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Working Party on Regulatory Management and Reform

Risk and Regulation: Issues for Discussion

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This paper offers a overview of the main issues for policymakers considering risk regulation and identifies a number of issues for discussion.

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RISK AND REGULATORY POLICY

Introduction

1. OECD governments have come to recognise the critical importance of and the need for an effective risk policy. Public servants deal regularly with risks in many public policy domains – economic, financial, health, safety, environmental and national security. With increasing frequency, officials face decisions about policies, programmes and services where future uncertainties are economically significant and unavoidable. Thus, they need to assess, appraise and manage risk in an overall effort to develop suitable policy responses. Moreover, in a context of growing complexity and interdependence, they need to inform the public about the nature of risks and the inherent tradeoffs between specific policy choices.

2. The concept of risk policy in the public sector comprises a broad picture. Not only does it include what has been termed risk management or risk analysis; it also looks at how risk-related decision-making unfolds when a range of actors is involved. Risk policy requires co-ordinating and possibly reconciling between differing policy objectives, perspectives, goals and activities. Indeed, the problem-solving capacities of government administrations have often been limited in the face of the major challenges facing society today. Risks such as those related to natural disasters, terrorism or critical infrastructures call for co-ordinated effort amongst a variety of government agencies. Finally, risk policy also needs to take into account such factors as the historical and legal background, guiding principles, value systems and perceptions.

The risk policy process

3. Many OECD countries have developed both implicit and explicit frameworks for developing regulation (and more generally public policy) solutions in the face of uncertainty and risk. A generalised and stylised version of the risk policy frameworks across the OECD can be divided into three sequential phases: *assessment, management and review*. These three phases are all linked with the additional element of *communication*.¹

Risk assessment

4. Risk assessment is generally comprised of two separate parts, that of framing and forecasting. The purpose of framing is to capture the variety of issues that the public may associate with a certain risk. What counts as risk may be different for divergent groups of individuals. Framing therefore places particular importance on the need for all interested parties to share a common understanding of the risk being addressed. Framing can also take up the practice of conducting preliminary probes into hazards or risks and rank them based on prioritisation schemes and existing models for dealing with risk. Finally, risk framing needs to make major assumptions, conventions and procedural rules for the forecasting of risk.

1. There is, of course, an additional phase of the risk policy process; in the event that a risk comes to be realised, there is the “crisis management” phase. While extremely important, crisis management will not be taken up in this paper. This issue is being addressed by the OECD, notably at the next meeting of the Centre of Government (CoG) in September 2006.

5. The objective of *risk forecasting* is to provide the knowledge base for whether a policy decision should be taken in the face of risk and, if so, how the risk can be reduced or contained. Risk forecasting thus comprises a scientific assessment of both the risk and questions concerning its economic implications. A key component of this process is to link a potential source of harm with likely consequences and their probabilities.

6. Depending on the source of risk and the organisational culture of the administration, many different ways exist for structuring risk assessment. Confirming the results of risk assessment can be extremely difficult, in particular when cause-effect relationships are hard to establish, when they are instable due to variations, and when effects are both rare and difficult to understand. Equally important to understanding the physical attributes of risk is detailed knowledge of the public's concerns about the risk as well as likely social consequences and political responses. The most controversial and difficult aspect in this regard is judging the public's tolerance for the risk.

Risk management

7. *Risk management* aims to design and implement actions and remedies required to tackle risks with an aim to avoid, reduce, transfer or retain them. Risk management relies on a sequence of steps which facilitates systematic decision-making. To start with, a range of potential risk management options is identified. The options are then assessed with regard to such criteria such as effectiveness, efficiency, minimisation of external side-effects, sustainability etc. Based on the relative weight of each of these assessment criteria, various risk management options are evaluated. This evaluation supports the next step in which one (or more) risk management options is selected, normally after consideration of possible trade-offs that need to be made between a number of second-best options. This needs to take account of the capacity of government to respond to a crisis, if one occurs. The final two steps include the implementation of selected options and their enforcement.

Review and evaluation

8. A crucial component of effective risk governance is review and evaluation. Monitoring performance is often neglected or not carried out systematically. Instead, much ex post evaluation is undertaken in the wake of crisis or regulatory failure. There may be tendency in these situations to rush to find quick solution. Thus, there is a crucial need for more systematic ex post evaluation, so that lessons learned can put in place new intuitions and methodologies for risk assessment and management.

Risk communication

9. The remaining element of the risk process is *risk communication*, which is important throughout the entire risk policy cycle. Risk communication should enable the public, which is not formally part of the process, to understand the rationale of the results and decisions from the risk framing and risk forecasting phases. Moreover, it needs to help the public to make informed choices about risk – balancing factual knowledge about risk with personal interests, concerns, beliefs and resources – when individuals or groups are themselves involved in risk-related decision-making. Effective risk communication can foster tolerance for conflicting viewpoints and provides the basis for their resolution. Ideally, risk communication –based on an understanding of public perception of risk - can have a major impact on how well society is prepared to cope with risk and react to crises and disasters.

