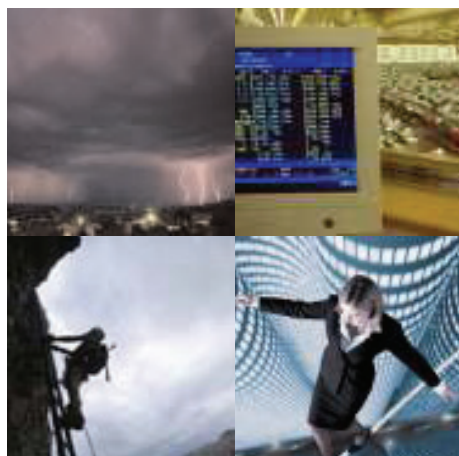
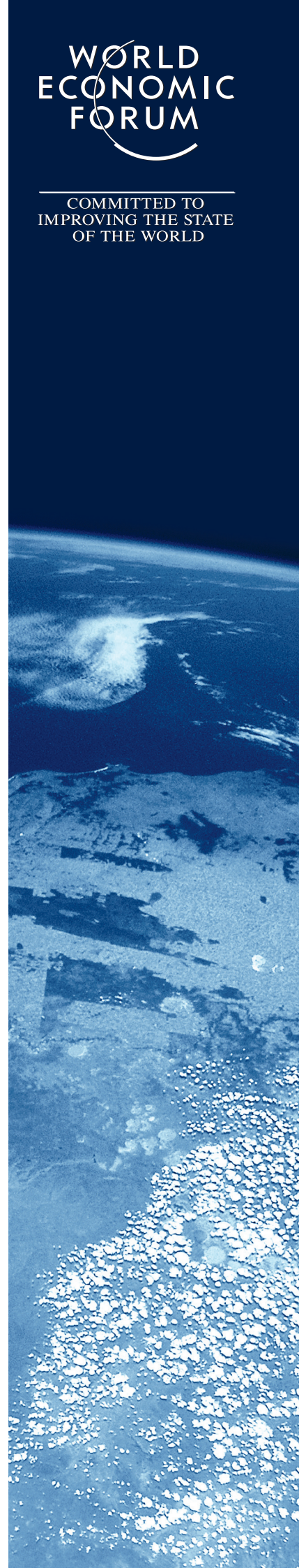


Global Risks to the Business Environment



A project of the World Economic Forum
in collaboration with
Merrill Lynch



World Economic Forum
91-93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland
Telephone +41 (0)22 869 1212
Fax +41 (0)22 786 2744
E-mail: contact@weforum.org
www.weforum.org

© 2005 World Economic Forum
All rights reserved
No part of this publication may
be reproduced or transmitted in
any form or by any means,
including photocopying or
recording, or by any information
storage and retrieval system.

Executive Summary

This paper, the output of two workshops organized by the World Economic Forum in collaboration with Merrill Lynch, reviews major, global risks facing business leaders today, and examines how those risks differ from the challenges of the past. Some key points:

1) Global Risks and Business – At a time when risks not specific to business are having an unprecedented effect on the corporate world, it is crucial for business leaders to understand the environment in which their business operates, in order to survive, remain competitive and grasp opportunities.

2) An Increasingly Turbulent and Complex World – Today's risks are much more interconnected than in the past. They are much more volatile and can disrupt markets throughout the world with almost instantaneous precision. Such risks can be difficult to anticipate and respond to, even for the most seasoned business leaders.

3) The Global Risks – We identify 36 “global” risks, classified into four categories: economic, geopolitical, societal and environmental. This report details the prevailing consensus reached at our workshop discussions as to the ten risks most likely to have a major or extreme impact on business:

- Instability in Iraq
- Terrorism
- Emerging fiscal crises
- Disruption in oil supplies
- Radical Islam
- Sudden decline in China's growth
- Pandemics – infectious diseases
- Climate change
- Weapons of mass destruction (WMD)
- Unrestrained migration and related tensions

4) Risk Mapping - Connecting the “Dots” and Spotting the Patterns – In an interconnected world, global risks should not be considered on a stand-alone basis; it is important to understand how they can trigger, amplify or buffer one another.

