WORLD DEVELOPMENT REPORT 2014

Managing Risk for Development

CONCEPT NOTE

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Motivation

1. The path of economic development is paved with risks and opportunities.

2. On the one hand, facing risk is a difficult challenge for most households, communities, firms, and countries. The possibility of losing a job, going bankrupt, suffering from disease, being affected by a natural disaster, or going through a prolonged economic downturn can be overwhelming. Such negative events may destroy lives, assets, trust, and social stability. Especially when risk is mismanaged, its negative outcomes can be severe, turning into crises with often unpredictable consequences.

3. On the other hand, the opportunity for growth and welfare improvement may never materialize without confronting and even taking risks. As the world changes, new opportunities and possibilities as well as risks and complications arise constantly. Rejecting or ignoring change can lead to stagnation and impoverishment. In contrast, embracing change and dealing with risks responsibly may open the way to sustained progress.

4. Risk is inherent in the pursuit of new opportunities. That is true for individuals, families, enterprises, and nations. A country opening its borders in search of international integration and higher economic growth may also raise its exposure to international shocks. A firm upgrading to more advanced technologies to enhance its profitability may also become more indebted and financially vulnerable. Farmers adopting new crops and more inputs in expectation of higher yields may also face potentially larger losses. A rural household migrating to the city seeking better health and education services may expose its members to higher crime and less communal support. The motivation behind these actions is the quest for improvement, but the results are seldom guaranteed.

5. To be sure, not all risks are confronted voluntarily to take advantage of opportunities. Some risks are at least partly imposed on people. That is the case for risks derived from natural hazards (such as earthquakes and droughts), health epidemics (such as influenza and malaria), and international economic crises (such as rising food prices and a global financial meltdown). Events like these can cause serious, long-lasting, even permanent damage to human, social, and physical capital, especially for the poor. They have negative consequences not only because they affect people’s current living conditions but also because they weaken their ability and willingness to undertake new opportunities. Realizing that a negative shock can push them into destitution, bankruptcy, or crisis, people may stay with technologies and livelihoods that appear relatively safe but are also stagnant.
Box 1 The Gomez family: a modern tale of risk and opportunity

The Gomez family lives in a shantytown, on the outskirts of Lima. Only a few years ago, the family lived in a rural village in the Peruvian Andes, where they had a small farm. The region was prone to droughts, and they could never earn enough income to escape poverty. Many of their neighbors in the village had migrated to the city in the 1980s, pushed by civil war in the countryside. The Gomez family refused to go for fear of losing their land and finding nothing better in the city. The risk was too large. Peru was a different place at that time: inflation and unemployment were rampant, and the threat of civil war was ever present.

In the 1990s, the macroeconomy was stabilized and the civil war ended. New opportunities started to arise in urban and rural areas. At first, these opportunities eluded the Gomez family. A dam had been constructed near the village where the family lived, but using its waters required the renovation of canals on their farm. They applied for a loan from a commercial bank but were denied, which came as no surprise since it was their first time applying. Mr. and Mrs. Gomez came to believe that their children had no future in the village and decided to migrate to the city. This time, however, they did not have to worry about losing their farm. They had been given a property title and were able to sell the farm to a richer neighbor, who had the capital to renew the canals. The money from the farm would give the Gomezes a cushion as they took the momentous risk of migration.

Lima, with just under 10 million inhabitants, seemed like a huge and inhospitable place to the Gomez family. That is why they decided to move to the shantytown where many members of their village had relocated. There, they would find companionship, cultural identity (all the festivals of their old village were properly celebrated here), and of course help finding a job. Mr. Gomez got a job on a construction site, but the work was irregular, with frequent layoffs. Mrs. Gomez would have to pitch in, and she was fortunate to find work as a seamstress in a textile enterprise. The grandmother helped out, taking care of the children when they returned from school. Having two income earners (and a willing grandmother) made the Gomez household more resilient to whatever might happen.

And things did happen. Mario, the eldest son, was injured in a traffic accident. There was no car insurance, and the Gomez family had to bear the cost of Mario’s medical treatment. They could not have done it alone, and they didn’t have to. They relied on a public hospital, run and financed by the state. Medical treatment there was of uneven quality, but it provided basic services. The Gomez family had to spend some of their limited savings to supplement the hospital services and buy medications, but all that was worth it because Mario recovered.

The Gomezes had to dig into their assets once again, but this time for a very different purpose. Elena—the second daughter whom everyone regarded as the brains in the family—came home one day and asked her parents if she could study English in the evenings. This was a good idea. Peru had recently signed several free trade agreements (one of them with the United States), and exporting companies had started to grow, offering jobs to young, qualified people. English would be a big plus.

Some months before, however, her parents would have declined her initiative on the grounds that it was not safe to be out at night. Police protection was scarce in the outskirts of the city, and criminals took advantage of that. When a crime wave eventually affected the Gomezes’ shantytown, the community put together neighborhood patrols (effective, although at times unduly harsh). When Elena asked for English classes, the safety risk had been reduced, and she could go out to study in the evenings. As time passed, she and her family would be well prepared to benefit from the period of stability and sustained growth that Peru was experiencing.

Confronting risks and seizing opportunities may have put the Gomez family on the path out of poverty, possibly forever. It was their work, initiative, and responsibility that made it possible, but they could not have done it alone.
Whether risks are imposed or taken on voluntarily, growth and development can be achieved only by confronting risks responsibly and efficiently. Risk management should, therefore, be a central concern at all levels of society. From both private and public perspectives, the goal of risk management is to mitigate the losses and improve the benefits that people may experience while conducting their lives and pursuing development opportunities. Risk management has, therefore, the potential to bring about a sense of security and the means of progress to people in developing countries and beyond.

Whether risks are idiosyncratic or systemic, risk management is a shared responsibility, requiring actions that individuals and social systems must undertake, often in coordination. It is virtually impossible for individuals to handle successfully all of the risks they face on their own. Effective risk management requires the participation of well-functioning social and economic systems—the household, the local community, the enterprise sector, the financial system, the state, and the international community—each providing support to people’s risk management in different yet complementary ways.

Objectives

The World Development Report (WDR) 2014 will concentrate on the role that risk management plays in development and poverty reduction. It will argue that responsible and efficient risk management is crucial not only to reduce the negative impacts of shocks and hazards but also to enable individuals, households, and entrepreneurs to pursue new opportunities for growth and prosperity.

The WDR 2014 will focus on the management of risks people face in their struggle for development. This people-based approach implies that risks faced by institutions (such as firms, banks, and governments) will be regarded as relevant depending on how they broadly affect the societies in which they operate. The risks that the Report will consider in the analysis fall into four broad areas: health, wealth, income, and safety. These categories encompass important aspects of well-being and have a demonstrated importance for development.

The WDR 2014 will concentrate on the process of risk management and not on specific risks or particular social programs. Thus, it should not be taken as a complete study of, for instance, health epidemics, natural disasters, or financial crisis. Likewise, it should not be regarded as an exhaustive analysis of, for example, social insurance, public infrastructure, or regulatory policy. Such analyses go well beyond the scope of a single general report and are best left for sector-specific work.

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1 To give a concrete example, a firm’s exit from the market is not of concern if workers can find a job in a more productive firm and owners can relocate their capital similarly.
11. The Report will first provide an analytical framework for understanding risk management from individual and social perspectives. Next, it will assess the most important risks that people face, especially in developing countries. Then, it will analyze how various social and economic systems, including the state, can help or hinder people’s efforts to manage risks. The WDR 2014 strives to provide a set of recommendations for better risk management directed to key development actors, from civil society to governments in developing countries and from the donor community to international development organizations.

12. Why devote a World Development Report to managing risk? How will this WDR add value to development discussion and practice? How will it differ from other reports on shocks and crises?

13. First, a WDR on managing risk is timely: moving from a focus on crisis response to one on managing risk is long overdue. The serial, global food, fuel, financial, and fiscal crises since 2007 have stemmed from poor management of important risks and have slowed development and poverty alleviation in many countries around the world. Indeed progress toward meeting some of the Millennium Development Goals has been stalled.2

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2 World Bank and IMF 2012.
Figure 2  Preparation for risk can build resilience
Better macroeconomic conditions lead to lower growth contraction in the face of global economic crises: sample of low-income countries

Source: Staff calculations based on data from World Development Indicators and International Financial Statistics.
Note: All macroeconomic policy indicators and the growth rate in GDP per capita are GDP-weighted group averages.

14. **Second, this WDR will argue that risk is intrinsic to the development process and needs to be managed, not necessarily avoided at all costs.** In so doing, it aims to avoid the “doom and gloom” prevalent in many discussions of risk and crises. Confronting risks with high potential to result in development opportunities should be embraced but managed responsibly to avoid substantial losses and crises. Although risk is often seen as a threat to development, this Report will focus on making risk management an instrument for development. For instance, many reports have concluded that floods in urban areas worsen poverty. With its different point of view, this report will instead stress how managing urban flood risks more effectively can make the urbanization process—a major driver of development—sustainable.

15. **Third, this WDR will discuss avenues toward resilient development from a holistic perspective, thus highlighting novel synergies, linkages, and trade-offs.** Most existing reports on risk focus on a single sector (such as finance or agriculture), a single type of event (such as natural hazard or commodity price volatility), or a single instrument (such as financial regulation, insurance, or social safety nets).
In particular, the report will be able to compare approaches that focus on a single risk (such as government use of catastrophe bonds to cope with earthquake risks) to those aimed at coping with a wide variety of risks (such as maintaining fiscal space to cope with unexpected shocks of any origin). Recent events have shown how one risk can trigger another: for individuals, health problems often translate into income shocks; for communities, a drought increases food prices and can lead to food insecurity; and the tsunami in Japan in 2011 showed how natural hazards can trigger technological hazards. Considering multiple risks together is more consistent with the situations that individuals have to manage, and is expected to lead to recommendations that take advantage of synergies and are, therefore, more cost effective. For example, managing health and income risks together may be more efficient than designing health insurance and social protection in isolation.

Moreover, by considering the different systems that can support a person’s risk management and by investigating the interactions between them, the report will discuss the best level and mechanisms for managing different risks. Most instruments for risk management indeed require collaboration across many systems. For example, early warning systems are usually created and managed at the national scale, but communities need to be involved to help administer and make them effective. Efficient risk management is by nature multiactor, multilevel, and multisectoral—the WDR 2014 and its policy recommendations will be the same.

**Figure 3 Preparation for risk can unleash opportunities**

Rainfall insurance encourages Indian farmers to increase their investments

![Figure 3](image-url)


*Note:* The bars represent the self-reported investment decisions of 749 farmers who were provided rainfall insurance in a semi-arid area of India. Survey was conducted in November 2009.
16. **Fourth, the WDR 2014 will consider an integrated approach, with options for better risk management at all stages of the risk “chain,” from hazard to exposure and from preparation to coping and crisis management.** Not playing down the importance of the notion that “prevention is better than cure,” the Report will go further by developing and promoting an integrated approach. Recognizing that risk cannot and should not be eliminated altogether, and that exceptional shocks can always occur, it will aim at integrating the preparation for crisis management and coping within ex ante risk management in a consistent way. In doing so, it will review some of the recent developments in decision-making methodologies that use more of the available information, account for low-probability scenarios and surprises (“black swans”), and more generally integrate nonquantifiable uncertainty (“deep uncertainty”) into decision making.