10. Experience with risk communication points to a number of lessons and tools. When involving stakeholders, public officials need to avoid putting a premium on well-organised private interests to the detriment of the general public. Communication procedures need be adapted to the specificities of the risk issue and be based on objective assessments of potential hazards. At the same time, however, they have to express clearly the limits of scientific knowledge, the underlying assumptions and the uncertainties.

11. Recognising interested and directly concerned citizens as legitimate partners in the exercise of risk assessment is no short-term solution for the problems of risk management. But serious attention to participation and process issues may, in the long run, lead to more successful management methods.

Integrating risk into regulatory policy and practice

12. Most OECD governments generally follow a number of elements of the policy process described above. While tackling “policy” risk has proved to be a daunting challenge, most countries have put in place methodologies to successfully mitigate many “operational” risks. However, the specific methods vary across countries, across agencies, over time, and depending on the particular risk being addressed.

13. In principle, risk regulation begins with some assessment of potential future risk. In practice, regulation may be a reaction to a recent crisis. In either case, risk-based regulation attempts to assess the future likelihood of adverse consequences, through an initial component usually called “risk assessment.”² One widely applied form of risk assessment is Environmental Impact Assessment. In the EU, the move towards quantitative risk assessment has been driven in part by WTO decisions under the Agreement on Sanitary and Phytosanitary Standards (SPS), which requires a scientific risk assessment to support international trade restrictions.

14. After forecasting a risk, decision makers must decide what to do about it. In risk-based regulation, risk management is conducted by comparing the consequences of policy alternatives (including the alternative of no action). The standard approach to assessing “how much” regulation is needed is through RIA, and especially cost-benefits analysis. In the United States, since 1980 some form of benefit-cost analysis has been required of all new agency regulations. In the European Union, benefit-cost analysis is increasingly required. It has been used in Australia for several years and in Japan since 2005.

15. Regulatory interventions to manage risk can take numerous forms. They can be interposed at various points in the production – on inputs, on technologies, on activity levels, on outputs or on exposure and risk levels. Likewise, the regulator has a choice of regulatory instruments to: conduct standards, price instruments, quantity instruments, information instruments and hybrid instruments.

16. An important link exists between the identification of risk management options and regulations. In particular, certain management options for a given risk could include a regulatory component. This regulatory component has to follow regulatory policy to help identify the tool or mix of tools that would be most effective in implementing the proposed risk management option. Furthermore, a mutual assessment of risk management tools and regulatory tools is often the best way to reaching an optimal solution to the complex challenge of risk management.

2. There is considerable variation across OECD countries and agencies in the use of terminology to describe the risk policy process. Of note, a number of countries use “risk assessment” to describe various components of the process. For a comprehensive overview of risk terminology see *IRGC White Paper #1, Risk Governance – Towards an Integrated Approach, Annex D*, www.irgc.org/irgc/knowledge_centre/irgcpublications/

17. A robust system of risk and regulatory governance needs not only the tools of risk assessment and management, but also an institutional structure to guide and oversee these analyses. Effective risk regulation needs implementation and enforcement. Institutions for this component vary widely across countries. In addition, decisions are needed about where responsibility lies for assessing and managing particular risks, with implication for risk avoidance and transfer when other units are responsible for overseeing regulatory quality and policy.

Risk policy in a broader context

18. Effective risk policy needs to go well beyond the generic elements of risk assessment and management.³ Equally important to the policy-making process are co-ordinating public and private responses to risk, the interdependent nature of risk, and strengthening and global responses to risk.

Co-ordinating public and private responses to risk

19. Over the last 20 years, the interface between the public sector and the market has shifted dramatically. For instance, in a majority of OECD countries', critical infrastructures – electricity grids and telecoms – have been privatised and are in private hands. Likewise, key public services – health care and pensions – have moved away from the exclusive domain of the public sector and are being provided by the market. Given this shift, a major challenge for public authorities is to define, apply and enforce appropriate regulations which shift a greater share of risk management to the private sector.

20. Such efforts would seem to stand a better chance of success when they benefit from high-level political backing, or indeed are initiated by political leadership.⁴ This idea is clearly supported by the more widespread trend of the need for high-level support for regulatory reforms.

21. One way to structure such a partnership is to have government standards and regulations coupled with third party inspections and insurance to enforce these measures. Insurers can require – at least as a minimum condition for providing coverage – that safety rules and regulations are respected. By doing so, they benefit from the scale economies of a common system of norms and standards. In turn, regulatory authorities can rely on the insurance sector for enforcement. For example, insurance companies and other financial institutions could play a major role in the implementation and enforcement of norms such as building codes. Insurance coverage or mortgages could be made conditional on inspection, certification and, when necessary, the adoption of loss mitigation measures.

22. Another form of co-operation is to create funds financed jointly by the private sector and the government with the aim of promoting risk prevention in specific areas or industries.⁵ Such funds could improve the handling of industrial risk in inhabited areas by assisting industries in their efforts to reduce risk and by furnishing the means to purchase threatened properties.