5) Dealing with Global Risks – Seldom can global risks be addressed by a single business entity, industry or country, and many institutional mechanisms are proving fairly ineffectual as they struggle to cope with the challenge. There is also a large discrepancy between the immediate time horizon employed by most business and political leaders and the long-term approach required to tackle risks on a global scale. As a result, our capacity to address risk is jeopardized; a myopic tendency – or worse: denial – prevails. Finally, of equal concern is the problem that some major risks are being passed on to those least able to solve them – or with least responsibility for creating them.

The Global Risks Programme aims to identify key risks to the global economic outlook, the links between these risks, and their likely effect on markets and businesses.

Systemic risks are quite complex. Our objective is to help business leaders cut through the complexities and make well-informed decisions. The World Economic Forum's Global Risks Programme will provide business leaders with the following:

- **Understanding:** to help business leaders and other key decision-makers understand and make sense of the macro-level factors at play (such as globalization, technology, demographics and geopolitical changes);
- **Awareness:** to help business leaders avoid the “boiling frog syndrome” by becoming more aware of mounting risks before it is too late to avoid them or mitigate their consequences;
- **Planning and implementation:** to contribute to the development of tools that enable decision-makers to better confront or moderate a risk, in addition to identifying opportunities that could emerge.

To launch this new programme, the World Economic Forum organized two workshops in collaboration with Merrill Lynch at its London office and New York headquarters. Both workshops were attended by leading experts in a broad range of risk fields, ranging from international security to climate change. Data and advice were also drawn from the Forum's community of Fellows and various experts in leading think tanks and academic institutions. In convening these sessions and drawing upon outside expertise, we were acutely aware that cross-cluster risk analysis of this type is rare.

There is substantial evidence to suggest that exogenous risks affect business today much more than ever before. For instance, a study conducted by A.T. Kearney in September 2004 shows that a large number (43%) of *Fortune* 100 companies blame various global risks for their company's failure to meet earning expectations.

Identifying global risks – and how they might affect one's business – is all about spotting the trends and “connecting the dots”. It requires the ability to see through the complexity of today's world and identify opportunities and constraints before they arise.

Unfortunately, there is a widespread tendency among many businesses to be well prepared only for the *last* event that has occurred – not the next one coming around the corner. Denial is an all too common strategy, and there is a natural tendency not to react until the catastrophe is unavoidable.

What is needed instead is for senior executives to become better prepared, perhaps by simply taking a broader look at the world, stretching their horizons further than the next quarterly report, and asking the simple question: “What would I do in the event of...?”, or “What new business opportunities will be created by these risks, and how can I get ahead of the competition?”

The Global Risks Business Case for CEOs

Professor Nitin Nohria, a member of the Leadership Initiative at the Harvard Business School, has been compiling data on the leading US business figures over the past 100 years, to try to understand what the leadership criteria are for those companies that generated outstanding shareholder value over a period of 15 years. There are no real common traits, except for “contextual intelligence” which seems to connect leaders across generations. All successful leaders “knew where they were in the evolving business environment” and all “were shrewd in calculating the impact of factors such as technology, globalization, labour relations, demographics, government regulation and social mores”. “What makes a leading business figure is the ability to understand and capitalize on the sweeping trends influencing the marketplace of their time”. The iconic example is Jack Welch, the retired General Electric chief, who recognized in the 1980s what very few executives of that era saw: the decline of the basic industries that had long driven the economy.

Global Risks Can Provide New Business Opportunities for Those Who Seize the Advantage First

Successful businesses will be those prepared to react quickly to new risks or, even better, anticipate them well before their competitors. For example, the threat of terrorism has generated substantial opportunities in the high-tech sector for security systems, new screening and detection devices, and new tools for sifting through volumes of data and information. Indeed, the US market for information security, currently US\$ 8.7 bn, is expected to grow between 15-20% per year through 2008.

Climate change has begun to trigger a “race for green” in both the automotive and energy sectors, with companies like Toyota and BP striving to get out ahead of their competitors and establish new complementary qualities to their brand (see box). Others are moving to establish new trading and futures markets or provide services to help businesses manage their energy use more wisely.

