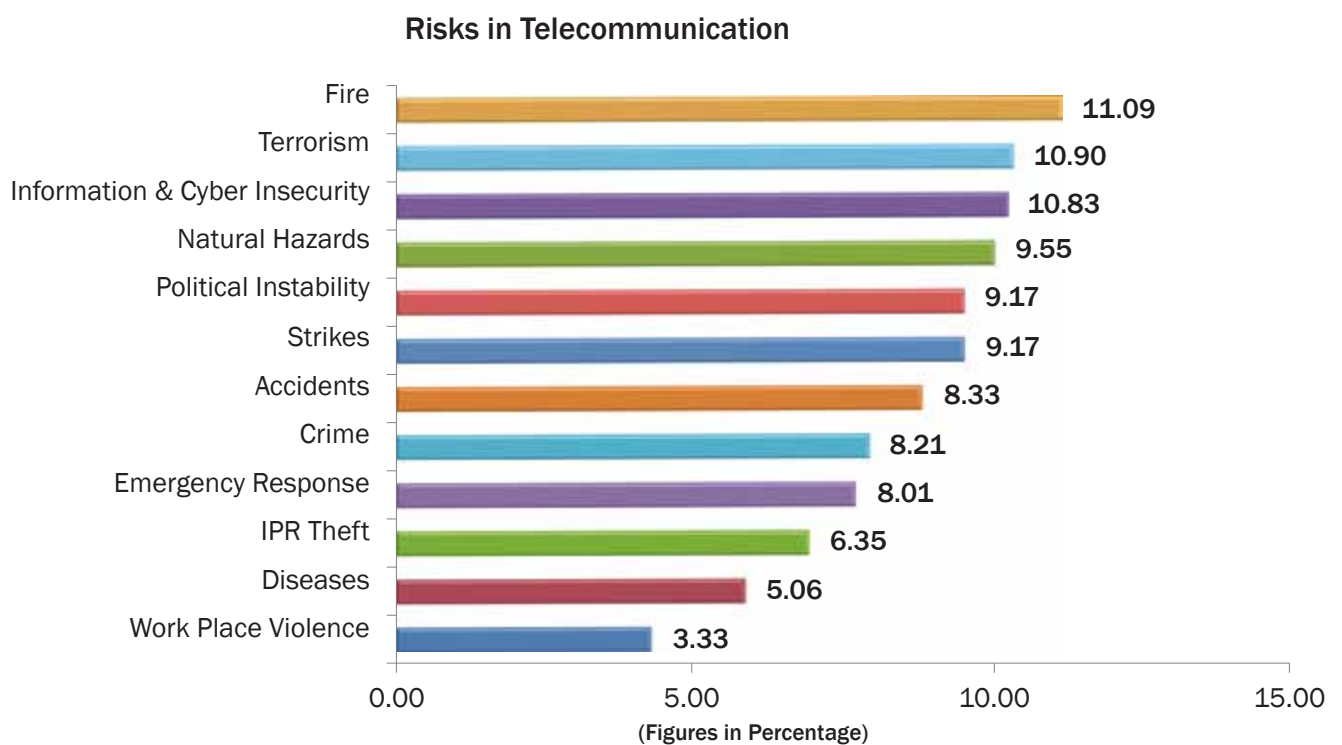


Figure 11: Risks as per Telecommunication

Infrastructural Companies

Natural hazards are the prime concern of infrastructure companies and make them spend considerable amounts to ensure safety during extreme natural hazard situations. Crime and fire have been rated at the same risk level, with fire being placed at number two, due to its widespread impact. A crucial factor for infrastructure companies is political instability. Some of the companies do indicate that a change in government initiates changes in the land usage allocation procedure or changes in project approvals. In spite of high rate of accidents at infrastructure development sites, the risk of accidents is rated low at number five.

Telecommunication Sector

Fire accidents have often resulted in major network outages for several telecom companies in India and abroad. No wonder why fire is rated as the number one risk by the telecom companies. Terrorism is placed at number two. Some parts of India are affected by Naxal insurgency. Telecom companies do operate in such areas and there are risks to their employees and communication installations. In fact, the cost of maintaining safety at workplace and to secure infrastructure in these areas is extremely high.

Risks – Details

Information and Cyber Insecurity

Information and cyber insecurity has been rated as the number one risk by most of the respondents during India Risk Survey 2012. Information espionage refers to obtaining secret or confidential information without the permission and knowledge of its holder. Cyber crime is a criminal activity, in which computers or computer networks are both a tool and the target. Cyber crime includes everything from electronic cracking to hacking of websites to denial of online services. Considering the advantages of the cyber age and increasingly competitive corporate environment, cases of business information thefts are becoming more prominent. Norton's Cyber Crime Report 2011 reveals that India loses approximately

INR 34,110 crores annually due to cyber related crimes. Another major concern with cyber crimes is its low detection level and next to negligible prosecution. The monetary loss due to information theft is impossible to assess as it depends upon the nature of information stolen. However, such losses can neither be recovered through insurance coverage nor is the law able to protect from such incidents.

During the NASSCOM Global Leadership Awards, India's home minister revealed that India is ranked fifth in the number of cyber crimes. Every year, cyber crime in India is going up by 50 per cent and during the last five years, around 9,000 Indian websites including those