17. **Fifth, this WDR will pay close attention to the role of government and other support systems not only in managing but also in sometimes creating risk.** The recent financial crisis illustrates how risk management tools can easily propagate and amplify risk instead of managing and reducing it. The same is true for public policies. In addition to moral hazard and constrained capacity issues, the report will deal with the political economy of risk management. Many studies assume benevolent governments that are intent on improving the common good, without considering the complex set of constraints and incentives government officials face. While recognizing and analyzing the state’s potential positive role, this Report will also pay attention to the failures of government intervention, pointing out instances where government policies could create incentives for excessive risk taking, undermine households’ and communities’ own risk management, and discourage innovation and change. So while many reports have made recommendations on what should be done to improve risk management, the WDR 2014 will investigate why those recommendations have proven so difficult to implement, and why so little is done to anticipate and prevent potential crises and to manage risk ex ante.

18. **This WDR builds on a number of previous WDRs.**

- The WDR 2000/01 on *Attacking Poverty* identified “security” as one of three pillars needed to combat poverty, focusing on the need to reduce poor people’s vulnerability by reducing the likelihood of key hazards and setting up safety nets and other mechanisms to help them cope with shocks. This WDR will update and expand that analysis.
- The WDR 2004 *Making Services Work for Poor People* tackled various accountability measures to improve basic service delivery, especially in health, education, water, and sanitation, in part to help the poor manage risks stemming from low quality and unpredictable delivery of services.
- The WDR 2006 on *Equity and Development* discussed links between inequality and ability to pursue opportunity, among others.

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3 For example, a political economy problem arises when losses that have been avoided thanks to effective risk management are not observable while prevention costs are immediate and visible.
• The WDR 2007 on *Development and the Next Generation* focused on the pivotal phases in the lives of young people, how to ensure that their potential is unleashed, and how to avoid certain risks associated with those phases.
• The WDR 2010 on *Development and Climate Change* dealt with the need to confront climate change and enact smart policies to reduce vulnerability, enable growth, and finance the transition to low-carbon development paths.
• The WDR 2011 on *Conflict, Security, and Development* addressed the risk of violent conflict and ways to prevent violence and promote recovery in fragile countries.
• The WDR 2012 on *Gender Equality and Development* examined persistent gender gaps and the risks they entail, setting forth priorities for public action to close those gaps.
• The recently launched WDR 2013 on *Jobs* discusses how vulnerability is related to unemployment and certain types of work, outlining how jobs that do the most for development can spur virtuous cycles.

The WDR 2014 will follow up and complement these publications by analyzing the process of risk management, discussing what it takes to build resilient development strategies.

19. Some important risks will not be addressed directly in the WDR 2014. For example, security threats at the national level stemming from external or internal sources such as war, civil war, and terrorism (the subject of WDR 2011) will not be covered. However, crime and violence at the local level will be considered.

### Analytical framework

#### The risk chain

20. The world is constantly changing and generating both shocks that occur suddenly (such as natural hazards and financial shocks) and trends that manifest gradually (such as demographic transitions and technological trends). These changes affect social and economic systems (such as households and communities) to a greater or lesser degree depending on their exposure. A system’s exposure is determined by the combination of its internal conditions and its external environment. The interaction between the shocks and trends stemming from the world and the system’s exposure can generate beneficial or harmful outcomes for its members. How the system fares in the case of a negative outcome determines whether it is resilient or not. Resilience is not an either-or proposition but a relative and gradual outcome. Crisis is an extreme manifestation of the lack of resilience, which occurs when the negative outcome is severe and generalized.

21. The interaction between shocks and trends, exposure, and outcomes can be represented by a risk chain (see figures 4 and 5).\(^4\) In this context, risk is the *possibility* of loss. Risk may be

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\(^4\) The concept of a risk chain is discussed and illustrated in Alwang, Siegel, and Jørgensen (2001). See also Barret (1999) and Heltberg, Siegel, and Jørgensen (2009).
imposed to the extent that it derives from outside forces. It can also be voluntary when it is taken on in the pursuit of opportunities. Most often, the imposed and voluntary aspects of risk are present at the same time. Risk management is the process that involves confronting risks, preparing for them (ex ante risk management), and coping with their effects (ex post risk management). Risk management is an important determinant of a system’s exposure and recovery capacity.

Table 1 Selected terms and definitions

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Risk</td>
<td>The possibility of loss. It can be imposed from outside or taken voluntarily in the pursuit of opportunities</td>
</tr>
<tr>
<td>Risk management</td>
<td>The process that involves confronting risks, preparing for them (ex ante risk management), and coping with their effects (ex post risk management)</td>
</tr>
<tr>
<td>Uncertainty</td>
<td>The situation of not knowing what the outcome will be</td>
</tr>
<tr>
<td>Exposure</td>
<td>The conditions that determine the possible losses and benefits from given shocks and trends</td>
</tr>
<tr>
<td>Resilience</td>
<td>The ability of a system to absorb, cope, and recover from a negative shock, while retaining or improving its functioning</td>
</tr>
<tr>
<td>Crisis</td>
<td>A situation in which the adverse outcomes from risk become so severe and generalized that the functioning of the system is threatened</td>
</tr>
<tr>
<td>Systemic risk</td>
<td>Risk that is common to most members of an entire system. Also referred to as covariate or aggregate risk</td>
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22. To make these concepts concrete, consider the following examples that use a household as the system of interest. A household is characterized by a set of internal conditions, including, the gender, age, health, and education of its members; its physical assets such as a house, land, and livestock; and its cultural values and preferences, such as tolerance for risk. The household is also characterized by its external environment, including the surrounding community, geography, available markets, and public goods. The combination of the household’s internal conditions and external environment determines its exposure to the shocks and trends occurring in the world.

23. As a first example, consider the case of an imposed risk derived from a negative shock (see figure 4). Suppose that the household lives in a seismic area and is periodically subject to earthquakes. They are likely to have a negative effect on the household but need not spell disaster, however. Their effect depends on the intrinsic intensity of the earthquake, the household’s exposure such as the quality of housing and infrastructure, and its coping capacity such as available disaster insurance. To a considerable extent, the household’s exposure depends on how it prepares for the possibility of earthquakes (ex ante risk management), and its recovery is determined by how it deploys its coping mechanisms when earthquakes happen (ex post risk management).
24. A second example is the case of a voluntary risk taken on in response to a positive trend (see figure 5). Consider a household that owns a small farm, which has traditionally cultivated a limited set of crops. Technological innovation and trade openness (the positive trends) have recently made available new seeds and inputs. The farmer has the option of taking advantage of these agricultural innovations, with the opportunity of increasing its yields and income but also with the risk of losing its investment and even falling into poverty. If the household decides to take on this risk, the outcome will partly depend on the farm’s external environment (such as public irrigation infrastructure), internal conditions (skill training and private irrigation infrastructure, for example), and additional shocks that may occur (such as rainfall intensity). The final outcome will also be determined by what happens after the harvest. If the yield is low, possibly because of little rainfall, the household may still be resilient, for example if it has taken out rainfall insurance. (Indeed, access to this type of insurance may encourage the household to pursue innovation, as shown in figure 3.) If the harvest is plentiful, the eventual success may depend on the elements of ex post risk management, such as storage and conservation facilities, access to agricultural markets, and reinvestment behavior.
Figure 5  Risk chain: a voluntary risk taken on in response to a positive trend

25. The risk chain is presented above as a linear sequence of actions and events for didactical purposes only. In reality, the relationships represented in the risk chain are intrinsically dynamic and complex, entailing a large array of feedback effects. One of them is the loop between outcomes and ex post risk management: if coping is poorly designed and executed, for example, a bad situation may turn into a crisis. A second feedback effect relates to the connection between outcomes and exposure. A crisis, for instance, may weaken a system’s internal conditions, making it more exposed to subsequent shocks and, therefore, more vulnerable. On the other hand, the system can learn from failures to improve its risk management strategy, reducing its exposure to future harmful shocks. A third feedback effect concerns the link between outcomes and changes in the world. Outcomes in a small system, such as a household, are unlikely to affect the world. However, when these outcomes are sufficiently correlated across systems, they may impact the world around them and drive the shocks and trends emanating from it.

26. The risk chain presented above is seen from the perspective of a single economic system. In reality, multiple systems coexist and interact with each other in an integrated environment. Together, they can form larger systems, as when households are grouped to form communities, and communities grouped to form nations. Together, they can create more complex systems, as when households are combined with enterprises and financial institutions to form a national economy. Together, they can affect each other, as when the financial sector becomes the source of shocks affecting the internal conditions and external environment of households, communities, and firms.
Basic risk management

27. Responsible and efficient risk management requires a systematic approach that combines preparing for (ex ante) and coping with (ex post) risk. Its goal is to mitigate the losses and improve the benefits that people may experience while conducting their lives and pursuing development opportunities. Whether undertaken at the individual or social level, risk management is a dynamic process: objectives are identified and updated periodically, risks and choices are assessed continuously, and risk-management strategy is monitored, evaluated, and reformed in an iterative process.

Figure 6 Ex ante and ex post risk management

28. The key components of risk management are presented in figure 6. Let us begin with ex ante risk management. Its first component involves acquiring relevant knowledge on all elements of the risk chain, including events and their likelihood. This process is difficult and arguably never-ending since some aspects of the risk chain are quite uncertain. The second component involves building protection by following decisions and actions designed to lower the probability and magnitude of a negative outcome and, potentially, to increase the probability and size of positive outcomes. Thus, protection includes, but is not limited to, risk prevention and reduction. The third component is obtaining insurance to transfer resources from good to bad times, whether by one’s own means (self-insurance) or by pooling risk with others (through

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5 The seminal paper in this field is Erhlich and Becker (1972). See also the extension in Muermann and Kunreuthe (2008) and the applications in Gill and Ila (2000), Holzmann and Jørgensen (2001), and Packard (2002).
market or informal networks). The three components of ex ante risk management can be potentially complemented and improved by the state and other social and economic systems, as discussed later.

29. Consider, for example, a family contemplating moving to a new, malaria-prone location, where the parents may be able to get better jobs. To shield the family from the risk of malaria, the parents could decline the new jobs and give up on the opportunity to improve household income. If they decide to undertake the opportunity and confront the malaria risk, the family may first learn about malaria and preventive measures (knowledge). They can take malaria pills and use mosquito nets (self-protection). They can join the local community in draining static water sources and spraying insecticides (community-based protection). They may also buy health insurance to cover treatment costs if a family member becomes infected (market insurance), increase family savings (self-insurance) and build social networks in the new location (informal insurance).

30. Let us now turn to ex post risk management, or coping. It involves the set of actions aimed to lessen the impact of negative outcomes, should they occur, and to recover from them. It may also include making the most of beneficial outcomes. The first element of ex post risk management consists of updating relevant knowledge by assessing the new situation. Building on this updated knowledge, the second element consists of implementing necessary and available responses to alleviate negative outcomes (or take advantage of positive ones). Ideally, these responses would have been considered and prepared under ex ante risk management. That implies employing the resources accumulated through self-insurance, making use of available informal and market insurance, and deploying the contingency measures considered under self-protection. If preparedness is weak, however, ex post risk management is left to deal with unexpected, new, and uncertain situations. Under those circumstances, coping often requires very costly measures.