First Out of the Gate: Toyota and Climate Change

With the successful rollout of its hybrid gas-electric vehicle, the Prius, Toyota appears to have gained a substantial competitive advantage in the race to claim the brand for “climate friendly” vehicles. Global sales of the vehicle reached the 200,000 mark in May 2004, and Toyota is now ramping up production to 180,000 vehicles per year, primarily for the US market. The financial figures are proprietary, but Toyota does seem to have found a way to turn a global risk – climate change – into a profit opportunity. The Prius was designed as an entirely new vehicle, with fuel economy about twice that of a typical American passenger vehicle, and, consequently, substantially lower carbon emissions. The Prius is now the “green” vehicle in the US, greatly enhancing the image of Toyota’s brand and establishing itself as the benchmark against which all other “climate-friendly” advances will be judged. Perhaps more importantly, Toyota recognized early on that creating the Prius would give them substantial experience in engineering and road testing electrical components that will be essential for future vehicles running on hydrogen-powered fuel cells.

Equally, the risk of pandemics, increased by globalization and the associated mobility of people, goods and services, and the risk that biological weapons will be used by terrorists, have opened up new opportunities for businesses that can excel in the early detection and identification of diseases. Travel vaccines, together with influenza vaccines, are expected to grow the fastest among currently available vaccine products, and there is a burgeoning new market for defence against bioterror agents (see box).

VaxGen’s Re-focus

VaxGen, a company in California, is emerging as a major player in the market for vaccines and therapeutics against bioterror agents. The US government announced in November 2004 that it is purchasing from VaxGen 75 million doses of a new-generation anthrax vaccine under a US\$ 877.5 m US contract – the first awarded through a federal programme to develop and stockpile antidotes to biological and chemical weapons. VaxGen has also partnered with Kaketsuken, the largest vaccine company in Japan, to develop Kaketsuken’s attenuated smallpox vaccine, LC16m8, for the US and potentially other markets.

VaxGen has been working on landing this contract for more than two years. The company switched its corporate focus to developing bioterrorism vaccines after its much-hyped AIDS vaccine failed a late-stage clinical study in February 2003, and decided to rethink its strategy.

An Increasingly Turbulent and Complex World

The Changing Nature of Risk

Several factors contribute to make the world increasingly fragile and turbulent.

Due to the advances in technology and the progress of globalization, the levels of interdependence and interconnectivity between businesses, markets, people and nations have increased greatly. At the same time, the pace of change has increased dramatically; the effects – and consequences – of a risk event are felt more widely and more quickly than ever before. And conditions not only change rapidly, they change more frequently and in increasingly unpredictable ways. Sometimes it is not even clear whether and when a return to equilibrium will occur, creating great difficulty for business models that may have been applied successfully in the past.

Taking the global financial markets as an example, two issues stand out according to Kevan Watts, Chairman of Merrill Lynch International: the first is whether the accommodative monetary policy that the US Federal Reserve has pursued in recent years has led to inappropriate risk taking by investors. Indeed, there are members on the US Federal Open Market Committee who already wonder whether “the prolonged period of policy accommodation has generated a significant degree of liquidity that might be contributing to signs of potentially excessive risk-taking in financial markets.” If this is the case, then it is possible the world might see increased volatility in global financial markets as and when the Fed decides to rein in that liquidity growth and investors reassess their risk-appetite. The second issue is more strategic and concerns the low level of saving by America. Low interest rates and tax cuts have encouraged both borrowing and consumption by US households that have contributed to the emergence of large current account and budget deficits in America. Going forward, one of the biggest economic uncertainties is how sustainable these American deficits are – and in particular how willing non-American investors will be to continue funding them. A better global balance would not only require higher saving in America, but also stronger domestic demand among America’s trading partners. Such a shift could potentially have major implications for both financial markets and for corporate strategies.

Additionally, there is the challenge of making sound decisions about risk on the basis of incomplete or imprecise data, or – in today’s “information era” – because there is too much data. Information overload can make it difficult to decipher useful signals from meaningless noise, stalling the decision-making process, or even bringing it to a halt.

