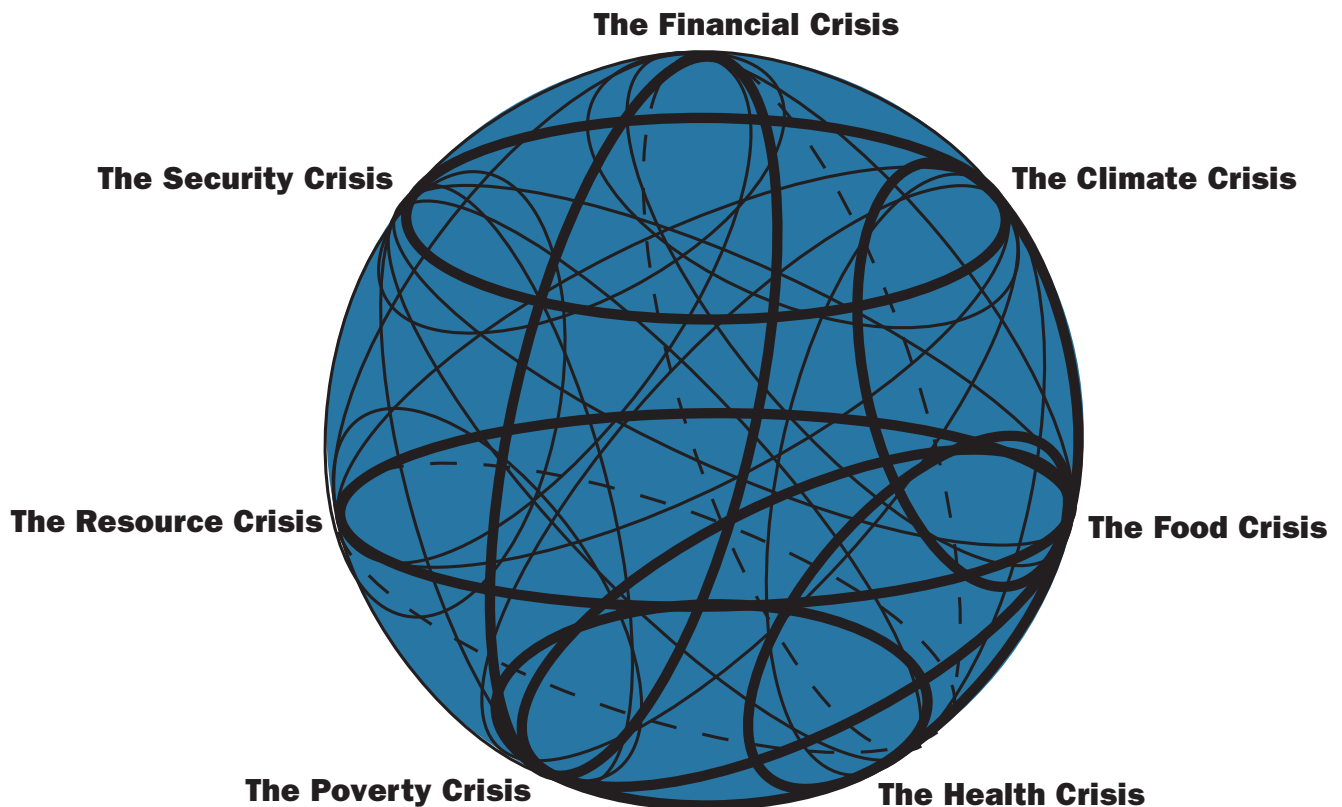


1 Seven Interconnected Crises

The current financial crisis is not an isolated event. It is one of seven interconnected global megacrises which could dramatically change political and financial conditions across the globe. But just what are these crises? How do they relate to each other? And how can political and financial decision-makers tackle one crisis without making the others worse? Monday Morning has conducted a systematic analysis of hundreds of reports, surveys and books in order to uncover the fundamental principles driving these crises. With this, we are able to present a complex picture of new global risk patterns which will place entirely new demands on decision-makers' understanding of the world around them, and their ability to act decisively. The crucial difference between success and disaster lies in the decision-maker's ability to understand the complex interrelations between these crises, and to utilize this knowledge appropriately.