31. Continuing with the example above, if some members of the household contract malaria, the family could first make use of its health insurance and draw on its savings to pay for malaria treatment. If available, the family may also tap on public hospitals or other government resources. If necessary, the family can seek to borrow money from friends in its new social network. If that were not enough, additional costly actions might be necessary. Children might be removed from school and nutrition cut down to cover the additional medical expenses. In general, the form and amount of coping depends on the size of the loss (for example, the intensity of the disease and whether those infected are income earners), ex ante risk management actions taken (savings, insurance, networks, nets, pills), and access to informal or government protection. The family would be considered resilient to the extent that its members are able to resume their essential activities without suffering substantial losses.
Box 2 Constraints to effective risk management

People encounter many constraints that, alone or combined, undermine their ability to manage risk responsibly and efficiently.

Some of the constraints are related to people’s internal conditions:

- **Lack of resources.** People have limited income, assets, and other resources to acquire the knowledge needed to assess the risk, self-protect, or obtain insurance against it. The poor are hence more vulnerable to potential negative outcomes and less able to invest in innovative high-risk-high-return activities.¹

- **Lack of information.** Even with resources, people may have limited access to information to identify, assess, and price risk to be able to make informed decisions. As a result, they may avoid taking risks that present development opportunities or may take risks that are insufficiently assessed and hedged.ii

- **Deep uncertainty.** Decision making is further complicated by uncertainty that may be so large that it is not possible to gauge the correct relationship between actions and their likely consequences or to assess the value of specific outcomes.iii

- **Cognitive failures.** Even in the absence of deep uncertainty or information gaps, people may not be able to transform information into knowledge. Cognitive failures limit their ability to process and apply the knowledge and to capture possible links between different risk sources and their cumulative effects. Recent evidence shows how schooling can improve decision making by enhancing cognitive functions.

- **Behavioral biases.** Even when people have the knowledge, they may be unable to turn it into action for effective risk management. They may either underestimate or overestimate the risk of certain events.iv Aversion to loss and social stigma attached to failure can lead to missed opportunities. Myopic behavior about distant risks may prevent governments and society from acting responsibly to protect the environment, passing the risk on to future generations. Cultural norms and biased risk perceptions may drive behavior that puts some people at risk (cultural bias against using contraceptives, for example), or that causes others to reject engaging in activities with higher risk but also higher potential returns.v

People may face additional constraints related to their external environment:

- **Externalities and moral hazard.** Risks undertaken by some people may impose losses on others. Firms perceived as too-important-to-fail impose negative externalities.vi Failure to internalize them (by requiring firms to hold higher capital, for example) creates incentives for excessive risk taking and makes risk management actions of the affected people insufficient. Positive externalities, such as knowledge spillovers, may reduce incentives to innovate, because innovators cannot take full advantage of their initiative.vii

- **Missing markets, instruments.** Markets in critical areas for risk management (credit, risk pooling, and insurance products) may be missing, not functioning properly because of inadequate financial infrastructure or high transaction costs, or are simply costly. Less than 3 percent of the population in low-income countries has access to health insurance, compared with 31 percent in upper-middle-income countries.viii

- **Public goods and institutions.** Public goods and services essential for risk management (stability, rule of law, basic infrastructure) may not be available. Managing natural and environmental risks is difficult in the absence of infrastructure, property rights for housing, or lack of enforcement of land use plans.ix

- **Exclusion.** Even if markets for risk management exist, some people may be excluded from them because of their gender, ethnicity, and political background. They may have limited access to formal and informal networks that offer insurance and protection. Gender discrimination is indeed a key obstacle to risk management, especially if other factors of exclusion are also present.x xi
The constraints

32. The risk-management framework presented above is a basic, ideal benchmark. In reality, people face large constraints that may prevent them from managing their risks responsibly and efficiently (see box 2 for a full discussion). Some of these constraints are related to people’s internal conditions. People may have limited income, assets, and resources with which to obtain knowledge, protection, and insurance. Even if they have the resources, they may lack information and the ability to turn it into knowledge (cognitive failure). And even if they have the knowledge, they may be unable to turn it into actions and behaviors that not only prepare them for risk but also encourage them to pursue new opportunities (behavioral failure).

33. Other constraints are related to people’s external environment. First, risks undertaken by some people may impose losses on others (negative externalities), encouraging undue risk taking by the former and making risk management insufficient for the latter. Second, public goods and services that are essential for risk management (such as economic and political stability, law and order, and basic infrastructure) may not be available. Third, markets in critical areas for risk management (credit, risk pooling, and insurance products) may be missing. And fourth, even if public goods and markets for risk management are present, some people may be excluded from them because of their gender, ethnicity, or political background.

Social and economic support systems

34. It is nearly impossible for people to overcome these constraints on their own and thus manage risks successfully. If this is true for idiosyncratic risks, it is even more so for systemic ones. The individual has limited influence over shocks that occur at an aggregate scale, the community, the nation, and the world (see figure 7). Her self-protection strategy, for instance, cannot include outright control of those shocks. Arguably, they are best handled by coordinated action at an aggregate scale. Key social and economic systems, including the state, can potentially support people’s risk management by, first, alleviating the vast array of constraints they may face, and, second, controlling aggregate or systemic shocks.

35. The WDR will argue that well-functioning social and economic systems can support people’s risk management in different yet complementary ways. Figure 8 provides a schematic presentation of the main support systems and some of its mechanisms.

- The household is the primary instance of support, using its pooled resources to care especially for its most vulnerable members—the young, the elderly, and the ill. Insofar as it refrains from gender, age, and other biases, it can use its diversity for equitable risk diversification. It can then be a source of protection while its members, particularly the young, make investments for their future.
The community can help its members deal with idiosyncratic risks through informal networks of insurance and protection. To the extent that the community can overcome collective action problems, it can also pool efforts and assets to support household and individuals as they confront common risks, such as those derived from natural hazards, economic shocks, and crime and violence.

**Figure 7 Individual and society: risk management is a shared responsibility**

- The enterprise sector—comprising formal and informal production units—can absorb and transform economic shocks, helping stabilize people’s income, employment, and consumption expenditures. It can do so to the degree that it features innovation, competition, and efficient reallocation of production factors. This way, it can directly alleviate people’s resource constraints and allow households and individuals to pursue their own risk management strategies.

- The financial system can provide households and individuals with financial risk-management tools and services. Some of them serve people’s demand for market insurance, such as health and life insurance and contingent credit lines. Others assist people’s protection by providing, for instance, student loans for human capital formation. These functions can be accomplished insofar as the financial system is not itself a source of instability or a mechanism for the propagation of systemic shocks.
The state can support people’s risk management in two dimensions. First, it has the scale and tools to manage systemic risks at the national level. Thus, for example, it can seek to ensure national defense and provide macroeconomic management. Second, the state can support the other social and economic systems by providing social protection (social insurance and assistance), public goods (infrastructure, law and order) and public policy (regulatory framework). These positive roles can be accomplished only to the extent that the state does not suffer from capacity constraints or falls prey to policy uncertainty, regulatory capture, corruption, or outright predatory behavior. Box 3 discusses in greater detail the role of the state in risk management and how it will be considered throughout the Report.

The international community can offer global expertise and knowledge, international policy coordination, and the pooling of national resources to alleviate crisis situations. This support is especially necessary when the national capacity to deal with extreme shocks and events is insufficient and when the risks confronted are of a global nature. The challenge for the international community is to find risk management cooperation that delivers assistance effectively to the people, avoids moral hazard, and holds governments and international organizations accountable.

None of these social and economic systems works perfectly. Alas, in many cases they hinder, rather than help, people’s risk management. They have the potential, however, to become...
effective support systems. By recognizing this potential, this WDR will aim to identify the main pitfalls and areas for improvement. The Report’s recommendations are based on such selective analysis.

**Box 3  Role of the state and its treatment in the Report**

The state is an essential part of the risk management process, supporting people at different layers of society. It has the scale and tools to manage risks at the national level and can help other social systems improve their performance by complementing their efforts and providing an enabling environment for their functions. It offers public goods (information, education, infrastructure), conducts public policy (macroeconomic management, regulation, rule of law), and offers social insurance and assistance.

A core role of the state is to address market failures. One type of market failure occurs when agents impose externalities on others. Public policy can discourage actions with negative externalities by making them more costly to undertake, while offering incentives for actions that have positive effects on others. The state can reduce the residual gaps in information and knowledge that hinder risk management ability. Indeed, information asymmetries can create adverse selection and result in a collapse of insurance markets, providing a rationale for the state to provide insurance (medical, unemployment). The lack of well-functioning and affordable insurance markets is of particular concern in developing countries, where the state could create the right conditions for their development. The state also has a unique role in providing a stable economic and political environment and in supporting those excluded from formal and informal networks because of gender or ethnicity. Appendix table 1 provides some examples of areas where the state can support the private systems.

While helping people manage risks, state intervention can also create drawbacks, highlighting the trade-off between market and government failures.

- **Political economy considerations.** The state may not undertake more aggressive prevention and preparation in part reflecting limited political returns to ex ante risk management. This may also be difficult to implement owing to political capture and opposition by powerful interest groups. Lobby groups may prevent innovation by unduly influencing regulation, thus making it difficult for competing technologies to reach the market.

- **Moral hazard.** Public risk management policies may also introduce incentives that encourage excessive risk taking. For instance, the expectation of post-disaster rescue may reduce efforts for prevention and mitigation, particularly where insurance is unavailable or expensive. Too-big-to-fail firms may take risks beyond their capacity to manage, expecting to be rescued if they are troubled.

- **Excessive regulation** to reduce risks may stifle innovation and push risks to less-regulated parts of the economy. Risk may remain in the system if tightly regulated and less regulated sectors remain connected, or if the less-regulated sectors become systemically important. Frequent changes in the regulatory framework can undermine production and investment and restrain lending to the private sector.

- **Capacity constraints and poor planning.** Lack of strong institutions and governance may limit the state’s capacity to play its supporting role efficiently and to undertake prevention and preparation.

Given its central role in managing risk at all levels of the support chain, from the individual to the national economy, public policy and the state will be present in all parts of the Report, as opposed to being featured in a single chapter. Key policies that the Report will discuss include social protection, infrastructure, security, labor, enterprise, and financial regulations, and macro-economic management. The state will also link with the international community through the latter’s provision of global expertise and international resources and tools to manage the state’s own risks.
Key questions

37. As noted, a potential value added from the holistic perspective of the Report is that novel synergies, linkages, and trade-offs can be identified and used to answer key questions regarding risk management for development. These questions can in turn guide the recommendations that the Report may provide. The following five questions will be presented at the beginning of the WDR and taken into account throughout the Report, serving as connecting threads and unifying targets of analysis:

- How can we move from ad hoc response to systematic risk management?
- How can risk management unleash opportunity?
- Who is empowered and who is responsible for risk management?
- Should the state “play in the field” or “keep the grass green”?
- How can risk management strategies account for information imperfection and deep uncertainty?

How can we move from ad hoc responses to systematic risk management?

38. An old proverb cautions that “an ounce of prevention is worth a pound of cure.” There is a lot of truth to this: interventions to prevent infectious disease and infant malnutrition have repeatedly been estimated to have very high returns. For example, a bundle of interventions designed to reduce malnutrition is estimated to have a benefit-cost ratio of 15 or better. The proverb also applies outside health. Various interventions to reduce disaster risk and put in place early warning systems are estimated to bring benefits many times the initial cost, yet spending on disaster response is far higher than spending on prevention. Failure to prevent and prepare has tragic and costly consequences—economic and financial crises, disasters, ruinous health shocks, social unrest—that often could have been avoided at moderate cost. In 2010, an earthquake in Haiti cost more than 220,000 lives, while one of much larger magnitude in Chile produced about 500 fatalities. Chile’s enforcement of building codes appears to account for much of the difference. In financial crises, ad hoc responses have become the norm, with countries using arbitrary and sometimes extralegal measures to bail out struggling banks. Given that banking and macroeconomic crises occur with some frequency, why have not more countries set up contingency plans and crisis-management frameworks?