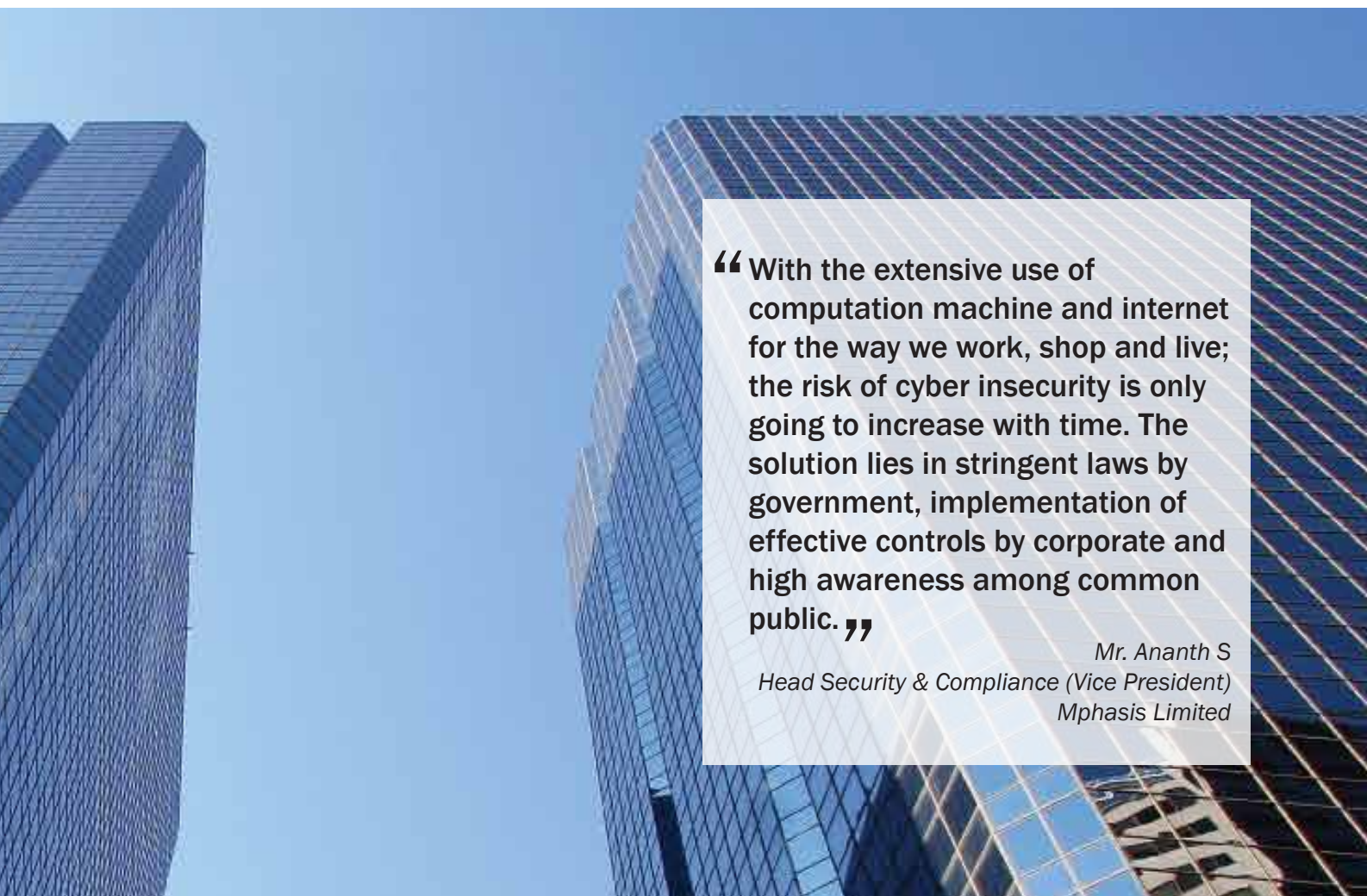


of various government departments were hacked. Many government websites, some of them carrying sensitive information have become victims of cross-border hacking, mainly from Pakistan, Bangladesh, Nepal and China. Therefore, it is no wonder that the government has specifically rated information and cyber insecurity as the number two risk in this survey. Major cyber crimes reported in India are denial of services, defacement of websites, SPAM, computer viruses and worms, pornography, cyber squatting, cyber stalking and phishing. The Criminal Investigation Department Review for the year 2008 reveals that nearly 69 per cent of the information theft is carried out by current and ex-employees and only 31 per cent by hackers.

In the present scenario, cyber terrorism and usage of cyber attacks to harm the enemy countries are the impending issues. Apart from many reported attacks on Indian military and intelligence agencies websites, there is a long list of failed attacks on Indian energy and infrastructure installations. This is a serious

situation where lives of ordinary citizens are at risk, along with the losses caused to the economy.

Despite the Information and Technology (Amendment) Act 2008, which is constituted to broaden several new provisions related to data protection, piracy and cyber terrorism, companies are still prone to the threat of information espionage. As the vulnerability has not been reduced due to the intangible nature of information stolen and because of the fact that in most cases, the accused are the employee or ex-employee of the organisation having access to the company database. National Crime Record Bureau (NCRB) statistics indicate that from 2007-2010, police have recorded as many as 3,038 cases under the Information and Technology Act with only three convictions. Maharashtra recorded highest number of cyber crimes (104 cases) followed by Andhra Pradesh (66 cases) in the year 2010. The cases of data theft have been reported from almost every industrial and corporate hub of India. However, banking industry is found to be the most vulnerable to



“ With the extensive use of computation machine and internet for the way we work, shop and live; the risk of cyber insecurity is only going to increase with time. The solution lies in stringent laws by government, implementation of effective controls by corporate and high awareness among common public. ”

*Mr. Ananth S
Head Security & Compliance (Vice President)
Mphasis Limited*

phishing attacks in India. There is a regular complaint from all the ensuing sectors about low understanding of technical skills by the law enforcement and judicial officials.

In order to deal with such crimes, India has established Computer Emergency Response Teams (CERT) with an objective to coordinate and respond during major security threats. Bangalore has been credited with introducing one of the first cyber cells in India. As of now, there are only 18 cyber cells in major cities of India, but with increasing dependence on the internet, even smaller cities are registering a significant rise in the number of such cases.

The risk of cyber insecurity has been given the highest rating by industries across regions and sectors. Notwithstanding the perception of ordinary people who rate it below the category of physical crimes, incidences of cyber insecurity

have affected every four out of five people using the internet. However, most cases go unreported in India. Lack of legal awareness related to cyber laws, dearth of cyber law experts, insufficient number of cyber cells across country, interdependence of cyber world and most importantly, rise of a net savvy generation are chiefly responsible for making this risk very critical. This rating has also been substantiated by the fact that one of the research findings of the study titled 'Crime Online: Cybercrime and illegal Innovation' sponsored by the University of Brighton highlighted a relation between poor economies and increasing cyber crime rate. Recession in poor economies is likely to drive computer literates to less risky cyber crimes. The study also blamed a booming call centre industry in India as one of the causes for rising cyber crime.





Terrorism

Terrorism, including Naxalism, poses a major threat to the country. It not only jeopardises safety and security but also impedes the economic progress of the country. Added to it is the menace of cross-border illegal immigration through porous littoral and land borders across the country.

The most detrimental trend related to terrorism is its extension from the typical terrorist prone areas of Kashmir and North-East India, to urban centres, work places and agglomerated zones across India. A far higher number of casualties has been reported from the main cities than those reported from Kashmir and Northeast India in the year 2011, as many as 34 civilians lost their lives in terror related incidents in Kashmir while the combined casualties reached 37 in two attacks in Delhi and Mumbai in the same year.