Finally, there are asymmetries inherent in some of today’s risks, enabling even small events, seemingly inconsequential decisions, or small clusters of ill-intentioned people to have a disproportionately big impact. An obvious example here is terrorism, but there are others as well. A recent example of a seemingly inconsequential decision with major consequences was the decision by electric utility managers in Ohio to forgo regular maintenance of tree limbs overhanging power lines which led to the power blackout in 2003 that paralyzed much of the north-east US for days. Nonlinearity has become a defining characteristic of many risks today.

Is the World a Riskier Place?

This is a difficult question to answer. Certainly the world has experienced sudden outbreaks of war, major disruptions in oil prices or supply and pandemics killing millions of people many times before. Indeed, many of the risks we face today are not new. If we take a large number of indicators that measure the “riskiness” of the world (e.g., life span, number of deaths in conflicts or caused by terrorism, number of outbreaks of epidemics), the world is probably less risky today than it has ever been.

But what makes the world seem riskier today are the ways in which interconnected risks can amplify aggregate effects and the speed at which risk can spread throughout the world, disrupt tightly coupled systems, or become known immediately to millions of people or markets – almost instantaneously via the Internet and broadcast media.

What Shapes Our Ability to Identify Risks?

It is important to understand that risk is a function of both probability and impact, and both can be highly subjective. We need to assess the chances of a risk occurring, as well as the magnitude of its impact and consequences. And we need to be aware of some well-known factors that inhibit our ability to make good decisions.

For example, people will often judge an event as either frequent or likely to occur simply because it is easy to imagine or recall, i.e., if it is readily available to one's memory. In addition, if events are sensationalized by the media, we tend to "perceive" a higher frequency and assume a higher probability. In general, people will over-estimate risks with which they are familiar and under-estimate the unknowns.

There is also something called "confirmation bias": people tend to look for evidence that confirms their own view and disregard any findings that contradict it. Similarly, people tend to place great faith in their own judgements, and conclude very often that certain bad things "won't happen to me". Finally, it is not uncommon for us to make estimates by starting with a value we know (the "anchor") and adjusting from that point. The fixed, mental frameworks from which we view the world colour or inhibit our ability to process or accept new data or information.

To a substantial extent, risk perception and risk management are also affected by culture – the degree to which people are well-informed and/or have developed some degree of resilience or tolerance to risk. One can imagine, for example, that Israelis have developed some degree of resilience to terrorism, or that many inhabitants of Florida are able to block out the potential for a major hurricane to destroy their homes or livelihood.

Business executives are, of course, human beings. They are vulnerable to the very same kinds of forces and factors.

The Global Risks

At the outset of this project, we developed a large list of global risks aggregated across four categories: economic, geopolitical, societal and environmental (see the table in the Appendix). Although some of the risks in this list are more regionally specific than others, we felt that all had a potentially global impact. We also recognized that understanding the granularity of risks would be important. For example, the risk of terrorism has different implications for a business whose operations are mostly in Europe, versus one in the Middle East, and climate change poses different risks for businesses operating in Bangladesh versus those in California.

Which Global Risks Matter Most/Least to Business?

Using our table of risks as a starting point, we asked the 60 or so participants in our workshops in London and New York to indicate their views on the probability and potential impact of each. The chart below summarizes the outcome of these discussions. While not the result of a statistically valid survey or study, this assessment does reflect the best judgement and the consensus of the experts and business leaders who participated in the workshops.