THE FINANCIAL CRISIS

- Saving banks from the global financial crisis has so far cost governments more than 4,000 billion dollars, and this does not include the value of more or less unlimited loan guarantees that some governments have issued.
- Markets around the world have seen billions of dollars wiped off the value of shares.
- A worst case scenario would see western economies experience low or negative growth for the next two years.
- The national debt of the United States has now reached 11,000 billion dollars, the budget deficit now lies at almost 12% of GDP and private debt has reached record levels.
- Derivatives with a nominal value of more than 600,000 billion dollars have been drastically de-valued as a result of the crisis, and several banks are threatened with insolvency.

SEVEN INTERCONNECTED CRISES

Rarely have the world's decision-makers been confronted with a global crisis as deep, complex and dangerous as the financial meltdown which has struck the world's banks and stock markets in recent months. Respected, global financial institutions, that have survived world wars and depressions, were brought to their knees; global money markets collapsed; and for a few dramatic weeks the global financial system was on the brink of disaster. Trust – always a vital element of any well-functioning market – disappeared, to be replaced by fear, panic and massive falls in the values of stocks and shares.

Governments in the United States, Europe and Asia threw billions and billions of dollars into the financial system; purchased bank shares; and in several cases issued almost unlimited loan guarantees. Many hoped that political will and financial generosity could restore confidence in the financial system.

It was the first serious financial crisis of the 21st century, but it will be neither the last nor the greatest. The crisis' fundamental causes remain with us. A long and painful recession is in prospect, putting the global economy at serious risk. Whilst the global financial system licks its wounds, a number of other global crises will increase in influence, presenting new tests for global leaders.

Monday Morning's global risk assessment – based on a systematic analysis of hundreds of reports, surveys and books – reveals that the current crisis gripping financial markets is a symptom of a new global pattern of risks where global and tightly intermeshed megacrises form a collective systemic crisis. Monday Morning's analysis shows that:

- **SEVEN INTERCONNECTED GLOBAL CRISES** have escalated in scale in the first years of the 21st century. All of them look set to grow further and to re-enforce each other's growth during the next five years.
- **THE CONTINUED GROWTH OF THE GLOBAL ECONOMY** will be determined by the global megacrises, the collision of which will generate fresh political and economic earthquakes.
- **DECISION-MAKERS ARE UNDER PRESSURE.** The longer they wait, the greater the risk of a chaotic and irreversible downward spiral, and the greater the financial and social costs.
- **WITH ANY CRISIS COMES THE OPPORTUNITY TO INNOVATE.** Early awareness gives a competitive advantage in the race to find significant new global business opportunities and solutions. Some of the future's most important growth markets will emerge from these crises.

Each of these crises has its own individual dynamic, but it is only by understanding the complex relationships between them that decision makers can develop a long-term response to the crises. The financial crisis may delay the solution to the global climate crisis and thus accelerate climate change. This in turn will exacerbate the effects of the food and health crises.

Risk & Opportunity Report 2009

Traditional financial models have been unable to capture the global risks that during the past year have led to extreme market fluctuations and, on occasion, chaotic scenes. The models build on simplified extrapolations of empirical data concerning past events – on what we think we know. These models provide us with a false sense of security. They do not help us to tackle unexpected events that can suddenly change the psychology and expectations of market actors dramatically. Experience teaches us that the risk of extreme crises and errors is increased when market participants and experts think in narrow local channels. The financial crisis gives us an idea of the costs.

Monday Morning's Risk & Opportunity Report cannot provide a precise prediction of future events, what it does do is provide a road map of the various risk systems and their inter-relationships in order to provide advanced warning of future crises. Colossal costs can be saved by companies and countries that are prepared for the challenges presented by these global crises.

In the 21st century, no sizeable crisis will remain national or sectorial. Crises are dynamic, they cross international borders and are closely interlinked to other global crisis systems.

In the coming years, climate change or the food and resource crises may increase the risk of extreme fluctuations on the financial markets, leading to new crises of security and poverty.

What is required is a new and updated method of assessing risk to provide early warnings of the development of global crises. Monday Morning's Risk & Opportunity Report provides a complete analysis of the global crises' inter-relationships and their consequences, and of the new opportunities for innovation and creative thinking that can take us closer to a solution of these crises.

THE CLIMATE CRISIS

- In 2007, global CO₂-emissions rose at a record rate to 36.6 billion tons. Since 2000, emission rates have risen four times as quickly as they did during the 1990s.
 - The average air temperature on Greenland's ice sheet has risen by more than 4°C since 1991.
 - Summer ice levels in the Arctic Ocean have shrunk to less
- The Antarctic ice sheet has become increasingly unstable during the past ten years. This could lead to increases in sea levels of several meters by 2050.