Terrorist attacks from Islamic fundamentalists (Al-Qaeda and its affiliates) have positioned all developed Western nations on a high state of alert for protecting their homeland. In the present context, unpredictability and threat of terror attacks continue to target India, as we are bracketed along with Western powers when it comes to selecting targets by terror outfits. It is further compounded due to the country's gigantic dimension, multiple security agencies (who often work for both the Centre and State levels) and political instability.

Further, due to our security apparatus overload, the need to relentlessly monitor the activities of home grown terror outfits may face bandwidth issues. Considerable success achieved by the state due to a slew of proactive measures taken by security agencies has not reduced the threat of terror as it kept creeping

in several new urban areas. Although Mumbai, Jammu and Kashmir, Central India and North-eastern states have for long been experiencing terrorist attacks, New Delhi, Bihar, Uttar Pradesh and Punjab are of late, emerging as new bases of terrorist activities, with ever-increasing incidents of bombings, confiscation of explosive material and arrests of several terrorist. Moreover, 310 of the country's 636 districts are also found to be currently afflicted by varying intensities of some kind of terrorist activities including subversion by separatist elements.

Naxal insurgency contributed approximately to 3,800 deaths including those of civilians and security personnel since 2005. They are believed to have acquired a tremendous capability to attack even the urban zones such as Delhi and Bangalore. Naxalism has been referred by the Indian Prime Minister as one of the single largest destabilising factor which is affecting our growth.

“Terrorists have the ability to inflict irreparable damage to individuals and the industry in India. There is thus a need for industrialists to recognise its threat and take initiatives to make India, and themselves secure. We need a nationwide movement, spear headed by our industrialists. And a good start would be to dedicate one percent of their annual profits towards these efforts, to counter terror.”

*Maroof Raza
Author and Analyst*

Fire

Fire hazards are a common threat to establishments across sectors and regions, and in most cases, investigations have revealed that fire occurred due to sheer negligence. Since Independence, India has lost several lives and property worth billions in fire related incidents. There have been many instances when the authorities have highlighted risk of fire in buildings. Following a major fire accident in Kolkata's AMRI hospital in 2011, fire authorities conducted audits in many hospitals across the country. Fire safety audit of several major hospitals in Delhi and Mumbai revealed that more than half of the hospitals lack fire prevention measures. In case of high-rise buildings, the scenario is equally bad. In February 2012, the fire department in Mumbai had issued notices to as many as 383 high-rise buildings for not complying with fire safety regulations. Several high-rise buildings, approximately 60 percent in Gurgaon, have not renewed their no-objection certificate from the fire department. In Jaipur, a tourist hub, more than 90 percent of the high-rise buildings have less than adequate fire fighting measures. It has often been found that most of the buildings do not adhere to fire prevention measures as described under the National Building Code of India for they do not care about getting no-objection certificates from concerned authorities, as it does not entail any major penalty.

While responding to a right to information petition, Mumbai's fire department indicate that electrical short circuit and careless disposal of cigarettes/matches are important causes of fire in Mumbai. This is followed by flames from stoves/candles, firecrackers and over-heating of gadgets.

While focussing on the risk of fire, a section of corporate sector have made efforts to train their employees on fire safety aspects. They have also jointly conducted fire safety mock drills on regular basis with the state fire departments.

However, fire departments across the country are in imperative need of additional funds to modernize and upgrade their equipments as well as manpower skills. The most challenging part for the fire departments is to reach to the top of high-rise buildings for want of a necessary equipment to reach to the top. Recently, the fire department of the Pune Municipal Corporation (PMC) has inducted a new imported fire tender at a cost of INR 110 million to tackle fire incidents in high-rise buildings. The fire tender, with 70 meter hydraulic platform has the capacity to douse fires at a height of 100 meters. More such efforts are needed in other metros as well to secure high-rise building from fire.


“We (Indian) are now a Country with more awareness and more commitment towards Safety. In some way being an emerging market, we have more requirements to adopt and implement Safety as part of our DNA. We have access to Codes, Knowledge and Learning; the need is to "Walk the Talk".”

*Sandeep Goel
Director - Spectral Services Consultants
(An AECOM Company) and President – FSAI
Delhi Chapter*

The risk of fire has been rated among the top six risks by all the regions across India. The respondents from outside of India have ranked risk by fire as the number one risk. The manufacturing and telecom sectors have also highlighted fire as their number one risk.



Crime



The National Crime Records Bureau (NCRB) data for cognisable crimes committed on yearly basis from 1953 to 2010 indicates a regular increase of crime rate in India. It is also to be noted that NCRB accounts only for the recorded criminal activities. The possibility of all criminal incidents

not reaching police remains a reality. In addition, organised crime is on the rise in India. Theft accounts for approximately 14.8 percent of the total recorded crime in India. Similarly the crime of kidnapping and abduction is rising which accounts for 1.7 percent of the total crime.