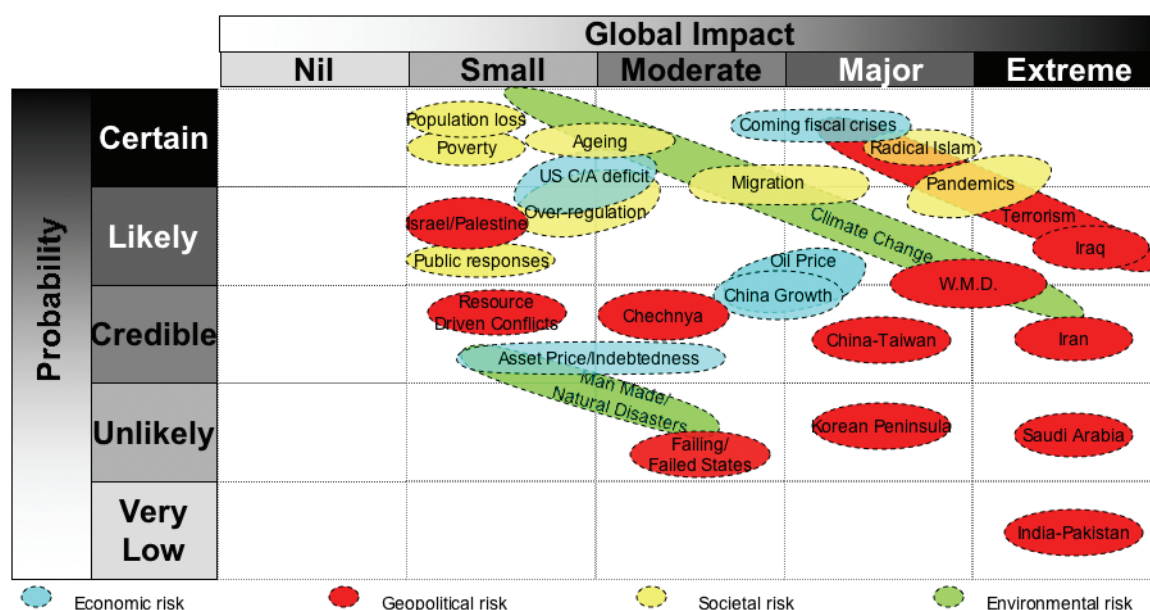
The time horizon in which any of these risks may occur varies considerably. Some, such as the US current account deficit or further deterioration of the situation in Iraq, are unfolding today. Others, such as climate change, will produce impacts whose most severe consequences may not be felt for decades.

“Top Ten” Risks

Of all the risks we examined, there was general consensus that ten are “likely” or “certain” in terms of their probability, and “major” or “extreme” in terms of their impact. These risks – which potentially could be most disruptive to business and markets – are summarized below. Others, such as the destabilization of Saudi Arabia or a conflict between India and Pakistan, were thought to be less likely. However, because a worst case event in these areas of risk could have an extreme impact, they should not be ignored – especially by businesses whose viability would be most immediately affected.

Instability in Iraq

Iraq is at a tipping point. If instability prevails, the implosion of the country is very possible, with devastating consequences cascading one after the other. First, destabilization could spread to adjacent countries with strong vested interests in Iraq’s future – Turkey, Syria and Iran. Second, the Middle East would have to cope with the possibility of a large failed state serving as a breeding ground for international terrorism. Third, the security of global oil supplies would be put at great risk, with a consequent impact on prices and the global economy. Fourth, the image of the US as an ultimate guarantor of international stability would be shattered, raising significant credibility problems in other parts of the world.



Note: Apart from climate change, all environmental risks are not included in the matrix because of the great variability in terms of time horizon and impact, as well as their dispersion in geographical terms.

Terrorism

Businesses and governments now perceive risks of terrorism through the post 9/11 prism and the real possibility that terrorist attacks of catastrophic proportions (“catastrophic terrorism”) with extreme consequences for the economy and business might occur. Under the brand of Al Qaida, splinter groups are emerging and operating without the mandate of a large organization – terrorism is becoming much more fluid and decentralized than before. In our workshops, bioterrorism emerged as a major concern, as technological advances have made it much easier to develop pathogens cheaply in a world that is simply unprepared for a major bioterror attack. There is also a growing consensus among experts that “the war on terror” is being lost, and that the rate of new recruits joining terrorist organizations is greater than the rate at which terrorists are being eliminated (one expert put it at 3 to 1).

Emerging fiscal crises

A number of global risks identified in our programme could pose major problems for the financial solvency of several countries. The need to sustain an ageing population, urbanization, increased security costs, adapting to climate change – these are critical challenges with time horizons that vary. Some – such as ageing – are certain (i.e., already unfolding) and their effects are not difficult to anticipate; others are more difficult to predict and measure (e.g., the costs of providing adequate infrastructure, healthcare and other services for rapidly urbanizing regions). If these risks peak simultaneously, they could provoke a “perfect storm” by enormously complicating governments’ ability to meet their fiscal obligations. The after-effects could then extend beyond a specific country or region. Future fiscal crises will affect many countries in the world, but it was felt that European and Asian countries are most at risk because of their high levels of indebtedness.