CHAPTER 1

Furthermore, the global financial crisis will also affect the poverty crisis, leaving increasing numbers of third world countries in a critical situation. In the short term, the downturn in economic activity will relieve the resource crisis, bringing oil and raw material costs down from the record levels which they reached during the summer of 2008. The problem, however, is that this will, in turn, reduce the incentive to invest in clean technologies and energy-saving measures, accelerating, rather than solving, climate change problems.

The global security crisis is equally alarming. A new generation of conflicts fueled by new global and regional imbalances is on the way. In recent years both energy and food crises have resulted in regional conflicts and wars. These have a reciprocal impact on the financial system, increasing the risk of further financial chaos.

Perhaps what is most alarming is that limited national measures intended to alleviate one crisis, may exacerbate the effects of others. The greatest challenge for 21st Century decision-makers is to identify the patterns and relationships that exist between the various global crises, making it possible to develop a viable global response to them all.

Global Climate Crisis at Tipping Point

One of the most serious consequences of the current financial crisis is the risk that it will reduce the incentive to act on global climate change.

- **IT DEFLECTS POLITICIANS' ATTENTION** from the climate issue, and could reduce the political will to enter into an ambitious climate agreement at the 2009 COP15 Summit.
- **THE ENORMOUS UNCERTAINTIES** affecting financial markets mean that banks are very unwilling to take on risks, making it harder for companies to gain access to the capital they need to invest massively in the clean technology and energy saving measures that will deliver reductions in CO₂ emissions.

In five years it may be too late to act. The lack of political and financial initiatives may lead to accelerating global climatic change. According to leading NASA climate researcher James Hansen, the crisis affecting the world's climate is already so advanced that it will soon be irreversible. If greenhouse gas emissions conti-

than 20% of what they were 30 years ago. Seas may already be ice-free by the summer of 2010.

- The Antarctic ice sheet has become increasingly unstable during the past ten years. This could lead to increases in sea levels of several meters by 2050.

MM | High risk of growth in CO₂

Two possible scenarios for emissions

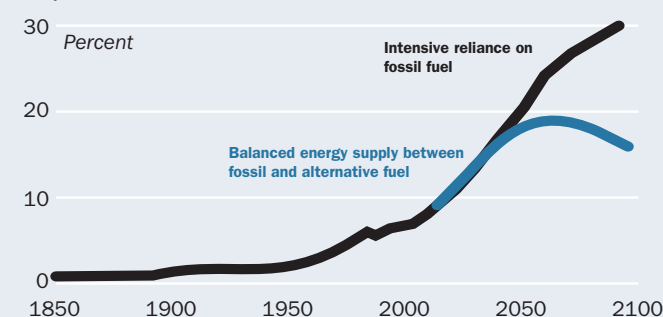


Figure 1: Without a radical reduction in CO₂ emissions up to 80 percent before 2020, the climate changes will reach a tipping point. But even with a balanced energy supply using both fossil fuel and several renewable energy sources it will be difficult to reach the global goals.

Source: Global Carbon Project 2008.

nue to grow at their current rate, concentrations of CO₂ in the atmosphere will grow from their current level of 385 ppm to the irreversible tipping point of 450 ppm, leading to global increases in temperature of 2-3 °C (see figure 1). British economist Nicholas Stern has warned that continuing business-as-usual growth in CO₂ emissions will result in temperature rises of between 6 and 8°C this century.

The financial costs of inaction multiply massively the longer that solutions are delayed. In 2006, the Stern Review estimated that by acting quickly, it would only be necessary to invest 1% of GDP to avoid the worst affects of climate change. Today, less than three years later, he warns that costs can escalate to 20% of GDP if timely action is not taken. The global climate crisis could thus end up being far more expensive than the current financial crisis. If new climate prognoses are taken seriously, it is clear that delivering 80 per cent reductions in CO₂ emissions by 2050, relative to 1990 levels, is needed. A 50 per cent reduction in global emissions will not be enough. Developed countries have to move even faster, with at least a 40 per cent reduction by 2020.