Incidence of Total Cognizable Crime (IPC) 1953-2010

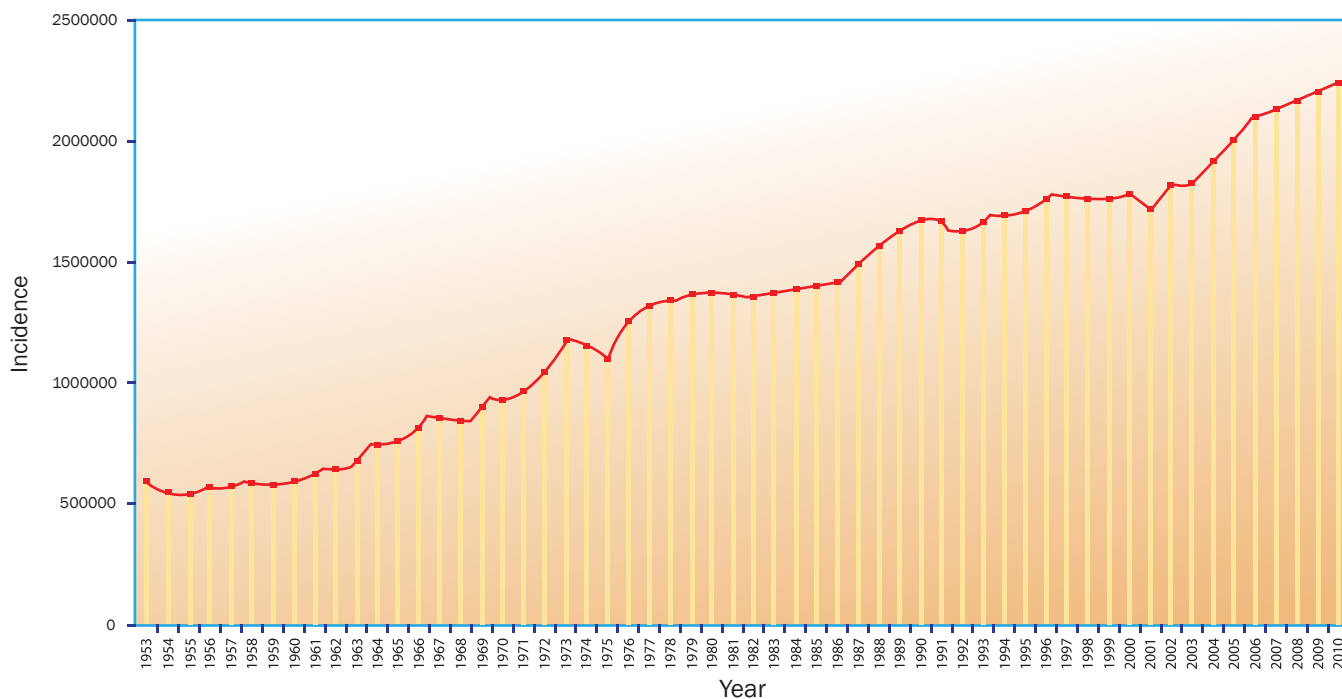


Figure 12: Data on Recorded Crime in India, 1953 – 2010

(Source – National Crime Records Bureau, India)

In 2010, Uttar Pradesh recorded the highest crime rate while Madhya Pradesh topped amongst states recording highest number of crime against women. Delhi, Mumbai and Bangalore accounted for 12.5, 9.2 and 8.7 percent respectively of the total IPC crimes reported from 35 cities across the country.

Of late, white collar crimes are also increasingly making their presence felt among Indian firms. Indian firms has been afflicted by several types of white collar crime like investment, banking, credit card and online transaction frauds, medical scams, and education, housing and job rackets, etc. While there has been an overall decline in frauds globally, as many as 84 percent of Indian firms have indicated their vulnerability to corruption and bribery. Failure to strengthen internal control mechanisms to control frauds in Indian firms has further made

the situation worse. As most fraudsters are experts in using sophisticated technology to conduct their activities, the police are often not found to be well-versed in dealing with the rising number of such white collar crimes. In this context, the Economic Offences Wing (EOW) of the Mumbai police is planning to educate police officers of the city to investigate white collar crimes. In 2011, during a panel discussion on Entrepreneurship and Social Change, Mr. Adi Godrej, Chairman of Godrej, while accepting the fact that white collar crimes are rising, stated that “it should not be said that we are in a state of panic”. However, during the same discussion, Dr. Narayan Murthy, Chairman of Infosys, lamented the prevalence of large scale white collar crimes in India and called for exemplary punishment to such fraudsters.

Increasing crime rate is a deterrent to the growth of any economy. Crime has been moderately rated at number four by the survey respondents. The financial and infrastructure sectors have placed crime at number two and three respectively. Modern techniques of Crime

Prevention through Environmental Design (CPTED), effective policing and purposeful reintegration of defaulters into society are some of the basic solutions that needs to be implemented to curb crime.

“Present-day security concerns have underlined the need for risk assessment based planning of built environment. Planning approach needs to be built on 'Crime Prevention Through Environmental Design' framework and provide safety and security as a passive inherent character such that the technological solutions cater to the residual risk. Planning of built environment must begin to systematically recognize risks that impact:

- Continuance of business operations
- Security of vulnerable population
- Security and safety of high value assets
- Safety and security of high value processes and operations

Security risk mitigation can no longer ignore environmental design.”

*Prof. Virendra K. Paul
School of Planning and Architecture
New Delhi*



Natural Hazards

Natural hazards are threats which cannot be averted at will. They have a negative effect on people and the environment. Some natural hazards are interlinked to each other. For

example, the earthquake in Japan on 11th March 2011 led to a giant tsunami causing huge loss to life and property. Its aftermath even resulted in nuclear radiation from the