Disruption in oil supplies

High oil prices are not unprecedented; indeed, after the Iranian revolution in 1979 they rose to US\$ 75/bbl in 2004 dollars. The view expressed in our workshops was that a new equilibrium above US\$ 30/bbl will be reached in the mid term, as production capacity and demand are realigned. However, it was also felt that a supply disruption is moderately likely in the near to mid-term in Nigeria, Saudi Arabia, Venezuela or Russia. Just one of these would be sufficient to provoke a major spike in oil prices, and even though economic growth and the overall

health of the global economy are less coupled to oil prices than in the 1970s, it could have significant impacts on markets and businesses across the board.

Radical Islam

Some experts at our workshops made the point that rather than being in the middle of a “war on terror”, the Western world is in the midst of an ideological conflict with a radical stream of Islam. In this view, radical Islam is about mobilizing masses towards the supreme political goal: the triumph of the Islamic state and the implementation of Islamic law worldwide. Others argue that the fault really lies with ruling powers in the Middle East and elsewhere, and their failure to reform economic and political systems in ways that would improve the welfare of their people. Whatever the root cause, optimists point to the fact that, since Afghanistan, radical Islamic groups have not seized power anywhere in the world. Pessimists stress that the group ideology is spreading, in particular in Europe and parts of Asia, and that significant risks lie ahead. More generally, there is concern that the spread of religious fundamentalism greatly complicates the mechanics of international cooperation.

Sudden decline in China’s growth

With annual real GDP growth of 9% over the past twenty years, China is often perceived as the emerging superpower of the 21st century. Yet, vulnerabilities do exist. People in the workshop felt that the greatest risk facing China’s continued growth is not necessarily economic. Indeed, the ability of the government to engineer a soft landing using market instruments – e.g., a progressive increase in interest rates – seems real, as is its determination to address the issue of non-performing loans in the banking sector and to restructure public enterprises. The greatest risks that might bring Chinese growth down in an abrupt manner stem from other sources: i.e., the risk of pandemics, particularly acute in this part of the world, the inability of cities to absorb the huge influx of peasants from the countryside, the spread of regional poverty and the inability to put in place an effective system of governance with low levels of corruption. Any of these would impact growth and trigger an immediate domino effect. Additionally, the limited availability of data on socio-economic conditions in areas of China outside the main centres of modernization along the coasts creates concern that we may not really understand the full range of risks governing China’s future, and that there may well be surprises down the road.

Pandemics – infectious diseases

The expansion of trade and greater mobility associated with globalization, together with the encroachment of humans into natural areas, growing resistance to drugs and changes in climate are increasing the risk of a major outbreak of infectious diseases. Some infectious diseases are new or relatively new (e.g., HIV/AIDS, SARS), some are re-emerging (e.g., TB, cholera), and some are shifting geographically (e.g., West Nile, Dengue fever). There is particular concern over the spread of infectious diseases from animals to humans; public health officials have warned, for example, that an outbreak of avian flu could kill millions of people and cause major disruptions to markets and travel worldwide. The risks are amplified by the woeful inadequacy of existing public health services to prevent, detect and/or respond to the spread of infectious diseases.

Climate change

There is now widespread scientific consensus that climate change poses a serious threat, along with increasing evidence that we are already beginning to see some effects (e.g., the European heat wave of 2003 and the break up of Arctic ice). Besides an increase in average global temperatures, changes that are highly likely include a rise in sea levels, the increased frequency of heat waves, more droughts and floods, and significant changes in the range and distribution of both commercially and ecologically important species. Such changes – along with the advent of new regulatory controls on carbon emissions and other greenhouse gases in Europe, parts of the US and elsewhere – pose important risks for a broad range of economic sectors, ranging from agriculture, tourism and insurance, to power generation and transportation. This is particularly true for investment projects of a long-term nature (e.g., power plants or forest plantations).