The most extreme consequences of the global climate crisis can only be alleviated through massive investments in clean technologies; energy savings; Green Lean; new material technologies; and increased carbon productivity. According to consultancy

THE FOOD CRISIS

- 923 million citizens of third world countries are undernourished. A further one billion people suffer from poor nutrition.
- Global corn stocks are at their lowest levels for 30 years. In many areas, farmers are fighting soil erosion and lack of water, making increasing productivity tough.
- The world's population is growing by 78 million people per

year. Continually increasing demand for meat and protein-rich food has put global food producers under pressure.

SEVEN INTERCONNECTED CRISES

company McKinsey, carbon productivity could be increased 15-fold over 50 years, and 70% of the technologies to do this are currently available. To do so, however, requires new financial incentives. Global investment in clean technologies needs to be quadrupled to an annual level of at least 80 billion dollars per year until 2050. This is a small change compared to the amount that governments and the financial sector have spent in an attempt to ward off the current financial crisis.

Food Crisis Accentuated by Climate Change

Within a short period of time, extreme weather conditions brought about by global climatic changes such as droughts, storms and floods will exacerbate the global food crisis. In 2007, drought in Australia and other areas was a contributory factor in the rise in global food prices. This led to social unrest in more than 50 countries, and in several third world countries governments struggled to feed their populations. During the next five years, the risk is that these extreme crises will become more frequent. Accelerating climate change increases the risk of poor harvests. This will result in rapidly rising prices on the world market, social unrest and rising levels of poverty.

Even though the world's production of corn, wheat and other crops has tripled since 1950, global food supplies are vulnerable. By 2050, the world will have 3 billion extra mouths to feed, and global demand for animal proteins is rising rapidly. Climate changes will make it difficult to secure the foodstuffs necessary to feed the growing population. At the same time, bio-ethanol production makes still greater demands on soil and water resources. More intensive foodstuff production and more weather-resistant crops may go some way to providing the solution, but they risk exacerbating climate problems. As it is, agriculture already accounts for 17-18% of global CO₂ emissions.

The increasing industrialization of agriculture and the use of genetically modified crops may be able to raise productivity levels markedly. However, there is also a risk of epidemics; the development of resistance to herbicides and pesticides; and soil exhaustion. The political and financial dilemmas are real. Greater investment in new technologies and new high-yield crop varieties will be required to satisfy the world's growing population. The financial crisis may make it harder, however, to raise the capital to make these investments. A solution to the financial crisis is one of the measures required if the food crisis is to be alleviated.

If this does not happen, social unrest, conflict and agricultural protectionism will result, harming global economic development.

The Global Health Crisis

The risk that diseases can spread from one corner of the globe to the other in the space of hours has never been greater than it is today. Today, our world is characterized by international trade and increasing cross-border travel. This has led to a growing risk of the rapid spread of new viruses, resistant bacteria and the potential for new pandemics such as SARS.

The globalization of disease patterns and the increased risk of infection are here to stay. New infectious diseases spread more rapidly. In 1998, 1.2 million people in 56 countries caught dengue fever. In the last few years alone, the WHO has registered 1,100 epidemics around the world. Forty new infectious diseases were unheard of a generation ago. The world is faced with what is potentially a global health crisis that could have serious human and financial repercussions in the next few years, and whose impact could be made worse by the dynamics of other global crises. The climate crisis, for example, may increase the number of epidemic diseases.

The consequences could well be serious for both developed and third world countries. In the poorer Southern Hemisphere, governments lack the financial resources to fight even the most elementary diseases, and the global financial crisis makes it even harder for them to take effective action. In the western world, governments are fighting a health crisis conditioned by financial problems and over-consumption. Rising numbers of elderly citizens; more and more lifestyle diseases; and growing expectations, may well lead to further increases in health costs in the coming years. Between 1990 and 2005, health costs in OECD countries have grown twice as fast as the economy as a whole and now account for 8-9% of GDP on average. If these rates of growth continue, the expenditure involved will affect financial stability. The need for additional investments in new hospitals, new forms of treatment and healthcare strategies is pressing.

The financial crisis and the recession that follows it will accentuate the political and financial healthcare dilemmas. More effective preventative strategies that could contribute to lessening structural pressures on healthcare costs are a necessary part of the solution. Alleviating these healthcare issues further presupposes a solution to the food crisis, so that healthier food is produ-

THE HEALTH CRISIS

- Cholera, yellow fever and other epidemic diseases are making a comeback. Every day, one million people die from malaria.
- According to the Oxford Economic Forecasting Group, a global bird flu epidemic would cost 1-5% of GDP
- Chronic hunger has caused illness in 126 million children.