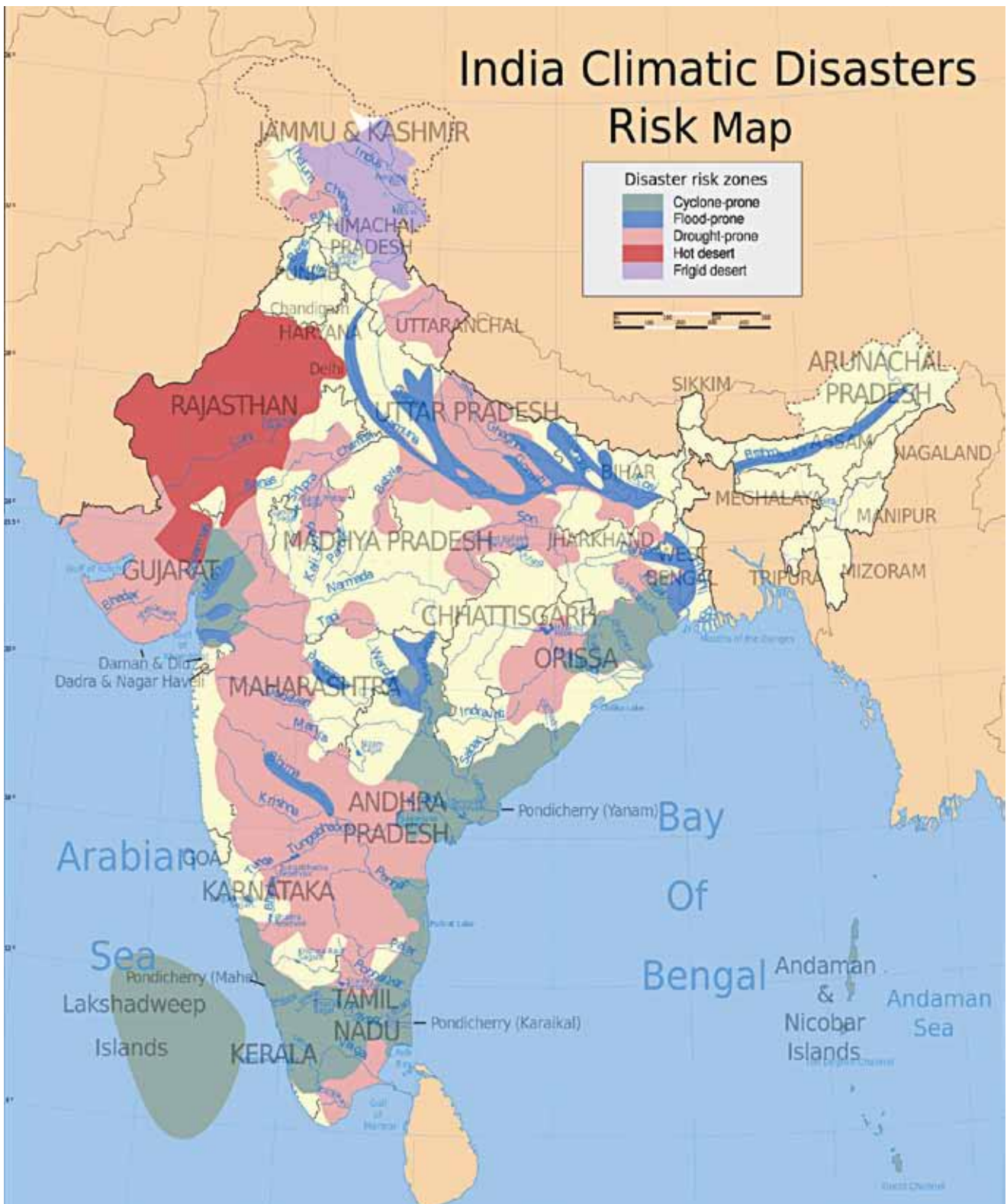


Figure 13: India: Natural Hazard Zone

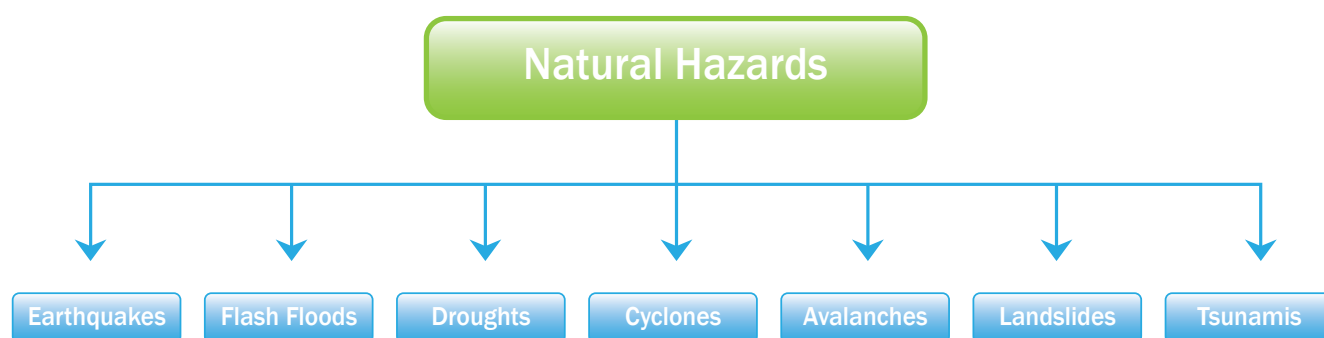


Figure 14: Disasters covered under natural hazards

nuclear power plant facility at Fukushima.

According to United Nations Environment Programme (UNEP) report, China, India and Bangladesh are ranked first, second and third respectively, in terms of the number of deaths caused due to natural disasters. In the year 2011, the United Nations (UN) ranking for India and China remained the same for facing the number of natural hazards. While China witnessed as many as 22 natural disasters in 2011, India witnessed 16 in the same year. Among the natural disasters affecting various parts of India floods, cyclones, earthquakes and droughts cause maximum damage to life and property. It was closely followed by heat and cold waves, avalanches, landslides and pest attacks.

Indian topography is vulnerable to natural hazards. Out of 35 states and union territories of India, 27 of them are disaster prone. In India, almost 58.6 percent of the landmass is prone to earthquakes of moderate to very high intensity, 12 percent of the landmass is prone to floods and river erosion; around 5,700 km of the coastline are prone to cyclones and tsunamis; 68 percent of the cultivable area are vulnerable to drought, and almost the entire hilly stretch are at risk from landslides and avalanches. In the last thirty years, the country has been hit by as many as 431 major disasters resulting in enormous loss to life and

property. In 2010, a cloud burst in Leh resulted in 196 deaths, 65 persons went missing and 27,350 hectares of crop area were affected. Geography is alone not to be blamed as United Nations has highlighted causes like unplanned urbanisation and ignorance of environmental issues as reasons for increasing number of natural disasters in emerging economies of India and China.

Recently, Indian Meteorological Department (IMD) section on seismology reveals that frequency of earthquakes affecting parts of India and its neighbouring countries has increased in the past few years. Between January and March 2012, earthquakes of moderate intensity hit India and its parts as many as 18 times.

In India, the response of government, state and central, to natural disasters have more often been found to be reactive rather than proactive. While post-disaster mitigation mechanism has left much to be desired, pre-disaster preventive measures are almost non-existent and at best, half-hearted. However, in Delhi, the National Disaster Management Authority (NDMA) along with the Delhi Disaster Management Authority (DDMA) completed a successful disaster management mock drill in February 2012. Much has been done and more needs to be done to make India fully prepared to face any natural calamity.

Strikes

Section 2 (Q) of Industrial Disputes Act 1947 defines strike as “a cessation of work by a body of persons employed in any industry acting in combination, or a concerted refusal, or a refusal under a common understanding of any number of persons who are or have been so employed to continue to work or to accept employment.” Although illegal strikes are prohibited under section 25 of the same Act, a nominal penalty of about INR 50 and prison term ranging from a month to as much as six months have hardly acted as a deterrent to recurring strikes in India.

Strikes in India have led to huge loss of business across sectors. Banking and industrial sectors are the worst affected by strikes. Recent workers strike in Maruti Udyog at Gurgaon in 2011 has led to a drastic fall in sales of one of the biggest car selling manufacturer in India. Frequent strikes by Hyundai employees in India resulted in its shifting of operations to Turkey in 2009. Air India and Kingfisher pilots’ strikes also set bad precedents to the effective and smooth functioning of the economy which is always on the move. One such nationwide strike is recently organised by all Indian trade unions

against government’s advocacy of liberalisation on 28 February 2012. The strike severely affected banking, transport and insurance sectors causing huge financial loss running into several billions of rupees. Recent protests against Foreign Direct Investment (FDI) in retail have often resulted in a countrywide closure of various retail outlets. Besides, occurrence of strikes, especially in transport sector, not only creates inconvenience to the general public but also disrupts supply of essential commodities. Strikes in health sector have an attached risk of lack of medical care with possibility of deaths or deteriorating medical conditions due to non-availability of doctors, nurses, ambulances and other hospital staff. Frequent strikes by municipal employees in metro cities not only resulted in the accumulation of garbage but also affect the general health of the inhabitants of the affected areas. Delay in garbage disposal also at times resulted in the spread of communicable diseases.