WMD

Recent revelations about nuclear weapons programmes in North Korea and Iran have reinforced fears that the nuclear non-proliferation regime has begun to break down. When coupled with Russia's difficulties in implementing full security and safeguards for large

quantities of nuclear weapons material left over from the Cold War, there is growing concern that we may witness terrorist use of a nuclear weapon or "dirty bomb" within a decade or so. Indeed, some experts at our meetings in London and New York put the odds at 50-50. In addition, there is the continuing risk of a "launch on false warning", resulting from the fact that both the US and Russia continue to maintain thousands of nuclear warheads on hair-trigger alert. Biological weapons in the hands of terrorists pose a special danger as well, with high likelihood that access to many forms of deadly agents has or will be achieved in the not-too-distant future.

Unrestrained migration and related tensions

The issue here is not migration *per se*, but rather the uncontrolled and chaotic movement of people – compelled by poverty, wars, political persecution, natural disasters or other factors. Orderly migration can provide a significant benefit for nations whose demographic changes have created a labour gap or a "pension time bomb". Illegal (and to a much lesser extent legal) migration, however, can overwhelm a society's coping mechanisms and give rise to powerful constituencies against it, creating strong interracial and political tensions. The instability that may result, together with uncertainty about the availability of labour and impacts on the costs and benefits of social services, can create important risks for business. In extreme cases, some people in our workshop felt it might even provoke the disintegration of society.

A quick glance at the list above and the accompanying chart should leave the reader with a discomforting finding: attention paid to risk mitigation by both business and government alike doesn't necessarily correlate with the views from our two workshops on the most important priorities. For example, the time, resources and expertise being devoted to risks such as climate change, pandemics or the rise of radical Islam are most likely not at a level commensurate with their potential for serious disruption or harm.

Risk Mapping - Connecting the “Dots” and Spotting the Patterns

We have stated that the extent of interconnection between risk categories is one of the main reasons for the abiding impression that the world has grown riskier. But what are these linkages, and which are the risks that matter most?

Global risks are pervasive in nature. They are fluid and mutable. To capture the power of interconnectedness, one has to understand that we have entered a quantum era, where small things and hidden connections can have major consequences and can happen very quickly and unexpectedly.

Global risks are connected together by a complex web. Some connections are obvious. For example, we can see that there are links between poverty and migration, between Iraq and terrorism, between the US current account deficit and asset prices. There is a correlation, and often a causation link, between these different issues. But what about links that are less obvious and that may create new risks or inadvertently precipitate a low probability risk?

Aggregation of Risks

Many low probability and apparently independent events can combine to create a substantial risk and produce extreme events or “perfect storms” outside the range of conventional forecasts. As an example, a relatively small number of radical Islamic elements in Chechnya could obtain nuclear WMD through organized crime channels in Russia, elevating the risk of a catastrophic terrorist attack.

Mutation of Risks

Some risks may mutate, changing the nature of the threat they pose. Changes in the availability of water caused by climate change, for example, could be the transmission mechanism by which an environmental risk could mutate into a geopolitical one. Away from the coast, it is easy to see how the increased frequency of drought or flood conditions will affect water supplies and irrigation, putting pressure on agriculture and food security, and exacerbating existing resource conflicts. Along the coasts in low-lying areas such as Bangladesh, rising sea levels of just one metre or less could flood lands now inhabited by millions of people, adding to poverty, and forcing migration to adjacent areas.

What Are the Inevitable Surprises to Look Out For?

Business leaders should also be aware of risks known as “black swans”. These are risks that defy probability; they do not fit neatly into a bell curve or other familiar distribution pattern. Instead, a few observations contribute disproportionately to the total picture, resulting in incomputable probabilities with a potentially large impact. So-called “unknown unknowns” made famous in remarks by US Defence Secretary Donald Rumsfeld during the early stages of the conflict in Iraq are of this kind.

Dealing with Global Risks

The “Governance Gap”

By definition, global risks transcend national boundaries. There are only a limited number of global institutions to address global risks, and there is ample evidence that neither these institutions nor nation states are responding to global risks in the most efficient or effective way. Many existing governance structures tend to be too compartmentalized or fragmented, and many business leaders are compelled to focus on their short-term bottom lines. A fundamental discrepancy exists between the time-horizon of political and most business leaders and the long-term nature of most global risks, which results in most risks being dealt with in a purely reactive way.