- Lifestyle-related conditions are on the rise in both the Northern and Southern hemispheres. According to OECD estimates, 41 million people will die of chronic illnesses in 2015.
- Western health systems are fighting rapidly rising costs, caused by aging populations, among other factors.

CHAPTER 1

MM | The price on resources is spiralling

A historical boom

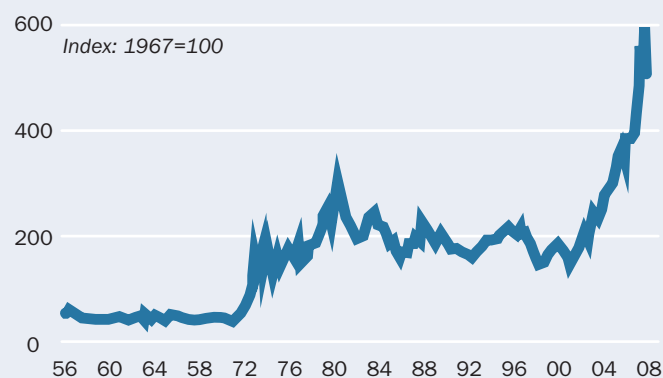


Figure 2: The raw materials have experienced a massive price increase since the turn of the millennium on the stock exchanges in The States. Since this summer, the prices on raw materials have decreased, but in the long run, the trend is going upwards.

Note¹: A combined index of 28 raw materials, which includes grain, soya, coffee, cotton, silver, copper, rubber, zink, sugar, wood, and so on.
Source: Reuters CCI.

ced. In other words, the health crisis cannot be considered as an isolated issue: solutions must be coordinated with measures taken to avert other crises.

Third World Poverty

The World Bank has warned that poverty levels will increase sharply in a number of developing countries as a result of the current financial crisis and the economic problems resulting from it. These countries risk ending up at the bottom of the heap when the effects of the global financial crisis are realized. This may accentuate global inequalities, and result in a new wave of international mass migrations, creating new political and financial tensions.

Behind the poverty crisis lurk significant demographic imbalances. Global population growth is most rapid in the poor countries of Africa and Asia. In Europe, meanwhile, death rates will begin to exceed birth rates by 2015. Population growth may result in increasing numbers of “failed” states and still further social unrest in developing countries. In the Western world, demographic change may make financing welfare states and healthcare systems more difficult in the coming years. The proportion of the population of working age will fall in Europe so that, by 2050,

there will only be two people of working age to provide for each pensioner. Re-prioritization of the state’s services, pensions, higher retirement ages and longer working hours will all be on the European agenda.

In the Western OECD countries, public spending on social services averages 21 percent of GDP. The challenge is to develop a market structure that contributes to a reduction in unemployment; social exclusion; marginalization; and costly sick leave. Seen from the third world perspective, these problems seem insignificant, but if they are not solved they will also weaken the enthusiasm of developed countries to produce coordinated efforts to solve the issue of global poverty.

A new approach is called for that both solves the poverty crisis, and addresses the demographic challenges from which it arises. Maintaining a demographic defensive wall is not a viable long-term strategy for developed nations. For this reason, governments must begin to tackle the global poverty crisis, and one way of doing so would be to ease the immigration of well-educated immigrants. Remittances from immigrants may well contribute significantly to poor economies. But efforts must also be made to increase opportunity in the poor countries themselves.

Investments in the world’s poorest countries can also contribute to reducing social inequalities. Micro-loans are one of the most promising instruments offered to a new generation of entrepreneurs. Instead of considering the world’s poor as potential victims, they can, as business thinker C.K. Prahalad has advocated, become active agents in the development of a new global market at the base of the pyramid. The most forward-thinking Western companies already invest in the development of cheap nano-products designed for this market, and maintaining focus on this strategy, even in times of crisis, will be of critical importance.

New Resource Crisis Is Just Around the Corner

Global resource problems would appear to have been alleviated by the consequences of the financial crisis. Between June and October 2008 alone, the price of oil fell from 145 dollars to less than 40 dollars a barrel because the market anticipated that the financial crisis would give rise to a lengthy recession. This was accompanied by a sudden reduction in investments in cleantech companies during the summer and autumn of 2008.