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7 Kunreuther and Michel-Kerjan 2012.
39. Granted, progress has been made toward better prevention and preparation, thereby addressing the causes of risk and vulnerability rather than fighting the consequences. Repeated cycles of high inflation during the 1970s and 1980s taught many middle-income countries to develop sound fiscal and monetary policy frameworks; inflation rates are now lower and more stable. Some low-income countries and donors have moved to complement disaster relief with measures to strengthen resilience through support for food production, national social protection systems with capability to respond to shocks, and disaster risk reduction. Growing numbers of children are immunized against infectious diseases (figure 9). And households in developing countries increasingly buy old-age, health, and agricultural insurance.

**Figure 9 Immunization rates have increased in all regions, but low-income countries still have a long way to go**

Source: World Development Indicators 2012, Table 2.18.
Note: Measles immunization rate (% of children aged 12-23 months), by region (population weighted).

40. Yet many developing countries are not moving very aggressively toward systematic prevention and preparation. Why is that so? Is it lack of knowledge, lack of resources, lack of willingness, or perhaps inability to translate intention into action? Those who argue that better knowledge boosts prevention and preparedness cite cognitive failures: people often underestimate the probability of relatively common risks and therefore fail to act in time. People also may not know how to protect themselves and may not even know what to prepare for. A strong case can be made, however, that a key constraint for better risk management is lack of

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8 World Bank 2012b, c.
resources. The least developed countries are after all where immunization rates tend to be the lowest (see figure 9). The poor are not well served by financial products, which often fail to meet their cash flow needs.\textsuperscript{9} In addition, the everyday struggle to eke out a living can make planning ahead hard for the poor.\textsuperscript{10} However, lack of willingness and incentives to prevent and prepare also play a role. Avoiding a risk has no tangible financial or political return, so how do decision makers justify expenses on insurance and preparedness to their voters and shareholders when the prepared-for events do not occur? Finally, people do not always act on their intentions. Myopic behavior means that many people put off buying insurance and saving for old age; another form of myopia occurs when decision making fails to consider risks to future generations, as is evident in the difficulty in reducing emissions of the greenhouse gases that cause climate change.

41. How can the constraints to systematic risk management be countered? Can households and communities be induced to prevent and prepare for common risks? How can innovation and enterprise sector flexibility be best balanced with worker protections? Can financial institutions see profitable market opportunities in offering banking and insurance to the poor? Can incentives for political leaders be tilted more toward broad prevention? Should protection be made universal, for example by mandating certain protective measures or outlawing risky products and behaviors? Or should choice be preserved while expanding access to risk management instruments so that agents can purchase insurance or invest in protective measures based on their needs and preferences? These are some of the questions this Report will pursue.

\textbf{How can risk management unleash opportunity?}

42. For poor households, risk is often decoupled from opportunity precisely because their exposure to risk and their limited capacity to cope prevent them from pursuing opportunities, both in the short and the long term. For example, using a bank account, and therefore benefiting potentially from access to credit and other financial products, can be too costly if people have few savings that they can use to manage daily risks. In Kenya, only 18 percent of people who were offered a savings account with no setup cost (but modest transaction fees) used the account regularly. This suggests that transaction fees limit the ability to withdraw small sums to deal with emergencies, which in turn reduces the incentives to use financial services more broadly.\textsuperscript{11}

43. Moreover, high exposure to risk of income loss can push people to forgo investment in future opportunities. For example, in Cote d’Ivoire, parents had to pull their children out of school following a drought, compromising the children’s potential for income generation as adults.\textsuperscript{12} The impact of such shocks can even transcend generations when the nutrition of infants is affected, which limits their cognitive development and productivity as adults.\textsuperscript{13} For people

\textsuperscript{9} Collins and others 2009.
\textsuperscript{10} Banerjee and Duflo 2011.
\textsuperscript{11} Dupas and others 2012.
\textsuperscript{12} Jensen 2000.
\textsuperscript{13} See the evidence provided in Friedman and Sturdy (2011).
with no margin for error, pursuing opportunity can be unaffordable. At the macroeconomic level, inability to manage risk can also have important consequences for people. Had Nigeria reduced volatility of real effective exchange rates and public investment by about one-third over 1980–94, it could have reduced poverty by almost 10 additional percentage points.  

44. There are several channels through which better risk management can improve access to opportunity. Knowledge helps people take preventive actions (like hand-washing or being vaccinated) or make specific investments in human capital (like education). Providing insurance or cash grants help in making more profitable production choices. For example, insurance enabled farmers in Ghana to devote more resources to production. Diversification from farm into nonfarm activities can protect households from experiencing large losses from weather shocks, while providing them with higher incomes, as Nicaraguan farmers experienced after receiving grants to set up nonfarm businesses. In Bangladesh, farmers who received a small incentive to migrate during the lean season were more likely not only to migrate but to increase their earnings and help to sustain consumption of their families in the village. Remittances from migrants to their families contribute in part to greater investment in education of the children, as shown in figure 10.

**Figure 10  Remittances can help increase human capital investment**

School enrollment rates (12-17 year-olds)
Households receiving remittances vs. others

![Graph showing differences in school enrollment rates among households receiving remittances compared to others in Nicaragua, Guatemala, Honduras, and El Salvador.](source)

*Source: Fajnzylber and Lopez 2008.*

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15 Jensen 2010.
16 Karlan and others 2012.
17 Macours, Premand and Vakis 2012.
18 Bryan, Chowdhury, and Mobarak 2012.
45. Risk management actions conducted at more aggregate levels also unleash opportunity. Through more and better employment, a vibrant enterprise sector can provide people with more resources to invest in insurance, assets, and human capital. At the national level, a strong macroeconomic stance can give the government sufficient scope to provide public goods at the time most needed. For example, China’s large foreign exchange reserves and low level of debt enabled the government to respond effectively to the Asian financial crisis of 1997–98 by implementing a stimulus program that kept the economy on a path of strong growth.

Who is empowered and who is responsible for risk management?

46. Who is responsible for managing risk? Sometimes those given the responsibility have the least capacity. People may be capable of dealing with certain small risks. But they are inherently ill equipped to confront large shocks (such as a household head falling ill), covariate shocks (natural hazard), or multiple shocks occurring either simultaneously or sequentially (a drought followed by a food price shock and food insecurity). To manage the risks triggered by large, covariate, simultaneous, or sequential shocks, people need support from other systems.

47. How, then, should the responsibility for risk management be shared? If the first reaction to shared responsibility is to rely heavily on government support, additional resources will need to be mobilized, possibly through increased taxes. Moreover, taking responsibility away from those who are affected by risk can distort incentives. Other approaches to sharing responsibility, involving community or the enterprise and financial sectors, could be a better alternative in many cases. Shared responsibility thus requires coordination between those affected by risks and those empowered to manage them. This could be achieved through efficient market mechanisms or regulation.

48. Do markets and the society adequately value responsibility and thus encourage individual effort? A well-designed health insurance plan, for example, could reward and encourage healthy lifestyles. Or the unemployment insurance premium, paid by individuals, can be adjusted to reward and encourage more intense job search. Markets and societies that fail to monitor and reward individual risk management efforts may generate moral hazard. If private and social insurance does not respond to self-protection, does low self-protection result?

49. Are people increasingly in need of support from other socioeconomic systems, including the state, because of the increasing proportion of systemic risk in the totality of risks they face? Systemic risk could be increasing over time (figure 11), for instance, because of greater

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19 See, for instance Atkin (2009).
20 Kochar 1995; Bhattacharya and Barrett 2010; Baulch 2011; Heltberg and others 2012, respectively.
21 For instance, some U.S. homeowners do not buy disaster insurance knowing they can count on government aid if their home is destroyed. “Natural Disasters: Counting the Cost of Calamities.” The Economist, January 14, 2012.
22 Auf der Heide 1989.
interconnectedness (financial globalization), clustering (urbanization), and growing overall risk exposure (wealth and population growth). If that is the case, systemic risk may need to be managed at more aggregate levels (such as the state or the international community).

**Figure 11 Increasing occurrence of banking crises, natural disasters, and homicides**

*Sources: Laeven & Valencia 2012; CRED EM-DAT the International Disaster database; UNODC.*

*Note: The bars represent the number of banking crises that meet one of the following criteria: financial distress in the banking system (significant bank runs, losses in the banking system, and/or bank liquidations); significant banking policy interventions in the banking system (extensive liquidity support of at least 5 percent of deposits and liabilities to nonresidents; bank restructuring of gross costs at least 3 percent of GDP; significant bank nationalizations). The dashed line for natural disasters represents the number of disaster events that fulfill at least one of the following criteria: 100 or more people affected; 10 or more people killed; declaration of a state of emergency, call for international assistance.*

50. Can individual risk management contribute to systemic risk creation? Systemic risk is costly to the society. In many cases, individuals who take higher risk ex ante bear only a small part of the incremental ex post costs resulting from their decision. Similarly, people and firms do not have an incentive to individually respond to long-term, systemic risks that have limited short-term consequences, such as carbon emissions. Negative externalities need to be internalized and the positive ones rewarded through appropriately designed public policy.

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24 Also large idiosyncratic risk can have a more severe impact when concentration and the risk exposure value grow.
Should the state “play in the field” or “keep the grass green”? 

51. The state is a key player in supporting people’s risk management as well as that of their different support systems. In doing so, the state may either provide an enabling environment for efficient decision making or intervene directly. How can the state better provide an enabling environment that enhances risk management by individuals and their systems? At the national level, the state is responsible for ensuring peace and institution building through security and defense. It also provides a stable economic environment through macroeconomic management. It can improve the quality of decision making and policy making by ensuring a more adequate flow of information.\(^\text{27}\) It can promote private entrepreneurship by designing flexible product and labor market regulations.\(^\text{28}\) It can foster the development and stability of the financial system by setting up regulations that promote accurate information disclosure, ensure efficient entry and exit, and enhance incentives for private agents to exert corporate control.\(^\text{29}\) Overall, the state can “keep the grass green” for the people and its support systems by, among other things, ensuring macroeconomic stability, the free flow of information, and sound regulatory frameworks.

**Figure 12 Health expenditure by South Korean households during the Asian Crisis**

Private health expenditures by households dropped significantly after the crisis

\[\text{Source: Yang, Prescott, and Bae 2001.}\]
\[\text{Note: In thousands of Won per month at 1995 prices. The medical CPI (1995=100) is used to convert actual expenditure into real values. The financial crisis in Korea began on August 1997.}\]

\(^{27}\) Islam 2003.  
\(^{28}\) Loayza, Oviedo, and Servén 2010a, b.  
\(^{29}\) Barth, Caprio Jr., and Levine 2004.
52. Should the state intervene directly? If so, in what circumstances? Direct public interventions are usually advocated to correct market failures or improve equity. For instance, people tend to cut their health expenditures during crises and when they become unemployed. That was the case in the Republic of Korea during the 1997–98 Asian financial crises, until the government increased spending on health and welfare in 1998 (by 20 percent in social welfare and by 5 percent in public health and insurance). It also facilitated affordable care through its health infrastructure. The number of patients attending public health centers for treatment increased by almost 40 percent in during the crisis.30

53. Can direct state intervention become a source of risk? If intervention is poorly designed, it can lead to moral hazard problems and excessive risk taking. For example, some governments offer credit guarantees to provide access to bank loans to underserved segments of the society. As guarantor, the state should accept sufficient risk to encourage bank participation in these schemes. However, excessive coverage by the state may both raise borrowers’ incentives to default and discourage proper credit assessment and monitoring by banks.31 How can the state reduce the risks associated with these interventions?