In a nutshell, short-termism prevails: business cannot respond in time because the pressure to produce strong quarterly results collides with the long-term perspective needed to address most global risks. If companies try to address the issue in earnest, they can be punished by the markets. The same is true for politicians: their willingness to tackle the problem is most often bound by the time-horizon dictated by the electoral cycle. Indeed, the challenge of dealing with long-term global risks is compounded by the fact that the tenure of most business leaders is less than five years.

The “Leadership Gap”

Difficulties caused by the governance gap are compounded by a leadership gap, both at the international level and in terms of mobilizing society. This generates a “pass the buck” strategy where risks are being redistributed from the core to the periphery. For example, many health, poverty and environmental risks are being transferred to those with the least capacity or resources to solve them: developing countries, for example, or low-income populations in Western countries, or even future generations.

Some major risks, such as the current account deficit in the US, the impact of climate change or the welfare of an ageing population, are being transferred to future generations. Others, such as global security, are being transferred to one single country, either willingly or by default.

The main concern is that the transfer of global risks in this way may reduce the world's capacity to respond satisfactorily in the long term. Some might argue that countering such transfers of risk from the core to the periphery belongs solely within the sphere of governmental institutions. But can business really sit back and leave the future of their markets to others?

Conclusion

In the brief review above, we have summarized the most important global risks that emerged from a series of workshops conducted jointly by the World Economic Forum and Merrill Lynch. We have also attempted to identify some of the factors that distinguish today's risks from those of earlier decades and have described some of the challenges business leaders face in addressing risks.

This first phase of our Global Risks Programme – in which we have attempted to identify and examine some of the most important global risks facing business today – will be followed by further projects that the Forum will undertake for the benefit of its members, in close collaboration with leading experts and decision-makers. By blending the world's best minds with rigorous, innovative methodology and new technologies, we will aim to provide our members with unique tools to assess and manage the global risks that lie ahead.

Appendix: Global or Systemic Risks

Economic Risks

Oil prices/energy supply
Asset prices/excessive indebtedness
US current account deficit
Coming fiscal crises
China's growth

Geopolitical Risks

Terrorism
Organized crime
Current/future hot spots (with int'l implications):

- Israel/Palestine
- India/Pakistan
- Iraq
- Chechnya
- Korean peninsula
- China/Taiwan
- Iran
- Saudi Arabia
- Failing/failed states
- Resource-driven conflicts

Weapons of mass destruction

Societal Risks

Radical Islam
Coming religious wars
Retrenchment from globalization and liberalism
Over-regulation
Demographics:

- Ageing
- Population loss
- Male surplus

Migration
Pandemics (HIV/AIDS, TB, malaria, SARS, etc.)
Poverty
Public response to tech developments (Biotechnology, nanotechnology, other areas)

Environmental Risks

Ecosystem services and biodiversity
Climate change
Water supply/quality
Natural catastrophes/accidents
Nitrogen loading
Air pollution

Contributors

Thierry Malleret, Ilaria Frau and Bud Ris contributed from the World Economic Forum.

Merrill Lynch participated in this report within the framework of its Strategic Partnership with the World Economic Forum. The effort was led by Kevan Watts.

The World Economic Forum would like to thank Victor Pinchuk for his contribution to this programme. Victor Pinchuk is founder of Interpipe Corporation and is among the Ukraine's most successful business people. He has steered his company, now a global leader in ferroalloys and pipe production, through difficult and challenging times. His approach to global risk management focuses on effective forecasting, remaining flexible, and on acting and reacting quickly. Mr Pinchuk also believes in social responsibility and both he and his company are active in the fight against HIV/AIDS.

Edited by Fabienne Stassen
Layout by Kamal Kimaoui

For a more detailed analysis of global risks, their framework and effects on business, go to weforum.org/globalrisks



COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

The World Economic Forum is an independent international organization committed to improving the state of the world. The Forum provides a collaborative framework for the world's leaders to address global issues, engaging particularly its corporate members in global citizenship.

Incorporated as a foundation, and based in Geneva, Switzerland, the World Economic Forum is impartial and not-for-profit; it is tied to no political, partisan or national interests. The Forum has NGO consultative status with the Economic and Social Council of the United Nations. (www.weforum.org)