Respondents from souther and western region as well as those from IT/ITES, manufacturing, financial services, infrastructure and telecom sectors have rated strikes among their top six risks.



Intellectual Property Rights Theft

World Intellectual Property Organization defines intellectual property as ownership rights over intellectual activity and the resultant product of such activities. Intellectual activity may include any activity in the industrial, scientific, literary and artistic fields. Intellectual property falls into the following categories: Copyright, Patent, Trade Mark, Design Protection, Geographical Indications, Trade Secrets, Layout Designs for Integrated Circuits, Protection of New Plant Variety, etc.

In recent years, India has seen a substantial rise in the number of cases related to data theft and IPR violation. This unprecedented rise is mainly being attributed to lack of a robust legal system, poor education among law enforcement officers and deep-rooted corruption. These conditions have received attention especially in the countries of USA and UK where there is already a backlash against outsourcing in India. Moreover, it has also led several investors to rethink their investment plans in India. Analysts argue that despite being attractive for its cost-savings potential, Indian outsourcing business for software development exposes companies to the risk of losing their valuable intellectual capital and/or confidential data. In 2011, Special 301 report which gauges the adequacy and effectiveness of US trading partners in protecting IPR have put as many as 12 countries under the Priority Watch List including India, Pakistan and China. This is because of increasing number of IPR violations in these countries. Expressing concerns over inadequate legal framework and enforcement mechanism, the report stated that piracy and counterfeiting, including those in medicine, remain widespread and India's enforcement regime is ineffective at addressing this problem.

“The ever increasing IPR Theft does not only hit bottom-line of the companies but also is a theft of revenue for the government.”

*Mr. P. K. Modwil, CPP, CFE
Regional Vice President
ASIS Region 32 and
Brand Assurance Manager
Diageo India & South Asia*

Indian government has devised stringent provisions under the Copyright (Amendment) Act, 1994 which entails civil as well as criminal proceedings against copyright violators with a prison term which range from seven days to three years. Besides, intensifying raids on copyright violators have successfully brought down the levels of piracy in India. India provides protection to IPR in accordance with its obligations under the Trade Related Intellectual Property Rights (TRIPS), agreement of the World Trade Organization. India is also a signatory to various other conventions like Berne Convention (1971), Universal Copyright Convention (1979), Vienna Classification (1973), Paris Convention for the Protection of Industrial Property (1979), and Geneva Convention for the Protection of Rights of Producers of Phonograms (1979) hence, the protection of IPR matches the international system at certain levels.

Respondents from northern and southern regions, and those from outside India, and IT/ITES and financial services have ranked IPR among the top six risks affecting business.



Political Instability

Economic growth and political stability are interconnected. While on the one hand, uncertainty associated with unstable political environment slows down investment and economic development, poor economic growth on the other, also leads to governmental collapse and socio-political unrest. Any instability in the political dispensation at the Centre would have a direct bearing on the governance of the country and would also negatively affect macroeconomic indicators. It also results in the formulation of short-term macroeconomic policies while relegating the need of formulating long-term economic goals to a background. Frequent changes in policies due to governmental changes not only create volatility but also globally downgrade the rating and image of the country in a globalised world.

India's continuous improvement in terms of providing a conducive corporate culture depends upon the longevity and effectiveness of the forthcoming governments to take firm and long-lasting decisions on economic reforms. Moreover, continuity, commitment and clarity in implementing economic decisions by the Centre and State governments as well as by the opposition parties also go a long way in strengthening the trust of companies across sectors.

Also, the relation between political instability and poor economic productivity depends upon the nature of a political change taking place in a particular country. If political change is violent and unconstitutional, economic growth and investment retention capability of a nation is bound to suffer. But if political change takes place within constitutional limits and also does not entail a drastic overhauling of entire socio-economic structure, then it is unlikely to dwindle investor's interest in the country. Other



factors like literacy levels of the country's population, size of the market, technical knowhow, form of the government (democratic/authoritarian), stability of the governmental structures and institutions also determines the level of economic growth in a country.

At present, in India, the issue which needs immediate attention under the category of political instability is corruption. Rising levels of corruption in governance is likely to put off the prospective investors. The extent to which the successive governments in India would succeed in bringing down the levels of corruption, are likely to dictate the way the economy of India will go in the next 10 years or so. Also, investor-friendly environment of the country, by cutting down red tape in bureaucratic circles and adoption of single-window clearance procedures, are likely to restore the corporate



confidence in India. Over all, slow progress in achieving these steps has led to the inclusion of “Political Instability” as a risk in India Risk Survey 2012. This in turn, goes on to prove that development of the country is closely connected with stable governments.

Emergency Response

Emergency Response mechanism in India varies from state to state but nowhere does it caters to the requirements of International best practices. Efforts have been made by the central and state governments to provide for police stations, hospitals, fire stations and transport as nearest to the habitations as possible, but gaps remain. For example, average police-public ratio in India is 152 policemen per 100,000 of the population,

while as per United Nations standards, the ratio should be 222 police officers per 100,000 people. Similarly, while international standards recommend fire station after every three kms, in India, fire stations are often found at far off locations. Moreover, their response time even in cities sometimes exceeds beyond 30 minutes. The stipulated international standard response time has an upper limit of 3 minutes. Mock fire drills take place only occasionally and that too, in metro cities. The equipment and techniques used are mostly out-dated and worn out. In February 2012, a woman died when her rope snapped during mock fire drill in a high rise building in Bangalore. This did take place due to low quality of equipment.

Medical response has a similar reflection as fire. During one of the recent reports, the government indicates that India has dismal ratio of 1:1953 in term of doctors to the population, as compared to the World Health Organization (WHO) recommended ratio of 1:1000. The Planning Commission of India released a report where they mentioned that India lacks 600,000 doctors, 1,000,000 nurses and 200,000 dental surgeons. It is estimated that India has 20 percent of the global disease burden and has only 6 percent of the global hospital beds. The WHO recommends hospital bed to population in the ratio of 3:1000 however India survives on 0.86:1000. One of FICCI’s earlier reports on health care revealed that although rural India has three-fourth of country’s ailing population, it has only one-ninth of the total number of beds and one-fourth of the total healthcare resources of the country.