54. As we suggested above, risk management policies may have unintended consequences—especially if the state does not have a comprehensive approach to address risks. A recent example comes from the Euro Area countries. Failure of policy makers to account for all the links between real, fiscal, and financial sectors and to take a holistic approach have led to policies that partially address the crises while creating or exacerbating other risks. For instance, further fiscal austerity measures may impair growth prospects. Weaker growth in turn reduces the state’s ability to pay off its debt, thus further limiting fiscal space and putting even more pressure on already stressed government balance sheets if further bailouts are needed.32

*How can risk management strategies account for information imperfection and deep uncertainty?*

55. As our framework illustrates, knowledge is one of the pillars of risk management. But most decisions have to be made with imperfect information, a problem confronting decision makers at all levels, from individuals deciding on health insurance or migration, to government officials designing infrastructure or monetary policy.

56. How is it possible to improve the knowledge on which actual decisions are based? “Uncertainty” is a relative concept: what is known by a group of agents—say, medical experts—is unknown to others—say, households potentially affected by an illness. Sometimes, households and businesses do not spend the time and money necessary to collect information, or they

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30 Yang, Prescott and Bae 2001.
31 Levitsky 1997; Beck, Klapper, and Mendoza 2010.
32 Shambaugh 2012.
overestimate their knowledge. Lack of knowledge, say, on how illnesses are transmitted, can lead to inappropriate—or counterproductive—protection measures. Information asymmetries between innovators and investors also explain underinvestment in innovative firms. In such a context, which policies are best able to help decision makers value and access the information they actually need?

57. How can one make decisions when the information simply does not exist? Some decisions involve “deep uncertainty,” that is, cases in which even experts cannot agree on the models that relate key forces that shape the future, the probability distributions of key variables and parameters, or the value of alternative outcomes (because, for example, they hold different views on the value of an ecosystem). How, for instance, should water infrastructure in Burkina Faso be managed when, in the presence of climate change, one model projects a 20 percent increase in precipitation and another a 20 percent decrease in precipitation (figure 13)? How can expertise for public policies be organized in these uncertain domains in a way that is consensual and not vulnerable to rent seeking and capture?

Figure 13  Change in annual rainfall in 2080–2100 compared with 1980–2000 in Africa according to two different climate models

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Figure 13  Change in annual rainfall in 2080–2100 compared with 1980–2000 in Africa according to two different climate models

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Source: Intergovernmental Panel on Climate Change 2007.
Note: The panels show the change in rainfall projected by the Community Climate System Model (CCSM) (left) and the Geophysical Fluid Dynamics Laboratory (GFDL) model (right), using the same greenhouse gas emissions scenario SRES-A1B.

34 Tavoosi and others 2004.
36 Hallegatte and others 2012.
58. New decision-making methodologies—often based on scenario analysis and vulnerability identification—have been developed to cope with this situation. They can help build more robust projects and create consensus among stakeholders with different values. They can capture the “low-probability, high-impact” scenarios, which are difficult to account for in classical cost-benefit analysis.\(^{37}\) How will these methods affect risk management approaches and the balance between protection and insurance? These methods favor solutions that are adaptive, flexible, and reversible. For instance, helping West African farmers manage drought through an insurance scheme that can be adjusted annually is less vulnerable to climate change than building a complex irrigation infrastructure.

59. How can these new developments be translated into operational tools that can be applied by all actors, from households and firms to governments and international organizations? A growing set of case studies and the analysis of advisory bodies are helping determine what works and what does not. The WDR team will look closely at these studies as it considers recommendations for firms, local authorities, and governments.

**Outline**

60. The WDR 2014 will consist of two broad sections. The first will develop the analytical framework for risk management and then present a synthesis of the main risks people face and their development consequences. The second section will analyze the contribution of each social and economic support system, including the role of the state. The WDR 2014 will also include an introductory chapter, where the main motivation, objectives, and scope of the Report will be presented; and a closing chapter, where the most important conclusions and recommendations for various development actors will be synthesized and discussed.

61. The analytical framework is discussed above; the following outlines the remaining components of the WDR 2014.\(^{38}\)

*Risks to people: Facts and development consequences*

62. Which risks should the WDR 2014 focus on? This chapter lays out four broad areas in which losses can take place: health, wealth, income, and safety. These categories do not encompass all possible risks. Nor does this categorization imply that a shock’s impacts are confined to a single category. Rather, the categories capture those aspects of well-being that people value the most. They are areas in which risk is nontrivial for large groups of people. And they all have demonstrated importance for development.

63. Within these broad categories, risks are diverse in origin, characteristics, and outcomes. Some risks are more important than others. But this importance varies over time and across

\(^{37}\) Weitzman 2009.

\(^{38}\) Extended chapter outlines, with additional information, arguments, and references, are available upon request.
geographies. Indeed, survey respondents in different countries experience different shocks, though health shocks, natural hazards, crime, and price shocks are more common (table 2). This diversity in origin, characteristics, and outcomes makes a typology of risks useful. A typology will help illustrate the critical dimensions to consider when working to improve risk management. The chapter will distinguish the origins of risk (Is the risk voluntary or imposed?) and the characteristics of shocks (Are the shocks idiosyncratic or covariate? Slow or rapid onset? Rare or common?). It will differentiate between the different outcomes associated with risks (Are the outcomes temporary or permanent? Localized or widespread?). For instance, informal networks can help a household facing temporary income loss, but they are ineffective when drought affects an entire community. Reducing gender-based violence may require interventions at the household and community levels to change norms and behaviors. But this strategy would be less useful for confronting political violence. Long-term, preventive measures can combat noncommunicable diseases but are powerless against the onset of pandemics. Microcredit can stimulate investment but is often inaccessible during a health crisis.

<table>
<thead>
<tr>
<th>% reporting type of shock</th>
<th>COUNTRY</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Malawi</td>
</tr>
<tr>
<td></td>
<td>Urban</td>
</tr>
<tr>
<td>Household Issues (legal, familial)</td>
<td>0.8</td>
</tr>
<tr>
<td>Prices (inputs, outputs, food)</td>
<td>21.3</td>
</tr>
<tr>
<td>Hazards (natural, drought, flood)</td>
<td>52.6</td>
</tr>
<tr>
<td>Employment (jobs, wages)</td>
<td>6.9</td>
</tr>
<tr>
<td>Assets (house, land, livestock)</td>
<td>0.3</td>
</tr>
<tr>
<td>Health (death, illness)</td>
<td>7.7</td>
</tr>
<tr>
<td>Crime &amp; Safety (theft, violence)</td>
<td>8.6</td>
</tr>
</tbody>
</table>


*Note: Recall period was 12 months for the Malawi and Uganda surveys, and was 5 years for the Nigeria and Tanzania surveys.*

64. To make the typology relevant, the chapter will identify key risks and important transmission channels. It will investigate how these vary across geographies using various metrics, including cost, lives lost, and insured and uninsured damages. Particular attention will be paid to how risks and their impacts vary by gender. The chapter will employ household surveys and statistics to document these risks and shocks. And it will provide examples of how innovative methods for collecting real-time data from social media and other sources can improve risk management.

65. The impacts of mismanaged risk are not limited to direct losses from shocks. They include the consequences of drastic coping responses, such as cutting back food consumption or taking up hazardous work; the opportunity costs of actions taken to protect against risk, such as
holding liquid assets; and missed opportunities, such as planting low-risk, low-return crops, withholding investments in risky locations, and limiting travel for fear of crime. These impacts are experienced in the short run but can also be felt in the long run. At times they are permanent. A growing body of research documents the role that shocks—above all, health and weather shocks and economic crises—play in pushing households below the poverty line and keeping them there.\textsuperscript{39} Infant malnutrition is a frequent transmission channel for the enduring consequences of negative shocks. Impacts affect members of the household differently, particularly across genders. Young girls, more than young boys, might be held back from school after a shock to household income. Young men are exposed to general crime and violence and women to gender-based violence. Mismanaged risk can also have impacts beyond the household, for example by depleting social capital.\textsuperscript{40}

66. The impacts of risk and risk taking affect people differently. Wealthier households or households that have access to risk management instruments (whether private, community-based, or public) are typically able to bear more “voluntary” risk—and can thus expect higher returns.\textsuperscript{41} Poor people, in contrast, often pursue low-risk, low-return livelihoods because they have limited access to risk management tools. Worse, they are also exposed to many “imposed” risks and have little room to cope with losses (partly explaining the apparent risk aversion observed among the poor). Under these circumstances, wealth accumulation and escape from poverty become extremely challenging.\textsuperscript{42} Other factors are also at play. Gender, for instance, is a key factor in determining the level of exposure to “imposed” risks and how households cope with them. Thus, access to opportunity frequently varies with gender. The interactions among risks, risk-taking attitudes, and exposure to “imposed” risks are critical to understanding the relationship between risk and opportunity. The chapter will describe the risks that people value most and examine differences by gender, income, geography, and other characteristics.

The household

67. This chapter documents the actions that individuals within a household take to manage risks, and the constraints they face in this process.\textsuperscript{43} Following the risk management principles of knowledge, insurance, and protection, the chapter takes stock of the different strategies that households of different countries and income levels adopt to manage risks. For example, households can insure themselves by keeping savings in the bank, by purchasing insurance products, or by accumulating reserves including food stocks, jewelry, and cash.\textsuperscript{44} They can

\begin{thebibliography}{99}
\bibitem{Baulch} Baulch (2011) offers a useful survey.
\bibitem{Heltberg} Heltberg, Hossain, and Reva 2012.
\bibitem{Banerjee} Banerjee and Duflo 2011; Rosenzweig and Binswanger 1993; Carter and others 2007; Dercon 2008; Jalan and Ravallion 1999; Lokshin and Ravallion 2004.
\bibitem{Baulch1} Baulch 2011; Dercon 2008; Jalan and Ravallion 1999; Lokshin and Ravallion 2004.
\bibitem{Aryeetey} We define the household as a group of people (usually) linked by family ties who share their endowments and their income with the common objective of improving their current and future livelihoods.
\bibitem{Aryeetey1} Aryeetey and Udry 2000.
\end{thebibliography}
protect themselves by diversifying their investments, economic activities, or the crops they grow. Moreover, by investing in education and better health, or migrating to a location where they have access to better jobs, they reduce their future exposure to risks while taking advantage of new opportunities.

68. Household decisions regarding risk management do not necessarily apply to all household members in the same way. In fact, substantial evidence documents important differences in intrahousehold risk allocation that leave some members (particularly women and girls) more exposed to risks. For example, the chapter looks at how diversification of economic activities and farming often leaves women to do mostly unpaid work, which also reduces their bargaining power in the household. The chapter also discusses how underinvestment in girls’ human capital hurts their risk-management ability as adults.