It seems evident, however, that the fundamental forces driving the rise in energy and raw material prices during the past fi-

THE POVERTY CRISIS

- 2.6 billion people survive on less than 2 dollars a day.
- More than 100 million of the world's children receive no formal education.
- The richest 1% of the world's population earn as much as the poorest 57% combined. A global recession would extend that gap in coming years.

- Risk of further international mass migrations.

SEVEN INTERCONNECTED CRISES

ve years are still in place (see figure 2). Between 2003 and 2005, the price of energy and metals rose more than three-fold, and nickel prices rose six-fold. The financial crisis and the ensuing recession have merely brought this price spiral to a temporary halt. Rapidly growing populations, economic growth in Asia's most populated countries and increasing levels of consumption amongst their large and growing middle classes, point to markedly higher energy and raw material prices when the economic conditions become more favorable.

Governments and companies will feel the effects. New taxation and incentive systems are required which reward companies and institutions that save resources, reduce the use of materials and increase carbon efficiencies dramatically. New and less energy-intensive transport systems; a new generation of electric vehicles; and renewable energy generation could become global growth drivers in the coming years. Digital networks and increased internet communication could cut out many unnecessary journeys and the CO₂ emissions they entail.

One of the most alarming facets of the global resource crisis is the lack of water. According to a report published by the International Water Management Institute, one-third of the Earth's population will suffer from a lack of water in 2025. Regions such as the Middle East, Africa, South-East Asia and China will have to deal with dramatically falling groundwater levels. The problem can be partially addressed through resource-conscious water administration, reduced waste and intelligent agricultural watering systems, but this can also make the solution to the food crisis more difficult to find. There is also the risk that water resource conflicts can develop into recurring water wars. This aspect of the resource crisis could be worsened by global warming and rising demand for more, and more intensive, foodstuff production. These inter-related crises exacerbate each other, and they all affect the last of the seven global crises: the security crisis.

Security Crisis

There is a security dimension to all global crises. Financial imbalance, lack of resources, natural disasters and humanitarian emergencies are the primary causes of wars and regional conflicts, but the global security crisis also has its own internal dynamic.

The 9/11 attack was an unforeseen event which set in motion a chain of other events for which we are still paying the price seven years on.

- America and its allies are still involved in two unfinished and hugely expensive wars in Iraq and Afghanistan, the resolution of which seem further away than ever.
- The Al-Qaeda terror threat has been reduced, but still exists. In Pakistan, a country which has now joined the nuclear club, and a number of other Islamic states, fundamentalist movements remain strong. Further conflicts between cultures and civilizations could arise.
- The risk of new terror attacks and dangerous political destabilization in Pakistan could give further momentum to global political security crises. Tensions have recently increased in the fraught relationship between Pakistan and India, both nuclear powers.
- Though the situation has stabilized in Iraq, developments in Afghanistan have led to a significant risk of setbacks. The escalated conflict between Israel and Palestine is already a matter of deep concern, but could spiral further out of control. This would affect neighboring states and could alter the balance of power in an unstable Middle East. The results will affect neighboring states and could alter the balance of power in an unstable Middle East.
- There is a serious risk of the spread of weapons of mass destruction.

The military and financial powerhouse states are tied together in mutual dependence to the extent where any war, cold or otherwise, would result in serious losses for all parties. Violence, as much as terror, is now a global phenomenon.