Steps were taken by the government in 1960s to strengthen the emergency response mechanism. National Safety Council (NSC) of India was set up in 1966 to generate, develop and sustain a voluntary movement on safety, health and environment at the national level. Apart from conducting various specialised

training courses, conferences, seminars and workshops, NSC also conducts consultancy studies such as safety audits, hazard evaluation and risk assessment, designing and developing Health, Safety & Environment (HSE) promotional material, facilitating organisations in celebrating various campaigns, e.g., Safety day, Fire Service Week, World Environment Day, etc. NSC adopted several activities based on APELL (Awareness & Preparedness for Emergencies at Local Level) processes which includes making public aware of possible hazards within the community, encouraging formulation of co-operative plans to

respond to any emergency anytime, and encouraging accident prevention, among others.

It is encouraging to note that concerned agencies responsible for emergency response have become innovative with new ideas at the time of emergencies. Of late, agencies of mass media have increasingly been used to popularise ideas and to spread awareness among the general population. Still, efforts are half way. The sooner the gap is bridged, the better it will be for providing safe and secure environment for the emerging economy to thrive.

“There is a great opportunity to create public-private partnership for effective emergency response system. As such the government requires enormous funds and time to create a new system for a large country like India, where as in a partnership results can be achieved in much quicker timeframe.”

*Mr. Kunwar Vikram Singh
Chairman – CAPSI and APDI*



Accidents

India faces the highest number of accidents and accidental fatalities in the world. The maximum number of accidents are reported from the transport sector i.e. road as well as railways. Industrial accidents are quite high in number as well. Some approximations claim that Indian roads alone accounted for approximately 105,000 accidental fatalities in 2010.

This is almost 15 percent of the global road fatalities when India has just 1 percent of the total global vehicles. The incidents of accidental deaths have shown increasing trend during the decade of 2000-2010 with an increase of 50 percent in the year 2010 as compared to the year 2000. According to Planning Commission of India, the total annual economic loss is 2.5 percent of India's GDP due to rising number of road fatalities.

Most of these accidents are caused by human error, with a majority of them being in private vehicles especially two-wheelers. In 2010, the highest number of deaths due to road accidents took place in Tamil Nadu (15,409 deaths) followed by Andhra Pradesh (15,337 deaths), Uttar Pradesh (15,099 deaths) and Maharashtra (14,063 deaths). In cities, highest number of road accidents took place in Delhi (7479 cases) followed by Bangalore (6490 cases) and Mumbai (4008 cases). Trucks and two-wheelers were responsible for over 40 percent of accident related deaths in India. Besides road accidents, accidents taking place at the workplace also pose a formidable risk to employees' safety. It is hard to get reliable data of occupational diseases and workplace accidents in India due to lack of specific



system for reporting and recording. As per the statistics put forth by Greenpeace, India, as many as 16 accidents have so far taken place from 1990–2010 in India's civilian nuclear power installations in which several people lost their lives. In 1987, special section on occupational health and safety to safeguard workers employed in hazardous industries was incorporated in Factories Act 1948 but its applicability is limited by the fact that it can only be applied to companies having 10 or more employees.

Diseases

India is endemic to various diseases like Malaria, Dengue, Kala-azar, Cholera, Tuberculosis, Jaundice, Typhoid, Meningitis, Leptospirosis and several others. Some of these diseases are seasonal while some are vector or water-borne. Besides, finding prevalence of virus like New Delhi Metallo Beta Lactamase - 1 (NDM-1) in numerous water samples taken from the national capital, New Delhi has created a fear factor among its residents about their well-being. Incidents of bird flu have also kept recurring in parts of West Bengal and North-eastern states time and again. Japanese Encephalitis claimed

376 lives in 2011. Absence of modern health facilities in small towns and cities limit their growth prospects as very few investors and corporations show their interest in investing in states afflicted by such communicable diseases. In foreign media, India has always received flak for its prevailing unhygienic standards and poor sanitary conditions.

Recently, detection of as many as 12 cases of Total Drug Resistant Tuberculosis (TDR-TB) from Mumbai has sent panic waves across the country. Similarly, a smaller number of cases of MDR-TB (Multi Drug Resistant Tuberculosis) have also been reported from parts of Karnataka, especially Bangalore. As both the cities are known for their economic potential and growth prospects, the spread of communicable diseases like TB are likely to send alarm bells to the prospective investors, affecting the overall growth of the country. Increasing number of AIDS patients in India is

also one of the risk factor from the medical point of view. As per the estimates of National AIDS Control Organisation (NACO), there were 22.9 lakhs people living with HIV-AIDS in India in the year 2008–2009. This estimate puts India in the high risk category in the world, having the third largest number of AIDS affected population. Although Indian government has taken a massive prevention and treatment programme targeting high-risk population, number of those affected by the disease keeps on rising.

As the risk is not rated very high, it can be given a low priority in the list of the risks mentioned in the report. Still, poor sanitation and lack of hygiene should not be taken lightly as several instances took place when diseases caused due to bad sanitation took the form of an epidemic at times, resulting in loss of several lives.



Workplace Violence

Just as industrial disputes are not new to India, so is the culture of workplace violence. Workplace violence is violence or threat of violence against workers. It can occur at or outside the workplace and can range from threats and verbal abuse to physical assaults and homicides. In India, incidents of workplace violence are quite common. According to an SHRM survey of 2012, over one-third (36 per cent) of organisations reported incidents of workplace violence. In September 2009, Vice President of an auto parts manufacturing company in South India was beaten to death by 40 workers after he reportedly sacked them. Previously, in 2008, the CEO and Managing Director of Cerlikon-Graziano Transmission India was assassinated by a group of employees in Greater Noida. Often, workers unrest takes the form of violent protests which

potentially puts the lives of the management as well as the workers at risk. On 16 September 2011, workers stir at Maruti Suzuki plant in Manesar turned violent and 11 company supervisors were allegedly beaten by them.

The phenomenon is not however, India-specific. It has global connotations. According to one estimate, some 2 million American workers are victims of workplace violence each year. In United Kingdom, risk assessments are made mandatory to systematically examine work activities to determine if there are any hazards that are likely to expose workers to the threat of harm or injury. Pre-Employment Screening (PES) and regular screening of employees at workplace are amongst the most popular methods to bring down the incidents of workplace violence.