69. A host of constraints make managing risks difficult, especially if the household is poor. Limited resources to invest in insurance and protection is the most important constraint. Other constraints include insufficient information, lack of cognitive tools to use the available information, or behavioral failures, all of which exacerbate exposure to risks. Thus, when shocks take place, households try to mitigate losses by resorting to coping measures, in some cases as drastic as reducing calorie intake or pulling children out of school and sending them to work. The chapter examines how ex ante risk management and coping mechanisms vary in different environments, comparing, for example, greater and lesser access to financial markets, infrastructure, and property rights. In particular, the chapter considers how risk management improves as women become more empowered to manage risks (for example, through property rights).

70. The chapter then discusses how the state can improve household risk management through a number of interventions, the most important being in the areas of knowledge (through education), social insurance, and social assistance. The chapter reviews the evolution of social insurance provision (specifically for health, old-age, and unemployment) and social assistance programs in low- and middle-income countries. It looks at spending and coverage of these programs as well as how successful they have been in protecting consumption and human capital in the presence of negative shocks. The chapter also documents how the state can improve household knowledge about risks and increase its incentives for undertaking prevention (for example, in health).

45 Dercon 1996.
46 Dercon and Krishnan 2000.
49 Access to financial services will be discussed in depth in the chapter on the financial system.
71. Regarding social assistance programs, the chapter discusses how the rapid increase in the number of early childhood development programs, conditional cash transfers, and others subsidies has improved risk management by raising investment in human capital and physical assets. In addition, programs like workfare or direct transfers provide much needed support to poor households after they have been hit with a negative shock, and also may act as an insurance of sorts, allowing people to take on economic activities with potentially higher payoffs.

72. Finally, the chapter discusses the failures of public policy in supporting household risk management. For example, the chapter examines how the connection between contributory social insurance systems and formal jobs is leading countries to implement additional noncontributory programs to insure the uninsured, thus potentially introducing distortions in the labor market. Another important point of discussion relates to how demand for public programs and services is affected by cognitive and behavioral failures, as well as by poor service delivery, which can limit the effectiveness of these programs in improving risk management. The chapter also addresses the challenges of social assistance programs to protect the transient poor as well as those close to poverty, an important aspect to consider if such programs are used for crisis response. Finally, the chapter highlights the efforts that countries are undertaking to improve public policy, for instance in adopting technological and operational innovations that make these risk-management support programs more efficient and more client-focused.

The community

73. In developed countries, most people take for granted their access to an array of formal instruments to help them stabilize consumption in face of shocks and lifetime events—social insurance, pension plans, market insurance, savings accounts, credit lines, and safety net programs. Not so in developing countries, where the majority of the population can rely on none of these instruments. Instead, transfers from family and the community often help protect against deprivation and sharp declines in consumption, education, health care, and productive assets after shocks. Such pooling of risk often occurs within networks defined by community and kinship ties. This chapter will explore the role of communities in risk management and will consider how the public sector can support and fill gaps in community risk management.

50 The chapter also discusses the impact associated to targeting women in some of these programs. See Grosh and others (2008) and references therein.
51 This has been documented for some workfare programs, such as India’s National Rural Employment Guarantee Act (NREGA). See Ravallion (2008), Ravi and Engler (2009), and Imbert and Papp (2012).
52 Such as Colombia’s Regimen Subsidiado, Mexico’s Seguro Popular, or India’s Rashtriya Swasthya Bima Yojana (RSBY) for health, and South Africa’s Older Persons Grant or Bolivia’s Renta Dignidad for old-age. For Mexico, see Antón and others (2012).
53 Patt and others 2010; Cai and others 2010; Dupas and others 2012.
54 Jalan and Ravallion 1998; Ravallion and others 2007.
55 Bhattamishra and Barrett 2010; Narayan and others 2000, ch. 4; Scott 1976.
74. Several trends are amplifying communities’ exposure to risk and the impacts of shocks. Climate change is increasing the frequency and severity of droughts, floods and other extreme weather events and disaster risk.\(^{56}\) Urbanization, population growth, and land scarcity push ever more people to live in neighborhoods where they are exposed to risks from crime, pollution, and land degradation.\(^{57}\) Some 1.5 billion people live in fragile or conflict-affected states or in countries with high levels of criminal violence.\(^{58}\)

75. Communities confront both idiosyncratic and covariate risks. Many types of crime, violence, and disasters are covariate at the level of communities and can even transform the community’s structures and undermine its cohesion. Some communities also help members pursue opportunities, through savings and credit groups, for example, that provide financing for investment in agriculture or small business. Community risk management operates through the spreading of knowledge, informal insurance (reciprocal networks for risk pooling), community-based protection (collective action against crime, violence, and disaster), and support for coping (transfers without an expectation of reciprocity).

76. Yet community risk management is far from adequate or equitable. First, informal insurance mechanisms can be overwhelmed by large covariate shocks such as disasters or the impacts of the global food, fuel, and financial crisis—events in which most community members see their real incomes decline and have little left to share. Most studies reject the hypothesis that risk is shared fully among community members.\(^{59}\) Women and girls can be particularly vulnerable to economic and climatic shocks, often bearing the brunt of the effects and carrying the largest burdens of coping.\(^{60}\) And community-sharing norms sometimes exclude the poorest.\(^{61}\) Second, not all communities have sufficient trust and cohesion to mount collective action responses to risk. Most observed community responses are triggered by specific shocks; less attention is typically paid to prevention, preparedness, and long-term trends such as gradual climate change. Finally, collective action can be captured by elite groups, which either exclude women, the poor, and religious or ethnic minorities or allow them only nominal participation.\(^{62}\)

77. Governments and other external actors have important roles in supporting and augmenting community solutions, but they too are sometimes more reactive (ex post) than preventive (ex ante). Interventions can focus on protection (rule of law, sanitation, infrastructure, early warning systems); insurance (savings groups, insurance for weather shocks); knowledge (early warning systems); and assisted coping (post-disaster relief). In practice, however,

\(^{56}\) Field and others 2011.
\(^{57}\) Narayan and others 2000, ch. 4.
\(^{58}\) World Bank 2010.
\(^{59}\) Coate and Ravallion 1993; Ravallion and Chaudhury 1997.
\(^{60}\) Baird, Friedman, and Schady 2011; Heltberg, Hossain, and Reva 2012; van de Walle 2011.
\(^{61}\) Vanderpuye-Orgle and Barrett 2009.
interventions do not always deliver the intended results—infrastructure may not be maintained, project design may fail to consider community preferences, or knowledge may not be shared. Many interventions are reactive because of incentives stemming from the political economy: financing for humanitarian response tends to materialize once a disaster makes headlines internationally. Beforehand, however, donors and politicians find it less attractive to fund preparedness for disasters that may not happen. Moreover, current funding mechanisms can trigger moral hazard. Nicaragua at one point declined a weather risk insurance program citing reliable availability of post-disaster relief funding. Thus, designing incentives that reward prevention and preparedness, and not just relief, is an important challenge. This chapter will draw on qualitative and quantitative evidence to shed light on the strengths and weaknesses of community risk management and public action to support it, focusing in particular on crime, violence, disasters, and economic crises.

The enterprise sector

78. The enterprise sector, consisting of formal and informal enterprises, can help people manage their risks through four basic channels. First, it can help absorb shocks and provide a steadier stream of income and employment by sharing risks among workers and owners and by reallocating underemployed labor and capital to more productive uses. Second, by raising productivity through specialization, economies of scale, and innovation, the enterprise sector can provide higher income and employment, thus alleviating the resource constraints that limit people’s own risk management possibilities. Third, by consistently providing a variety of close substitutes and limiting the negative effects of supply and demand shocks, the enterprise sector can lower the volatility of consumption expenditures and thus stabilize people’s purchasing power. Fourth, the enterprise sector can also help individuals manage health risks and safety risks directly. Through employment, it can provide workers with tangible benefits, such as health insurance and safe work environment, and intangible benefits, such as job satisfaction and a sense of security.

79. An enterprise sector that does not function well can increase the risks that households face and create new sources of risks. A stagnant enterprise sector may generate income-related risks (through loss of jobs and loss of capital returns) as well as asset-related risks (through loss of investments). If the enterprise sector is inflexible in reallocating resources, a worker may remain unemployed or settle for a job with a lower level of remuneration than her previous job; an investor may become stuck in suboptimal investment opportunities; and a consumer may face volatile changes in the costs of living. A malfunctioning enterprise sector can generate significant risks to households beyond the income dimension, including human rights abuses and industrial disasters.

63 North 1991.
64 Coase 1937.
80. The enterprise sector has its own risks to manage. In an a world that is increasingly interconnected through a global supply chain, enterprises face unexpected events such as global economic crises and natural disasters, as well as gradual changes such as technological and demand shocks. Innovation and resource (re)allocation help the enterprise sector to self-protect and to capture opportunity by adapting to changes. However, in the short run, some measures that the enterprise sector takes to manage risks, such as establishing flexible labor contracts and the job churning in the processes of firm turnover, can result in higher risks to workers. Over the long run, a dynamic enterprise sector can become more productive and resilient, and this benefits both owners and workers: the Schumpeterian process of “creative destruction” accounts for more than 50 percent of productivity growth, and this, in turn, explains two-thirds of the cross-country differences in per capita income.

Figure 14 Heavy product market regulations raise macroeconomic volatility

81. Government interventions that “keep the grass green” through the provision of public goods are generally considered to help the performance of the enterprise sector. But government interventions that “play in the field” (including by supporting selected enterprises or industries) is often an issue of debate. One challenge for policy making is to balance the needs of providing the enterprise sector with flexibility to respond to shocks with the needs of protecting people, in particular those most vulnerable including women and youth, from excessive exposure to the

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65 Almeida and Fernandes 2008.
66 Caballero 2008; Schumpeter 1942; Cowen 2002.
associated risks.\textsuperscript{68} Although regulation can help correct externalities, informational asymmetries, or coordination failures, excessive rigidity is often costly because it lowers market efficiency and competition.\textsuperscript{69} Empirical evidence suggests that increasing product market regulations tends to be associated with higher volatility (figure 14, left panel).\textsuperscript{70} Imposing distortions to protect incumbent firms will result in not only larger output loss but also slower recoveries after a negative shock (figure 14, right panel).\textsuperscript{71}

82. This chapter will first discuss the channels through which the enterprise sector can operate to support household and individual risk management and the risks it could create if it malfunctions. It then will discuss how enterprises can manage risks and how innovation and creative destruction can help absorb technological and demand shocks, thus ensuring the proper functioning of support for household risk management in the long run. Finally, the chapter will discuss how the government can play a role in enterprise sector performance through the business environment and direct interventions and the trade-offs between enhancing microeconomic efficiency and improving employment protection.

\textit{The financial system}

83. The financial system can help people manage risk, first, by providing them with financial risk-management tools and, second, by avoiding propagation of negative shocks to people.\textsuperscript{72} On the first aspect, the financial system can offer people market insurance (such as disaster or life insurance), self-insurance (saving deposits), and self-protection (education loans) services. Access to such services helps people conduct secure transactions and remit funds, diversify personal wealth, stabilize consumption in the face of income fluctuations, and cope with health shocks. People, including the poor, need a range of financial services, rather than just credit, to be able to pursue opportunity and improve their income over time and to be more resilient to shocks at each level of income.\textsuperscript{73}

84. Low financial literacy and trust in the financial system, poor access to financial services, and a possible supply-demand mismatch make greater financial inclusion, especially of the more vulnerable, a challenge (figure 15, left panel).\textsuperscript{74} For instance, across income strata within developing countries, women are 6–14 percentage points less likely than men to accumulate

\textsuperscript{68} United Nations 2011.
\textsuperscript{69} Dam 2006.
\textsuperscript{70} Loayza, Oviedo, and Servén 2010a.
\textsuperscript{71} Bergoeing, Loayza, and Repetto 2004.
\textsuperscript{72} In drafting this section, the 2014 WDR team intends to build on regional reports (including de la Torre and others 2012), and coordinate with the 2014 GFDR team, which is preparing a parallel report on financial inclusion.
\textsuperscript{73} Demirgüç-Kunt, Beck, and Honohan 2008.
\textsuperscript{74} Beck and de la Torre 2007; Lin and others 2009.
formal savings. The financial system itself can respond to the lack of financial literacy and inclusion and deal with the limited range of financial services available to people. It does so to some extent; however, market failures tend to make these responses insufficient.