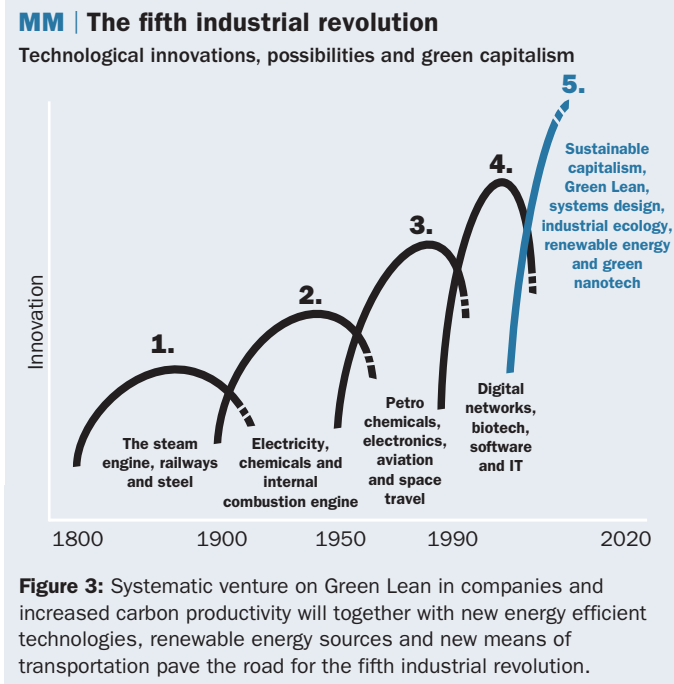
The costs entailed by the two unresolved wars are so great that they have weakened the position of Western economies, and the current financial crisis has made this situation even more serious. America is at serious risk of over-reaching itself both financially and militarily, and the costs of solving and cleaning up after the financial crisis exceed the Pentagon's annual budget. As a result, America may have to adjust its security strategy to new economic realities. The United Nations, since the 9/11 attacks marginalized and declared "irrelevant" by the Bush administration, will have to return to multilateral conflict resolution strategies under the new Obama administration. However, the UN's Security Council and its structure do not reflect the global power structures now under development. That is a major obstacle to the multilateral strategy.

THE RESOURCE CRISIS

- The emerging middle class in China, India and other high-growth countries will double and re-double their consumption of energy, metals and consumer durables in the coming decades.
- By 2020, more than 130 million cars will be in use on Chinese roads.

- According to Shell's scenario group, global energy consumption will have at least doubled by 2050.
- There is a risk that the oil market supply will not be able to meet demand, and that rapidly growing demand and falling production levels will cause prices to rocket.
- More than one billion people lack access to clean drinking water.

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Kilde: Monday Morning Weekly.

The resource crisis and the price rises of recent years have accentuated the problems of global power shifts. The five major, oil-dependent regions – the US, EU, Japan, China and India – transferred approximately 2,700 billion dollars to the oil producing nations in 2008. The West's financial dependence on oil and capital from authoritarian regimes has increased and entails significant security risks.

Russia took advantage of its status as an oil- and gas-rich country to go to war in Georgia in 2008, and the West did not dare to get involved. In the coming years, further examples of this type of conflict may arise. If, as a result of climate change, the ice in Arctic seas melts – which could happen as early as the summer of 2010 – Russia will attempt to take advantage of its financial and military position to claim the natural resources hidden under the ice. The resource crisis and climate crisis could thus lead to further security conflicts in the first decades of the 21st century. New wars could generate new financial crises in a self-perpetuating downward spiral. Military budgets may rise, but this will not address the fundamental causes of global megacrises. On

the contrary, increased military spending only adds to the risks of new tensions and conflicts arising.

The Need For a New Global Strategy

The world is involved in a race against time. The risks entailed by the seven interconnected global crises require a rapid, globally coordinated response. Decisions taken over the next five years will determine whether these potential megacrises will be avoided in time.

None of these crises can be solved in isolation. If one crisis is left unresolved, the risk is that other global crises will return in new forms. This is why new partnerships are required – nationally, regionally and globally, to develop innovative strategies to address the causes of these problems. The financial crisis can not be surmounted without the development of a new financial paradigm that promotes stable and substantial investment in solutions to the other global crises.

The same political leadership which the world's governments have shown in addressing the financial crisis needs to be mobilized in addressing the other global crises.

The climate crisis is the most serious of these, and the one which will have the most far-reaching effects for other global crises in the coming decades. In order to avoid a situation in which these crises spiral out of control, effective global agreements are required within a short time frame. The COP15 summit in Copenhagen may well be of crucial importance, as the pace at which climate change is taking place shows that action is imperative.

A fifth industrial revolution is required in order to develop a new sustainable market economy and a new, future-oriented mindset in the population as a whole (see figure 3). Through technological innovation and massive investment, the aim has to be to achieve an 80% reduction in CO₂ emissions by 2050. This will also reduce the risk presented by other global crises. It is one of the most vital challenges humanity has ever faced. The alternative – inaction or insufficient action – will have far-reaching consequences for coming generations.

Four decades ago, Americans put a man on the moon. During the financial crisis, political leaders have mobilized trillions of dollars to halt global financial meltdown. Politicians must show similar global leadership to resolve the seven interlinked crises. Humanity has no room for error. If the solution is delayed for too long, the human and financial costs will be greater than we could ever conceive.