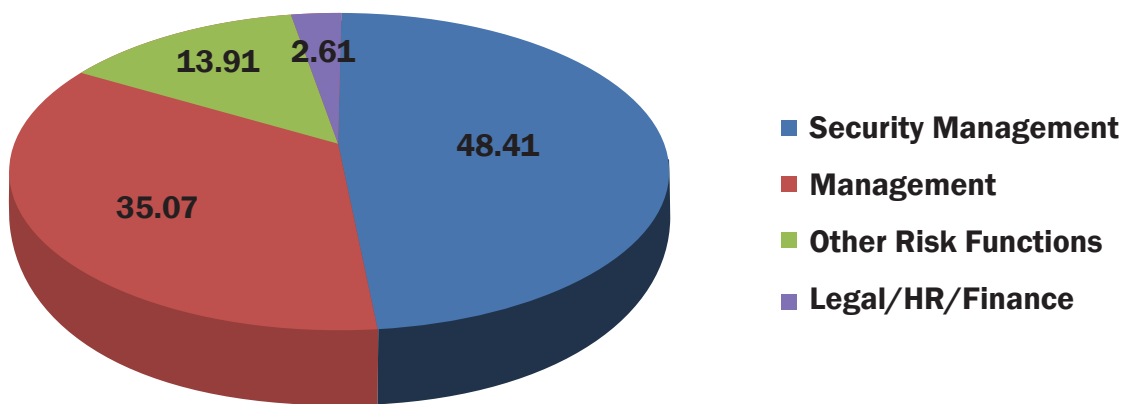


Methodology and Respondents

A risk survey form was designed to collect responses from professionals across sectors and regions of India, and from corporates outside of India. The form was available online and efforts were made to meet top end management for getting the form filled. The form listed 12 prominent risks and respondents were required to rank the risks as per their criticality to their respective businesses. An open ended section was also included in the form for respondents to add new entries of risks to the list.

The profile of respondents is described in the following graphs:

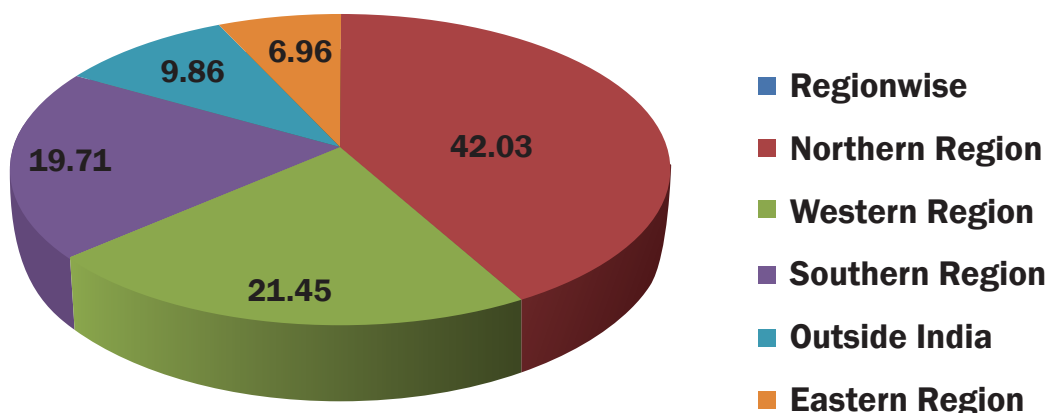
Respondent wise Contribution



(Figures in Percentage)

Figure 15: Respondent wise Survey Contribution

Region wise Contribution



(Figures in Percentage)

Figure 16: Region wise Survey Contribution

Industry wise Survey Contribution

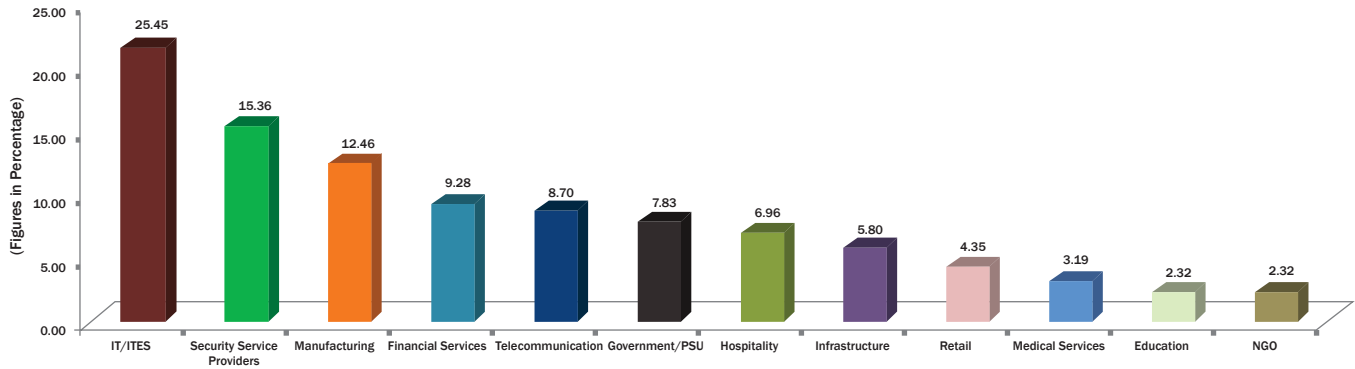


Figure 17: Industry wise Survey Contribution

“Having a rational approach in gauging the intensity of a risk helps formulate preventive measures which can reduce the probability of the occurrence of threats. A risk assessment survey before undertaking a significant task or venture always helps in making informed business decisions.”

Mr. Sidharth Birla
Vice President, FICCI

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About Pinkerton

Pinkerton Consulting & Investigations is the world's oldest and the largest risk mitigation and security consulting company.

Pinkerton enables businesses to pursue their business goals and objectives in a safe and secured environment by providing comprehensive mitigation and security consultancy services. The company delivers the highest quality of innovative, cost effective and responsive risk management solutions which are customized to the specific needs of each client.

Pinkerton's tradition of excellence continues with the experience you can trust and the integrity you can rely on as a respected leader in the security consulting and investigation industry. With offices located in North America, Latin America, Europe and Asia, you can depend on an organization with a rich history and a dynamic future.



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About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. FICCI has contributed to this historical process by encouraging debate, articulating the private sector's views and influencing policy.

A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry.

FICCI draws its membership from the corporate sector, both private and public, including SMEs and MNCs; FICCI enjoys an indirect membership of over 2,50,000 companies from various regional chambers of commerce.

FICCI provides a platform for sector specific consensus building and networking and as the first port of call for Indian industry and the international business community.



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