85. Now consider the second aspect of the financial system’s support function. The financial system takes on, and partly retains, risk from the rest of the economy by offering various services to people and the socioeconomic systems that support their risk management. If the financial system fails to keep its house in order and to manage the retained risks well, it can generate negative shocks that will affect individuals and households directly or indirectly affect them through enterprises and the state. A clear example of such a negative shock from the financial system is the ongoing process of financial disintermediation in advanced economies that grew out of the financial crisis and that has resulted in reduced financial services provided by banks. Such a shock temporarily excludes financially active people from access to finance, creates refinancing problems for enterprises, and results in a loss of employment, income, and wealth. As history has shown, the financial system’s own management of risks needs to be strengthened (figure 15, right panel).

**Figure 15 Access to finance and banking crises**

![Access to financial risk management tools, selected countries](image)

![Incidence and cost of banking crises 1970-2011](image)


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Demirgüç-Kunt and Klapper 2012. Hallward-Driemeier and Hasan (2013) show that lack of account ownership, and asset accumulation, could limit women’s ability to pursue self-employment opportunities.
86. Market failures concerning financial inclusion and the financial system’s own risk management justify government intervention. Public policy can advance sound financial inclusion and enhance financial literacy through education programs (as part of school curricula and at teachable moments in life), regulation (consumer protection, business conduct), and provision of supporting infrastructure (retail payment systems, credit registry).\textsuperscript{76} The government can aid the management of the financial system’s own risk through systemic risk monitoring, prudential regulation, minimum and regulatory buffers of capital and liquidity, deposit insurance, and resolution frameworks for problem banks and financial crises. Some government policies have been more successful than others in addressing private market failures, and others have been counterproductive.\textsuperscript{77}

87. Governments have had difficulty successfully combining the policies aimed at fostering financial stability, on one hand, with those intended to advance financial inclusion, development, and competition on the other.\textsuperscript{78} The cost of tighter prudential regulation has often been passed onto individuals and small and medium enterprises, either through higher pricing or impaired access to financial services. To improve financial inclusion and financial system risk management, governments have often resorted to measures that have distorted market incentives.\textsuperscript{79} An example is a loan subsidy that, among other things, may distort the repayment discipline of borrowers and the risk management efforts of financial institutions. Further, financial deepening is not inclusive when financial access is heavily tilted toward the wealthy.\textsuperscript{80} Moreover, the interplay between financial stability and competition is yet to be fully understood, at least from the policy perspective.\textsuperscript{81}

88. This chapter discusses government policies to improve financial inclusion and systemic risk management, their failures, and some important lessons. It also highlights different policy trade-offs that governments face and provides examples of how financial sector policy makers confronted these trade-offs in various country circumstances. In this context, the chapter considers different institutional structures supporting policy decision making and their effectiveness, especially in addressing the policy trade-offs between promoting financial inclusion and stability.\textsuperscript{82}

\textsuperscript{76} Klapper, Lusardi, and Panos 2012; Xu and Zia 2012.
\textsuperscript{77} Morgan 2007.
\textsuperscript{78} The team will draw in this section on the analysis and messages of the GFDR 2013 (World Bank 2012a) and supplement those as needed in the areas that the GFDR have not explored sufficiently for the purpose of WDR 2014.
\textsuperscript{79} Calomiris 2011.
\textsuperscript{80} Cull, Demirgüç-Kunt, and Lyman 2012.
\textsuperscript{82} Beck 2012.
The national economy

89. One of the main functions of any national government is to provide tools to manage systemic risks at the national level. In this regard, the government provides two essential public goods—security, safety and defense, to ensure peace and protection and to promote institution building, and macroeconomic management, to maintain economic stability. This chapter will focus on the management of macroeconomic conditions that can influence people’s ability to manage risks. The goal of macroeconomic management is to provide a stable economic environment that creates the right incentives for decision making and to ensure that the state has sufficient resources to fund its basic programs—especially those that protect the most vulnerable segments of society. By implementing credible and transparent macroeconomic policies, and by generating and maintaining fiscal space to perform its basic functions, the government can reduce uncertainty and enable economic agents to focus on productive activities.

**Figure 16 Volatility of growth in real GDP per capita**
Countries with lower income tend to display greater growth volatility

Source: World Bank’s World Development Indicators.

Note: We report the group average of individual country’s standard deviation of growth in real GDP per capita over the period 1990-2011. The classification of countries according to income levels follows that of the WDR.

90. Managing risks at the national level entails designing and implementing macroeconomic policies to counter aggregate shocks. The interplay between these shocks, the characteristics of the domestic economy, the external environment, and the macroeconomic policy responses will shape economic outcomes. Developing countries tend to display greater output volatility compared with advanced economies (figure 16), in large part because they face larger and more frequent shocks, and because their internal conditions and external environment may amplify and spread the impact of these shocks. For instance, the impact of a sharp deterioration in the terms of trade will be amplified in countries that specialize in primary commodities or in those that
lack the financial instruments to hedge against such shocks.\textsuperscript{83} The government’s task to reduce the sources of macroeconomic volatility (especially those induced by policy), develop the institutional framework to support best outcomes, and strengthen the shock-absorbing capacity of the economy.

91. Financing social protection programs and providing adequate public goods (such as infrastructure) requires the state to have the ability to mobilize resources. Creating and maintaining the fiscal space necessary to perform this function calls for the strengthening of fiscal revenue performance and implementing an efficient sovereign asset and liability management framework (SALM).\textsuperscript{84} Asset management strategies can vary from self-insurance (by accumulating international reserves) to market insurance (such as hedging against external shocks by using derivatives linked to the volatility of mature stock markets or commodity prices to hedge against a sudden stop in capital inflows.\textsuperscript{85} Prudent liability management chooses the appropriate currency composition, interest rate structure, and maturity profile for government debt to reduce its financial risks.\textsuperscript{86} Overall, an efficient SALM framework may not only help reduce the government’s exposure to financial risks but also maintain a healthy balance sheet that supports sustainable financing of government programs.\textsuperscript{87} In this context, the SALM may help identify fiscal challenges associated with expected long-term obligations (say, future public pensions and social security schemes) or uncertain future events outside the control of the government (such as bailouts or disaster relief).\textsuperscript{88}

92. The state can create macroeconomic instability when its economic policies become unpredictable and unsustainable. Policy volatility induces domestic shocks that may lead to greater aggregate instability and lower growth.\textsuperscript{89} Unsound macroeconomic management may result from poor implementation and institutional capacity or from uncertainty about the likely impact of policy measures. Political economy factors can also play a role in the effectiveness of managing risks at the national level. For instance, the political cycle or anticipated backlash from the opposition may influence the policy maker’s decision to increase public expenditures, rather than to build up policy buffers, in good times.\textsuperscript{90} Coordination failures among different national authorities in charge of economic policy making may also lead to suboptimal allocation of available policy instruments among the different macroeconomic targets.\textsuperscript{91} Finally, mismanaging risks at the national level has distributional consequences—exacerbating income and wealth risks

\textsuperscript{83} Kalemli-Ozcan, Sorensen, and Yosha 2003.
\textsuperscript{84} Heller and others 2006; Das and others 2012.
\textsuperscript{85} Caballero and Panageas 2006, 2008.
\textsuperscript{86} Wheeler 2004.
\textsuperscript{87} Das and others 2012.
\textsuperscript{88} Traa and Carare 2007; Cebotari 2008.
\textsuperscript{89} Fatás and Mihov 2012.
\textsuperscript{90} Tornell and Lane 1999.
\textsuperscript{91} Claessens 2005.
for some segments of the population, especially the poor. Incomes of the poor are affected in the event of high inflation\textsuperscript{92} or a sharp devaluation of the currency.\textsuperscript{93} In addition to the poorest quintiles of the population, income and employment of the youth and seniors are more severely affected by fiscal consolidations and financial crises.\textsuperscript{94}

**The international community**

93. The international community complements national governments’ efforts to help their people manage risks in the four main areas covered in the Report. It does so by providing global expertise and longer-term perspective in managing risks, assisting policy coordination, and mobilizing international resources. This chapter will discuss the management of risks at the global level by focusing on the international community’s role in supporting governments. For the purposes of the chapter, the international community will refer to organizations of international cooperation, such as the Group of 20, United Nations, and Organization of Economic Cooperation and Development (OECD); providers of development finance and global expertise, including the international financial institutions and donors; and global standard setters and policy makers.\textsuperscript{95}

94. Several reasons justify a role for the international community in risk management. A country with limited access to global markets or weak institutional capacity may face risks with such negative outcomes that the required action may go beyond its capacity to cope.\textsuperscript{96} The capacity to deal with risk is also challenged by the increased size and frequency of shocks that can trigger intricate cross-sector linkages within an economy.\textsuperscript{97} Growing economic and financial integration across countries further complicates the national efforts to manage risk. Problems originating from one country can quickly spill over to other countries, resulting in systemic crises. Increased connectivity of social systems through the movement of people, information, and goods across geographic boundaries can also increase health risks, facilitating the distribution of some of the deadliest infectious diseases.\textsuperscript{98} Some risks grow gradually over time,\textsuperscript{92,93,94}

\textsuperscript{92} Easterly and Fischer 2001.
\textsuperscript{93} Bahmani-Oskooee 1997; de Carvalho Filho and Chamon 2008.
\textsuperscript{94} Ahrend, Arnold, and Moeser 2011.
\textsuperscript{95} Examples include: International Labor Organization, World Health Organization (WHO), UN International Strategy for Disaster Reduction, the Global Platform for Disaster Risk Reduction, Environmental Protection Agency, Financial Stability Board, International Monetary Fund, World Bank, Basle Committee for Bank Supervision, Bank for International Settlements, and World Trade Organization.
\textsuperscript{96} For example, direct losses from major natural disasters such as hurricanes, earthquakes, and tsunamis can be very large, in some cases exceeding multiples of a country’s GDP, particularly for small developing countries (figure 17).
\textsuperscript{97} Economic and financial crises have arguably become more complex, resulting in higher fiscal expenditures, sharp increases in public debt, large output losses, and long recovery times (figure 18). The frequency and cost of natural disasters also increased in recent years—World Bank 2011b.
\textsuperscript{98} A number of epidemics turned into pandemics in recent years as they spread across continents. Examples include the global influenza pandemic in 2009-10, swine-flu, H1N1, H5H1, and HIV viruses (OECD, 2011a). Rapid action
with implications crossing geographic boundaries or generations, as people may have myopic perceptions of the risks involved (such as the risks of climate change generated by greenhouse gases associated with human activities). Coordination of national efforts and awareness of long-term perspectives are global public goods that can help tackle issues affecting many countries and generations.