3. The following section draws extensively from OECD 2003, *Emerging Risk in the 21st Century, An OECD International Futures Project*, www.oecd.org/dataoecd/23/56/19134071.pdf

4. The United States is a case in point. In response to the findings of a presidential commission, a Presidential Decision Directive (PDD63) on “Protecting America’s Critical Infrastructures” was issued in 1998, launching a major interagency initiative.

5. Such a scheme was suggested by the French Parliament after the Grande Paroisse chemical plant accident in 2001.

23. Another example is provided by the impact of certification on the implementation of safety measures in corporations. Such public/private co-operation can be an effective risk management tool, complemented when needed by liability law. For instance, an injurer can be held liable for damage even while complying with safety norms if the optimal level of care cannot be imposed through norms.

24. At the core of such public/private partnership is the need to get the incentives right, in particular by internalising to the extent possible the costs of risk-generating activities. Public/private co-operation can also aim at creating positive-sum solutions with regard to risk prevention.⁶

Interdependent nature of risk

25. Addressing risks in an interdependent environment requires a much broader perspective than in the past. A variety of assessment methodologies are employed in sectors as diverse as food safety, environmental policy and terrorism, and there are a number of observations that apply to many.

26. Many risk assessments assume that a hazard is linked from a well-identified source to a single endpoint in more or less linear fashion. Such assessments will be woefully inadequate in explaining or predicting complex, interconnected phenomena. As new risk policies are developed, they will need to combine knowledge from a wider variety of disciplines and areas of expertise.

27. Another weakness in many risk assessments is that they overlook a hazard's potential damage to systems. For instance, earthquake results not only in casualties and structural damage, but in infrastructural damage as well. Thus, vulnerable points in the system need to be strengthened (for example by creating redundancies or building protection elements more systematically), and the "architecture" of the system needs to be made more resilient.

28. In an interdependent world, the risks which an individual government agency faces depend not only on its own choices but also on those of others. Because risks cut across ministerial boundaries, risk management must be cross-cutting. While many sources of sectoral expertise on risk may exist, governments need to develop holistic analytical frameworks in order to assess and counter interdependencies among different areas of risk

Global responses to risk

29. Many emerging systemic risks are global (*e.g.* infectious diseases, terrorism, extreme weather conditions), as are their evolving contexts (*e.g.* growing trans-border movements of people and goods, global climate change) and the solutions available to risk management. Co-operation among countries is therefore of major importance.

30. Unco-ordinated approaches to risk management may entail considerable costs to the global community. These costs can take the form of under-protection of global common assets due to self-interested behaviour, trade disputes, and inefficiencies and gaps in regulation that may provide unwarranted protection from legal action.

6. The Turkish Catastrophic Insurance Pool (TCIP), created after Turkey's 1999 earthquake disaster, illustrates how the combination of legislative measures (making insurance compulsory), public service (providing insurance up to a ceiling) and market forces (complementary insurance, reinsurance of the pool, possibly issuance of catastrophe bonds) can create the appropriate mix of regulation and incentive to better address risks. It is expected that the TCIP will help significantly improve enforcement of building codes and both prevention and coverage of earthquake risks in Turkey.

31. International management of a variety of risks requires a policy framework in which decisions are prepared and co-ordinated on the basis of scientific and other considerations, with international agreements providing the foundation for dispute resolution. Co-operative structures need to rely on an internationally consistent assessment of risks. One challenge is to create a framework for clarifying the respective contributions of facts, value statements and uncertainties in risk issues.

32. The growing interdependence of economies and societies implies that emerging risks in developing countries, where monitoring and early warning systems are often inadequate or nonexistent, can rapidly spread. Co-operation between the OECD and developing countries also needs to be strengthened so as to transfer knowledge, skills and technologies and thus close potentially dangerous gaps in the overall effort to monitor and mitigate potential threats.

Issues for discussion

What is the role of risk management in regulatory policy today? And what will it become?

- How vital is the need to strengthen government capacity to assess and manage risk? Are communication and consultation instruments sufficient to judge the public's tolerance for risk? Who should take the responsibility to identify and fill the gaps?
- How can governments better resist pressures to regulate after a crisis? How can governments move beyond "lessons learned" and put in systematic review and evaluation methodologies for risk?
- How should the public and private sectors co-ordinate their responses to risk? Given that a large proportion of critical infrastructures and public services are now either owned or provided by the private sector, are new, co-ordinated risk strategies required? What would this imply for sectoral regulators?
- Given the crosscutting nature of risk, how should OECD countries develop more holistic strategies for managing risk? What should be the specific role of RIA?
- Is there a need to develop regulatory responses to risks which are increasingly interdependent and cross-border? How can this be done without a regulatory race-to-the-bottom?

Should the OECD develop a programme of provide practical tools and a comparative analytical framework for risk and regulatory policy?

In developing a programme, what relative emphasis should the Secretariat assign to:

- Collecting and sharing information on risk management policies, tools and practices, and agencies;
- Developing guidelines, common definitions, principles;
- Providing a platform for policy dialogue and professional networks;
- Building partnerships with private sector actors and with non-OECD countries to analyse risk in areas of common concern and to develop practical responses?