**Figure 17 Estimated damage from natural disasters**

The cost of disasters can exceed multiples of an economy’s size

![Chart showing estimated damage from natural disasters]

*Sources: CRED EMDAT International Disasters Database; World Bank’s World Development Indicators.*

95. Against this background, the international community can enhance national governments’ efforts by addressing the similar types of constraints that their people face in managing risks—information gaps, externalities imposed by others, constrained access to markets and resources, and public goods. Policies and interventions of the global community aim at enhancing the national governments’ tools to tackle these obstacles. In so doing, it focuses on the risk management instruments of knowledge, protection, insurance, and coping.

by national and global health authorities can prevent them from becoming pandemics (e.g., SARS in 2003 and smallpox in 1979—Barrett 2007).

99 For example, Kyoto protocol in the area of climate change, entered into force in 2005, set binding targets for 37 industrial countries and the European Community for collectively reducing global greenhouse gas emissions.
Banking crises have large costs in terms of output loss and fiscal balances.

**Sources**: Luc Laeven and Fabian Valencia (2012) based on 147 episodes of systemic banking crises over the period 1970-2011 over a large sample of developing and developed countries.

**Note**: 1/ In percent of GDP. Output losses are computed as the cumulative sum of the differences between actual and trend real GDP over the period \([T, T+3]\), expressed as a percentage of trend real GDP; \(T\) is the starting year of the crisis.

2/ Fiscal costs are defined as the component of gross fiscal outlays related to the restructuring of the financial sector. They include fiscal costs associated with bank recapitalizations but exclude asset purchases and direct liquidity assistance from the treasury.

3/ In percent of GDP. The increase in public debt is measured over \([T-1, T+3]\); \(T\) is the starting year of the crisis.

In this context, the international community can create an environment for effective risk management by generating and disseminating global expertise, narrowing information gaps, and increasing risk awareness. Through global rules and standards, it can encourage governments as well as their people to take steps that protect against risks such as financial, health, and safety risks; and through technical assistance, it can enhance the risk-management capacity of countries and their institutions. Importantly, the global community can provide a platform to promote international policy dialogue and cooperation in an environment where policies and practices adopted by one country can have important implications for others and affect their vulnerability. The international community can also provide global insurance, by intervening directly and pooling resources to alleviate crises and mobilize rapid action through rescue and resolution efforts. Such interventions can be critical in the event of a systemic threat or when national resources alone are insufficient. It can also play a catalytic role, encouraging nations to act together and pool resources.
International donors are important members of the global community in this process and have a crucial (but difficult) role in supporting risk management in countries with fragile and weak economic or political environments. In such environments susceptible to corruption and political risks, international engagement presents significant risks for donors and implementing partners, but it holds the potential for positive development results for the nations involved. At the same time, the growing emphasis on accountability and impact results makes donors highly risk averse, leading to a donor strategy that focuses more on risk reduction and avoidance than on exploring development opportunities. This chapter will consider how donors can be induced to take on (managed) risk (through risk mitigation, risk sharing, and coping mechanisms), so that they can supplement national governments’ efforts to create an environment that nurtures potential development opportunities and to prepare for possible adverse consequences.

Similar to national governments, the global community’s participation in risk management may be associated with challenges and trade-offs. A potential failure in any direct involvement is the possibility that the ready availability of external help will encourage public and private agents to take excessive risk or to be less cautious in risk-mitigation efforts. The challenge is to find a risk-sharing solution that avoids moral hazard but that also holds the countries and the international community accountable. In this context, financial support could be provided with appropriate conditionality, and insurance mechanisms could take into account the degree of self-insurance and protection by the nation. A second challenge is the failure to pay sufficient attention to long-term and multiple dimensions of risks. The policy design needs to be comprehensive and contain contingency plans to avoid ad hoc responses and long-term damage to development. Finally, coordination may have limits in part stemming from incentive problems and political economy considerations. Moreover, the international architecture needed to ensure coordination across nations may be lagging behind the complexities and connectedness of the global system. Regardless, prolonged periods of inaction and the resulting uncertainty would add to risk and make the ultimate solution more costly. Slow progress made in resolving the Euro Area crisis, in addressing global warming, and in coordinating exchange rate policies to resolve global imbalances are examples of coordination difficulties.

**Concluding remarks**

In conclusion, WDR 2014 will provide policy-relevant analyses of risk and risk management from a holistic, people-based perspective. In particular, the Report will assess how effective risk management can reduce the impact of negative shocks and open the door to

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100 OECD 2011b.
102 Barrett (2007) discusses various reasons for lacking progress in mitigating global climate change, and how international cooperation, institutional design and use of incentives can work together to ensure the effective delivery of global public goods such as climate change mitigation.
opportunity, especially for poor people. Toward that objective, it will stress the importance of moving from ad hoc responses to systematic risk management, and it will ask why more resources are spent on coping with crisis than addressing the causes of vulnerability. It will explore how people can be encouraged to take responsibility for risks within their potential capacity, and how they are supported by private and public systems when risks overwhelm their individual ability. It will inquire whether the state can best support risk management by intervening directly or by creating an enabling environment, while avoiding becoming a source of risk itself. In analyzing these issues, the ultimate goal will be to derive concrete recommendations that contribute to policy debate.
Process and timetable

Consultations

Internal consultations

The WDR 2014 team has conducted an initial set of consultations across the World Bank Group, including CRO, DEC, FPD, HDN, OPC, SDN, TRE, IFC, the Regions, as well as with some Executive Directors and their advisors. These discussions have contributed to the framing of this Concept Note, the analytical work program, and the process for the Report.

External consultations

The WDR 2014 team has been and will be engaged in an active dialogue with key stakeholders including, but not limited to: Global Network of Civil Society Organizations for Disaster Reduction; International Federation of Red Cross and Red Crescent Societies (IFRC); Japan International Cooperation Agency (JICA); Organization for Economic Co-operation and Development (OECD); International Labor Organization; World Economic Forum; and government authorities and experts in Sweden, Norway, Denmark, Finland, the Netherlands, Spain, Germany, Switzerland, France, Japan, Brazil, Peru, among other countries.

The WDR 2014 team has benefited from participating in the International Risk and Disaster Conference (IRDC) in Davos. It will soon benefit from participation in the 2012 Northeast Universities Development Consortium Conference; the 2012 Meetings of the Latin American and the Caribbean and Economic Association; the 2012 African Economic Conference; and the 11th Consultative Group Meeting of the Knowledge for Change Program, hosted by the Government of Denmark; among others. Finally, the Gesellschaft fuer Internationale Zusammenarbeit (GIZ, Germany) and the WDR 2014 team will hold a two-day workshop in mid December 2014, bringing together leading researchers to discuss managing risk for development.

Timetable

The main milestones for the production of the Report are as follows:

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</table>
The team

This Report is being prepared by a team led by Norman Loayza, together with Inci Otker-Robe. The other members of the core team are César Calderón, Stéphane Hallegatte, Rasmus Heltberg, Ana María Oviedo, Xubei Luo, and Martin Melecky. Research analysts Kanako Goulding Hotta, Rui Han, Harry Edmund Moroz, Anca Maria Podpiera, Faiyaz Talukdar, and Tomoko Wada complete the team.

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Appendix Table 1  Public goods and policies to support each system’s contribution to people’s risk management

<table>
<thead>
<tr>
<th>Systems</th>
<th>Knowledge</th>
<th>Protection</th>
<th>Insurance</th>
<th>Coping</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Household</strong></td>
<td>- Public schools, education, and training.</td>
<td>- Government transfers (cash, in-kind, productive).</td>
<td>- Publicly-provided health insurance.</td>
<td>- Government transfers (cash, in-kind)</td>
</tr>
<tr>
<td></td>
<td>- Consumer protection.</td>
<td>- Subsidies (education, housing)</td>
<td>- Public pensions.</td>
<td>- Subsidies</td>
</tr>
<tr>
<td></td>
<td>- Financial literacy and management.</td>
<td>- Regulation (land tenure, gender, child labor).</td>
<td>- Unemployment insurance.</td>
<td>- Workforce</td>
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<td></td>
<td></td>
<td>- Service delivery.</td>
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<tr>
<td><strong>Community</strong></td>
<td>- Weather forecasts, early warning systems (EWS).</td>
<td>- Rule of law (security services).</td>
<td>- Savings and credit groups.</td>
<td>- Disaster relief provided by the state.</td>
</tr>
<tr>
<td></td>
<td>- Awareness raising, change of norms, and behaviors.</td>
<td>- Disaster risk reduction.</td>
<td>- Publicly-provided weather insurance.</td>
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<tr>
<td></td>
<td></td>
<td>- Adaptation to climate change.</td>
<td>- Social protection against covariate risk.</td>
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<td></td>
<td></td>
<td>- Sanitation.</td>
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<tr>
<td><strong>Enterprise</strong></td>
<td>- Information collection and dissemination.</td>
<td>- Provision of public goods and services (infrastructure).</td>
<td>- Public insurance (natural disasters, environmental accidents).</td>
<td>- Corporate bailouts</td>
</tr>
<tr>
<td>sector</td>
<td></td>
<td>- Labor market regulation.</td>
<td>- Public guarantees (investment, exchange rate).</td>
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<tr>
<td></td>
<td></td>
<td>- Product market regulation (entry &amp; exit, innovation, competition).</td>
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<tr>
<td>system</td>
<td></td>
<td>- Regulation, supervision and enforcement (prudential, business conduct, consumer protection).</td>
<td>- Minimum and regulatory buffers (capital, liquidity).</td>
<td>- Bank and crisis resolution (bank liquidity assistance, blanket guarantees, restructuring and recapitalization).</td>
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<td></td>
<td></td>
<td>- Consumer financial education.</td>
<td>- Fiscal contingent liabilities.</td>
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<tr>
<td></td>
<td></td>
<td>- Crisis simulation exercises.</td>
<td>- Foreign exchange reserves.</td>
<td></td>
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<tr>
<td><strong>National</strong></td>
<td>- Data collection and dissemination.</td>
<td>- Monetary/exchange rate policies.</td>
<td>- Countercyclical macroeconomic policies.</td>
<td>- Fiscal austerity.</td>
</tr>
<tr>
<td>economy</td>
<td></td>
<td>- Trade diversification (product and market).</td>
<td>- Asset management (reserve hoarding, stabilization funds).</td>
<td>- Fiscal stimulus (e.g. tax breaks, spending cuts)</td>
</tr>
<tr>
<td></td>
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<td>- Capital flow management</td>
<td>- Debt and contingent liability management.</td>
<td>- Debt issuance.</td>
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<tr>
<td></td>
<td></td>
<td>- Banking regulation and supervision.</td>
<td></td>
<td>- Government borrowing.</td>
</tr>
</tbody>
</table>
Endnotes

i Guiso 1998.
iii Hallegatte and others 2012; Debelle 2010.
v Dercon 2008.
vi Narain, Ötker-Robe, and Pazarbasioglu 2012.
vii Hallegatte and Przyluski 2010; Lall and Deichmann 2012.
viii World Bank, World Development Indicators.
ix Lall and Deichmann 2012.
x Robinson 1984; World Bank 2011a.
xı Singh (2011) and references therein.
xiii Copeland 2012; Damania 2002.
xv Stern and Feldman 2004; Narain, Ötker-Robe, and Pazarbasioglu 2012, among others.
xvi See the recent discussions on the shadow banking system for the financial sector. See, for example, Financial Stability Board (2011a, b), and Narain, Ötker-Robe, and Pazarbasioglu (2012).
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